SWASHTHA- Strengthening Water, Air, Sanitation and Hygiene Treasuring Health
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Lessons Learnt Document
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ENPHO
Creating Eco Societies

MUNICIPAL ASSOCIATION OF NEPAL 2050

PRACTICAL ACTION

Contents

List of Abbreviations

CS:	Colloidal Silver
ENPHO:	Environment and Public Health Organisation
EU:	European Union
FCHV:	Female Community Health Volunteer
HH:	Household
IAP:	Indoor Air Pollution
ICS:	Improved Cooking Stoves
MoLD:	Ministry of Local Development
MuAN:	Municipal Association of Nepal
NSA:	Non-state actors
ODF:	Open defecation free
PMC:	Project Management Committee
SWASHTHA:	Strengthening Water, Air, Sanitation and Hygiene Treasuring Health
TLO:	Tool Lane Organisation
VDC:	Village Development Committee
WASH:	Water and Sanitation
WATSAN:	Water and Sanitation

Chapter 1: Introduction

1.1 Background of the Project

Urban population in Nepal is expanding rapidly, placing enormous pressure on basic services such as shelter, safe drinking water and sanitation, drainage and sewerage, transportation, and waste management. Environmental health risk from unsafe drinking water, poor hygiene behavior, lack of sanitation and prolong exposure to indoor air pollution (IAP) in poorly ventilated kitchens is high in Nepal. To meet the increasing demands for environmental health services, Practical Action Nepal Office is implementing a project "SWASHTHA – Strengthening Water, Air, Sanitation and Hygiene Treasuring Health" in seven municipalities, two Village Development Committees (VDCs) of Chitwan – Sharadanagar and Pattihani and three small towns - Sunawal, Bardaghat and Kawasoti. This four year (2009-2012) project works in community and household (HH) level in four municipalities - Bharatpur, Butwal, Gulariya and Tikapur and supports few municipalities and small towns which are potentially growing to become municipalities along the western highway corridor like Ratnagar, Ramgram, Sidharthanagar, Sunawal, Bardaghat and Kawasoti in preparing participatory water and sanitation plans.

This project is co-funded by the European Union (EU) under its Non State Actors in Development programme, UN-Habitat's Water for Asian Cities programme and ISLE of Man Government. The project's implementing partners are Municipal Association of Nepal (MuAN) and Environment and Public Health Organisation (ENPHO) as non-state actors (NSA), respective municipalities and concerned Village Development Committees (VDCs) as local state actors.

The overall objective of this project is to contribute to sustainable improvement in health and wellbeing of vulnerable population especially, women and children residing in urban and peri-urban settlements of the above mentioned project areas.

The table below summarises the project's results and the major interventions carried out by the project for achieving the results.

SN	Result	Major Interventions
01	Improved access to safe drinking water	• Prepared participatory WATSAN Plan for municipalities, and targeted VDCs • Water supply schemes in schools, communities and households • Promotion of low cost HH water purification technologies
02	Improved access to better sanitation facilities	• Sanitation facilities in schools and communities • Households sanitation facilities (various types of toilets, *Juthelno, Chang*) • Support in ODF Declaration
03	Improved hygiene practices among women and children	• Capacitating FCHVs, mother leaders, volunteers for promote the beneficiaries in better hygiene practices • Behavioral change campaigns in schools and

		communities
04	Improved indoor air quality	• Awareness campaigns on Indoor air pollution (IAP) • Capacitate women on improved kitchen management • ICS trainings and installation • Bio-gas attached toilets
05	Institutionalisation of environmental health improvement measures through improved linkages among state, non-state, and private sector's actors	• Strengthening user groups and committees on dissemination and advocacy of community based practices/approaches • Develop linkage between Water User Groups at national levels to share experiences • Participatory WATSAN master plans institutionalised by municipalities • Participatory project's learning sharing • Participatory meeting and review

The project took following approaches to achieve the expected results:

- Integrated approach in multi-sector environmental issues (air, water, sanitation, solid waste and personal hygiene)
- HH focus environmental sanitation approach
- Community and school led total sanitation approach
- Involvement of women and build their capacity to tackle urban environmental problems
- Capacity building of local committees responsible for the management and operation of community facilities
- Promotion of local volunteers especially women and lead mother

1.2 Objective of this report

Practical Action aims to document lessons learned from this project in order to use those lessons to design new projects, to influence policy makers and donors and to share with practitioners as knowledge products. The specific objectives for preparing this report are:

- To analyse successes and failures of strategies, approaches and activities with regard to design, efficiency, effectiveness, impact and sustainability;
- To draw specific lessons; and
- To recommend strategies, approaches and activities for an ideal water and sanitation project for poor, vulnerable and excluded communities.

1.3 Methodology

The report is prepared out in three phases as mentioned below:

- **Review the documents:** It mainly covered review of project documents, periodic progress reports, and relevant literature on WATSAN projects in Nepal, research and study reports and collection of project information from project teams.

- **Visit to the project sites:** The field study phase comprised of visits to Kailali and Bardiya Districts to interact with project partners, target beneficiaries and Practical Actions staffs who were directly involved in managing the project.
- **Prepare the Report**: preparing the lesson learning report after analysis the collected information.

Chapter 2: Key Lesson Learning

2.1 Awareness and Capacity building

***Key Lesson:* Resources intended for volunteers as local change agents improves the health status of local people.**

The project enhances the capacity of local volunteer on water quality, sanitation, hygiene and indoor air. Those volunteers are FCHV[1], Mother leader, school teacher, students and WASH volunteers. Project Management Committee (PMC) has selected these volunteers from the targeted communities. In total the project has enhanced the capacity of 319 FCHVs, 38 mother groups and 70 WASH volunteer and mobilised in the project areas, and also trained school teachers and students.

After enhancing the capacity of those volunteers, they are mobilised on awareness activities, door to door visit, motivating to community people for promoting them on improving their hygiene practice and behavior.

Now these volunteers have become focal agents to deliver the message in the communities. As the same way, several trainings and knowledge enhancement opportunities for those volunteers by the project has made them recognised by communities and other stakeholders. It is seen that, they are become change agents in the communities.

"After the training received by SWASHTHA project, we frequently discuss about sanitation in mother group's meeting and I also regularly visits the beneficiaries HHs and encourage them for using toilet, safe drinking water and convince them on better hygienic practice. Nowadays, all the HHs use toilet, drink filter water, and use improved cooking stoves. The rate for visiting hospital by waterborne disease especially of the children is also decreasing in the community." - ***Sugi Yadav*, *FCHV Guleriya, Bardiya.***

Enhancing the capacity of these volunteers and promoting them as local change agents also provides an opportunity to sustaining the project's intervention in community after completion of the project. It is seen in the community that harmonious relationship is developed between these volunteers and target communities. In this context, these volunteers will always ready to motivate the community people for improving their hygienic practice and behavior.

[1] The Female Community Health Volunteer (FCHV) Programme in Nepal was started in 1988 by the Ministry of Health and Population in order to improve community participation and to enhance the outreach of health services through local women working voluntarily.

***Key Lesson*: Awareness of mothers in water quality, improved sanitation, hygienic behaviour and IAP definitely leads to create healthy homes.**

Mothers are more responsible for WASH and IAP (Indoor Air Pollution) sector. In context of Nepal and in the general context, mothers are responsible to collect water, cooking food, cleaning surroundings and caring children. Therefore, mothers need to be involved in any WASH and IAP interventions for better results.

The project enhanced the knowledge of mother group's leader to promote them as local volunteers and mobilised them to aware the other HHs. Door to door visit, awareness campaigns have been organised to motivate the mother on improved sanitation, hygienic behavior and IAP. It can be seen in the target community that the sanitation practices and hygienic behavior are improving.

A recent study report[2] also states that most of the households of Butwal (89%), Bharatpur (89%), Tikapur (97%) and Gularia (76%) are found clean and almost 94% of the beneficiaries from all the programme areas reported having toilet in their houses. The report also states that the hand washing after toilet is 98.3% in the all the project municipalities, as followed by after working on dust 86% and before eating 76.4%.

***Key Lesson*: Door to Door visit is one of the best option to convince and motivate community**

For awareness activities in communities; normally we conduct orientation, training, mass rally, etc. In the beginning of the project intervention, the project also conducted these types of awareness activities in communities and assumed that the participants are adopting the message in their daily life. But when observing their houses, they were actually not practicing what they learnt from those awareness programmes. In this context, the project team changed the strategy for changing their behavior and practice. After that WATSAN volunteer and field staffs mobilised in "door to door" visit and motivate them on better hygienic behavior and sanitation. These types of regular visit and motivation activities conducted several times in communities, and found improving in their practice.

[2] "Health Impact Study Report – an external evaluation of project's outcomes" – Nov 2012

2.2 Resource Mobilisation

Key Lesson: ***Subsidies serve like catalyst; it is effective for quick results.***

The project provides some subsidies for those HHs who are below the poverty line. Those subsidies are specially provided to the HHs for major three purposes: **(a) household sanitation**-*construction of toilet, bio-gas, platform of water tap*; **(b) Safe water**-water *pump installation, and using of water filter*; **(c) Kitchen management** – installation of Improved Cooking Stoves (ICS).

The level of amount of subsidy provided by the project is different in each community. It is decided by the Project Management Committee (PMC)[3] on the basis of the beneficiaries' need, their economic and social status. In average, the project has provided 45-50%[4] subsidy and other remaining cost has been beard by the beneficiaries themselves. After receiving the subsidies, the community people became active for construction of toilets, using filter water and ICS. In the community, those subsidies played a key role for construction of toilet in very short period. Now, almost all HHs of the targeted areas have their own toilet, water filter and finds at least one ICS using in their kitchen. With this learning; the Sanitation Master Plan developed by the Government of Nepal also advocates for other I/NGOs working in WATSAN for varying level of subsidies depending on the economic condition of the HHs.

[3] The project has formed PMC in the municipality level with chaired by CEO. In PMC, there are representative from the local level (one member from each TLO). PMC is a coordination unit which takes participation for planning and monitoring of the project's intervention.

[4] It is an average calculation of the subsidy provided by the project. The subsidy amount is calculated on the basis of total cost and beneficiaries' contribution.

2.3 Participation, Collaboration and Institutionalisation

***Key Lesson*: Working directly with government stakeholder as a major counterpart support for legalise the project's concept and promote for replicate the best approaches in broad areas.**

The project works closely with Government stakeholders. The municipalities are the counter part of the project. The project supports for fulfilling the basic need of residents of those municipalities: "providing the sanitation and hygiene facilities to their people". WATSAN master plans of municipalities are prepared jointly, and project interventions are carried out on the basis of that master plan. On the other hand; those municipalities who have prepared WATSAN master plan, they are also coordinating with other organisation for implementing their intervention on the basis of that plan.

CEO of Bharatpur Municipality presenting suggestion for institutionalizing WATSAN into municipality and accessing resource, Kathmandu.

The project approach found effective for those municipalities, and they are replicating this approach in their further plan and also advocate for other municipalities for applying this concept in their WATSAN plan. Different interaction, meeting and workshop were organised with the lead of MoLD in district, regional and central level for institutionalising WATSAN master plan into the planning process of the local authorities.

***Key Lesson*: Involvement of community people in project intervention helps to build the confidence of community**

Greater the involvement of local institutions in designing project activities, purchasing services and implementing such activities, higher is their acceptance of such interventions. This also builds the confidence of these groups through leadership development and enhancement of their management capacities along with exposure to wider community and direct interaction with stakeholders. Networking and collaboration among beneficiaries and stakeholders builds a strong foundation for horizontal dissemination of technology at local level which is always a major factor after project completion and a pivotal aspect of sustainability. Improved level of confidence of beneficiaries has helped in channeling of resources from stakeholders towards their need. With the formation of Project Management Committee (PMC) in municipality level and Tool Lane Organisation (TLO) in community level, the project has enhanced the participation of local people in project intervention process.

***Key Lesson*: acceptable and useful concept can easily replicate**

Learning and doing is one of a crucial part for development sector. Every project or programme provides specific guidance for further implementation of another project/programme. As the same way, by implementing the project intervention, the best

learning can also replicate in another areas. When talking about the project modality of SWASHTHA, it focuses on integrated approach for promoting healthy life in communities, which becomes successful in the project areas. By addressing this learning, not only the government stakeholders (municipalities) apply its modality in WASTAN plan, but the partner organisation (ENPHO) has also developed some projects with applying this concept for implementing in another districts. In 2012, ENPHO has received financial support from USAID for implementing SU-SWASHTA project in two cluster of Surkhet District where 550,00 rural people will be benefitted.

2.4 Integrated approach

***Key Lesson*: Integrated approach gives better health outcomes in comparison to sector-wise approaches.**

It is clear that water, sanitation, hygiene and indoor air have close relationship with human health. However, improvement of these entire sectors leads to better health outcomes. In many cases, an individual or an organisation can or may not address these entire sectors and in this case the best option is a collaborative effort of different stakeholders.

This integrated approach takes multi-sector environmental issues in a holistic way (air, water, sanitation, solid waste and storm drainage) and as a starting point for them to be able to bring positive changes in their health because of improved environmental infrastructures. The project works to bring together a range of activities which complement and build on each other in reducing environmental threats and improving environmental health of the residents including poor of selected project areas. The project communities have now better access to safe drinking water, sanitation facilities (knowledge and skills to better sanitation) and are experiencing benefit with the improved sanitation practices contributing to better health outcomes by reduction of diseases caused by water and poor sanitation.

2.5 Technology Transfer

***Key Lesson*: Already proven technology should again make testing prior to apply in the field.**
Project interventions try to make the beneficiaries familiar to use on the new and proven technologies relating to their health improvement. The major two technologies promoted by the project are: **(a)** Improved cooking Stoves (ICS), and **(b)** water filters. It is said that these two technologies are already tested and proven. During intervention, the project also provides relevant subsidy to promote these technologies among the beneficiaries. But when observing in the field, it is found these technologies are not totally successful; beneficiaries are replacing these technologies with the traditional one and somewhere they are trying for another options.

When the beneficiaries found that CS filters have some problems in its maintenance and it is also not durable, they replace this filter with other types of filters (candle filter, Bio-sand filters).

The scenario of CS Filter:
The project promoted to use CS (Colloidal silver) clay filter in the beginning of the project intervention. About 30% of total beneficiaries adopted this technology. In the beginning this filter became popular because of its dual benefits: disinfects the biological contamination and filter turbidity of water and makes water cool. But the project did not measure its durability and accessible maintenance options. After 6 to 12 months of using this filter, people face the problem in its water tap and its durability but they did not find any option to maintain it easily in the local level. In this context, beneficiaries again try for other options. Now, it finds that more than 95% of the users of CS filter are adopting other types of water filters.

When observing in the field, **ICS** is also not found properly acceptable in the typical *Terai* community. The major factors behind this un-acceptability by the communities are: their cooking habits and structure of houses (*most of the houses are made of clay*). *"Some beneficiaries also said that ICS consumes more fire-woods and takes more time for cooking as compare to tradition cooking stoves. In this context, they automatically divert to previous and traditional types of*

Changed shape of ICS in a community of Tikapur municipality

stoves, and somewhere it is also found that they made changes the shape of ICS and made them as traditional stoves."

A recent study[5] also shows that 28.6% of the beneficiaries who made the ICS don't exit while observing their home. The study further explains that fixed ICS were broken because of its improperly working chimney made up bamboo which caught fire due to the household structure (*i.e., houses made of clay*). The study also states that only 53.6% beneficiaries (*who made ICS*) regularly use it, and 43.7% use it as an alternative means.

Key Lesson: ***Appropriate small technology can promote as enterprise in the community level.***

The project provides some subsidy to distribute bio-sand filters[6] in some communities of Guleriya and Tikapur municipalities where the problem of arsenic is severe. This filter becomes very appropriate and useful for the community, and they also accept it very easily.

During promotion of this filter, PMC had selected some beneficiaries form field level and trained them for constructing the filter. By adopting this knowledge and skill, some women of Tikapur municipalities has promoted an enterprise in the community: they produce bio-sand filter in the community level and sell them to others.

Asoje Gharti Magar*, residents of Bagnaha Tikapur is a FCHV. She received a 5 days training for constructing Bio-sand filter in 2010. Now she leads a small women group of enterprises for constructing and promoting bio-sand filters in communities. Their groups have already sold 180 bio-sand filters in NRs 1500-1800 per filter.*

[5] "Study on ICS and its Impact on Health", conducted on August 2012

[6] Bio-sand filters are typically constructed from either concrete or plastic which removes pathogens and suspended solids through a combination of biological and physical processes that take place in the bio-layer and within the sand column.

3. Conclusion and way forward

The future path of the SWASTHA project depends on whether or not the community people can sustain and maintain the project interventions carried out by the project in the targeted areas. The approach and lesson should be owned and replicated by Practical Action when other donors come looking for the opportunities for other projects.

Practical Action has also projected to provide direct services for 150000 urban people on safe drinking water, sanitation and waste management.[7] In this context, the lesson from the SWASTHA Project can provide further guidance for planning and designing the projects/programme related on water and sanitation.

[7] Practical Action Nepal Country Strategy Paper 2012-2017