

Report-1

A Detailed Review of WatSan Projects

BANGLADESH:
Addressing Indoor Air Pollution (IAP)

A PROJECT JOINTLY UNDERTAKEN BY:
Village Education Resource Center (VERC)
and
Winrock International (WI)

TECHNICAL SUPPORT PROVIDED BY:
Local Government Engineering Department (LGED)

SPONSORED BY:
The World Bank, Dhaka, Bangladesh

DATE: 15 JUNE 2008

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LIST OF ACRONYMS

ARECOP	– Asia Regional Cookstove Program
ADP	– Annual Development Plan
BCSIR	– Bangladesh Council for Scientific and Industrial Research
BRAC	– Bangladesh Rural Advancement Committee
CBO	– Community Based Organization
CLTS	– Community Led Total Sanitation
CAP	– Community Action Plan
CV	– Community Volunteer
CWAC	– Community WatSan Action Committee
CEA	– Country Environmental Analysis
DALY	– Disability Adjusted Life Years
DANIDA	– Danish International Development Agency
DPHE	– Department of Public Health Engineering
DSTF	– District Sanitation Task Force
DISHARI	– Decentralized Integrated Sanitation Hygiene and Reform Initiative Project
ESMAP	– Environment Sector Management Assistance Program
GDP	– Gross Domestic Product
GHG	– Greenhouse Gas
GOB	– Government of Bangladesh
GTZ	– German Technical Assistance
HEDON	– Household Energy Network
HYSAWA	– Hygiene Sanitation and Water Program
IAP	– Indoor Air Pollution
ICDDR,B	– International Center for Diarrhoeal Disease Research, Bangladesh
KII	– Key Informant Interview
KPT	– Kitchen Performance Test
LGED	– Local Government Engineering Department
LGI	– Local Government Institutions
M&E	– Monitoring and Evaluation
MDG	– Millennium Development Goal
MPA	– Methodology for Participatory Assessment
NGO	– Non-Governmental Organization
PNGO	– Partner NGO
PRA	– Participatory Rural Appraisal
PAC	– Para Action Committee
PCIA	– Partnership for Clean Indoor Air
REIN	– Renewable Energy Information Network
SNV	– Netherlands Development Organization
TSC	– Total Sanitation Campaign
SACOSAN	– South Asian Conference on Sanitation
SEDA	– Socio Economic Development Agency
SSI	– Semi-Structured Interview
IDCOL	– Infrastructure Development Company Limited
USTF	– Upazila Sanitation Task Force
UP	– Union Parishad
UNICEF	– United Nations Children’s Fund
VERC	– Village Education Resource Center
USAID	– United States Agency for International Development
UNO	– Upazila Nirbahi Officer
WASH	– Water, Sanitation and Hygiene Program
WASA	– Water Supply and Sewerage Authority
WSTF	– Ward WatSan Committee
WB	– World Bank
WBT	– Water Boiling Test
WHO	– World Health Organization
WatSan	– Water and Sanitation
WSTF	– WatSan Sanitation Task Force
WSP	– Water and Sanitation Project

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Executive Summary

Background

While appreciating that the issue of indoor air quality has, in recent years, emerged as a major health concern in both the developed and the developing countries of the world, the World Bank in collaboration with the Government of Bangladesh (GoB) undertook and accomplished the necessary task of attempting a Bangladesh Country Environment Analysis (CEA), a major finding of which study also convincingly pointed at the dire fact that majority people in the country living in the rural areas are putting up with poor indoor air quality only because they are continuing with the traditional cooking practices.

The study also found that the indoor air pollution (IAP) exposure risks can also be mitigated by the villagers at feasible cost, if self interest motivates them, and they are convinced that the problems are serious, like problems and diseases caused by poor sanitation and bad hygiene practices. As the community led total sanitation (CLTS) approach ignited people to undertake sanitation programme at their own initiative, for own good, based on community organizations and own resources, supported and facilitated by the NGOs and LGIs, the IAP risks can also be mitigated with community-led approach through an integrated institutional arrangement (GO-LGIs-NGOs-CBOs and Private sector) and effective financial policy from the government and donor communities.

The CLTS is now a time tested effective approach for undertaking community development initiatives by interested activists. The World Bank is of the view that the CLTS may also be effective in addressing the IAP reduction activities in Bangladesh. This study is a way forward to this effect.

The World Bank has held a series of dialogues with LGED, VERC and Winrock International in the second half of the year 2007 and a consensus was reached on undertaking a study across the GoB-NGO interventions on clean energy technologies viz ICS, biogas and solar panel promotion.

A team has been formed with relevant experts from LGED, Winrock International, ICDDR,B and VERC under the consultative guidance of the World Bank started working and duly presented the inception report, their 1st assignment, identifying the tasks and responsibilities for carrying out the review. A rapid assessment was fielded to explore the potentiality of the various sectoral actors working in addressing the health hazards caused through biomass energy consumption at the household and institutional/industrial levels.

The rapid review covered 5 NGOs, viz. WSP World Bank - DISHARI Project, Partnership Programme of NGO Forum, BRAC-WASH Project, DANIDA-HYSAWSA Project and VERC-CLTS Programme, identifying four organizations for carrying out a detailed review.

The detailed review was carried out through exposure visits and holding views sharing with the community people in the target NGO intervention areas of Saidpur, Sitakunda, Manikganj, Gazipur, Narayanganj and Naogaon. Roundtables and workshop sessions were held with the elected Local Government representatives, religious leaders, community elite, representatives of all segments of people and the civil society. From these sessions were obtained the perceptions of the participants on the issues of fuel energy use, relevant technologies and the effects on health of women and children in the form of air pollution.

Objectives

The purpose of the detailed review was to understand the select organizations' potential programmes in sanitation area and to identify service delivery models that can be adopted in the IAP pilot project. The main component of this project will be dissemination of clean energy technologies viz. ICS, biogas plant and solar panel, to reduce IAP in rural areas. Three different locations of clean energy technologies and

awareness raising had been selected for conducting the study in the form of exposure visit, thematic roundtable and workshops. The locations are:

1. Saidpur Upazila, District: Nilphamari
2. Sitakunda Upazila, District: Chittagong
3. Rajshahi Sadar Upazila, District: Rajshahi

The aim of this initiative is to ignite communities towards adapting the best practices of clean energy technologies and to develop commitment particularly among the local government institutions and policy makers for participation in IAP reduction programme.

Study Methodology

Four organizations were selected for carrying out a detailed review. The organizations selected have proven expertise in implementing WatSan and Hygiene Promotion programmes by ensuring successful community mobilization towards a desired change. The best practices of the four organizations were critically and intensively studied/reviewed by using various participatory methods like Focus Group Discussion (FGD), Observation, Transect Walk, Key Informants Interview, Spot visits, holding consultation session, Small Group Discussion, Thematic Round Table, Observing and Studying IEC Materials and in depth analyses, Capacity Building Process, Gender and Equity aspects, Governance, Financing Mechanism and Sustainability issues. Moreover, extensive desk studies and literature review have been carried out as part of the methodology.

The effectiveness of the approaches and the related scaling up processed were assessed based on the following framework indicators:

- Ultimate beneficiary, involvement of different stakeholders, aspect of governance and equity, self-financing and how they addressed the needs of the ultra poor.
- Access of community people to basic technology options and skills, availability of materials at the users' doorsteps.
- Level of success and sustainability, factors behind sustainability.

Overview of Selected Watsan projects

Four projects were selected for the detailed review because each has its unique approach for implementation of Watsan programmes. The projects are as follows:

- i. BRAC-WASH Project**
- ii. WSP World Bank-Decentralized Integrated Sanitation Hygiene and Reform Initiative (DISHARI) Project**
- iii. VERC-Community Led Total Sanitation (CLTS) Project**
- iv. SEDA- Community WatSan Programme Supported by NGO-Forum**

i) BRAC-WASH Project

The project follows bottom up participation and planning through the WASH Committees formed at the village level, whose members represent the entire village including other committees or NGOs that may be active in the village. Participatory planning takes place, with the committee planning for the core activities under the project but also formulating plans for activities that reflect people's own situations and their own assessment. The UPs together with BRAC staff guide the programme in setting priorities and mobilizing the village committee.

ii) WSP World Bank-Decentralized Integrated Sanitation Hygiene and Reform Initiative (DISHARI) Project

Dishari is currently performing its activities in 80 Unions of eight Upazilas under five Districts: Gazipur, Jamalpur, Dinajpur, Nilphamari and Lalmonirhat of two Divisions: Dhaka and Rajshahi. Dishari-Decentralised Total Sanitation Project, a joint initiative of Dhaka Ahsania Mission, Plan Bangladesh, WaterAid Bangladesh and WSP-World Bank commenced in March 2004. The initiative was taken to generate progress towards achieving the total sanitation target of “Sanitation for All by 2010”. To achieve this goal, a major strategy was adopted to strengthen the institutional capacity of the local government institutions enabling them to play a steering role, with ensured participation and coordinated effort of NGOs, stakeholders, local functional departments of the GOB and the local communities.

iii) VERC-Community Led Total Sanitation (CLTS) Project

Activities of VERC CLTS programme are currently being carried out in 75 Union/Pourasavas in eight Upazilas in the Districts of Chapai Nawabganj, Naogaon, Chittagong, Cox’s Bazar and Bhola in three Divisions: Rajshahi, Chittagong and Barisal of the country.

The entry point of the programme is the community, each and every component of the programme being community based. The process involves community people in all aspects of problem identification, planning/resource identification, implementation, monitoring and evaluation based on their own perspectives. As a result, the community people gradually own the programme and thus sustainability of the interventions adopted is also ensured. Considered as components of the community, the local government bodies, NGOs, CBOs and other stakeholders are also involved in the process ensuring sustainability and efficiency of the programme approach.

The key activities involved are : entry PRA, formation of a WATSAN committee, meetings with the WATSAN committee, meeting with the community, children’s group formation, community cleaning exercises, construction and installation of hardware, health and hygiene education sessions and monitoring behaviour changes.

The outcomes identified in a total 2488 communities have shown that the 100% sanitation approach can bring about a significant improvement in the WATSAN situation in a community within 9 to 10 months. The approach works across a range of geographical and cultural areas and can be introduced in places where a household level approach has been previously used.

iv) SEDA- Community WatSan Programme Supported by NGO-Forum

NGO Forum is the apex networking service delivery agency of NGOs, CBOs (Community Based Organization) and private sector and civil society actors who implement sanitation (WatSan) programmes with the underprivileged and underserved rural and urban communities.

Socio Economic Development Agency (SEDA) is presently pursuing its activities in 119 villages, 08 unions, 04 Upazilas in Manikganj district as a partner of NGO Forum.

SEDA is a legal non-governmental organization dedicated to contributing to sustainable socio-economic development of the poor and the disadvantaged sections of the society.

Through implementing its programmes, SEDA aims at ensuring that the backward and downtrodden community people would be enabled to generate income and reverse their lot.

SEDA also works as a development partner of different stakeholders, monitoring collaboration and coordination with different agencies.

Working Strategy

- i. Develop and institutionalize alternatives in the field of people's participatory development approaches, methods and tools.
- ii. Building capacity of the development actors for playing the role of facilitating the participatory development process.

Overview of Total Sanitation Activities in Bangladesh

Though sanitation activities were first initiated in the country by the Government with WHO support during the 1950s (GoB and UNICEF, 2001), the overall sanitation situation has remained poor to date, the low sanitation coverage causing a serious public health concern. It is estimated that 67% of the total population have no access to hygienic latrine facilities. 71% of rural households and 40% urban households still practise open defecation or use unhygienic latrines, resulting in the incidence of diseases like diarrhoea, dysentery etc. killer diseases. Besides, lack of adequate sanitation affects the economy adversely in terms of productivity loss due to sickness and the overall quality of life, where the poor are the worst sufferers. Health statistics indicate that approximately 125,000 children below 5 years are die annually and 342 children are dying everyday in Bangladesh for lack of proper sanitation. Therefore, sanitation for all still remains a key challenge in Bangladesh.

Two of the Millennium Development Goals (MDGs) endorsed by the United Nations General Assembly in September 2000 are directly linked with sanitation aiming at reducing child mortality and improving environmental sustainability. Targets for achieving these goals are to reduce by two-thirds the under five mortality rate within 2015 through ensuring children's access to better sanitation. The Government of Bangladesh is also committed to achieving the Millennium Development Goals (MDGs) targets and it has taken a step further declaring that countrywide 100% sanitation would be achieved by 2010 i.e., ahead of the MDG time frame.

The Total Sanitation campaign has gained a tremendous boost through the South Asian Conference on Sanitation (SACOSAN) 2003. The Conference was held in Dhaka during 21-23 October 2003. The heads of delegation from the 09 countries participating in the Conference ratified and adopted **The Dhaka Declaration on Sanitation** - a landmark regional policy towards sustainable sanitation. The Conference unanimously agreed about adoption of all out efforts to uproot the practice of open defecation, to save one million children under the age of five dying each year of water and sanitation related diseases. The outcome of SACOSAN was the Dhaka Declaration.

To achieve the targets, The Government of Bangladesh has emphasised improving the situation as a national priority move, adopting various national policies and strategies to get rid of the practice of open defecation through ensuring access to sanitation for all. The Union Parishads at the grass root level, Upazila Parishad at the Upazila level and the Zilla Parishad at the district level have been entrusted with the responsibilities of implementing sanitation related activities for achieving the target.

As a result, considerable progress in sanitation promotion has been achieved. In the year 2003, the national sanitation coverage status was estimated at around 29% only, which increased to 86% by 2007.

Emergence of CLTS:

The CLTS was first pioneered in Bangladesh in 1999 and has since been widely adopted within the country and beyond, particularly in South and Southeast Asia and Africa. The CLTS has great potential for contributing towards meeting the Millennium Development Goals, both directly in water and sanitation, and indirectly through the knock-on effects in combating major diseases and improving maternal health.

One noteworthy feature of the CLTS is the "**absence of household-level subsidy**". Unlike earlier approaches, the process of behaviour change is initiated without external support to households. The CLTS advocates that financing latrine construction is not an issue; it recognizes that total sanitation can be achieved if every member of the community participates.

Analysis

Institutional Arrangements

It has been observed that a number of initiatives were in the past undertaken by government agencies and NGOs in Bangladesh but they did not sustain and could not bring about visible success as the implementation processes, especially the institutional arrangements to carry forward the interventions were not thoughtfully made. The institutions engaged for the purpose had little or no access to the end users/beneficiary people, the technological aspects received comparatively more attention from the policy people. The field level implementors' capacity also was not built for the purpose through required training and orientation.

INSTITUTIONAL ASPECTS AND LGI ROLES AND LINKAGES:

The NGOs successfully practising the Community Led Total Sanitation Approach in the country have rightly identified the institutions and have extended technical support enabling the directly implementing personnel to take part effectively in the implementation of sanitation programmes. The local government institutions involved in the CLTS process now are Upazila Sanitation Taskforce, Union Sanitation Taskforce and the Ward Sanitation Taskforce. The informal institutions involved include the CBOs formed in different names under different facilitating NGOs (Community WatSan Action Committee CWAC in VERC), Water Point Management Committee, Hygiene Education Group, Children's Group, Adolescent Girls Group for Reproductive Hygiene, School/Madrassa Management Committee, Market Management Committee, Rural Sanitation Engineering Group, Cultural Group and Hygiene Practice Monitoring Group, each being assigned with specific tasks of water sanitation and hygiene behaviour change promotion activities. Taskforces mainly steer the overall process. Thus the formal and informal institutions are interlinked with each other for planning, implementation, monitoring and evaluation of the WatSan activities in Communities/Wards/Unions.

Role of local government:

The local government institutions in Bangladesh, especially the Union Parishad (UP) has been playing a pivotal role in implementing local level development initiatives. In particular, it has a vital role in achieving the Total Sanitation by 2010 as per Dhaka Declaration on Sanitation by SACOSAN (2003) based on the slogan that it has to be "people centered, community-led, gender-sensitive and demand driven", which emphasized on principles that should facilitate the new paradigm, particularly on poverty, community participation, subsidy issues and recognizing the roles of local government bodies.

In the context, the Government of Bangladesh initiated several steps on the basis of Dhaka Declaration and declared a national programme to achieve Total Sanitation by 2010 which should be based on the following guiding principles:

- A target for total (100%) environmental sanitation in every Union Parishad;
- A demand based sanitation through awareness and hygiene education;
- Provision of option, choice based on affordability and no fixation on technology,;
- Minimum requirement is to effectively confine the excreta, and adopt an incremental improvement of technology overtime;
- Villagers should plan, implement and monitor under direct leadership of the Union Parishad/ local government;
- NGOs should act as facilitators in providing orientation of UPs, mobilization of communities;
- The Department of Public Health Engineering (DPHE) being the lead agency should provide technical oversight and coordinate the national programme.

(Proceedings, SACOSAN 2003, Local Government Division, MoLGRD&C, 2004)

The above principles have been incorporated into a National Sanitation Programme to ensure a sound approach for nation-wide scaling up of the programme. Accordingly, Sanitation Task Forces have been formed in 4,484 Unions, 507 Upazilas, 64 Zilas (District) and a National Sanitation Task Force at the DPHE. The National TASK Force, DSTF and UpazilaSTF have been monitoring the over all progress of the sanitation activities of the USTF and Ward Sanitation Task forces at village level which are being facilitated by the NGOs and other actors active in the sector.

Training and Capacity Building:

The CLTS has been a process of empowering community people through training and orientation on the WatSan issues. This is in fact a combination of efforts that require capacity enhancement at facilitating NGOs and capacity building of community institutions, stakeholders and catalysts. There are packaged training sessions for all the stakeholders involved. Most of the training packages include class room sessions and hands-on orientation. The training and advocacy interventions make stakeholders aware of the issues, resources, actors, exploring potentiality of building alliances and above all, the distinct and specific role responsibilities.

Monitoring and Evaluation:

Each component of activities under the CLTS is backed by effective participatory monitoring arrangement. The NGO facilitator of hygiene education session on completion of each day's session identifies the key behaviour change points and asks the participants by when the household members will adopt the practice and who is going to cross-check the progress in the community. Then the participants willingly take the responsibility indicating the number of households within reach for monitoring purpose. This way the practice monitoring is being carried out in communities in a self-supportive fashion.

The latrines installed in a community also require regular monitoring in respect of use and maintenance; this is done through the hygiene education participants in addition to children's group members. If any fault is detected, the same is brought to the notice of the household concerned for corrective measures. Water points are monitored by the water point management committee so that it runs smoothly round the year. Usually the monitoring task involves no cost at all under CLTS. Monitoring is also done by the Union Sanitation Taskforce to ensure quality of the reported progress. In fact, Monitoring is a tri-party arrangement including the facilitating NGO, Local Government Institution and the community level committees. The most important feature of community monitoring system is that the CWAC (CBO) monitors its own progress of performance and impact on health, simultaneously; the community is going through the participatory learning and action after the findings of monitoring and assessment. The progress of the Total Sanitation programme is being monitored from Upazila level through the Union Sanitation Taskforce and Ward Sanitation Taskforce, while the overall national performance and progress across the country is monitored by the national Sanitation Taskforce/Secretariat.

Key learning

- Focal point – CBO and LGI(UP)
- Partnership, networking and interactive institutional arrangements for the purpose – GO, NGO, LGI, private sector (local entrepreneur)
- Capacity building of the partners and stakeholders for empowerment, mobilization and sustainability
- Effective participatory monitoring at all levels a necessity

ECONOMIC AND FINANCIAL ASPECT:

Sanitation has always required commitments of substantial resource provisions at a single point in time, which does not generate obvious or immediate financial benefits. Therefore, paying for sanitation has always been viewed as a difficult issue in the sector. To be realistic, one can't avoid addressing the obvious relevant question as to where from and how one is supposed to manage the resources for

sanitation and hygiene promotion. Obviously, the answer is the paradigm shift as per Dhaka Declaration which says that it has to be “people centered, community-led, gender-sensitive and demand driven”, stressing simultaneously the principles facilitating the new paradigm, particularly on poverty, community participation, subsidy issues and recognizing the pivotal role of local government.

The Dhaka Declaration from the SACOSAN (2003) urged all concerned:

- To recognize the need for community subsidies for promotion, awareness, capacity building and the creation of funding mechanism for scaling up sanitation and hygiene programmes.
- To focus on understanding and creating demand, sustaining attitudinal and behavioural change and encouraging wider community participation and shun top-down approaches common to the subsidized sanitation programmes.

If the sanitation programmes is to be financed or subsidized, it is better to finance the overheads of the project, particularly the promotion activities, rather than subsidizing the construction of facilities themselves. Households can gain benefits from following sound sanitation and hygiene practices themselves, regardless of what other households do. Sanitation has significant convenience benefits which people are willing to pay for if suitable products and services are made available. It may be more appropriate and sustainable to subsidize the start-up costs (for example, for skill development training, capacity building of the stake holders etc.) of small business (entrepreneurs) to provide products and services than to subsidize the products directly.

Field findings revealed that hygienic pit latrine for fixed defecation can be constructed by spending Tk. 30.00 (DISHARI) or Tk. 80.00 (VERC) or Tk. 50.00 only. So, even the hard-core poor wouldn't really require any subsidy for hardware, if they want to gain self respect (CLTS approach) and ownership feeling.

Cost of technology:

It is evident from the field findings that Dishari designed 5 different models of sanitary latrines, and their installation costs varied in the range of Tk. 30.00-1400.00, VERC designed 6 different models of sanitary latrines and their installation costs varied from Tk. 80.00 to Tk 1400.00 and SEDA-NGO Forum designed 5 different models, the installation costs of which were from Tk 350.00 to Tk 3,500.00, all of which have been accepted by the community people. Dishari designed the cheapest model of sanitary latrine that costs about Tk. 30.00 only. Users who get to learn about the know-how can construct the latrines with assistance from their family members.

Willingness to pay for installing latrines

The CLTS approach doesn't attach much importance to people's willingness to pay for latrines, where communities themselves take the responsibilities for total sanitation coverage with their own resources (skill, knowledge and social capital) and where development partners provide support and assistance in community capacity building, mobilization and ignition process under the leadership of the LGIs. The CLTS approach is a holistic one, where the community is totally pro-active. The essential CLTS approach is mainly based on “self respect” and not on “subsidy”. When people are ignited, sensitized and mobilized, demand is created and eventually they invest in sanitation.

Investment of NGOs in sanitation in the study areas

The study findings showed that the software was the principal and top most component, where the NGOs invested in sanitation, particularly to achieve the national and MDG goals as per CLTS approach in accordance with the government policy.

Community investment in sanitation

A VERC study findings showed that in 2003 only 5% households of the study sample (424 households) used latrines and invested for latrine, whereas, in the end of 2006, 100% households there were found using hygienic latrines and everybody had stopped open air defecation.

This clearly marks the merit of the CLTS approach and makes one of its fundamental assumptions a reality that “*subsidy is not an issue for sanitation but collective community participation very much is*”. Further, improvement in sanitation generates economic return over the investment by reducing financial

losses caused by water and excreta borne diseases which influenced and ignited the user families to make the investments for better sanitation options.

People's travel in sanitation ladder

A study (Walking Through Sanitation Ladder, Saha S.K et. Al; VERC 2006) by VERC study also found how different strata of the households moved up along the sanitation ladder, from low cost sanitation options to the better and durable sanitation options from their own resources.

Therefore, financing from external recourses for the hardware particularly is not the key factor for the achievement of Total sanitation, but the investment from the community is the factor for the success, which is the elementary driving force of the CLTS approach.

It is evident that investment in sanitation is dependent on its approach. The top-down investment or 'Subsidy' is not the key to success, rather paradigm shift or investment from the community and 'No subsidy' and 'self-respect' were found to be the key factors of success of the CLTS approach which led to the nationwide achievement of 86.23% coverage by the year 2007.

Financial Mechanism

The CLTS approach introduced different sanitation technology options for the user community as per their affordability. In addition, it is making effective use of social capital for supporting the hard-core poor. However, the overall financial mechanism of sanitation is:

- Communities (individual households) invest in hardware installations and their repair and maintenance,
- Development partners invest in software activities, particularly in hygiene promotion, mobilisation, capacity building, entrepreneurship development and advocacy,
- Government and LGIs invest in both hardware and soft ware (hygiene promotion) for the hard-core poor as part of their safety-net programme,
- Micro-credit facilities are also available for financing the entrepreneurs as well as for installation of better and durable sanitation options.

Entrepreneurship development

Entrepreneurs in this sector are treated as small scale production units and as catalysts as well, who ignite others to install sanitary latrines. Field findings showed that 56 entrepreneurs were developed and trained in Sreepur Upazila under DISHARI project alone, out of which 45 persons were found marketing their products. The rest 5 were working as masons busy with installation and repair of the sanitary latrines. VERC trained 10 persons as entrepreneurs and all of them are operational in their business in Manda Upazila. Apart from those, 25 private latrine producers were found active in this business who sees this opportunity as their secondary source of income. SEDA trained 32 persons as entrepreneurs in Shibalaya Upazila and 24 of them were found active in their business.

Key Learning Points

- a. *As per the existing policy of the government, there is no subsidy for individual latrine installation.*
- b. The very CLTS approach is based on "self respect" not on "subsidy".
- c. Usually the users utilize their own fund for installation of latrines.
- d. Local innovations are actively encouraged to expand the range of options available.
- e. On the basis of local demand and on principle of market economy, local entrepreneurs have emerged who produce different options of sanitary latrine and its spares.
- f. Development partners invest in software activities, particularly in hygiene promotion, mobilisation, capacity building, entrepreneurship development, advocacy and networking.
- g. The CBO is the focal point under the leadership of the LGIs, particularly the Union Parishad.

- h. Investment in sanitation ultimately links with health economy and eventually to poverty reduction, addressing the relevant MDG target.

TECHNICAL ASPECT

Design and Performance Monitoring of Sanitation Activities:

The national sanitation strategy has emphasized a wide range of sanitary latrine technologies depending on different socio-economic and hydro-geological condition. The traditional approach has been to provide a few acceptable technological options such as the concrete ring-slab with water seal. In a move away from this approach where a single latrine design is advocated, a wide range of hardware options have been developed and users can choose an appropriate model based on their affordability. VERC found that there are about 30 options innovated and used by the community people.

It has been observed during field survey that people who at the beginning install lowest cost latrine in his house, moved to the higher rungs along the ladder for convenience.

The raw materials for sanitary latrine are indigenous and locally available.

Each and every component of activities under the CLTS is backed by effective participatory monitoring arrangement.

The latrines installed in a community also require regular monitoring in respect of use and maintenance; this is done through the hygiene education participants in addition to children's group members. If any fault is detected, the same is brought to the notice of the household concerned for corrective measure. Water points are monitored by the water point management committee so that it runs smoothly round the year. Usually the monitoring task involves no cost at all under the CLTS. Monitoring is also done by the Union Sanitation Taskforce to ensure the quality of the reported progress.

Community Managed Pipe Water Supply (BRAC):

The study was carried out in a community that has been supported by BRAC to have a piped water supply system in a peri-urban arsenic affected area. The intervention was found addressing the safe water needs as per GoB policy of partnership between the service providing agency and community in need. Non-hardware items are not that strong in the intervention area and the study could not dig out significant information. The study team could conduct an assessment on the basis of interviewing managerial and implementation staff and reviewing documents as the project was not yet fully launched.

COMMUNITY ENGAGEMENT:

Community Organizations and Networks

The processes of community engagement in all the studied organizations were almost similar, which consisted of ensuring people's participation in all the project processes which usually start through the holding of an Entry PRA session for entry into a community. VERC starts with the community people and simultaneously it initiates sharing with the Upazila and Union Sanitation Taskforces so that whatever success is achieved can be readily shared by the community catalysts in the Upazila and Union forums. In case of DISAHRI, this initiation process starts through holding workshop with the Upazila Sanitation Taskforce giving emphasis on GoB interest and policy/strategy issues to activate the tier. SEDA goes through holding orientation sessions making use of the PRA tools. The UP members as participants of the session prepare respective Ward Level action plan for holding community level workshops to raise awareness in the community people in general and help formation of a CBO named Community WatSan Committee. As regards involvement of other actors like children and women's group - VERC, SEDA and DISHARI follow almost the similar strategies. In case of VERC, the CBO (Community WatSan Action Committee – CWAC) decides about the number of the hygiene education centres considering the easy access of participants and coverage of households which is finalized by the frontline staff in consultation

with the women participants. With BRAC, the project process starts with sharing sessions organised by the frontline staff members identifying the problems of say, arsenic contamination in ground water source and finding out alternative technologies of mitigation with cost benefit analysis.

Process of CBO Formation:

The outcome of situation analysis in the Entry PRA session ignites community people to have change of the WatSan situation of the community and to this effect, they form a CBO (VERC terms it as Community WatSan Action Committee – CWAC, NGO Forum terms as Village Development Committee-VDC; Dishari says it as Para Action Committee-PAC) to take on the responsibility on behalf of the community. **Venn diagram** is exercised at this stage for the purpose of committee members selection.

Resource Mobilization at Community Level:

Community ownership is the most important point of the CLTS implementation. Facilitating organizations like VERC is able to achieve 100% latrine installation coverage with their own resource without subsidy and the support from outside.

Implementation Arrangement:

When the action plan is prepared considering the number of households, population and geographical spread of the community, wellbeing status of people, activities to be done for the improvement of sanitation status, resources available within the community, with the support giving NGO and from local government, responsibilities like monitoring of progress, assigned to individuals and timeline within which the activities will be performed, the committee takes up latrine installation programme at the 1st instance. The trained catalysts (ultimately named as Rural Sanitation Engineers) extend technical assistance to households where necessary and complete the latrine installation task. The other important task the committee initiates is hygiene education for all the women of the community so that all the households get access to hygiene messages and hygiene practice is taken up by all the individuals. The CBO also takes care of the common places to ensure cleanliness and proper disposal of garbage. Institutions are also brought under coverage of sanitation through discussion with the respective management committees. To this effect, hygiene education is imparted initially by the NGO staff members for practice promotion and monitoring of actions/installations in the community. Virtually, the CBO of the frontline is the prime mover of activities under CLTS process.

Awareness Development

Ignition Point for change in behaviour:

The Entry PRA exercise is used for ignition in communities to install use and maintenance of hygienic latrine, safe water point and for changing behaviour at personal and domestic levels.

Process for Community Mobilization:

Related PRA tools and techniques are used for community mobilization. The following PRA and other participatory techniques are used at different steps and stages of community mobilization:

- Transect walk
- Social mapping
- Wellbeing ranking: seasonality trends calendar
- Open defecation site visit
- Feces calculation
- Flow chart analysis
- Drawing action plan

Role of Women

The CLTS emphasises active involvement of women in the programme process. They are in the forefront of interventions that start from entry into a community in the form of the Entry PRA. The women play a pivotal role in the community through the community based participatory mechanism. Their role also cover the implementation of improvement of behaviour practices, cleaning installed latrines, safety of safe water sources, safe water uses practice promotion and improvement of domestic and environmental hygiene.

Key Learning Points:

- Local CBOs/ clubs, LG members and social elite etc. are engaged in community mobilization.
- Ward level committee plays role in awareness raising on the CLTS
- LGI and NGO collaboration is effective in making the CLTS meaningful
- For establishing gender parity, both men and women are actively involved
- Courtyard meetings with vulnerable mothers, LGI members and social elite are essential components of community mobilization
- Folk music, drama, exhibition of short films and publicity on electronic media and in newspapers can help create awareness among people more effectively
- Exposure visits, thematic roundtable conferences and workshops on the CLTS approach are effective in making it sustainable for public awareness and wider alliance building.

SCALING-UP AND REPLICABILITY

Scaling up:

The multiple approaches and diversity, all adhering to the non-negotiable principles and sharing of learning and experience among the organizations, people and institutes are important in order to do better for scaling up the CLTS as a national programme.

Community based participatory approach with bottom-up planning, successful application of MPA and PRA tools for community ignition, situation analysis, planning, implementation and participatory monitoring and evaluation are important elements considered while scaling up the programme.

Community catalysts, private sectors (local entrepreneurs), NGOs, LGIs and finally the public sectors (concerned Government Departments, viz., DPHE) played their expected roles in scaling up and replicating the programme in other areas. Above all, GO – NGO – Private sector and CBO linkages, institutionalization of these linkages is an important factor in scaling up of the CLTS programme.

Learning showed that the integrated institutional approach is another key element towards scaling up and attainment of sustainability of the CLTS.

The success of the CLTS programme ultimately led to the alleviation of poverty and establishing healthy society.

Key Lessons and Recommendations

On the basis of the study findings and analyses of the detailed reviews of projects and exposure visits, thematic round table and workshops, the following recommendations are made for consideration while designing the future pilot IAP project.

Key Lessons Learnt:

The key lessons from the WatSan Review projects are as follows:

- A key feature is empowering communities to help themselves, and a shift from technocratic and financial patronage to participatory approaches. This requires a change in approach from training and management to an emphasis on empowering communities and strengthening local institutions.
- One noteworthy feature is, the absence of household-level subsidy. Unlike earlier approaches, the process of behaviour change was initiated without external financial support to households.
- By creating awareness within communities, a change in mindset is achieved. The shift from open defecation to fixed spot defecation is irreversible as, in addition to health benefits, it provides privacy and safety and people are likely to find it difficult to regress to the traditional practices which only bred diseases and sufferings.
- The old mindset of promoting a single model approach for technology has not been advocated. Rather, a variety of innovative technology options were made available on the ground. Households were at different levels of the sanitation ladder, and many had made a gradual shift from a low-cost model to a more durable one. Families are proud to show off their latrines as status symbols. Typically, a richer household allows access to members of a poorer household.
- The effect of peer pressure and participatory monitoring systems have ensured sustainability. Innovative systems are being used to police open defecation, for instance, through watchmen and children's groups.
- The variety of sanitation equipment on sale in the roadside shops indicates that there is a significant demand in areas. The introduction of cheaper materials and of multiple technology options have increased the demand, as a growing number of users are able to access the market.

Recommendations

A. Institutional Arrangements:

- Existing CBOs/new CBOs will be responsible for implementation of clean energy technologies at the grassroots level.
- Linkages with CBO-NGO-LGI-GO and private Sector (Entrepreneurs) is elementary for institutionalization of pilot IAP project.
- Users' committee should be formed as the CBO where women and adolescents will play active roles.
- Health Department, DPHE, LGED, BRDB and Ansar-VDP can be integrated with the IAP pilot project

B. Economics and Financial Aspects:

- Investment and fund support should be provided from the financing organizations for entrepreneurship development
- Micro credit facilities should be provided for installation of clean energy technologies.
- Cost of clean energy technologies should be affordable for all sections of people of the community. VAT, Govt. taxes etc on solar panels may be exempted.
- For popularization of biogas plant and solar panels, subsidy may be provided, so that larger number of community people can enjoy the facilities of clean energy technologies.

C. Technology:

- Arrangements of clean energy technologies should be identified to include in the IAP pilot project for implementation.
- Clean energy technologies should be affordable and low-cost to be accessible to all segments of people in the community.

- Skilled technician should be developed for installation of clean energy technologies in the users' premises.
- Users of clean energy technologies should be given short training on how to repair and maintenance of the technologies.
- Local entrepreneurs should be developed at the grassroots level for ensuring supply of the accessories of clean energy technologies to the door-steps of users.
- Community based Bio-gas plant should be introduced in the community and popularized

D. Community Engagement:

- Local CBOs/ clubs, LG members and social elite can be engaged for community mobilization.
- Ward level health committees can be engaged for awareness raising on the IAP project.
- LGI and NGO collaboration is needed in order to support and facilitate the IAP project.
- Teachers of different educational institutions, religious, social and other opinion leaders should be involved in the process of popularization of the IAP project.
- The CLTS approach has been found effective and well accepted by all stakeholders; hence adoption of this approach is recommended for implementation of the IAP project.
- Restaurants, tea stalls and small industries using traditional fuel for cooking and other heating purposes should be included in the IAP project.

E. Scaling up and Replicability

- Capacity building of CBOs and other local committees should be strengthened for better implementation of the pilot IAP project.
- Benefits of clean energy technologies should be presented before the community people through street drama, folk songs and cultural activities for scaling up the project.
- More exposure visits should be arranged to share the experience and learning about the clean energy technologies.
- LGI involvement would be extremely helpful in awareness raising and implementation of the pilot IAP project.

1. Background:

The issue of indoor air quality is becoming a major health concern across both the developed and developing countries of the world in recent years. To this effect, the World Bank in collaboration with the GoB has completed a Bangladesh Country Environment Analysis (CEA). A major finding of the study reveals that majority people in the country live in the rural areas and compulsively suffer poor indoor air quality due to traditional cooking practices. Domestic cooking using traditional cook stoves with biomass fuels is the main factor behind indoor air pollution in rural areas of the country. As women are responsible for cooking, so, they along with their children are directly affected by indoor air pollution. Many other similar studies and their findings have drawn attention of all concerned.

According to the WHO Global and Regional Burden of Disease Report, 2004, acute respiratory infections from Indoor Air Pollution (IAP pollution from burning wood, animal dung and other biofuels) are estimated to kill a million children annually in the developing countries. This has prompted the World Bank and other international development institutions to identify reduction of IAP as a critical objective for the coming decade (World Bank, 2001). Previous World Bank Research in Bangladesh, using the latest air monitoring technology and national household survey has found that IAP is dangerously high for many poor families. Studies and existing literature on interventions to promote clean fuel and improved stoves found that poor families are rather reluctant to adopt innovations that are unfamiliar and not supported by existing services and costly to maintain as well.

The study also found that IAP exposure risks can be mitigated by the villagers at feasible costs, if self-interest motivates them, and they are convinced that the problems are pretty serious, similar to the problems and diseases caused by poor sanitation and bad hygiene practices. As the CLTS approach ignited people to undertake sanitation interventions at their own initiatives, from self-interest, based on own community based organizations, supported and facilitated by the NGOs and LGIs, the IAP risks can also be mitigated deploying community led approaches through integrated institutional arrangements (GO-LGIs-NGOs-CBOs and Private sector) and effective financial policy from the government and donor communities. (Dasgupta S., Huq M., Khaliquzzaman M. and Wheeler D.; Improving Indoor Air Quality for Poor Families: A Controlled Experiment in Bangladesh, World Bank, 2007)

BCSIR developed a number of cook stove designs that are suitable for household level to semi-industrial heating purposes and thus fit to address the effects of pollution hazard on health. The dissemination of both ICS and biogas plants in the country has been chosen and adopted by the organizers of training courses, as well as for demonstration and installation of these technologies in the premises of the users by skilled technicians. The government organizations and NGOs undertook a number of projects for dissemination of ICS and biogas plants in the country but visible and lasting improvement in the situation or positive changes are not that visible because of a number of limitations. The reasons behind are believed to be not adopting appropriate strategies and methodologies while implementing the interventions. The current assignment is aimed at identifying the constraints in respect of dissemination of ICS and biogas use and to suggest mitigation measures for consideration and incorporation into the future IAP reduction programmes.

VERC innovated CLTS approach is widely known as Community Led Total Sanitation – CLTS which follows community participation at all the stages of planning, implementation, monitoring and evaluation. The tools and techniques that are used in the program have proved to be effective in other community based development interventions including strengthening of local government, non-formal education, community based mother and child health interventions including those meant for ICS promotion for IAP reduction. Through exchange of information and exposure visits and staff training, the CLTS approach has been adopted by many NGOs working in the sector along with a number of INGOs and donors. CLTS is now widely known and practised by many in the region and other continents as well. The sanitation strategy of Bangladesh Government document has adopted well the key lessons of CLTS (published in 2005). It should be further mentioned here that World Bank Delhi and Dhaka offices jointly extended technical support to scaling up the innovation in India and Bangladesh. This was done through exposure visits and sharing workshops participated by representatives from line organizations of the Governments of India and Bangladesh along with NGO representatives from VERC intervention area communities. At a later stage, the World Bank also extended similar support to Pakistan. This type of cross-sharing through

exposure visits, staff training and workshops introduced the CLTS in a wider domain. CLTS is now a time tested effective approach to undertake community development initiatives by interested activists. The World Bank is of the opinion that CLTS may also be effective in addressing IAP activities in Bangladesh. This study is a way forward to this effect.

Series of dialogues have been held with LGED, VERC, Winrock International by the World Bank during the second half of the year 2007 and a consensus was reached to undertake a study across the GoB-NGO interventions on clean energy technologies, viz ICS, biogas and solar panel promotion in Bangladesh. A TOR was also developed by the World Bank indicating the modus-operandi to this effect. In line with that, a joint team of relevant experts from the LGED, Winrock International, ICDDR,B and VERC under the consultative guidance of the World Bank. The inception report was the 1st assignment for the team consisting of identifying the tasks and responsibilities for carrying out the review of activities in the country. A rapid assessment has tried to explore the potentiality of the sectoral actors mainly working in addressing health hazards caused through biomass energy use at the household and institutional/industrial levels with a view to identifying the actors and for carrying out a detailed review of prevailing interventions. Based on the findings, a piloting initiative has been envisaged to be designed for implementation by the LGED.

The task was initiated by holding a national level workshop in Dhaka, the capital city of the country where the line ministry/department representatives of the government took part along with the concerned and relevant NGO experts as well as WHO, UNICEF and World Bank representatives. This event helped to draw an overview of the situation of addressing the issue of indoor air pollution and compilation of views expressed by the participants in terms of scientific paper presentation. The recommendations were taken to figure out the course of actions for the study initiative. The occasion was addressed by two of the honourable advisers to the present caretaker government.

The rapid review has covered (5 NGOs) WSP World Bank - DISHARI Project, Partnership Programme of NGO Forum, BRAC-WASH Project, DANIDA-HYSAWSA Project and VERC-CLTS Programme and has identified four organizations for the detailed review. The rapid review report was submitted to the World Bank on 31 October 2007. The rapid review was mainly carried out by holding talks with key staff members of organizations working at Head Office level, review of programme documents, consulting intervention area people, recording observations at the field level and holding consultation sessions at the central level.

The detailed review, the last leg of the exercise for the study team to be carried out was accomplished through exposure visits and sharing experience and knowledge with the community people in the target NGO intervention areas of Sayedpur, Sitakunda, Manikganj, Gazipur, Narayanganj and Naogaon. Roundtables and workshop sessions were held with the elected Local Government representatives, religious leaders, members of the local elite, all segments of people and professionals and civil society representatives. These sessions helped exploring their views on the issue of fuel energy use, technologies and the effects of air pollution on the health of women and children mainly. There was special scope for exchange of ideas between catalysts/users, LGI representatives from CLTS working areas and ICS/IAP reduction intervention areas of the country.

2. Objectives:

There has been considerable progress achieved in rural sanitation in the country. The local union parishads and NGOs played the key role of facilitator in this programme. Now the people in rural areas are enjoying the benefits of improved sanitation. In Bangladesh, about 90% families use traditional fuels for cooking and other heating purposes. Inefficient burning of traditional fuels in cook stoves cause indoor air pollution that directly affects the health of children and mothers. To combat the problem, BCSIR developed series of ICS designs that save fuels and can reduce IAP. In the last decade, a number of projects were undertaken by the GoB and NGOs for dissemination of the ICS technology across the country. However, the progresses of these projects are not up to the mark. The LGED is planning to implement a new generation pilot project aimed at reducing IAP in rural areas using an approach similar to that of CLTS.

The purpose of this report is to review some potential programmes in select sanitation intervention areas and to identify some service delivery models that can be adopted in the IAP pilot project. The main component of this project will be the dissemination of clean energy technologies viz. ICS, biogas plant and solar panels with a view to reducing IAP in rural areas. For awareness raising on clean energy technologies, three different locations of the country have been selected for conducting the study in the form of exposure visits, thematic roundtables and workshops. The locations are:

1. Sayedpur Upazila, District: Nilphamari
2. Sitakunda Upazila, District: Chittagong
3. Rajshahi Sadar Upazila, District: Rajshahi

The aim of this initiative is to motivate and encourage communities towards adapting the best practices of clean energy technologies and to develop commitment particularly among the local government institutions and policy makers for participation in IAP reduction programmes.

3. Study Methodology:

i. Approaches

Both VERC and Winrock jointly formed a review and documentation team comprising technology expert, programme specialist, institutional development specialist, financial analyst and experienced front line organizers for reviewing and assessing the project documents, related literatures, planning documents, selected interventions, implementation strategies, methods, tools and techniques of WatSan and Hygiene Promotion and Indoor Air Pollution (IAP) programmes with a view to putting the appropriate ones into practice for promoting clean energy technologies i.e. use of ICS, biogas and solar devices. Some dedicated and potential catalysts were selected for involvement in the review process to provide backup support for effective assessment and documentation of the best practices. According to the developed guidelines and un-structured questionnaire, the review and documentation team has studied literature, and documents, held dialogue with related officials of select organizations and accumulated need based information for designing of the pilot IAP project. Then the review team engaged in carrying out the detailed review following the set methodologies and collected related information. Two exposure visits, round table and district level workshops were organized and most useful backup support of the Union Parishad and Pourashava Chairmen, Members/Commissioners and NGO/CBO representatives for raising awareness on overall picture of Indoor Air Pollution (IAP) in Bangladesh was obtained through collecting and collating valuable suggestions and recommendations from the participants of ground and district level workshops. The VERC team was split into two groups for development of two specific manuals (Participatory Tools and Methodology and Technical Manual of ICS) and the groups developed structure and content of the manuals.

ii) Methodologies

- **Methodologies Followed for Rapid Review of the WatSan (CLTS).**

The review of service delivery models focus on renewable energy and WatSan and Hygiene Sanitation project in Bangladesh with special emphasis on participatory approach and methodologies such as community managed and demand driven initiatives implemented by the NGO sector. Five organizations were reviewed and analyzed by the VERC Team in different areas of Bangladesh. Intensive desk study, review of related documents and literature study of the selected five organizations have been done. A participatory discussion and sharing were in place for getting an insight into the projects. Name of the organizations reviewed with related information are as follows in the *Table No-1*:

Table No-1: Rapid Review of WatSan Projects.

Name of Organization	Place	Officials Interviewed	Literature & Documents Reviewed
1. NGO Forum	Dhaka (HQ)	1. Md. Ziaul Haque 2. Mr. Refatullah 3. Mr. Joseph Halder	- Annual Report 2006 - National Policy for Safe Water Supply & Sanitation 1998 - Serving the Unserved Consolidation of WatSan Success in CHT, Vol: 1 & 2 - Moolchitra - Coping with Water Scarcity
2. Dishari / WSP World Bank	Dhaka	1. Mr. Shafiul Azam Ahmed	- Progress Report of Dishari Decentralised Total Sanitation Project - Safety Nets and Safety Ladders, Exploring a Comprehensive Approach to Social Protection in Bangladesh - National Strategy of Sanitation 2005 - Sanitation for All by 2010 (Seminar Report)
3. BRAC	Dhaka (HQ)	1. Mr. Milon Kanti Barua	- BRAC Water, Sanitation and Hygiene Program - Sector Development Framework, Water Supply and Sanitation - Annual Report 2006
4. GOB-DANIDA (HYSAWA Project)	Dhaka	1. A.R.M.M. Kamal 2. Eng. Mofazzal Karim	- Report on the Nationwide Baseline Survey on Sanitation - Final Summary Report on Current Situation- Institutional Review, Water Supply and Sanitation Section - Project Proposal of HYSAWA Project - Methodology for Participatory Assessments - Methodological Workshop on Capacity Building for Enhancing Local Participation in Water Supply and Sanitation Interventions in Poor Urban Areas
5. VERC	Savar and Rajshahi	1. Md. Yakub Hossain 2. Md. Quamrul Islam 3. Masud Hassan 4. Tapan Kumar Saha 5. Rezaul Huda Milon	- Annual Report 2005 and 2006 - Participatory Strategic Planning Document - Advancing Sustainable Environmental Health (ASEH) - Baseline Report on Integrated Water, Sanitation, Hygiene Promotion and Community Institution Building Project of VERC. - Unlocking the Potential - Final Report on Evaluation of Arsenic Mitigation Pilot Project - Utilization Status of Various Government Allocations for Sanitation Purpose of 30 Unions in Bangladesh May 2007 - The Water Aid Bangladesh / VERC 100% Sanitation Approach: Cost, Motivation and Sustainability - Subsidy or Self-Respect? Participatory Total Community Sanitation in Bangladesh (Kamal Kar) - Walking Through Sanitation Ladder - Second South Asia Conference on Sanitation, Islamabad - Report on Roadside Vehicle Emission Testing Programme in Dhaka.

• **Methodology Followed for Detailed Review**

Four organizations were finally selected for detailed review/study which have been known to have very good expertise in implementing WatSan and Hygiene Promotion programmes including CLTS by ensuring successful community mobilization towards a desired change. The organizations have been quite successful in rendering technologies user friendly which is very much related to the success and sustainability of total sanitation. The best practices of the four organizations were critically and intensively studied/reviewed by using various participatory methods like Focus Group Discussion (FGD), Observation, Transect Walk, Key Informants Interview, Spot Visits, holding Consultation Session, Small Group Discussion, Thematic Round Table, Observing and Studying IEC Materials and in depth analysis on Capacity Building Process, Gender and Equity aspects, Governance, Financing Mechanism and Sustainability Issues. Moreover, desk studies and literature review have been carried out, which also form parts of the methodology.

The effectiveness of the approaches and scaling up processes were assessed based on the following framework indicators:

- Ultimate beneficiary, involvement of different stakeholders, aspect of governance and equity, self-financing and how the interventions address the ultra poor.
- Access of the community people to basic technology options and skills, availability of materials at the doorsteps.
- Level of success and sustainability, factors behind sustainability.

Considering the views of sanitary latrine users important for the study, they have been covered by carrying out consultation exercises. Here follows the tabular presentation of outcomes of the exercises (*Table No-2*):

Table No-2: Consultation Session (CS) with Sanitary Latrine Users

Nos. of CS	Geographical Locations				Types of Participants (Nos.)							Gender		Total Participants
	Dist.	Upazila	Union	Village	LGI Representative	Entrepreneur	Small Business	Agriculture	Day Labour	House Wife	Service holders/ Local Elites	Male	Female	
1.	Narayangonj	Sonargaoon	Jampur	Pakundia	1	1*	1	1		2	2	7	2	8
2.	Gazipur	Sreepur	Kawraid	Kawraid							5	7	6	13
3.	Naogaon	Manda	Kusumba	Barapai	2	2	4	6	1	4	3	15	7	22
4.	Manikganj	Shibaloya	Mahadevpur	Mahadevpur	9	1		2			6	14	4	18
5.	Manikganj	Shibalaya	Mahadevpur	Mahadevpur		2	2	2	2	7		5	10	15
6.	Gazipur	Sreepur	Kawraid	Kawraid		1	1	2	4	12	5	10	15	25

* Local elite includes school teachers, religious/opinion leaders and service holders

Views of various WatSan stakeholders have been presented in the following table (*table - 3*):

Table No-3: Case Studies with Types of Respondents

Geographical Locations				Types of Respondents						Gender		Total
Dist	Upazila	Union	Village	Technician	Entrepreneur	Catalyst	LGI	User	Non user	Male	Female	
Gazipur	Sreepur	Kawraid	Kawraid	1	1*	1	1	3		3		3
Naogaon	Manda	Kusumba	Barapai	1	1*	1	1	4		2	2	4
Manikganj	Shibaloya	Mahadevpur	Mahadevpur	1	1*	1	1	4		3	1	4
Bhola	Lalmohan			1**								

* Entrepreneur-cum-technician, **Upazila Sub-Assist. Engineer, DPHE

Detailed Report on Case studies given in Annexure 9.3

FGD sessions held with entrepreneurs have been presented in the following table (*Table No-4*):

Table No-4: FGD with Entrepreneurs

Geographical Locations				Types of Respondents						Gender		Total
Dist.	Upazila	Union	Village	Tech-nitian	Entre-preneur	Catalyst	LGI	User	Non User	Male	Female	
Bhola	Lalmohan	Lalmohan			9					8	1	9
		Ramaganj										
		Kalma										
		Lord Hardinge										
Bhola	Lalmohan	Ramaganj	Char Bhata					1	9		10	10

Through deploying the select series of participatory methods, a number of findings emerged which have been described in the findings section.

- **Methodology for Exposure Visit, Thematic Roundtable and Workshop**

The above mentioned tools/methodologies were adopted in the exercise as they were considered important to extract learning from people of all walks of life in the concerned communities, local government bodies and professionals at local and district levels. The application of these would be helpful in future as well in drawing the lessons learnt from the proposed pilot project for scaling up/replication in other areas.

Regarding exposure visits, the study team applied PRA tools like transect walk, focus group discussion, observation of hygienic latrines, sharing with catalyst, observation of Rural Sanitation Engineering Group (RSEG) performance for collection of real information and drawing insights of the successes of the Total Sanitation Campaign (TSC) related activities.

Holding of roundtable by team members followed open discussion, presentation of field findings and question and answers methods for creating positive environment to share their experiences gathered from the exposure visit and passing their comments on and suggesting ways for promoting the IAP programme.

Regarding the district level workshop, the study team deployed informal introduction, open discussion, small group exercise, picture demonstration and question and answer methods for sharing field experiences as well as ideas and views of the participants to use the knowledge and experiences of WatSan and Hygiene Promotion programme including the CLTS for adoption in the IAP programme.

4. Overview of Selected Watsan project.

There were four projects selected for detailed review as each of the projects has unique approaches to its implementation. The projects are as follows:

- **BRAC-WASH Project**
- **WSP World Bank-Decentralized Integrated Sanitation Hygiene and Reform Initiative (DISHARI) Project.**
- **VERC-Community Led Total Sanitation (CLTS) Project.**
- **SEDA- Community WatSan Programme Supported by NGO-Forum.**

i) BRAC-WASH Project:

BRAC-WASH programme envisages to ensure that 17.6 million people in 150 Upazilas of the country have access to sanitation services that are effectively used, including consistent hygiene practices. In addition to this, more than 8.5 million people are to be provided with safe water supply services. The programme ensures that the existing water supplies are sustained, well maintained and managed by the respective user communities.

The project follows bottom up participation and planning through purposely organized WASH Committee at the village level, whose members represent the entire village including other committees or NGOs that may be active in the village. Participatory planning is envisaged to take place with the committee planning for a core of common activities but also formulating plans for activities that reflect their own situation and their own assessment. The UPs together with BRAC staff guide the programme in setting priorities and mobilizing the village committee. Later, the necessary and desired plans are developed and negotiated at the village and as required, aggregated at the Union level with a multi-stakeholder group. At the village level, there are some village Shasthyo Shebikas (SS) who are provided support by a trained WASH Supervisor and the staff of the BRAC local offices throughout the project period.

At the national level, coordination is mainly carried out through the National Forum for Drinking Water Supply and Sanitation formed by the Local Government Division under the Ministry of LGRD&C and consisting of members from the GOB, donor and NGO sector (including BRAC). At the district level, BRAC participates in the monthly district development and coordination committee meetings which are organized by the Deputy Commissioner and include participation of major NGOs. The project objectives and progress related information are shared with other development partners both to optimize and resolve any constraints or challenges.

(Ref. Website BRAC Water, Sanitation & Hygiene Programme October 2005).

II. WSP World Bank-Decentralized Integrated Sanitation Hygiene and Reform Initiative (DISHARI) Project.

Dishari is currently implementing its activities and performing in 80 unions of eight upazilas under five districts, viz. Gazipur Jamalpur, Dinajpur, Nilphamari and Lalmonirhat under two administrative divisions: Dhaka and Rajshahi. Dishari -Decentralised Total Sanitation Project, a joint initiative of Dhaka Ahsania Mission, Plan Bangladesh, WaterAid Bangladesh and WSP-World Bank commenced in March 2004. The initiative was taken to generate significant progress towards achieving total sanitation target of "Sanitation for All by 2010". To achieve this goal, a major strategy was adopted to strengthen the institutional capacity of the local government institutions to play a steering role, with ensured participation and coordinated effort of NGOs, stakeholders, local functional departments of the GOB and local communities. During Dishari's embryonic phase, four major intervention strategies were developed which were reflected in the implementation phase of the project. The major intervention strategies for total sanitation are as follows:

- i. Partnership, Coordination and Collaboration
- ii. Capacity building of Union Parishad
- iii. Resource Mobilization
- iv. Community Mobilization

Resource mobilization is the key strategy of Dishari, which ensures participation of all stakeholders including the LGIs, community people, teachers, religious leaders, children-adolescents, private sanitary latrine producers and local NGOs. These are regarded as key institutions responsible for creating, launching and sustaining movements for social development.

The working plans in the communities are as follows –

- At the Upazila level, the Upazila Task Force facilitated in organizing meetings and workshops to plan review progress, prepare plans of action and identify next course of action.
- At the Union level, meetings are organized with Union Task Force, Local NGOs, Private Sector actors and other Stakeholders with increased participation where integrated planning is underway.
- DISHARI is committed to providing continuous facilitation at all levels to strengthen local government and stakeholders' capacity that happen to play a vital role in planning, implementing and monitoring of the total sanitation programme.

- Training sessions, workshops and different types of orientation played a significant role in the build-up of institutional capacity of the LGIs. These trained personnel focus on LG structure, activities and roles, good governance and people's participation. *(Ref. Dishari's Annual Report 2005)*

III. VERC-Community Led Total Sanitation (CLTS) Project

Activities of VERC CLTS programme currently cover 75 union/pourasavas in eight upazilas under six districts: Chapai Nawabgonj, Naogaon, Chittagong, Cox's Bazar, Rajshahi and Bhola in three Divisions: Rajshahi, Chittagong and Barisal of the country.

The main entry point of the programme is the community. Accordingly, each and every component of the programme is community based. The process involves community people in all aspects of problem identification, planning/resource identification, implementation, monitoring and evaluation from their own perspectives. This introduces ownership of the programme as well as ensures its sustainability for the future. As part of the community, the local government bodies, GO, NGO, CBOs and other stakeholders are also looped in in the process for greater involvement and efficiency of the programme approach.

Key activities involved in implementing CLTS project are:

Key activities involved are : entry PRA, formation of a WATSAN committee, meetings with the WATSAN committee, meeting with the community, children's group formation, community cleaning exercises, construction and installation of hardware, health and hygiene education sessions and monitoring behaviour changes.

As expected, there is a range of progress across the 3856 communities that are currently involved in this approach but most have shown marked improvement in their WATSAN situation. The outcomes identified in 2488 communities have shown that the 100% sanitation approach can bring about a significant improvement in the WATSAN situation in a community within 9 to 10 months. The approach works in a range of geographical and cultural areas and can be introduced in places where a household level approach was previously being used.

Whilst the initial motivational exercise places emphasis on hygienic latrines, it is on use rather than just installation. The other aspects of the 100% sanitation approach are introduced as the community plans and implements changes.

Communities also seem to be willing to act as promoters for other communities and so spread the message. This is important for the widening of the approach across communities as it is a more sustainable method of promoting 100% sanitation in the long term and it helps considerably when NGO resources are limited in the short term. *(Ref: VERC Process Documentation 2005)*

IV. SEDA- Community WatSan Programme Supported by NGO-Forum

NGO Forum is the apex networking service delivery agency of NGOs, CBOs (Community Based Organization) and private sector and civil society actors who implement sanitation (WatSan) programmes at the underprivileged and underserved rural and urban communities.

NGO Forum works as the development partner with all relevant national and international agencies and stakeholders ranging from the government and civil society to donor organizations.

NGO Forum maintains a nationwide working structure to facilitate the supports in a decentralized fashion. Through its countrywide working structure in communion with 735 partners NGOs and CBOs, NGO Forum's entire working area encompasses 14 Regions with administrative and management set-up at each of the regional offices. In line with its organizational mandate, NGO Forum maintains a dynamic network with relevant national and international agencies and stakeholders ranging from the government and civil society to donor bodies.

Socio Economic Development Agency (SEDA) is presently pursuing its activities in 119 villages, 08 unions and 04 Upazilas in Manikganj district of the country.

SEDA is a legal non-governmental organization dedicated to contributing to sustainable socio-economic development for the poor and the disadvantaged people of the society.

The community people (especially backward and downtrodden) would be enabled to generate income through suitable programmes.

SEDA works as a development partner of different stakeholders and monitor collaboration and coordination with different agencies.

Major Objectives

- i. To create awareness among the backward and downtrodden men and women about their family life, human rights, economic condition, health and sanitation, HIV/AIDS infestation etc.
- ii. To empower women so that they enjoy equal social and legal status.
- iii. To provide credit support to the community people for income generation.
- iv. To develop saving habit in the community people.
- v. To increase the rate of literacy through formal and non-formal education programme.
- vi. To optimize the use of available local resources and technologies for the welfare of the downtrodden and reduce, minimize and ultimately arrest all sorts of exploitation and promote relationship with the government, semi-government and non-government like minded development agencies.
- vii. To carry out disaster management programmes to reduce people's sufferings and redress miseries in the disaster-prone and –struck areas.

Working Strategy

- Develop and institutionalize alternatives in the field of people's participatory development approaches, methods and tools.
- Building capacity of the development actors for playing the role of facilitating the participatory development process. (*Ref. Personal communication with SEDA*)

5. Overview of Total Sanitation Activities in Bangladesh, Trend Analysis, Role of GoB and Other Actors:

Bangladesh with a population of 140 million and an area of 1,47,570 sq km has an extremely high population density. Administratively, it is divided into 06 Divisions, 64 Districts, about 465 Upazilas and a total of 4,483 Unions. About 50% of its population is poor; and 20% are hard core poor. It has one of the most vulnerable economies, characterized by low resource base and high incidence of natural disasters, which have adverse implications on long term savings, investment and growth. However, progress achieved by the country shows rapid improvements in the following fields: I. impressive success in the field of population control which was achieved at a low level of income as well as a low level of literacy (from 2.9 percent growth per annum in the mid-seventies to 1.5 per cent in the late-nineties); II. substantial reduction of infant mortality and child mortality; III. success in the field of disaster preparedness and overcoming the phenomenon of mass starvation, e.g., through increased rice production; IV. reduction in child malnutrition rates; V. success in mainstreaming women into the development process; VI; the emergence of strong vocal civic institutions that play an important role in organizing the poor and; VII. progress towards a viable democratic transition.

Despite all the above facts of its national growth process, sanitation had been struggling for long in the country. Sanitation activities in Bangladesh (the then East Pakistan) were first initiated by the

Government with WHO support during the 1950s (GoB and UNICEF, 2001). However, as in many other developing countries, sanitation situation is poor in Bangladesh. The low sanitation coverage causes a serious public health concern. It is estimated that 67% of the total population have no access to hygienic latrine facilities and 71% of the rural households and 40% urban households practise open defecation or use unhygienic latrines. Practice of open defecation or use of unhygienic latrine causes diseases like diarrhoea, dysentery etc. which is well known as killer diseases. Besides, lack of adequate sanitation affects the economy adversely in terms of productivity loss due to sickness and the overall qualities of life where the poor are the worst sufferers. Health statistics indicate approximately 125,000 children below 5 years are happen to die every year and 342 children are dying everyday in Bangladesh for lack of proper sanitation. Therefore, sanitation for all remains a key challenge in Bangladesh.

The institutional framework in the sector has taken shape over the past 150 years from the passing of the Bengal Local Self Government Act in 1885 establishing Union Committees responsible for roads, public health and primary education and authorizing them to raise funds. Municipalities in urban areas have carried out functions related to public health since 1863. The Department of Public Health (DPHE) was created in 1935 to promote public health through ensuring provision of drinking water and since 1954, also sanitation. After independence in 1971, the Government of Bangladesh (GoB) emphasized rehabilitation of the war ravaged water supply and sanitation services and installed new facilities through the DPHE. Initially services were provided free of charge with little involvement of the users in decision making, cost sharing and operation and maintenance. The efforts were not sustainable in terms of providing health and economic benefit to the community. This situation began to undergo a visible change following the innovation of Community Led Total Sanitation by Village Education Resource Center (VERC) in 2000. This can be treated as a turning point in the history of sanitation in Bangladesh. The situation has been changing and rural communities were found to be willing to gradually taking responsibilities of operation and maintenance of hand pumps. Most of the Union Parishads (Ups) have established Water Supply and Sanitation Committee (WatSan) for supervision of water and sanitation related activities, although not all of these are working satisfactorily. In the urban areas, the DPHE was originally responsible for water and sanitation services, and gradually Pourashavas are getting more involved in planning, implementation and management of water systems. Water Supply and Sewerage Authorities (WASAs) were established in Dhaka and Chittagong cities, being responsible for water supply, sewerage and drainage. At the national level, the LGD is overall responsible for the water and sanitation sector. The DPHE under the aegis of LGD is responsible for implementation of water supply and sanitation projects in the public sector in both rural and urban areas excepting the areas covered by WASAs. In addition to the DPHE, the Local Government Engineering Department (LGED), also under the LGD has been implementing water and drainage projects in urban areas as part of urban infrastructure development projects.

In 1962, DPHE-UNICEF collaboration introduced water-sealed latrines free of cost in selected areas of the then East Pakistan (Bangladesh). A study in 1973 showed that only 30% of these latrines were in use with their water seals broken. In 1975, water-sealed latrines with concrete slabs were sold at highly subsidized prices and 60% of the latrines were found in use. The concrete slab latrines suffered heavy damage during transportation in rural conditions. In 1979, BUET and UNICEF collaborated on an action research to develop a durable robust slab for water-sealed latrine and ferro-cement slab was introduced in 1980 and greater emphasis on water and sanitation was put through the International Water Supply and Sanitation Decade (IDWSSD) during 1981-1990. The subsidy on latrine components was reduced from 68% in 1975 to 34% in 1985; subsequently, a conditionality was introduced that ensured that every cluster of 10 beneficiary families having installed sanitary latrines would be entitled a government hand tube well. By the end of the 1980's, latrine shops started selling water-sealed latrines and concrete rings were seen aplenty in the rural markets, small growth centres and towns. Despite a lot of efforts of the DPHE and UNICEF, the sanitation coverage did not reach more than 16% people at the end of the decade in 1990. In 1991, a 10-year national sanitation strategy was formulated and the countrywide sanitation programme moved into a much higher gear. The social mobilization approach known as SOCMOB-AB (Social Mobilisation for Awareness Building) was launched in 1993 and sanitation week was introduced at the national level reaching down to the union level which was later discontinued in 1998. School Sanitation Programme was also launched in phases in 44 districts during 1992-2000 to promote sanitation involving School Management Committees with technical support from the DPHE and

UNICEF. The home-made hygienic pit latrine was also promoted under latrine building campaign. (Ahmed. A; *Experience on Sanitation in Bangladesh: The Challenge Ahead*, UNICEF, 2003).

In September 2000, the United Nations General Assembly endorsed the 8th Millennium Development Goals (MDGs). Two of these goals are directly linked with sanitation to reduce child mortality and improve environmental sustainability. Targets for achieving these goals are to reduce by two-thirds the under five mortality rate within 2015 through access to better sanitation. The importance of improved water supply, sanitation and hygiene (WASH) is recognized by their inclusion as specific targets in the framework of the Millennium Development Goals (MDGs). Water, sanitation and hygiene improvements are also perceived as having a major potential in contributing to other MDG targets. In that respect, the Government of Bangladesh is committed to achieving the Millennium Development Goals (MDGs) targets and has taken a step further professing that countrywide 100% sanitation would be achieved by 2010 i.e., ahead of the MDG time frame.

The Total Sanitation campaign has gained a tremendous boost through the South Asian Conference on Sanitation (SACOSAN) 2003. The Conference was held in Dhaka during 21-23 October 2003. The heads of delegation from the 09 countries participating in the Conference ratified and adopted **The Dhaka Declaration on Sanitation** - a landmark regional policy towards sustainable sanitation. The Conference reached a consensus and raised a unanimous agreement among the participating states which vowed on adoption of all out efforts to uproot the practice of open defecation, to save one million children under the age of five dying each year of water and sanitation related diseases. They also struck a common definition of sanitation, and decision to pay adequate attention to the sanitation needs of the vulnerable and marginalized population in urban and rural areas.

To achieve the targets, the Government of Bangladesh has given emphasis on improving the situation as a national priority. The government has adopted various National Policies and Strategies to decrease the practice of open defecation and to ensure access to sanitation for all. Union Parishads at the grass root level, Upazila Parishad at the Upazila level, Zilla Parishad at the district level etc have been made responsible to implement sanitation related activities for achieving the target. For sanitation, the basic minimum service level of sanitation services would be that every member of a household should have access to a safe hygienic latrine, either a separate households latrine, shared latrine subject to use by maximum two households or a community latrine.

The Union Parishad (UP) as the lowest tier of the government is identified as the most important institution to implement the sanitation programme at the village and community levels, as the UP is very much responsible to ensure the practice of sanitation through awareness building among the households who are also able enough to provide hardware subsidies to the hardcore poor, poor, women, elder and disabled to ensure sanitation for all within 2010. According to the government circulars and declaration, all UPs are expected to spend at least 20% from their ADP allocation, block allocation, 1% from a UP's own income and Gram Sarker allocation for sanitation. Besides, since January 2005, Bangladesh Government has been rewarding the UPs for achieving 100% sanitation coverage and the UP Chairmen achieving the target have been receiving crests, certificates and a cheque for Tk 2 lac. Not only that, the Bangladesh Government also issued circulars, guidelines, letters etc. to all UP Chairmen providing directives and guidance on how to use and spend the money for achieving 100% sanitation coverage. Community Led Total Sanitation innovated by Village Education Resource Center (VERC) in 2000 had been the key contributing factor behind all these positive developments in Bangladesh and to reverse the whole scenario of the sector. The concept and strategic aspects of the approach of CLTS was first adopted by sectoral NGOs, INGOs through training and exposure visits. At a later stage, right before the formulation of the national strategy document, the GoB adopted many of the key lessons of CLTS for reflection in the strategy document of 2005. The Government of Bangladesh has taken several steps for promotion of sanitation activities across the country. A sanitation survey has been conducted by the DPHE in 2003 (Report published in 2004). The SACOSAN was held in Bangladesh in the same year. The outcome of SACOSAN was the Dhaka Declaration. Several government initiatives taken after the summit have registered considerable progress in the sanitation services. Yearwise progress in sanitation in 2003 – 2005 is shown in *Table No-5*:

Table No-5: Absolute and Relative Measures of Sanitation Progress in Bangladesh

SL No.	Area	Total Household	P e r i o d				
			Oct2003 (%)	June 2004 (%)	Dec 2005 (%)	June 2005 (%)	Dec 2005 (%)
•	Rural Areas	1,83,26,332	5,272,589 (28.8)	6,081,923 (33.1)	7,240,626 (39.4)	10,457,387 (57.1)	11,347,905 (61.9)
•	Municipalities	18,51,337	983,025 (53.1)	1,036,350 (56.0)	1,189,599 (64.3)	1,371,416 (74.1)	1,431,515 (77.3)
•	City Corporations	12,16,424	850,527 (69.9)	885,454 (72.8)	892,906 (73.4)	907,797 (74.6)	914,034 (75.1)
•	National	2,13,94,093	7,106,141 (33.2)	8,003,727 (37.4)	9,323,131 (43.6)	12,736,600 (59.5)	13,693,458 (64.0)

Source: Orsola-Vidal (2006) using data from the National Sanitation Secretariat

Ref: To the MDGs and Beyond: Accountability and Institutional Innovation in Bangladesh, Bangladesh Development Series Paper No: 14, Published by The World Bank office Dhaka, January 2007.

Emergence of CLTS:

“Community Led Total Sanitation (CLTS) is an approach that empowers and encourages the local community to extensively analyze their own environment, sanitation conditions and initiate collective local action to stop open defecation and move towards improved sanitation and hygiene behaviour using their own resources and talents without waiting for external help or directions and prescription” (LGD 2004b:44). Being triggered by different participatory tools of ignition PRA and visualization of the probing outcomes, the process takes the shape of representation of community stakes in a community level communicative matrix. Community cooperation, innovation, social solidarity, unity and giving the voiceless voice constitute the major part of the process. The other side of the coin is carved with capacity building empowering the powerless with powers of skill, conscience and consciousness. CLTS was first pioneered in Bangladesh in 1999 and has been widely adopted within the country and beyond, particularly in South and Southeast Asia region. There have also been some experiences gained in Africa. CLTS has great potential for contributing towards meeting the Millennium Development Goals, both directly in water and sanitation, and indirectly through the knock-on effects in combating major diseases and improving maternal health. However, rapid institutional take-up of CLTS is giving rise to some dilemmas and challenges. Not the least of these is the need to shift donor mindsets away from a focus on offering subsidies.

One of the most noteworthy features of CLTS is the “**absence of household-level subsidy**”. Unlike earlier approaches, the process of behaviour change is initiated without external support to households. CLTS advocates that financing latrine construction is not an issue; it recognizes that total sanitation can be achieved if every member of the community participates. CLTS believes that communities can arrange cross-subsidies to make sanitation facilities accessible to weaker groups if formation of self-help groups and micro credit schemes are linked as source of funding provided an approach to making communities recognize the public good dimension of private behaviour. Subsidies would distort incentives and adversely affect the potential of communities to achieve self-reliance. Motivating communities to change sanitation practices rather than the provision of hardware and financial support is the focus of this approach. Households that cannot afford to make the financial investment would not be excluded as the community recognizes that total sanitation depends on the participation of every member of the community. The approach recognizes that there is a public good dimension in water and sanitation improvements to what is generally considered a private good. By creating awareness within the communities, a change in mindset is achieved. The shift from open defecation to fixed spot defecation is irreversible as, in addition to health benefits, it provides privacy and safety and once people adopt it, they are likely to find it difficult to regress to traditional practices. CLTS sees the introduction of cheaper materials and multiple technology options which can very well be in demand as a result of growing number of users are able to enter the market. Hence, no special efforts have had to be made to create the supply chain because growth demand can largely be met by private producers of pit latrines and related equipment.

6. Rapid Review

In order to identify a suitable service delivery model for reduction of IAP pilot project, 5 projects on WatSan managed by different organizations were selected for the rapid review exercise. The projects are as follows:

- **WSP World Bank - DISHARI Project**
- **Partnership Program of NGO Forum**
- **BRAC - WASH Project**
- **DANIDA-HYSAWSA Project**
- **VERC-CLTS Program**

During the analysis, the following aspects of the project were reviewed:

- a. Financial and market development – identifying successful approaches to financing and enterprise development, including monitoring mechanism
- b. Community engagement – exploring effective, innovative and participatory approaches to community mobilization
- c. Demand creation and marketing – exploring effective and sustainable mechanisms for demand creation, and product marketing
- d. Technology – identifying successful approaches to introducing improved cooking or sanitation technologies, operation and maintenance issues and monitoring system for user feedback and quality control
- e. Scaling up and replicability – identifying key catalytic elements for scale up, key actors, and role of stakeholders
- f. Institutional arrangements – exploring the service delivery mechanisms to identify key constraints and incentives, role of stakeholders, and inclusiveness with regard to hard core poor households

(Ref. Report on Rapid Review: Annexure-9.1).

7. Findings and Field Observations of the Detailed Review:

For conducting the detailed review, the team has visited 04 organizations that are engaged in design and implementation of development activities in the Water and Sanitation Sector in Bangladesh and their field findings have been analyzed mainly considering five aspects. The comparative analysis of the findings has been shown in the *table No-6* below:

Table No- 6: Comparative Analysis of Field Findings of Visited Organizations as per Aspects.

Sl. No.	Aspects	Organizations			
		BRAC	Dishari	VERC	SEDA (NGO-F)
1.	Institutional	A CBO is found operational and effectively running the scheme. The CBO has functional linkages with Upazila Administration, particularly with SAE, DPHE for technical assistance.	Planning starts from Uz. Sanitation Task Force under the Chairmanship of the UNO. Major decisions are being taken by the USTF which are being implemented by the USTF as UP is the focal point of total sanitation activities of Dishari. The CBO motivates the community and implements the programme with the	Entire planning process of CLTS programme follows a bottom up approach. CBOs start planning under the guidance of WSTF and USTF. Different CBOs implement their own activities as per plan. The social capital is being utilized for achieving 100% sanitation coverage	USTF is responsible for implementing WatSan programme. CBOS and supporting bodies provide support, assistance and facilitate the programme of USTF.

Sl. No.	Aspects	Organizations			
		BRAC	Dishari	VERC	SEDA (NGO-F)
			assistance WSTF.		
2	Economic and Financial	The cost of the installation of the scheme is Tk. 20 lac where users contributed Tk. 4 lacs (20 %). Income: Tk. 10,800.00 per month Expenditure: Tk. 10,000.00 (approx.). Earned money deposited to a local bank and that is being jointly operated.	The construction costs of different models of sanitary latrines vary from Tk. 30.00 – 1400.00	The construction costs of different models of sanitary latrines vary from Tk. 80.00 – 1400.00	The construction costs of different models of sanitary latrines vary from Tk. 350.00 – 3500.00 Special types of sanitary latrines with safety tanks with concrete super structure found costing Tk. 40,000.00
3.	Technical	Hardware: Deep Tubewell- 1 Electric motor- 1 Overhead tank- 1 O&M is being done by operator & users.	Sanitary latrines types: 5 O&M is being done by the users. In case of major repair, the local masons are engaged	Sanitary latrines types: 6 O&M is being done by the users. In case of major repair, the local masons are engaged	Sanitary latrines types: 5 O&M is being done by the users. In case of major repair, the local masons are engaged. The sweepers are locally available for cleaning and dumping the sludge
4.	Community Engagement	During the inception the targeted community was made aware of and eventually CBO formed. The CBO found operational and effectively running the scheme and also looking after the hygienic latrine coverage	USTF and Uz. STF as well as WSTF were trained and oriented on Dishari approach. Different types of CBOS formed under the guidance of WSTF. All the CBOS were found operational and effective.	Community mobilization process starts with application of PRA and MPA tools. During the participation process of all the stakeholders' several types of CBOs are formed. The activities on sanitation pave ways to addressing other development needs of the community by CBOs in a sustainable manner.	The CBOs were formed by using different PRA tools. The CBOs were found effectively operational.
5	Scaling up and Replicability	The scheme is running smoothly under the CBO leadership. The users are getting benefit (safe water) out of it. The neighbouring villages expressed their interest to have similar types of scheme.	Models of latrines displayed in front of UP office and public places. Stakeholders are campaigning for the scaling up of the programme Capacity building of the CBOs and LGIs effect the scaling up of the programme. UP ADP allocation for sanitation played a vital role for scaling up.	Models of latrines displayed in front of public places. Stakeholders are campaigning for scaling up of the programme. Capacity building of the CBOs and LGIs geared the scaling up process. Community based bottom up approach and effective participation led the project towards sustainability and scaling up	Models of latrines displayed in front of SEDA office. LGI is playing a vital role for scaling up the programme. UP introduces awards and incentives for 100% sanitized villages. NGO provides credit support for entrepreneurs and users.

The above findings showed that in all the projects, the role of Union Parishads and their involvement in the CLTS projects were more or less same in order to achieve total sanitation by the year 2010 to achieve MDG goal. The role of the UP was found similar in different projects in different areas because they were all implementing the same programme of the Government of Bangladesh. On the other hand, sanitation is one of the important civic and municipal responsibilities of the UPs. In fact, if UsP were properly guided and supported with appropriate expertise with sector NGO collaboration, they would be able to implement their own programmes.

In respect of social aspects, community mobilization process is more or less the same for all the 4 reviewed projects. But there are differences perceived in the institutional arrangements. The CBO of BRAC has direct operational linkage with the Sub-Assistant Engineer, DPHE at the Upazila level. DISHARI starts its planning from Upazila level together with the Uz.STF. This approach is a bit of top-down business, whereas VERC and SEDA start its planning with community ignition process and this is a perfectly bottom up process. In this regard, the approach followed by the reviewed projects were found differing in their institutional arrangements. Regarding financial aspects, it is found that the lowest price of SEDA-NGOF is Tk. 350.00 may be sustainable but seems costly for the poor, whereas the lowest price of Dishari latrine option is Tk. 30.00 and VERC option is Tk. 80.00 only. The Dishari project was found biased and costly for scaling up their programme as it starts from Upazila though the focal point is Union Parishad. The other approaches, CLTS (VERC) and WATSAN (SEDA) can be scaled up easily as these are low cost, community based and people centered approaches.

On the other hand, the BRAC project in Sonargaon is a Community Based Safe Water Supply Scheme. They follow community based approach, cost sharing as per National Policy for WSS and seeks technical support and assistance from Upazila level expertise (SAE, DPHE) as because, a UP does not have any technical skill/ expert on water supply schemes. Yet the UP is involved with the scheme as one of the Ward members is a member of the CBO.

(Mini Report of Detailed Review of WatSan Project on different aspects and Detailed Review on Exposure Visit, Thematic Round Table and Workshop are given in Annexure: 9.2 and 9.4 respectively).

8. Analysis:

On the basis of the detailed review of four different projects and two exposure visits, thematic roundtables and workshops held in Saidpur and Sitakunda, the following analysis of the findings on different aspects are given below:

8.1 Institutional Arrangement:

The study on the process of community mobilization through a sustainable institutional arrangement towards an effective WatSan programme under different NGO working areas has been an important assignment for the VERC-WI team. To this effect community led total sanitation (CLTS) has been selected to be studied and for drawing the main lessons so as to make recommendations for adaptation in designing the pilot project for IAP reduction in Bangladesh. It is observed that a number of initiatives were undertaken in the past to this effect by the government agencies and NGOs in the country but they did not sustain and could not bring about visible positive results. The main difficulty perceived with the implementation of the failed projects lay in weak institutional arrangement for carrying forward the interventions. The institutions that were engaged for the purpose had little access to the end users/beneficiary people. Their voices and choices were not taken into account or mainstreamed in the process, which made it impossible for the interventions to make any headway forward. Only the technology aspect was given attention, while the institutions that are important as carriers of the interventions were either forgotten or neglected or not properly identified or their capacities were neither built for the purpose nor enhanced through training and orientation. The technology also was under the grip of technologists of the project, people had little or no access and control over the process. Under the total sanitation programme, the community people are in the lead role and the institutions are groomed and readied exclusively with a clear understanding of the problems and issues based on the understanding of the contexts, resources and potentialities of the people concerned. It starts with the

identification of poor sanitation problems, explores through the causal background and identifies ways to overcome the problems.

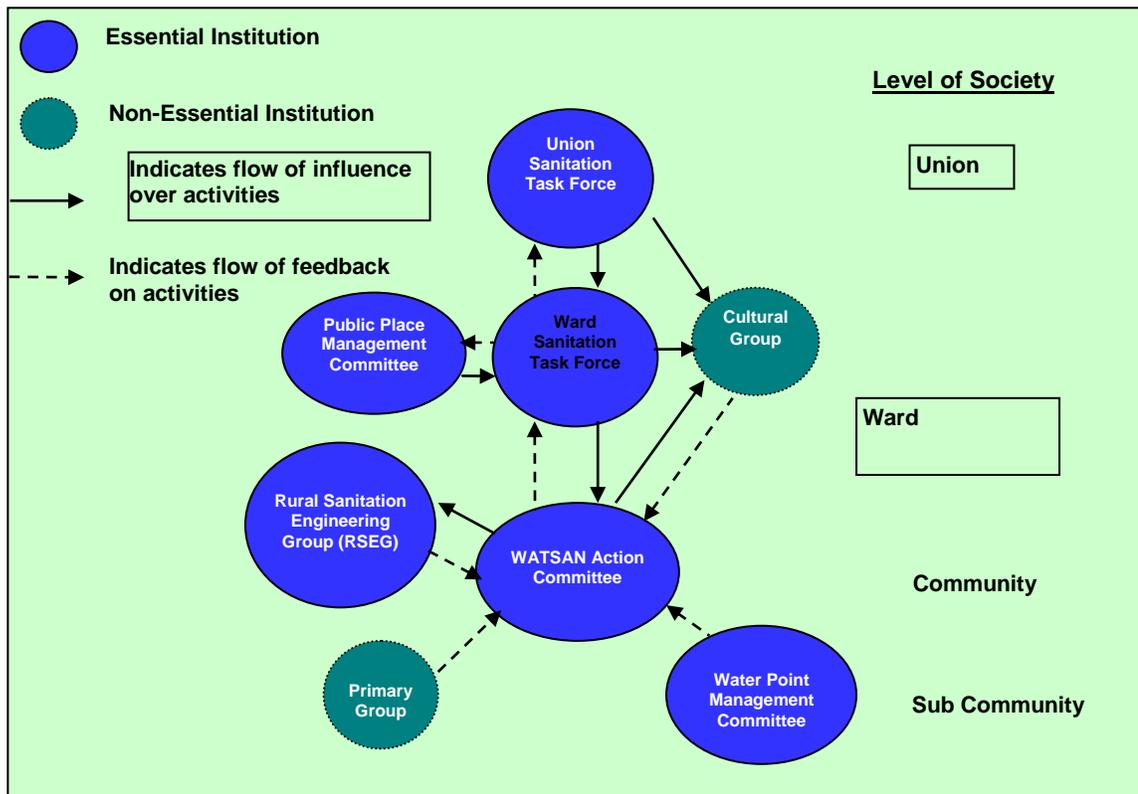
Institutional Roles and Linkages:

The NGOs that are successfully practising the Community Led Total Sanitation Approach in the country have rightly identified the institutions and extended technical support to them, enabling them take part in the implementation of sanitation programmes. The Local government institutions that are formal and long lasting by tradition are involved in the process, which are - Upazila Sanitation Taskforce, Union Sanitation Taskforce and the Ward Sanitation Taskforce. The informal institutions involved in the process under the CLTS include CBOs formed under different names under different facilitating NGOs (Community WatSan Action Committee CWAC in VERC), Water Point Management Committee, Hygiene Education Group, Children's Group, Adolescent Girls' Group for Reproductive Hygiene, School/Madrassa Management Committee, Market Management Committee, Rural Sanitation Engineering Group, Cultural Group and Hygiene Practice Monitoring Group. These groups are assigned with specific tasks of water sanitation and hygiene behaviour change promotion activities. Taskforces are mainly responsible to steer the over all process under respective jurisdiction and report to the immediate senior management Taskforce for coordination and monitoring purposes. Thus the formal and informal institutions are interlinked with each other for planning, implementation, monitoring and evaluation of WatSan activities in Communities/Wards/Unions.

Informal institutions are usually meant for the community level initiatives and they are formed as outcomes of process facilitation by outside agencies (facilitating NGO) in collaboration with the formal local government institution representatives (i.e., UP member, UP Chairman). The CWAC is the outcome of the entry PRA exercise facilitated by the NGOs named - VERC and DISARI. Immediately after formation of committees, they prepare action plans for total sanitation, indicating resource (material and human; internal as well as external) and fix the timelines for activities. They take steps to implement the planned activities by making use of material and human resources, monitor progress and evaluate outcome/ impact of activities towards achieving total coverage and making interventions sustainable.

Formal institutions are involved as per the circulation of the ministry in accordance with the mandate of national sanitation strategy. The facilitating NGOs organize orientation workshop for the Upazila, Union and Ward sanitation taskforces. This orientation activity is carried out simultaneously with the community level exercise of the entry PRA for ignition and mobilization for sanitation. First of all, the Upazila Taskforce is given an orientation on the CLTS. This session is attended mainly by the Union Parishad Chairman and head of Upazila level Govt. development departments. They make an assessment of the WatSan situation of the entire Upazila and then identify the lackings, needed actions, estimate availability of resources for the purpose and fix the timelines for each Union in consultation with respective Union Parishad Chairman. They also assign responsibilities to actors including the facilitation task forces to the facilitating NGOs. This way, the Union and Ward level exercises integrate the local government bodies into the process to make the sanitation programme successful and sustainable at the same time.

Exhibit: Institutional development and strengthening in CLTS



CLTS offers a wide range of hardware options by which users can choose an appropriate model based on their affordability. Local innovations are actively encouraged with a view to expanding the range of options available. Members are supported to enable them select the option best suited to their individual needs and budgets.

Recognizing that the field workers are the frontline staff, the CLTS approach helps to form community-based rural sanitation engineering groups made up of individuals who come up with innovative sanitation technology designs. These groups act as the community catalysts in carrying forward the process. The CLTS facilitates these 'engineers' to generate indigenous designs within certain technical parameters. These field workers and village engineers help the promotion of effective sanitation options by demonstrating models, providing advice and supporting people during latrine selection and installation. Households hire these engineers for the construction of toilets in their respective premises. In addition to the technological support, WAB-VERC provides support for setting up Village Sanitation Centres by the local masons who are provided training in good quality latrine construction.

Role of Local Government:

Politically free, economically sound, democratically elected and effectively functional local government is an essential pre-requisite for a sustainably developing and democratic Bangladesh. A decentralized administration with delegated legal authority can enhance local governance with effective community participation, which can lead to development, good governance, accountability and ultimately to poverty reduction. The recent development in the WSS Sector also shows that the GoB is quite sincere and serious about implementing its decentralization policy in particular, by strengthening the Local Government Institutions specially the Union Parishad, which is the only democratic institution at the grass root level in the rural areas.

In the process of achieving the WSSD and MDG targets, the National Government has allocated 20% fund against the ADP of the Union Parishads for total sanitation activities. The Local Government Division of the GoB with a recent Office Order (Dated: 05.02.2005) formed a Union Parishad Development Fund amounting to Tk. 9,000,00,000. The Union Parishads would receive Tk. 200,000 each as block grant so that they could effectively and efficiently implement the priority based development projects formulated by them. The National Policy for Safe Drinking Water Supply and Sanitation (1998) asserts that "Decentralization of decision making, training at the local level and local initiatives for resource planning are essential for success". The Sector Development Framework for Water Supply and Sanitation (UPI-Danida, LGD, MoLGRD&C, 2004) also recommended bringing about a change in involving the LGIs in the WSS service delivery, empowering the LGIs with clear mandates for different levels, channelling of development funds through local government and capacity building of the LGIs enabling them manage funds and development activities.

The conclusions reached in the formulation of the National Water Master Plan (NWMP) on the implications of the policy for the institutions in the WSS Sector are:

- The Central Government agencies need to withdraw progressively from activities that can be accomplished by the local institutions and the private sector.
- Continuing functions of the Central Government agencies, to the extent feasible and warranted, should be contracted out.
- A mix of LGIs, CBOs and the private sector should undertake activities at the District level and below.
- Local institutions and organizations need to be developed and/ or strengthened to fulfil their established mandates. They need to be financially sustainable and be given direct access to funding (whether raised locally or diverted from central funds) to exercise their responsibilities. While being responsible to the tax payer electorate, there will also be need to ensure that the appropriate standards are met.

The participatory process of development called for by the policy also requires capacity building and strengthening of the LGIs. Participation of users in planning, development/ implementation, operation and maintenance of sanitation facilities are critical factors for the success of total sanitation. User participation will ensure supply to responding to demands in terms of quantity, quality, time and location. The local government institutions are the best media for such participation to take place not only through the election process but also through the ensuring of public accountability of their activities. In participatory planning and development, the role of women is considered critical and the employment of women in the WSS agencies and in institutions should be increased since their current level of representation is low. Women members of the LGIs should be assigned special roles in achieving the Total Sanitation target and in the public consultation processes, women's presence and participations needs to be ensured.

The local government institutions in Bangladesh, especially the rural based local bodies such as, the Union Parishad (UP) has been playing a pivotal role in implementing local level development initiatives. In particular, it has a vital role in achieving the Total Sanitation by 2010 as per Dhaka Declaration on Sanitation by SACOSAN (2003). The SACOSAN unanimously agreed that the focus of proper sanitation and hygiene in the region should be based on the paradigm: "people centered, community-led, gender-sensitive and demand driven" and stressed some principles that should facilitate the new paradigm, particularly on poverty, community participation, subsidy issues and recognizing the roles of the local government; wherein the thrust:

- 1) Should provide hardware subsidies only to the poorest of the poor, who have no means of helping themselves, to be given under appropriate and effective monitoring and evaluation arrangements;
- 2) Should recognize the need for community subsidies for promotion, awareness, capacity building and the creation of funding mechanism for scaling up sanitation and hygiene programmes;
- 3) Should focus on understanding and creating demand, sustaining attitudinal and behavioural change and encouraging wider community participation as opposed to top-down approaches to subsidized sanitation programmes;

- 4) Should consider giving proper and appropriate acknowledgement and rewards to the Local Government and communities demonstrating tangible success in the elimination of open defecation and other unhygienic practices, intensifying advocacy through political and religious leadership;
- 5) Should encourage the Local Government bodies to engage in strategic partnership with the CBOs, NGOs and concerned actors, so as to facilitate scaling up of this new paradigm;
- 6) Should create an enabling environment for the small-scale private providers and innovative technical and financial mechanisms to be mainstreamed to promote better, faster and cheaper service delivery.

In this context, the Government of Bangladesh has initiated several steps on the basis of Dhaka Declaration and based on village based experiences gained and declared a national programme to achieve Total Sanitation by 2010 which should be implemented following guiding principles:

- A target for total (100%) environmental sanitation in every Union Parishad;
- A demand based sanitation through awareness and hygiene education;
- No fixation on technology, provision of option and choice based on affordability;
- Minimum requirement is to effectively confine the excreta, and adopt an incremental improvement of technology over time;
- Villagers should plan, implement and monitor under direct leadership of the Union Parishad/ Local Government;
- NGOs should act as facilitators through the processes, including orientation of the UPs and mobilization of communities;
- The Department of Public Health Engineering (DPHE) as the lead agency should provide technical oversight and coordinate the national programme.

(Proceedings, SACOSAN 2003, Local Government Division, MoLGRD&C, 2004)

The above principles have been incorporated into a National Sanitation Programme, however, in order to ensure a sound approach for nationwide scaling up of the programme. Accordingly, to gear up the process, Sanitation Task Forces have been formed in 4,484 Unions, 507 Upazilas, 64 Zilas (District) and a National Sanitation Task Force at the DPHE. The National TASK Force, DSTFs and UpazilaSTFs have been monitoring the overall progress of the sanitation activities of the USTF and Ward Sanitation Task forces at the village level which are being facilitated by the NGOs and other actors active in the sector.

The Detailed Review found the roles of the LGIs more or less similar, except for Mahadevpur UP covered by SEDA-NGOF programme providing some incentives and rewards to the best CBOs active in the field. On the other hand, DISHARI has been following the Upazila based approach as they start planning right assisted by the Upazila Sanitation Task Force under the Chair of the UNO and the decisions are disseminated downwards, to the Ward sanitation Task Force level. The Government of Bangladesh, particularly, the Local Government Division introduced a safety-net system (20% from ADP allocation of the UPs) through the UPs for the hard-core poor providing them with 100% subsidized sanitary latrines (with three rings and one slab) for total sanitation and allocated Tk. 200,000.00 (two lac) Block Grant for development purpose as award to the successfully 100% sanitized Unions. It inspired other unions and Upazilas for rapid scaling up and replication of the Total Sanitation (Actually 100% latrine coverage) programmes.

Training and Capacity Building:

The CLTS has been a process of empowering community people through provision of training and orientation on the WatSan issues. This is, in fact, a combination of efforts that require capacity enhancement at facilitating NGOs and capacity building of community institutions, stakeholders and catalysts. Successful facilitation by NGOs depend on proper capacity building training for their staff

members on participatory values and facilitation skills. The approach requires a 42-day package training on 9 modules to properly inculcate the required capacity in the staff members on a considerably wide range of issues.

The staff training sessions include training in –

- a. People Initiated 100% Sanitation Approach of VERC
- b. Human Potential Enhancement
- c. Training on Water and Sanitation Technology
- d. Motivation and Facilitation Skills
- e. Participatory Hygiene Promotion
- f. Ignition for WatSan through the Entry PRA
- g. Training in Resolving Conflicts
- h. Basic PRA (People's Participation and PRA)
- i. Participatory Planning Implementation Monitoring and Evaluation (PIME)
- j. Advocacy and Process Promotion

Community level training/Advocacy interventions include –

- a. Advocacy workshop with the Upazila Sanitation Taskforce
- b. Advocacy workshop with the Union Sanitation Taskforce
- c. Advocacy workshop with the Ward Sanitation Taskforce
- d. Entry PRA exercise for situation analysis and formation of the CBO
- e. Technological orientation for the community catalyts
- f. Caretaker training for waterpoint management
- g. Training on masonry for the catalyts
- h. Hygiene Education Training for School Teachers
- i. Orientation on menstrual management and reproductive health for adolescent girls
- j. Orientation of Public place management committee on Hygiene Promotion

Staff training about 42 days takes in all with intervals for practice and proper adoption. The stage of field level project implementation schedule is usually taken into account so that there is no gap between the application of skills acquired and meeting the programme implementation needs. Most of the packages are inclusive of class room sessions and hands-on orientation practices. The CLTS is a dynamic value based capacity building training, it requires developing proper inculcation of values and skills that can really help the underserved/poor people to become confident in exploring their own contexts and can find ways with the use of available resources and build up alliances with the local government. The training and advocacy interventions make stakeholders aware of the issues, resources, actors, exploring potentiality of building alliances and above all the roles and responsibilities.

Scaling up of the approach with the help of sector actors across sectors within the country had been effective. The number of sectoral NGOs has increased in recent years that have contributed to strengthening the national sanitation campaign and supporting the government effectively.

The schoolteachers' orientation has multiplied the NGO capacity of promoting hygiene education activities at the institution as well as household levels. Teachers and students are actively involved in motivation and monitoring processes and making campaigns more meaningful.

Exposure visits and organizing sharing workshops in both informal and formal ways are other important capacity building processes under the CLTS, which help expansion of the approach both horizontally and vertically.

Monitoring and Evaluation:

Participatory monitoring is in place for proper planning, implementation and monitoring of activities with the CLTS. The CBOs maintain registers to document the information, decision, plans of activities and review of progress of each activity. There is both organizational and community way of monitoring and

feeding back systems in place. The facilitating NGO maintains a flow of information from the field level to pass on to its head office and further onwards to the donor agency. The CBOs need to report on progress to Ward Sanitation taskforce – Ward taskforce reports to Union Taskforce – >The Union Taskforce to Upazila Taskforce The Upazila Taskforce to District Taskforce -> and the District Taskforce to National Sanitation Secretariat. This flow of information helps monitoring progress and planning monitoring visits to ensure quality of sanitation coverage.

Hygiene education being a behaviour concern and time taking initiative, monitoring plays a key role in measuring the rate of progress in accordance with the plan. Each message dissemination is completed through distribution of responsibilities to see that a practice has been inculcated in a community within the allocated time span. Hygiene Education sessions use visual charts for monitoring purpose so that the practice promotion rate can be documented in a simple manner on the chart and shared with the participants comparing with the rate of disease reduction in the community.

Key Learning:

- Existing CBOs/new CBOs will be responsible for implementation of clean energy technologies at the grass root level
- Ward Health Committee (that exists now) can be re-vitalized through wider participation
- Linkage with CBO-NGO-LGI-GO & private Sector (Entrepreneurs) is elementary for institutionalization and sustainability.
- Revitalize the union & upazila parishad based exiting sub committees to support and facilitate the IAP pilot project.
- Users' committee should be formed as CBO where women & adolescent will play active role.
- Union parishad, bazar committee, youth club & other social organization should be linked with the IAP Pilot project.
- Health Department, DPHE, LGED, BRDB & Ansar-VDP can be integrated with IAP pilot project
- Upazila administration can be integrated in the IAP programme and UNO should take lead role.

8.2 Economic and Financial Aspects:

Sanitation has always tended to be a lumpy investment, that requires commitment to provide substantial resources at a single point in time, and which does not generate obvious or immediate financial benefits. Thus paying for sanitation has always been viewed as a difficult issue in the sector. Yet to be realistic, policies must address issues such as how the sector can be financed in an equitable and sustainable manner. Thus, the relevant questions raised may be, "Where can the resources for sanitation and hygiene promotion be found? And like. Obviously, the answer is paradigm shift as per Dhaka Declaration which professes that sectoral interventions should be "people centred, community-led, gender-sensitive and demand driven" and stresses on some principles that should facilitate the new paradigm, particularly on poverty, community participation, subsidy issues and recognizing the pivotal role of local government.

The National Policy for WSS 1998 asserts the following about Rural Sanitation:

- Local Government and communities should be the focus of all sanitation activities. All other stakeholders, including the private sector and NGOs shall provide inputs into the development of the sector within the purview of overall government policy with the DPHE ensuring coordination.
- The users shall be responsible for operation and maintenance of sanitation facilities and will bear their total cost.

For Total Sanitation, behavioural change or improved hygiene is a set of individual behaviours that can be promoted or discouraged through various techniques, rather than a product (sanitary) to be sold. While behavioural changes take place on personal, domestic and environmental hygiene and sanitation, funding

and investments should easily be flowing towards household and community levels. The Dhaka Declaration from the SACOSAN (2003) also gave thrusts on:

- Recognizing the need for community subsidies for promotion, awareness, capacity building and the creation of funding mechanism for scaling up sanitation and hygiene programmes.
- Focusing on understanding and creating demand, sustaining attitudinal and behavioural change and encouraging wider community participation as opposed to top-down approaches to subsidized sanitation programmes.

In the context, if a sanitation programme is to be financed or subsidized, it is better to finance the overheads of the project, particularly the promotional activities, rather than subsidizing the construction of facilities themselves. Households can gain benefits from following sound sanitation and hygiene practices themselves, regardless of what other households do. Sanitation has significant convenience benefits which people are willing to pay for if suitable products and services are made available. It may be more appropriate and sustainable to subsidize the start-up costs (for example, for skill development training, capacity building of the stakeholders etc.) of small business (entrepreneurs) to provide products and services than to subsidize the products directly. Apart from that, appropriate sanitation has several important reasons, such as privacy, convenience and health. As because the reduction of diseases is the most important issue, in most cases the community people themselves like to have sanitary latrines for privacy and convenience. Some people may want to have latrines for keeping the environment clean, yet some may want to have them as a matter of prestige and status in the community (WEDC, 1998; Hurvey. P, Baghri, 2002). The SACOSAN, 2003 also suggested that the public sector must finance a major portion of the investment in hygiene promotion. While hygiene promotion can be cost effective in saving lives and reducing illness, it will still require major resource to work on larger scales (SACOSAN, 2003).

Regarding the Subsidy Policy, Dhaka Declaration 2003 and the National WSS Policy 1998 clearly mentioned: “Provide hardware subsidies only to the poorest of the poor (hard-core), who have no means of helping themselves, to be given under appropriate and effective monitoring and evaluation arrangements”. However, cross-subsidy which is known as community subsidy or social capital is being popularized in the CLTS implementation process (VERC experience), which contributes in facilitating the hard-core poorer sections of the community, because the very approach is community-led. In most cases, the UP has been coming forward to contribute to the hard-core poor from their own income (1%, see; Table: 9 below, Sources of Fund in UPs). This is also important to raise a question as Chambers R and Kar K mentioned (No subsidy, nor even for poor) whether subsidy for hardware is necessary. Field findings and the table below showed that hygienic pit latrine for fixed defecation can be constructed spending only Tk. 30.00 (DISHARI), or Tk. 80.00 (VERC) or Tk. 50.00 only. So, why even the hard-core poor should require subsidy for hardware supports, if they want to gain self respect (CLTS approach) and ownership feeling. On the contrary, if the fund flowed like (See Table: Source of Fund of UPs, VERC) this from different sources to the UPs in order to gain only 100% latrine coverage the basic mission of CLTS, particularly “Community-led and People first: they can do it” would be at risk and the rapid progress of the CLTS programme and its scaling up all over the country might be slowed and ultimately be stopped. So, it is time for rethinking: subsidy for what and for whom?

However, the paradigm shift has analyzed the situation (Subsidy or Self-Respect? Kar. K and Chambers 2004) in such a way: The paradigm shift is sharp. The different elements in each paradigm are mutually reinforcing which has been shown in *Table No-8*:

Table No-7: Scenario of Paradigm Shift

Start with (Sanitation Programme)	Past	Present / Future
	Target Driven Partial Sanitation	Community-Led Total Sanitation
Core activity	Constructing latrines	Igniting and facilitating process
Latrines designed by	Engineers	Community innovators
Number of designs	One or a few	At least 32 so far
Materials	Cement, pipes, bricks etc.	Bamboo, jute bags, plastic, tin etc.
Cost	Higher	Can be under 50 Taka
Indicators	Latrines constructed	Open defecation ended
Sustainability	Only partial	100 % so far

Start with (Sanitation Programme)	Past	Present / Future
	Target Driven Partial Sanitation	Community-Led Total Sanitation
Motivation	Subsidy	Self-respect
Coverage/ usage	Partial	Total

Source: *Proceedings: SACOSAN, 2004, Dhaka, Bangladesh.*

The above scenario showed that as per National Sanitation Policy for WSS 1998 and as per Dhaka Declaration, subsidies for hardware is not a very crucial factor, whereas, non-negotiable principles for the rural CLTS are:

- No subsidy for hardware (not even for the hard-core poor or anyone else)
- No blueprint design (only people's design to be considered, not engineers')
- People first: they can do it
- Facilitate, don't provide/ prescribe
- Go slow at first and faster, later.

Support or "subsidies" can also come from outside the community in the form of training and support for the facilitators. Support or subsidies for materials and land come from within the community. People who are landless or very poor are helped with places for digging the pits and basic materials by others in their own communities.

This is also important that financing (start up capital) for small scale entrepreneurs and private service providers and for innovative technologies needs to be mainstreamed and financial mechanism should be developed accordingly. There are scattered and segmented attempts of micro-credit provision for the users (Ahmed. F & Rahaman. M; ITN-Bangladesh; 2000) and small entrepreneurs in the sector. It is worth mentioning that micro finance can play a pivotal role in the sanitation schemes not only for its scaling up but also to reach the hard-core poor in order to achieve WSSD and MDG targets as declared by the Government of Bangladesh. Table below (*Table No: 9*) shows the sources of funding for sanitation coverage as studied by VERC:

Table No-8: Sources of Fund in UPs for Achieving Total Sanitation

Sl. Nos.	Source of Fund	Types/ volume
1.	Allocation from Annual Development Programme (ADP).	20% of ADP of which 75% will be used for hardware and 25% for hygiene promotion.
2.	Block Allocation (lump sum)	Some UPs have special Block Allocation in their ADP apart from 20% for sanitation coverage. They keep this Block Allocation (not all UPs) while they formulate ADP.
3.	Gram Sarkar Allocation	After reformation of Gram Sarkar during the immediate past political government, LGD allocated fund (Tk. 5,000.00) for each Gram Sarkar, for increased sanitation coverage. Gram Sarkar was headed by the UP Ward Member who at the same time was the Head of the Ward Sanitation Task Force.
4.	Department of Public Health Engineering (DPHE)	The DPHE also distributes latrines through Union Parishad under the National Sanitation Programme.
5.	Union Parishad's own Fund	The UP has their own revenue income from different sources. In order to achieve Total Sanitation by 2010, the GoB suggested UPs spend 1% of their total income (from taxation etc.)
6.	Prize money (Block Grant from the LGD, MoLGRD&C)	There is a prize money as Block Grant from the Ministry for the UPs who achieved 100% coverage which could be used for total sanitation achievement.

(Source: *Utilization Status of Various Government Allocations for Sanitation Purpose by the UPs; Final Draft Study Report; VERC, 2007*)

The Detailed Review in VERC CLTS area showed evidence that the distribution of 20% ADP allocation (as sanitary latrines: three rings and one slab as per DPHE design) in favour of the hard-core poor has

been monitored by the CBOs with certification of the UPs according to the application of the MPA and PRA tools.

Cost of Technology:

Table No-9: Different Type of Sanitary Latrine Developed By Dishari, VERC & SEDA-NGO Forum in the Study Areas.

SL.No.	Type of Sanitary Latrine	Installation Cost in TAKA		
		Dishari	VERC	SEDA-NGO Forum
1.	Sanitary Latrine with 10 rings for the soak pit, 1 slab and 1 ring (off set type)			3,500.00
2.	Sanitary Latrine with 5 rings for soak pit, 1 slab and 1 ring (off set type)			1,500.00
3.	Sanitary Latrine with 5 rings for soak pit, 1 slab and 1 ring (off set type)	1000.00-1400.00		
4.	Sanitary Latrine with 5 rings for soak pit, 1 slab and 1 ring (off set type)		1200.00 - 1400.00	
5.	Sanitary Latrine with 3 rings for soak pit, 1 slab and 1 ring (off set type)		700.00-800.00	
6.	Sanitary Latrine with 3 rings for soak pit , 1 slab and 1 ring (off set type)	500.00-700.00		
7.	Hygienic Pit Sanitary Latrine (Direct)	320.00		600.00-800.00
8.	Plastic Pan Latrine with siphon (off set)		300.00	
9.	Plastic Vent Pipe Model with bend pipe and 1 plastic pan (off set)		300.00	
10.	Plastic Pan Pit Latrine with vent pipe: local materials (off set)		140.00	
11.	Hygienic Pit Latrine: local materials (direct pit)	90.00		350.00
12.	Motka Model Pit Latrine with vent pipe : local materials (off set)		80.00	
13.	Extreme Low Cost hygienic Pit Latrine: local materials (Direct pit)	30.00		

It is evident from Table-1 that Dishari designed 5 different models of sanitary latrines, and their installation costs vary from TK. 30.00 to Tk. 1400.00, VERC designed 6 different models of sanitary latrines and their installation costs varied from TK. 80.00 to Tk 1400.00 and SEDA-NGO Forum designed 5 different models and their installation costs varied from TK. 350.00 to Tk 3,500.00. The costs of latrines shown here were without the super structure.

SEDA-NGO-Forum designed two models called “Sanitary Latrine with Septic Tank and Sanitary Latrine (offset) with Soak Pit of 10 rings” which cost TK. 40,000.00 and Tk 3,500.00 respectively. These two models are for the rich people only. The costs of other models designed by Dishari, VERC and SEDA-NGO Forum were found varying from TK. 30.00 Tk 1500.00. These models were found to be highly accepted by the community people. Dishari designed the cheapest model of sanitary latrine that costs about Tk. 30.00 only. Users, who come to learn about the know-how of the technology, are able to construct the latrines with assistance from his family members.

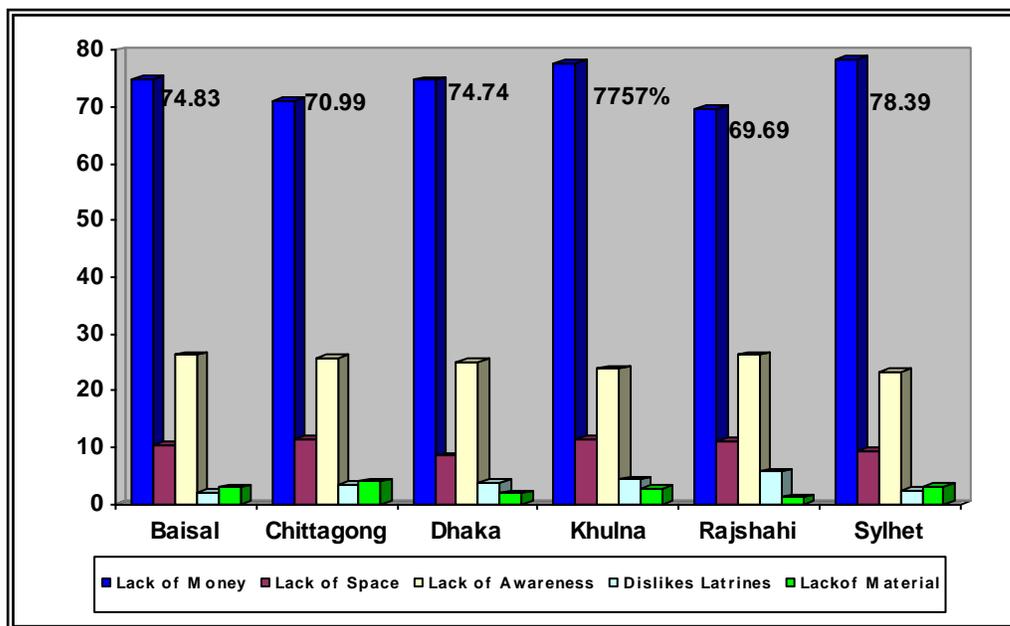
Willingness to pay for installing latrines

As per Community–led Total Sanitation (CLTS) approach, willingness to pay for latrines does not have much implications, where community people themselves take the responsibilities for total sanitation coverage with their own resources (skill, knowledge and social capital). With the CLTS, development partners provide supports and assistance in the community capacity building, mobilization and ignition processes under the leadership of the LGIs. The CLTS approach is a holistic one, where the community

is totally pro-active, the members helping themselves through helping their neighbours. The national scenario as well as other evidence in progression of sanitation coverage showed that only money and people's willingness to pay for latrine installation were not key issues with the CLTS. The essential CLTS approach is mainly based on "self respect" and not on "subsidy". When people are ignited, sensitized and mobilized and realization dawns upon them about the need for switching to sanitary latrine options, demand is created and eventually they invest in sanitation, maybe initially for low cost technology options; and later on, over a period move through the sanitation ladder from low cost options to better and more durable options. The CLTS introduces a wide range of hardware options by which a user can choose an appropriate model according to his ability to pay. Local innovations are actively encouraged for promoting expansion of the option range available to the community members. The user households are supported while they select the options which are best suited to their individual needs and budgets.

A Nationwide Sanitation Survey (2003) Report published in 2004 revealed that the households which then did not have latrines installed, didn't have them because of lack of money most importantly. Lack of money was the reason behind not installing the sanitary latrines with the highest percentage of people. It was around 70% in Rajshahi (the lowest) and 78% in Sylhet (the highest).

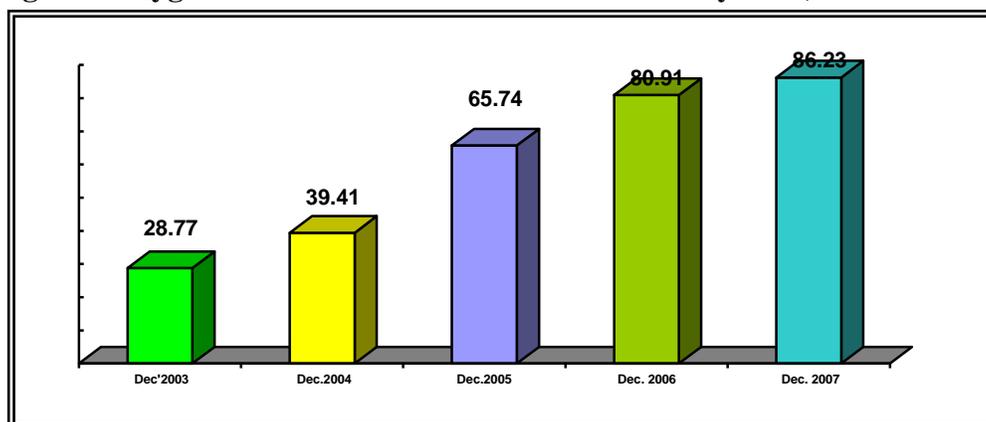
Reasons for not having a latrine: Divisionwise national scenario



Source: Nation Wide sanitation Survey, LGD, DPHE and UNICEF, 2004.

However, the scenario has changed radically over the years because of collaborative efforts from the communities, LGIs, NGOs and the government, particularly the role of the communities being evident while the GoB called for the CLTS intervention and all other stakeholders provided their highly potential efforts. It has been observed during the field survey that people who at the beginning installed low cost latrines, within a few years moved forward up along the sanitation ladder towards the high cost, durable and better sanitation technology options according to their affordability and gradual appreciation and sharpened realization of the benefits received. It proved that the community people have been gradually realizing the benefits of sanitary latrine use and they owned it. The CLTS approach professes that the community members help themselves by sharing their knowledge and skills as well as the social capital. This is the key reason behind the success of the sanitary latrine promotion movement in the country. Data from National Sanitation Project and Focal Point of the National Sanitation Secretariat showed the progress of hygienic latrine user households over the years after the government declared launch and all out attainment of the Community-led Total Sanitation drive in order to achieve the relevant MDG mark by 2010. The bar chart below showed the progress.

Progress in hygienic latrine use in rural areas over the years (% of households)



Source: National Sanitation Project, DPHE and Focal point, National Sanitation Secretariat

Investment of NGOs in sanitation in the study areas

The study findings showed that the software was the principal and topmost component, where the NGOs invested in sanitation, particularly to achieve the national and MDG goal as per the CLTS approach in accordance with the government policy. The table below shows the pattern of NGO investment in hardware and software:

Table No-10: Investment in sanitation (%) in the year 2007 according to hardware and software

Sl no.	Investment head	Names of the NGOs		
		DISHARI	VERC-WAB	SEDA-NGOF
1.	Hardware			
1.1	Safe water supply to the hard-core poor		29.1	
1.2	Environmental sanitation facilities (education institutions, public places/ markets, for the disabled and women)		9.2	10.0 (only school latrine)
2.	Software activities (community mobilization, hygiene promotion, capacity building, entrepreneurship development and communication)	100.0	61.7	90.0
	Total:	100.0	100.0	100.0

Source: Data from Upazila/ Area Coordinator of the NGOs in the study areas.

The above table showed that there was no investment and budget allocation for household latrine installation.

Community investment in sanitation

A study findings of VERC showed that in comparison with the year 2003 when only 5% households of the study sample (424 households) used latrines and invested in latrines, 100% households were found using hygienic latrines and all had stopped practising open defecation at the end of the year 2006. In the year 2003, average family investment for latrine utilization was TK. 26.20, which at the end of the year 2006 stood at taka 506.80 for better latrine options, which has been shown in the box below:

Box No: 1

Average investment per household in the year 2003 was TK. 11110.00 ÷ 424 Hhs. = TK. 26.20
Average investment per household in the year 2006 was TK. 214881.00 ÷ 424 Hhs. = TK. 506.80
Total investment increased: TK. 203771.00
Average increase of investment per household : TK. 203771 ÷ 424 Hhs. = TK. 480.59
Average increase of investment per family in %: $100 \div 26.20 \times 506.80 = 1934.35\%$

Source: *Walking Through Sanitation Ladder*, Saha S. K, et al. VERC, 2006

This clearly marks the advantages and the merits of the CLTS approach, which professes that a cardinal principle based on real life experience is the key to the success of the approach that “*subsidy is not an issue for sanitation but collective community participation very much is*”. Further, improvement of sanitation generates economic return over the investment by reducing financial losses caused by water and excreta borne diseases which influenced and ignited the user families to go for the investment for better sanitation options.

People's travel in sanitation ladder

A study (Walking Through Sanitation Ladder, Saha S.K et. Al; VERC 2006) by VERC found out how the different strata of Bangladesh countryside households moved forward through the sanitation ladder, from the really low cost sanitation options to the better and durable sanitation options investing from their own resources. A very negligible portions of the canitary latrine user households in the study areas were found having received any micro credit support (around 5-7% families in Manda Upazila, VERC, 10% in Sreepur Upazila, DISHARI, and around 20% in Shibalaya Upazila, SEDA; according to Area Coordinators, VERC, DISHARI and SEDA respectively) for the purpose from different financing organizations (e.g. BRAC, Grameen Bank and ASA). It is because of the CLTS approach and its in-built continuous motivation and mobilization processes that people turned away from open air defecation option, chose the sanitary latrine option for better life and eventually walked through the sanitation ladder for better and sustainable options along with improved hygiene behaviour. The key findings of the study are given below:

Box No: 2

Despite regional variations and variations by category of families, it is clearly evident that people made significant upward movement in the sanitation ladder. Poor families (identified as the largest category (e.g. 49% of 424 samples) were the best performers in moving up along the Sanitation Ladder. The middle class households were the 2nd largest category (36%). The hardcore poor households representing about 13% were found to be relatively slow movers. Only 2% of the total sampled households identified as rich also moved up towards the most durable options of latrines. While travelling up along the sanitation ladder, all categories of households have followed gradual progression principles. Compared with only 5.2% households of the study sample who started using hygienic latrines in the year 2003, it was found that 100% households were using hygienic latrines at the end of the year 2006. During those three years, most households invested own resources and continued to install better latrine options accompanied with better personal hygiene and community environmental cleanliness practices.

Source: *Walking Through Sanitation Ladder*, Saha S. K, et al. VERC, 2006

However, Financing from external resources for the hardware particularly, is not the key factor for the achievement of Total sanitation; instead, the investment from the community is the factor for determining

the success, which is the elementary driving force of the CLTS approach. The box below shows the evidence:

Box No: 3

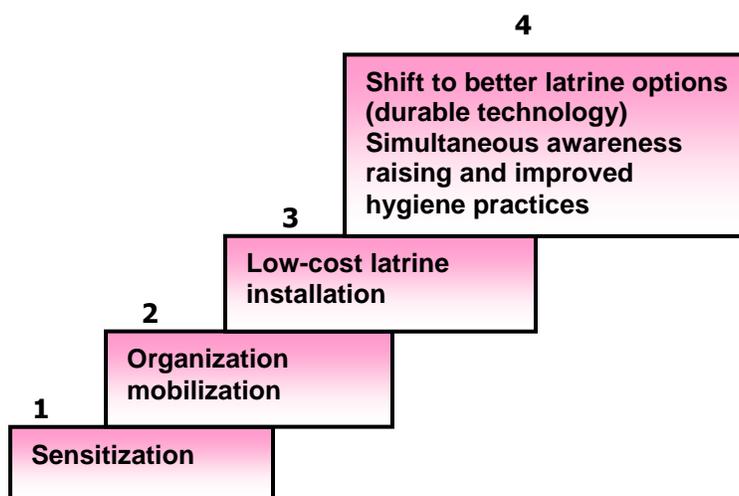
If this work would have been done with the financial and material assistance of any government or NGO, then this total mobilization would not have been possible, because we have seen in the past that when material and monetary assistance is provided from the top, then instead of cooperation and collaboration, there thrive conflicts, jealousy, passing the baby to others and blaming each other, which become a normal feature between the civil society, community, local government representative ; eventually creating splits and jeopardizing wider cooperation among stakeholders. Any mobilization like this should be started with people's own effort.

Aminul Islam, UP member, Kushumba

Source: *Walking Through Sanitation Ladder*, Saha S. K, et al. VERC, 2006

With regard to economic categories of forces, resource sharing among the community and just distribution of material and economic assistance by the community to the families in need have been reported as **driving** forces. On the other end, financial inability of economically poor families (hard-core poor) has been reported as the main hurdle. However, most of these hard-core poor families were found covered from the government safety-net programme (20% ADP allocation of UPs, Block Grant and 1% of their revenue income). The diagram below shows the sequential progress in latrine installation due to gradual hygiene behavioural change, which required low to high investments in more and more durable latrines.

Sequential steps involved in the approach of gradual progression in latrine installation and usages



So, it is evident that investment in sanitation is dependent on its approach. Top-down investment or ‘Subsidy’ is not the key to success, rather paradigm shift or investment from the community and ‘No subsidy’ and ‘self-respect’ have been found to be the key factors behind the success of the CLTS approach, as a result of which the nationwide achievement by the year 2007 was estimated at 86.23%. The VERC study also showed that a family of Barapai village in Manda Upazila, Naogaon had spent TK. 3950 on average in the year 2003 for managing waterborne diseases, while at the end of the year 2006, similar expenditure was reduced to Taka 1340 only as the villagers adopted sanitary latrine use gradually. This finding ultimately links sanitation with health economy and eventually poverty reduction.

Financial mechanism

As discussed above, the CLTS approach introduced different sanitation technology options for the user community as per their affordability. In addition, it provides for making use of social capital for supporting the hard-core poor. So, investment from the outsiders in sanitation hardware is not required. The costs of different sanitation technology options, sources of funding have already been discussed before. However, the overall financial mechanism involved in the field of sanitation is:

- Community (individual household) invests in hardware installations and their repairs and maintenance,
- Development partners invest in software activities, particularly in hygiene promotion, mobilisation, capacity building, entrepreneurship development and advocacy (see table-No: 11),
- The government and LGIs invest both in hardware and soft ware (hygiene promotion) for the hard-core poor as part of their safety-net programme,
- Micro-credit facilities are also available for financing the entrepreneurs as well as for installations of better and durable sanitation options.

Entrepreneurship development

Entrepreneurship development is part of the total soft ware package and it is quite important for marketing the technology options. Entrepreneurs in this sector are treated both as small scale production units and catalysts who ignite others to install sanitary latrines. Field findings showed that 56 nos. of entrepreneurs were developed and trained in Sreepur Upazila alone under the DISHARI project, out of which 45 persons were found marketing their products successfully. The rest 5 persons were found working as masons busy with installation and fixing repair jobs of sanitary latrines. VERC trained 10 persons as entrepreneurs and all of them are operational in their business in Manda Upazila. Apart from those, 25 more private latrine producers were found active in this business as their secondary source of income. SEDA trained 32 persons as entrepreneurs in Shibalaya Upazila and 24 persons were found active in their business. The table below shows the source of finance of the entrepreneurs:

Table No-11: Source of fund of entrepreneurs in the study area

SL. No.	Source of finance	Sreepur (%)	Manda (%)	Shibalaya (%)
1.	Micro Financing Institutions	15	24	29
2.	Self Financed	85	76	71
	Total:	100% (45)	100% (33)	100% (24)

Note: Figures in the parenthesis are the total numbers of active entrepreneurs

The above table shows high prevalence of self-financed entrepreneurs; the others received financial support from ASA, BRAC, Grameen Bank, VERC and SEDA which provided their 'seed money' or the initial working capital.

Key Learning Points

- As per existing policies of the government, there is no subsidy for individual latrine installation. In case of the hard-core poor, there is a provision of 100% subsidy from the UP's ADP allocation. Subsequently, this subsidy provision policy for the hard-core poor may ultimately jeopardize the philosophy of the CLTS approach.*
- The very CLTS approach is mainly based on "self respect" not on "subsidy". When people are ignited, sensitized and mobilized, the demand is created and eventually communities invest in sanitation.
- The CLTS introduced a wide range of hardware options by which users can choose an appropriate model according to their ability to pay.
- Usually, the users utilize their own fund for installation of latrines as they have already been mobilized and motivated to realize that it is essential to the sustenance of their health and hygiene.

- m. Local innovations are actively encouraged to expand the range of options available. User households are supported to enable them select the option best suited to their respective needs and budgets.
- n. On the basis of local demand and on principles of market economy, some local entrepreneurs have emerged who are ready to produce different options of sanitary latrines and their spares. As a result, employment creation and income generation have occurred in the project areas. Some entrepreneurs have taken it as a part-time income generation opportunity.
- o. Masons for sanitary latrine installations and repair are also there offering their services. As a result, employment generation in another related field has been created in the project areas.
- p. Development partners invest in the organizational and developmental activities, particularly in hygiene promotion, mobilisation, capacity building, entrepreneurship development, advocacy and networking.
- q. The expansion of entrepreneurship needs multi sectoral initiatives like latrine construction, ICS construction and installation of water points etc.
- r. The local CBO is the focal point under the leadership of the LGIs, particularly the Union Parishad.
- s. Investment in sanitation ultimately links with health economy and eventually poverty reduction and addressing the relevant MDG target.
- t. Positive back up support (technical in particular) is needed from the related government departments like the DPHE, LGED etc. in order to sustain the initiatives.

8.3 Technical Aspect

o Design and Performance Monitoring of Sanitation Activities:

The national sanitation strategy has emphasized a wide range of sanitary latrine technologies depending on different socio-economic settings and hydro-geological conditions. The traditional approach has been to provide a few acceptable technological options such as the concrete ring-slab with a water seal. In a move away from this approach where a single latrine design is advocated, a wide range of hardware options has been developed and users can choose an appropriate model based on their affordability. Therefore, local inventors and innovators are being encouraged for development of wide-range of models of sanitary latrines. As a result, according to VERC, there are about 30 options available which have been innovated and are being used by community people. It has been found from various field surveys that out of the 30 options of sanitary latrines, 19 have been innovated by community catalysts known as Rural Sanitation Engineering Group Members, the number of whom has increased further.

Generally, poor people prefer low-cost direct and offset pit latrines with plastic pan. Even families with limited funds could opt for appropriate options, depending on their affordability, from various models with costings ranging from as little as Taka 105 to more sophisticated models up to Taka 1,700 per unit. Households were at different levels of the sanitation ladder, and many had made a gradual shift from a low-cost temporary model to a permanent structure. Families were proud to show off their latrines, which are viewed as status symbols in areas.

During the detailed review, 3 project areas of different NGOs in different geographical regions have been surveyed as shown in *Table No12*:

Table No-12 Different Types of Sanitary Latrines being Disseminated By Dishari, VERC-CLTS and SEDA NGO-Forum in Different Parts of the Country.

SL.No.	Installation Cost in Taka		
	Dishari *	VERC-CLTS**	SEDA-NGO Forum ***
1.	Sanitary Latrine (off set)	Sanitary Latrine (off set)	Sanitary Latrine with Septic Tank
2.	Sanitary Latrine (off set)	Sanitary Latrine (off set)	Sanitary Latrine (off set)
3.	Hygienic Pit Sanitary Latrine (off set)	Plastic Pan Latrine(off set)	Sanitary Latrine (off set)
4.	Hygienic Pit Sanitary Latrine(direct)	Plastic Vent Pipe Model (off set)	Hygienic Pit Sanitary Latrine (off set)
5.	Extreme Low Cost Sanitary Pit Latrine	Plastic Pit Latrine(off set)	Hygienic Pit Sanitary Latrine(direct)
6.		Motka Model Pit Latrine (off set)	

It is evident from Table-1 that Dishari has been disseminating 5 different models of sanitary latrines, and their installation costs vary from TK. 30.00-1400.00. VERC has been disseminating 6 different models of sanitary latrines and their installation costs vary from TK. 80.0-1400.00. SEDA-NGO Forum has been disseminating 5 different models and their installation costs vary from TK. 350.00-40,000.00.

SEDA-NGO Forum developed two models entitled “Sanitary Latrine with Septic Tank and Sanitary Latrine (offset)” which cost TK. 40,000.00 and Tk. 3,500.00 respectively. These two models are suitable for rich people only. The costs of other models developed by Dishari, VERC and SEDA-NGO Forum vary from TK. 30.00 to Tk 1500.00. These models have been accepted widely by the community people. The cheapest model of sanitary latrine developed by Dishari costs Tk. 30.00 only. The user who knows the technique of building a sanitary latrine, can easily build this latrine with the help of his family members.

It has been observed during the field survey that the people who in the beginning of adopting sanitary latrine use usually install the lowest costing latrine in his house later moved to the higher rungs of the ladder gradually through years of use. It proved that the community people are gradually realizing the

benefits of using sanitary latrines. They are also motivating other people in the community. This is a key reason behind the success of sanitary latrine movement achieved in the country so far.

The raw materials for making sanitary latrines are indigenous and locally available. Local entrepreneurs have been developed in the project areas, who are producing different accessories of sanitary latrines and selling them to the community people at reasonable prices.

- **Community Managed Pipe Water Supply (BRAC):**

The GoB has not yet issued clear guidelines with regard to the users' contribution to the investment costs of village-based piped water supply schemes. However, the GoB has stated that users should contribute 20% of the investment costs for deep hand tube wells and other technologies for difficult areas.

Within the framework of a World Bank project, the communities need to make a total contribution of 50% of the total investment costs. However, the World Bank is experiencing problems to find partners for this project as the partners need to pre-finance the community contribution and this is apparently perceived as 'too risky' by most stakeholders in the sector. Calculations of the monthly user fee by BRAC indicate that a required contribution of 50% will result in a monthly user fee which should be beyond the hardcore poor user's ability to pay. This finding is further substantiated by the fact that in India, communities are required to make a contribution of only 10% of the total investment costs. After considering and weighing the pros and cons of these arguments, the community contribution to the initial investment costs has been put at 30%. This is similar to the contribution for installation of a deep tube well.

The communities will be required to make an up-front contribution of 10% and pay a monthly water user fee to:

- Repay the loan through a period of 5 years against a subsidized interest rate of 10%.
- Cover operation and maintenance costs, which are estimated to be around 10% of the total investment costs per annum.
- Provide cross-subsidy for the poor and hard-core poor users. See box below:

Box: 4 Arrangement of Cross-subsidy within the Community

To ensure that the poor and the hardcore poor have access to safe drinking water and are able to pay the monthly water tariff, a cross-subsidy system within the user community has been introduced. Three different service levels have been provided, which are:

- Shared Stand Post for small cluster for the poor and hardcore poor families. Monthly water tariff: Tk. 10.00-50.00.
- Individual house connection for middle-class families. These families pay a monthly water tariff of Tk. 150.00-175.00
- Individual and Multiple house connections for better-off families. Monthly water tariff: Tk. 300.00

To ensure that the poor and the hardcore poor are able to pay the monthly water user charge, their monthly user fees will be cross-subsidized through the user fees of middle and high income groups in the communities. For this purpose, three different service levels will be introduced:

- Shared stand post for small cluster of poor and hardcore poor families. These families will pay a minimal user fee between Tk. 10 and Tk. 50 per month.

- Individual yard connection for middle-class families. These families will pay a user fee of Tk. 150–Tk. 175 per month. Part of this user fee will be used to cross-subsidize the monthly water bill of the poor and hardcore poor families.
- Individual and multiple house connections for better-off families. These families will be paying a monthly user fee of around Tk. 300. Part of this fee will be used to cross-subsidize the monthly water bill of the poor and hardcore poor families.

During the detailed review, the project area of Pakundia Bahumuki Safe Water Pipe Line Supply Committee in Sonargoan Upazila installed by BRAC has been visited.

The project activities cover some 180 households. The community people are getting water through the whole day. There is a CBO who regularly monitors the project area. The committee engaged a trained operator to look after the operation of different machinery under the project. Each household pays Tk. 60.00 per month as a service charge for water supply.

● Use and Maintenance

During installation of sanitary latrines by the technicians, the users usually learn how to maintain and use the latrines. Therefore, it is the users who get to regularly clean their latrines by themselves. They also practise three important personal hygienic behaviours viz:

- Visit latrine wearing sandals or any other footwear
- Wash hands after defecation
- Wash hands before eating foods

As a result, the incidence of water borne diseases in the project areas start falling and eventually, there aren't any cases of sickness reported when the practice is well established in a particular community. Local skilled masons are available. In case of major repair and maintenance works of the sanitary latrine, the local masons usually help the users, it was perceived. In the cases where they helped the latrine users fix any disorder, they charged reasonable amounts of money, it was reported; but after all, it depends on the nature of the work or dysfunction, everyone admitted. In some areas, sweepers are available for clearing and dumping the sludge generated in the latrines. Dumping is usually done by digging a hole on the ground, then the sludge is dumped in the pit and finally it is covered with tree leaves, straw, mud etc.

● Health and Hygiene Education/Training:

The whole approach depends on the promotion of good behavioural habits; hence the crucial role of Health and Hygiene Education..

Through the Entry PRA process, people realize the need for “Health & Hygiene Education”. Therefore, the issue is usually discussed with the WATSAN action committee when drawing up the action plan. There are four types of specific sessions are held:

- Courtyard meeting
- Film show
- Health campaign
- Children's Education

The aim of these sessions are to promote good behavioural habits. The four types of sessions are designed to reach different groups of audiences and also to cover the whole community without leaving out anyone. This process creates the willingness and awareness among the community people to enable them take decisions for immediate action addressing any crisis regarding safe drinking water supply, sanitation and hygiene.

8.3.1 Entrepreneurship Development (process, techniques, training, capital/ fund flow, backward linkages and forward linkages, marketing, scaling up).

A Focus Group Discussion (FGD) was arranged at VERC Lalmohan office for sharing the experiences of present performance and background of entrepreneurship development in the CLTS programme in the area. In all, nine entrepreneurs have been involved in the CLTS related activities who attended the FGD session. Area Coordinator, WatSan, Lalmohan and Coordinator - Training and Communication Section, VERC facilitated the FGD. The discussion started with self-introduction and narration of overview of the assignment.

Purpose:

Assessment of performance of the CLTS related entrepreneurs with regard to obtaining need based information as well as sharing experiences of their present involvement and status of the business.

Process:

The discussion started with self-introduction and narration of overview of the assignment. The participants described their entry point in their gradual development as entrepreneurs with the initiatives and back up support of VERC. Mr. Khokon Mia from Lalmohan started the discussion with sharing how he began his journey of developing himself as an entrepreneur. Khokon also shared his involvement with VERC-CLTS programme, involvement with establishment of sanitary mart, the present status of the enterprise and his future aspirations, according to the guided questions of the facilitators. Then Md. Sohel Mia of Ramaganj, Md. Didar Bepari from Paschim Char Ummed, Ms. Jahanara Begum of Char Bhuta, Md. Humayun Kabir from Lord Hardinge and Md. Tofazzal Hossain from Kalma shared their experiences and described the situation regarding the construction, sales, installation and repairs of sanitary latrines, in turn. The participants at the FGD started their discussions dwelling on their previous involvement with the sanitation sector and how they eventually moved in the direction of developing themselves as entrepreneurs gradually. Each of them also explained how they mustered and generated capital for entrepreneurship development, ran their entrepreneurship successfully and the volumes of profits they were making out of their businesses. They articulately pointed out, without any hesitation, the difficulties they faced in the past and are facing at present in the process.

Findings:

- a. Entrepreneurs like Md. Khokon Mia and Md. Didar Bepari started their journey in developing themselves as entrepreneurs in traditional ways and gradually acquired and promoted the skills and potentials of entrepreneurship.
- b. Entrepreneurs like Ms. Jahanara Begum, Humayun Kabir and Mr. Sohel Mia developed themselves as entrepreneurs supported with through training and technical orientation provided by the facilitating organizations.
- c. The entrepreneurs are receiving remarkable encouragement and all kinds of positive motivational support from the support organizations.
- d. Most of the entrepreneurs started their initiatives investing their own small capital in a skeletal manner and gradually expanded their ventures with the Micro Credit Support of Grameen Bank and NGOs like COAST, SWANIRVAR Bangladesh and others. The amount of loan money borrowed from COAST SWANIRVAR Bangladesh etc. for individual entrepreneur is TK. 8000.00 - 12000.00.
- e. At least 5 entrepreneurs out of 9 weren't initially convinced that they were in the way of developing themselves as entrepreneurs in the WatSan field. But now they are happy with their performance and present involvement.
- f. All the participating entrepreneurs thought that due to the high demand creation of the Total Sanitation Campaign, they have been able to expand their business considerably and effectively.

- g. Most of the entrepreneurs needed more capital which they mentioned to be in the range of Tk.20000.00-25000.00 to upscale their business sustainably on a long term basis and they'd like to repay the loan on a monthly basis.
- h. Most of them suggested that the DPHE should provide technical and financial support to them for promoting private entrepreneurship in the sanitation sector.
- i. The entrepreneurs have proposed to their respective union parishads that they should engage them and not just anybody to construct latrine slabs, rings and other related materials for quality assurance.
- j. Finally, the entrepreneurs expressed their willingness to get involved in improved cookstove construction and installation as entrepreneurs. .

Learning:

- u. Proper demand creation is a pre-requisite for entrepreneurship development.
- v. The expansion of entrepreneurship needs multi sectoral initiatives like latrine construction, ICS construction and installation of water points etc.
- w. Positive back up support (both technical and financial) is needed from the related government departments like the DPHE, LGED and Local Government Institutions to sustain the initiatives.
- x. Involvement of WatSan and ICS development sectors will be helpful to develop more entrepreneurs for expansion of the sectoral activities and scaling up.

Key Learning Points

The key learning points perceived are given below:

● Design and Performance Monitoring

- i. It has been observed that all the sanitary latrines are so designed that from the hard core poor to the rich--all installed them in accordance with their economic conditions.
- ii. The services of a number of skilled technicians are available in the project areas who can make sanitary latrines with locally available raw materials. They are skilled enough to build any type of sanitary latrine in the user's premises.
- iii. Local entrepreneurship has been developed in the sanitary latrine intervention areas.They are producing all the parts of different types of sanitary latrines and selling the same to the users at reasonable prices.
- iv. There are sanitary latrine display centres in the project areas. These centres have different types of sanitary latrines on display showing with the types and the installation costs of each type of latrine conveniently. The customers can select and buy sanitary latrines suitable to meet their respective needs from these centres.
- v. There are strong monitoring teams comprising local CBOs and NGOs who regularly monitor the performance of the promoters as well as adoption trends with regard to sanitary latrine use in the project areas.
- vi. The local LGI representatives, teachers of the educational institutions, local clubs etc. were also found closely involved in the implementation and monitoring of sanitary latrine use in the communities.

● Use and Maintenance

- i. Users were found cleaning and maintaining their latrines regularly by themselves.

- ii. Local skilled masons are available for major repair works and maintenance of the sanitary latrine, as necessary.
- iii. In some areas, sweepers are also available for cleaning and dumping the sludge of the latrines.
- iv. All the project areas visited have CBOs, which are seen functioning properly. A strong and dedicated CBO and trained technical persons are a must for sustainability of a sanitary latrine project.
- v. By introducing use of sanitary latrines in the project areas, there is enhanced employment generation activities perceived, whereby poverty reduction goals have been achieved to an extent.
- vi. The children's groups played an important role in the popularization of sanitation activities in the areas.
- vii. The community people seem proud and happy because they have sanitary latrines in their premises.

o Health and Hygiene Education/Training:

- i. In the project areas, there are "Health Motivators" found working with the communities, who are seen promoting good behavioural habits regarding sanitation and safe drinking water in the communities.
- ii. It has been reported by the community people that by introducing sanitary latrines in the project areas, there has been perceived remarkable decrease in water borne diseases viz diarrhoea, dysentery, skin diseases etc.
- iii. The visiting team observed that during their transect walks in the communities, there were no bad smell perceived and the yards of the community households looked clean.

8.4 Community Engagement:

The study on the process of community mobilization through sustainable institutional arrangement towards an effective WatSan programme under different NGO working areas is an important assignment for the VERC-WI team. To this effect, Community Led Total Sanitation (CLTS) has been selected to be studied, so that the main learnings may be drawn from it so as to make recommendations for adaptation in the piloting design for IAP reduction in Bangladesh. It is observed that a number of IAP reduction initiatives were undertaken in the past to this effect by the government agencies and NGOs in the country but they did not sustain and could not bring about visible success. The main difficulty in rendering them successful lay in the implementation process, especially the community engagement strategy that was adapted to this effect. Community people had little access to the decision making process, which is the key driver to take the process forward. They were not involved in the planning of the intervention rather the project design was developed taking into account the experience of the implementing agencies which was not based on the assessment of the beneficiary community. Most of the hardware designs and cost options were also decided by the implementing agency without taking into account the affordability status of the community people concerned.

The process of community engagement in all the studied organizations are almost similar, which is, ensuring people's participation in all the project processes which starts through the holding of the Entry PRA session for entry into a community. VERC starts with the community people simultaneously at the Upazila and Union Sanitation Taskforces so that the already achieved success can be shared by the community catalysts in the Upazila and Union forums. This type of complete pictures and practical description of processes from frontline actors add extra efficacy to the sharing with higher tiers. This helps in visualizing things in package manner. In case of DISAHRI, this initiation process starts through holding workshop with the Upazila Sanitation Taskforce giving emphasis on the GoB interest and policy/strategy issues to activate the tier. In the session, the UP Chairmen as participants prepare action plans for the respective UPs so that the process moves effectively to a lower tier i.e., the Union level. The Union level

workshops are to make aware the UP members as participants along with the cross-section of participants to initiate activities for achieving sanitation coverage across the Union as a whole. Once the Union Taskforce is aware of the process and it involves the UP members along with other actors and move to the frontline for process facilitation towards formation of community institutions and undertaking project activities. At this level, the PRA exercise is held and Para Action Committee (PAC) is formed with the participatory action plan as the product or outcome. Thereby some differences between the two i.e., community catalysts playing role in the awareness raising at higher tiers beside VERC workers playing the role in Upazila and Union Taskforce sensitization/mobilization workshops are perceived. SEDA goes through holding an orientation session by making use of the PRA tools. The UP members as participants of the session prepare respective Ward Level action plans for holding community level workshops to raise awareness among the community people in general and help formation of an essential CBO in the process named Community WatSan Committee. This committee draws the action plan for the community and takes steps to implement the same towards achieving sanitation coverage including hygiene practice promotion. As of involvement of other actors like children and women's group - VERC, SEDA and DISHARI follow almost similar strategies. In case of VERC, the CBO (Community WatSan Action Committee – CWAC) decides the number of hygiene education centres considering easy access of the participants and coverage of households which is finalized by the frontline staff in consultation with the women participants. BRAC study case reveals that the project process starts with the sharing session of frontline staff members identifying the problem of arsenic contamination in ground water source and finding out alternative technologies of mitigation with cost benefit analysis. This analysis helps the community to find piped water option suitable to overcome the contamination problem and formation of a committee to undertake responsibilities of mobilizing the whole community. They were also convinced to contribute participation cost in addition to BRAC capital cost investment support and have ownership of the installation as outcome of process facilitation.

This exercise of community engagement which is done through mapping of the geo-physical context i.e., roads, lanes, crop fields, households, water points, installed latrines in the community with indication of hygienic/unhygienic status and location of institutions (religious and educational). Seasonality trends, analysis of diseases and availability of water round the year are also determined and assessed through discussion with the community people attending the session. Defecation site visit and feces calculation are also helpful to make analysis of the effects or negative impacts of open defecation on the environment, health and family income. All these analyses made on the prevalent situation enable the community people to draw an understanding that unsanitary living condition is unwanted and then they collectively get ignited to have a change to the entire situation. And to this effect, a committee comes into formation for taking the leadership initially through preparing a detailed plan of action and sharing it with the community people on another day for ratification and support and direct involvement. This is in brief the practice in CLTS by the practitioner NGOs striving for total coverage.

The existent skills of facilitation available with the NGO staff members to this effect can be replicated for other interventions towards a sustainable change of situation and more specifically to address the public health and environment issue of Indoor Air Pollution. If we can transfer the skill at the facilitating NGO staff level without compromising the values of people's participation, that will help all concerned go a long way.

Community Organizations and Networks

Process of CBO Formation:

The outcome of situation analysis in the Entry PRA session ignites community people to have change of the WatSan situation of the community and to this effect, they form a CBO (VERC terms it as Community WatSan Action Committee – CWAC, NGO Forum terms as Village Development Committee-VDC; Dishari says it as Para Action Committee-PAC) to take on the responsibility on behalf of the community. **Venn diagram** is exercised at this stage for the purpose of committee member selection which is, in fact, done considering the personal profiles of individuals in respect of acceptability, intelligence, willingness to serve the people etc. so that an unbiased assessment of individuals is done and the right types of individuals are selected for inclusion in the committee. All the participants are encouraged to give opinions

irrespective of their wellbeing status and thus a process of leader selection in a democratic manner is ensured. To make the committee more effective and related with the local government body, the UP members concerned are also included as a mandatory practice. Thus, the selection process proves really helpful in finding out the pro-active individuals for the purpose of community mobilization for achieving total sanitation in a given community. The first and foremost task for the committee is to draw a detailed plan of action for the community which is ultimately shared with the community people in general at a later date for ratification and putting into operation. Once the activities start as per plan at the frontline, and gradually other actors including the formal agencies like the local government bodies join in, then more energy is added to the initial capital to move ahead with more efficiency as they are also bound by government promulgations.

Resource Mobilization at Community Level:

Community ownership is the most important point of CLTS implementation. Facilitating organizations like VERC is able to achieve 100% latrine installation coverage with their own resource without subsidy and any support from outside. Regarding installation of water points, the facilitating organizations are able to sensitize communities for rendering them eager about cost sharing on the basis of their ability to pay in case of water point installation efforts at the community level as well as at institution and public place level for fixing the cost sharing basis. Now community people and especially the poor and the hardcore poor people have got a chance to participate in the whole process in terms of both software and hardware.

Implementation Arrangement:

When the action plan is prepared considering the number of households, population and geographical spread of the community, wellbeing status of people, activities to be accomplished for the improvement of sanitation status, resources available within the community, with the support providing NGO and from local government, responsibilities like monitoring of progress assigned to individuals and timeline within which the activities will be performed, the committee takes up latrine installation programme at the 1st instance. For the purpose, a technology orientation on latrine models with cost options is held for the committee selected catalysts. These catalysts, in turn, help other people of the community understand the technological aspects of the intervention. At this stage, individual households take steps to install latrines for each of the households. The trained catalysts (ultimately named as Rural Sanitation Engineers) extend technical assistance to households, where necessary and complete the latrine installation tasks. Formerly, this activity alone could take months, which is now done in a few days only. The other crucially important task that the committee initiates is hygiene education for all the women of the community so that all the households get access to hygiene messages, ensuring as a result, that hygiene practice is taken up by all the individuals excluding no one at a household. The committee decides the number of spots required, considering easy mobility of women. In this regard, the committee requests the NGO concerned to offer facilitation support for holding the education sessions.

For implementation of safe water access promotion, the committee forms a water point management committee taking representatives from each of the poor households of the cluster where there is scarcity of safe water for want of tube well or ring wells. As water point installation is highly subsidy backed and meant for the poor clusters, the committee encourages the deserving households to select a suitable common site for the installation and collect the participation cost as determined by the NGO (sometimes it is Union Parishad-DPHE supported) for payment and getting the delivery from the NGO selected supplier of the hardware. The water point management committee also selects one male and a female caretaker for each water point to be trained in the technology so that the installation remains running round the year.

The CBO also takes care of the common places to ensure cleanliness and disposal of garbage in proper manner. To this effect, all the households of the community are asked to keep their yards clean by disposing of all garbage in a fixed place for eventual transfer of the same to the crop fields for use as green manure.

Any institutions existing there in the community are also brought under coverage of sanitation through discussion with the management committee. To this effect, hygiene education is imparted initially by the NGO staff members for practice promotion and monitoring of actions/installations that are installed in the

community. Virtually, the CBO in the frontline is the prime mover of activities under the CLTS process. All its activities are documented for reference and record. This documentation of events helps sustain the committee activities.

Role of CBO after phasing out:

According to the plan and strategy of facilitating organizations, particularly in the case of VERC, a phasing out strategy is included in the process. After 2 to 3 years, the facilitating organization will phase out and the CBO remains responsible to perform all monitoring and follow-up activities, ensuring the use and maintenance of hygiene latrines and water points and the hygiene practice promotion activities with active and need based support from the USTF and WSTF.

Awareness Development

Ignition Point for change in behaviour:

The Entry PRA exercise is used for ignition in communities to effect installation, use and maintenance of hygienic latrines, safe water points and changing behaviour at personal and domestic levels. In the whole process, the ignition point is the realization of the dangers of open defecation on the part of each of the community people through triggering the conscience so that they stop the practice.

Process for Community Mobilization:

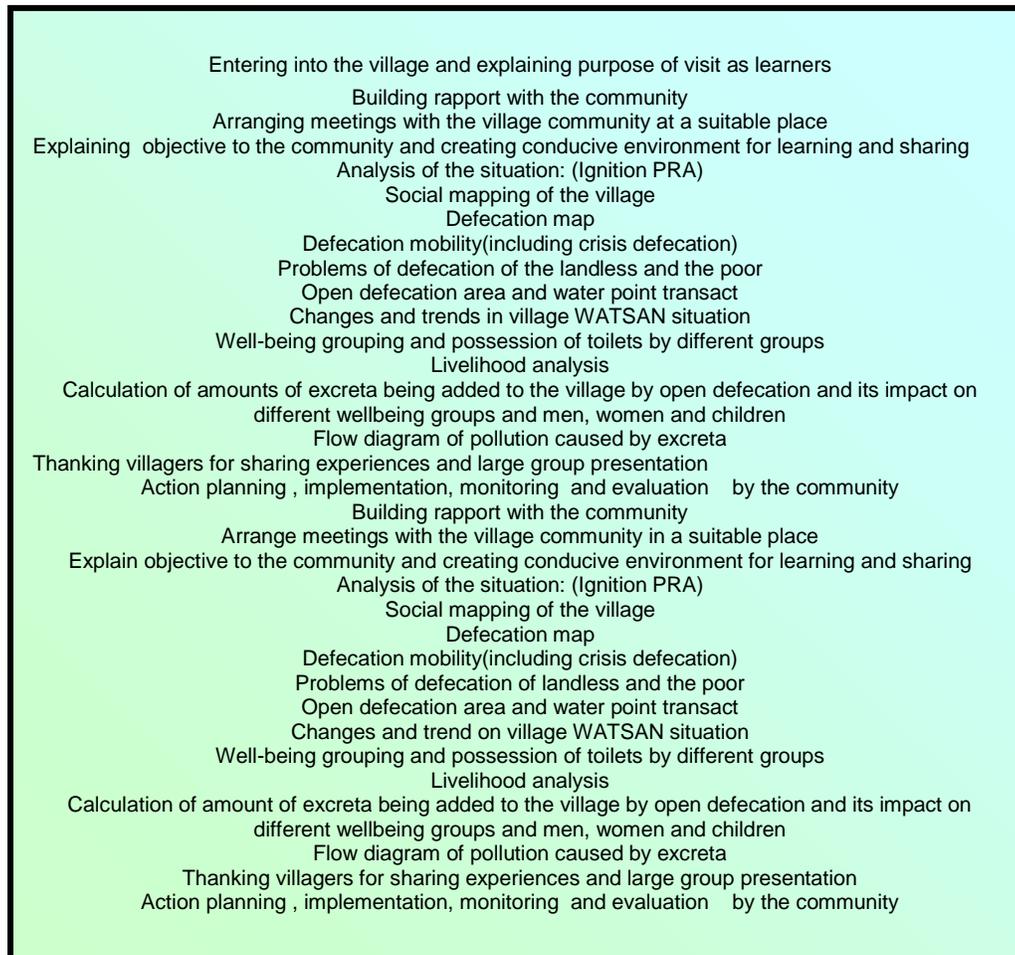
There is the practice of effective and related PRA tools and techniques for community mobilization. The following PRA and other participatory techniques are being used at different steps and stages of community mobilization:

- **Transect walk:** Transect walks are taken for becoming familiar with the villagers and rapport building, in addition to having a first hand overview of the prevalent situation of WatSan.
- **Social Mapping:** Social Mapping is done for identification of the Resources, Households, Water Points, Latrines etc. This visual arrangement of the prevalent situation of the village helps initiate dialogues with the community with a view to exploring the situation, make analysis and reach a point of consensus on focused issues.
- **Wellbeing Ranking:** Wellbeing Ranking has been used to identify realistic classification of the households of the community through the process. The ratio of rich, middle class, lower middle class, poor and hard core poor are determined through discussion with the participants, based on the information volunteered by them. This, in turn, helps determining the deserving poor category of households in need of hardware support from potential sources.
- **Seasonality trend calendar:** Seasonality trend calendar is used for identifying the season specific diseases, water scarcity, water logging, variation in income level in communities etc.
- **Open defecation site visit:** For effective sensitization of the community people and leaders of LGI, facilitators invite them to visit a big open defecation place and try to visualize the real situation. The facilitators explain the situation on the spot to create obvious and additional embarrassment for the users of the site and get the sensation deeper so as to help them for more effective realization of the situation.
- **Feces Calculation:** After completion of the open defecation site visit, the community people return to their common place and start calculation of feces from a particular household to the whole village through proper facilitation of the assisting NGO workers. At one stage, the community people estimates the huge quantity of human excreta generated in the community which already has disappeared. Then they realize in more than one ways how the human excreta has gone to different destinations including people's systems.
- **Flow Chart Analysis:** At this stage, the facilitators initiate the discussion on the modes of disappearance. At one stage, the community easily identifies the contamination routes through which the excreta get into the human stomach. They also realize the cause of diarrhoeal diseases. In this

process, the community gets ignited effectively to stop defecation in the open and use safe drinking water with hygiene practice.

- **Drawing Action Plan:** The members of the CBO sit together to draw an action plan covering at least a calendar year to stop open defecation through installation of hygienic latrine and water points for improved safe drinking water access and for hygiene practice promotion.

Box-No: 5 Ignition processes of CLTS



Role of Women

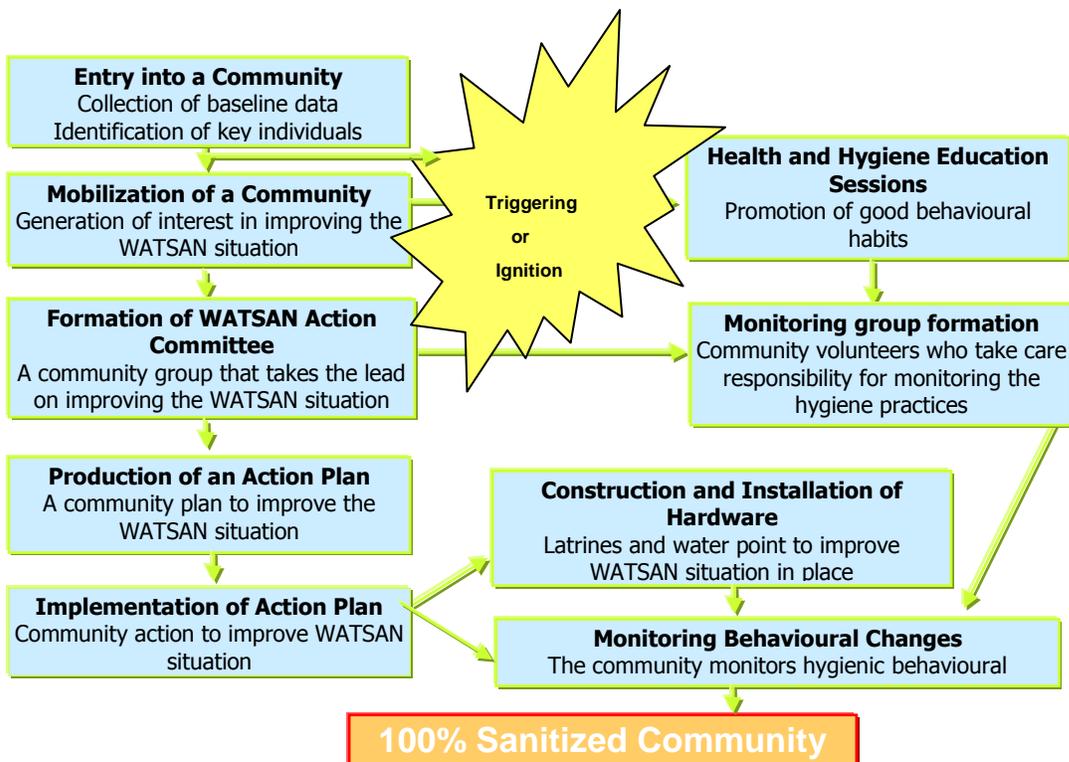
The CLTS programme lays main emphasis on active involvement of women in the programme process. Women are placed in the forefront of interventions that start from entry into a community in the form of Entry PRA.

Monitoring Arrangement:

Each and every component of activities under the CLTS is backed by effective participatory monitoring arrangement. The NGO facilitator of hygiene education session on completion of each day's session identifies the key behaviour change points and asks the participants by when the household members will adopt the practice and who is going to cross-check the progress in the community. Then the participants willingly take the responsibility indicating the number of households within reach for monitoring purpose. This way the practice monitoring is carried out in communities in a self-supportive fashion.

The latrines installed in a community also require regular monitoring in respect of use and maintenance, which is done through the hygiene education participants in addition to children group members. If any fault is detected, the same is brought to the notice of the household concerned for adoption of corrective measures, as necessary. Water points are monitored by the water point management committee so that they operate smoothly round the year. Usually the monitoring task involves no cost at all under the CLTS. Monitoring is also done by the Union Sanitation Taskforce to ensure quality and extent of the reported progress. In fact, monitoring is a tripartite arrangement involving the facilitating NGO, Local Government Institution and the community level committees. The most important feature of the community monitoring system is that the CWACs (CBOs) monitor their own progress of performance and the intervention impact on health simultaneously. This, in turn, helps communities to understand the benefits and encourage them to carry forward their efforts towards sustainability. The Upazila Sanitation Taskforce also undertakes monitoring to assess the quality and quantity of progress as reported by the Union Sanitation taskforce committees. Finally, the qualitative assessment is done at the time of declaration by the government by higher tier sanitation Taskforce Committees making recommendations for recognition and rewards for total coverage. Moreover, the progress of the Total Sanitation programme is also monitored at the Upazila level through the Union Sanitation Taskforce and Ward Sanitation Taskforce, The overall national performance and progress across the country is supposed to be monitored by the national Sanitation Taskforce/Secretariat.

The CLTS Implementation Process



Key Learning Points:

- Local CBOs/ similar organizations and clubs, LG members and members of the elite etc. are engaged in community mobilization.
- Ward level committees play effective role in awareness raising on the CLTS
- LGI and NGO collaboration is effective to make the CLTS meaningful
- For addressing gender disparities, both men and women should be actively involved

- Courtyard meetings with vulnerable mothers, LGI members and members of the social elite are essential as part of community mobilization.
- Folk music, drama, exhibition of short films and publicity on the electronic media and in newspapers can help create awareness among people more effectively
- Exposure visits, thematic roundtable conferences and workshops on CLTS are effective tools making it sustainable for public awareness and wider alliance building.

8.5 Scaling up and Replicability:

Scaling up:

The big question is whether the CLTS has the potentials to assume the desired dimensions of a self spreading popular and national movement, in Bangladesh and elsewhere. This requires rethinking as to how to go about the development of appropriate strategies and appropriate approaches for scaling up, replication and/ or social marketing. As discussed in the Financial Aspects section, one of the non-negotiable principles for the rural CLTS is: NO subsidy for hardware (not even for the hardcore poor or anyone else from outside). The table: Comparative analysis of the field findings showed that (Financial aspects) the lowest cost of a hygienic latrine for fixed spot defecation is Tk. 30.00 only (Dishari-WSP-WB Project). Chambers R. and Kar K. (2004) also mentioned it could be below Tk. 50.00. According to the “Dhaka Declaration” and National Policy for WSS 1998, subsidy for hardware is not a very crucial issue. But the safety-net policy of the GoB for the hard-core poor, if it is not misused, can create an impact for scaling up the CLTS programme as a national movement. If the subsidy supports from the LGIs and the national government continue as shown in the table: Sources of fund in UPs in achieving Total Sanitation, there is a possibility that the spread of the CLTS might slow down and in some cases, may stop altogether. The over enthusiasm and the speeding up of achieving 100% latrine coverage of unions and upazilas might also slow down and eventually it may destroy the mission of the CLTS approach, which upholds the dictas--it has to be “Community-Led” and “People first: they can do it”. Even there remains the risk of child and adult diarrhoeas and deaths that is eventually caused by the absence of or low graded hygiene promotional activities. Because, safe defecation through hardware installation is one of the components of the CLTS and the other components being personal and domestic hygiene which can be achieved through the CLTS approach.

The multiple approaches and diversity, all adhering to the non-negotiable principles (see Financial Aspects) and sharing of learning and experiences among the organizations, people and institutes are important in order to do better for scaling up the CLTS as a national programme. Thrusts should also be given on continual realistic feedbacks leading to continuous adaptation and improvisation of approaches and methods. Let people innovate new methods, designs and approaches through community based catalysts, community consultants and community engineers (local entrepreneurs: VERC Model) according to their convenience, the NGO, LGIs and government will only assist and support in the facilitation process.

Community based participatory approach with bottom up planning, successful application of MPA and PRA tools for community ignition, situation analysis, planning, implementation and participatory monitoring and evaluation were the important elements for scaling up the programme. In this respect, effective community ignition was one of the key issues for sustainable sanitation programme and its scaling up.

Community catalysts, private sectors (local entrepreneurs), NGOs, LGIs and finally the public sectors (concerned Government Departments, viz., DPHE) played their expected roles to scale up and replicate the programme in other areas. Above all, the GO–NGO–Private sector and CBO linkages as well as their institutionalization have constituted a decisive factor package for scaling up of the CLTS programme.

Institutional arrangement, cohesion and co-ordination among the CBOs, NGOs, LGIs and the government are essential. Learning showed that (see table: Comparative Analysis of Field Findings) the integrated

institutional approach is another key element towards the scaling up, success and sustainability of the CLTS. The national and local governments must ensure that the best learning is enriched, expanded, scaled up and replicated in the neighbouring areas and other parts of the country.

Replicability:

Replicability applies to process as much as to the outputs. In other words, it is to be tried to develop solutions that others desire, can afford, and are able to copy. This is what is meant by replicability. Latrines should be constructed using designs, materials and techniques that the local people appreciate and are willing and able to copy. In addition, installed latrine management (safe disposal of sludge) and operational structures, use and maintenance pattern that can be easily understood and copied etc are also considered for choice of replication. Community based masons, entrepreneurs and catalysts can be the real powerhouses for replication, if they are empowered and equipped for the tasks. An incremental improvement approach (Sanitation Ladder) can be used to upgrade a pit latrine as the family's income increases according to their affordability. Findings from the Detailed Review and Exposure Visits showed that poor families started with a simple pit and low cost superstructure. In time, the latrine is upgraded to ring-slabs and pour-flush type and a more permanent structure can also be built with local resources. Accordingly, learning and experience of the applied approaches are found copied and replicated in the neighbouring areas.

Local entrepreneurship developed with skill development and capacity-building support from locally active NGOs (some NGOs also provided credit support to them in order to scale up their enterprises/ business) made it possible to replicate the programme elsewhere, mostly in the neighbouring villages, unions and upazilas. This is a crucial element for the replicability. Other elements include whether the types of technologies, spares, technical skills for installations, repair and maintenance are locally available. Most important findings are that those technical hands and the entrepreneurs are emerging from within localities/ communities.

The success of the CLTS programme ultimately led to the alleviation of poverty and a healthy society, resulting in the fact that it is being scaled up and replicated rapidly now all over the country and beyond the boundaries of Bangladesh.

The scaling up and replicability of the CLTS approach as a prototype can also be applied for popularizing clean energy technologies in order to address the Indoor Air Pollution in Bangladesh. The success stories of the CLTS are due basically to its community based roots and pro-people entity. So, if the people are put first: they can scale up and replicate the programme elsewhere, in every other part of Bangladesh if they are properly facilitated by an integrated organizational/ institutional arrangement and mainstreamed financial mechanism (subsidy policy and micro-credit: for what and for whom).

9. Key Lessons and Recommendations

On the basis of the findings and analyses of detailed review of projects and exposure visits, thematic round tables and workshops, the following recommendations are made for designing future pilot IAP projects.

Key Lessons Learnt:

The key lessons learnt from the WatSan review of select projects are as follows,

- A key feature is empowering communities to help themselves, and a shift from technocratic and financial patronage to participatory approaches. This requires a change in approach from training and management to an emphasis on empowering communities and strengthening local institutions.
- One of the most noteworthy features is the absence of household level subsidy. Unlike earlier approaches, the process of behaviour change was initiated without external financial support to households.

- By creating awareness within communities, a change in mindset is achieved. The shift from open defecation to fixed spot defecation is irreversible as, in addition to health benefits, it provides privacy and safety and people are likely to find it difficult to regress to traditional practices once they adopt the better option.
- The old mindset of promoting a single model approach for technology has not been advocated. Rather, a variety of innovative technology options were made available on the ground. Households were at different levels of the sanitation ladder, and many had made a gradual shift from a low-cost model to a more durable one. Families are proud to show off their latrines as status symbols. Typically, a richer household allows access to members of a poorer household to such facilities held in esteem.
- The effect of peer pressure and participatory monitoring systems have ensured sustainability. Innovative systems are being used to police open defecation, for instance, through watchmen and children's groups. The refusal of families to allow their daughters to marry into households without sanitation systems is an effective incentive for encouraging total sanitation practices.
- The variety of sanitation equipment on sale in the roadside shops indicates that there is a significant demand of such wares in the area. The introduction of cheaper materials and the availability of multiple technology options have increased the demand, as a growing number of users are now able to enter the market looking for meeting specific basic needs. It needed no special efforts to create the supply chain. Private producers of pit latrines and related equipment have largely met the growing demand.

Recommendations

A. Institutional Arrangements:

- Existing CBOs/new CBOs will be responsible for implementation of clean energy technologies at the grass root level.
- Ward Health Committees (that exists now) can be re-activated and revitalized through wider participation.
- Linkages with CBO-NGO-LGI-GO and the private Sector (entrepreneurs) is elementary for institutionalization of the pilot IAP project.
- Revitalize the union and upazila parishads based on the existing sub-committees to support and facilitate the IAP pilot project.
- Users' committees should be developed and formed as CBOs where women and adolescents will play active roles.
- Union parishad, bazar committee, youth club and other similar social organizations should be linked with the IAP Pilot project.
- Health Department, DPHE, LGED, BRDB and Ansar-VDP can be integrated with the pilot IAP project.
- Upazila administration can be integrated in the IAP programme and the UNO should take the lead role.

B. Economics and Financial Aspects:

- Investment and fund support should be provided from the financing organization for entrepreneurship development.
- Micro credit facilities should be provided for installation of clean energy technologies.
- Cost of clean energy technologies should be affordable for all sections of people of the community. VAT, Govt. taxes on solar panel may be exempted.

- For popularization of biogas plants and solar panels, subsidies may be provided, so that larger number of community people should be encouraged to access and enjoy the facilities of clean energy technologies.
- Some budget provision should be there in the LGI fund for promoting low cost technology ICS.
- Credit facilities with low interest or no interest for the poor should be made available from the partner NGOs for installation of clean energy technologies.

C. Technology:

- Arrangements to be organized for conducting the identification of appropriate clean energy technologies to be included in the IAP pilot project for implementation.
- Selected clean energy technologies should be affordable and low cost to be accessible to all segments of people in the community.
- Skilled technicians should be trained, groomed and their services made available for installation of clean energy technologies in the users' premises.
- Users of clean energy technologies should be given short training on how to repair and maintain the technologies.
- Local entrepreneurs should be developed at grass root level for ensuring supply of the accessories of clean energy technologies to the door steps of the users.
- Need based clean energy technologies should be offered to the users.
- Motivation and demonstration centres need to be established for publicity of the selected appropriate clean energy technologies.
- Loop research of clean energy technologies should be carried in BCSIR and other research institutions in the country to reduce costs and rendering the technologies more user friendly.
- Community based biogas plants should be introduced in the community and popularized.
- Solar panels could be used by groups or clusters of poor households for lighting purposes which will reduce the consumption of kerosene oil resulting in reduced IAP.
- Those who can not afford to use clean energy technologies, should be motivated to modify their kitchens so as to render them to be well ventilated, so that the smoke from their traditional stoves can be let out easily.

D. Community Engagement:

- Local CBOs/ other clubs, LG members and members of the social elite etc. can be engaged for community mobilization.
- Ward level health committees can be engaged for awareness rising on the IAP project.
- LGI and NGO collaboration is needed in order to support and facilitate the IAP project.
- Teachers of different educational institutions, religious and social leaders and other opinion leaders should be involved in the process of popularization of the IAP project.
- The CLTS approach has been found effective and well accepted by all stakeholders; therefore, this approach can be used for implementation of the IAP project.
- Keeping the gender perspectives in mind, both men and women should be actively involved in the IAP project.
- Restaurants, tea stalls and small industries owners associations who use traditional fuel for cooking and other heating purposes should be included as stakeholders in the IAP project.
- Courtyard meetings with vulnerable mothers, IGI members and members of the social elite are essential for community mobilization.

- Folk music, drama, exhibition of short film and advertisement on TV, Radio and in newspapers on the reduction of IAP will help create awareness among the people in the country.
- More exposure visits, thematic roundtable conferences and workshops on IAP reduction programme are essential for creating and enhancing public awareness.

E. Scaling up and Replicability

- Capacity building of CBOs and other local committees should be strengthened for better implementation of the pilot IAP project.
- Benefits of clean energy technologies through street dramas, folk songs rendition and cultural activities should be presented before the community people for scaling up the project.
- Demonstration of clean energy technologies at Hat/bazaar/Union Parishad/ Educational Institutions etc should be carried out for creating and raising public awareness.
- More exposure visits should be arranged to share the experience and learning about clean energy technologies.
- Involvement of more catalysts could be helpful for implementation of IAP pilot project.
- LGI involvement would be extremely helpful for awareness raising and implementation of the IAP pilot project.

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A. Rapid Review:

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1. INTRODUCTION:

As agreed by VERC, Winrock International, LGED and World Bank, the initiative towards the development of pilot project model on Promoting Indoor Air Pollution prevention a study of interventions taken up by Government and sector NGOs is a necessity. To this effect a rapid review is aiming at assessing the potentiality of NGOs and line agencies of the Government in Bangladesh have been carried out during October 2007 in Bangladesh. This study will help screening of organizational initiatives undertaken so far and select key NGOs and interventions for detailed study to draw an understanding of key learnings to design the pilot initiative.

A total of five NGOs have been studied for the purpose of rapid review of sanitation program and three have been identified for detailed study. Literature review, personal interview and field visits were useful in doing the review. The inception workshop that was held in Hotel Sheraton was very much informative to the process of review as the event was attended by key individuals from different relevant agencies of the country with UN bodies. The study team members of VERC, WI held a series of round tables, among themselves and with local government representatives from VERC-Winrock program areas. These sharing meetings were helpful to undertake the study. We understand this Rapid Review findings have encouraged us to go ahead with the detail review of the selected organizations in due course. Main findings of the review have been indicated in the overview part of the report.

2. OVERVIEW OF REVIEW PROCESS:

For application of suitable service delivery model to IAP reduction pilot project, 05 numbers of projects on WatSan undertaken by different organizations have been conducting the rapid review. During the analysis there are different aspects of the project were investigated. Major aspects of each of the project are:

- Community engagement
- Institutional arrangements
- Technology
- Demand creation and marketing
- Financial and market development
- Scaling-up and replicability

The overall findings of this investigation is stated in a Table number-1 (**apendis-2**)

3. PROJECT SELECTED FOR REVIEW BY VERC:

Team A is mainly responsible for review and documentation of sanitation campaign program specially CLTS implementing in different areas in Bangladesh. According to this assignment VERC project implementation team collected necessary information about GOB departments and NGOs engaged in implementing Total Sanitation Program in the country. As per the project requirement the Team-A has reviewed the design, goal, objectives, activities, strategy, expected results, sustainability and scaling up process carefully and selected six potential projects implemented by the six different organisations for Rapid Review.

4.

PROJECT SELECTION CRITERIA:

Designing of a pilot project for reduction of IAP is the main focus of the project and development of manuals on participatory methodologies for community mobilization and technology option for popularising the ICS is another important task of the project. Thus, for selection of the appropriate organization the following criteria have been set up:

- The program should have remarkable experiences on community based development including PRA.
- The program should have People Centered WatSan and Hygiene Promotion.
- Excellent experiences to work with LGI as driving force for the sustainability of the project.
- Market development and demand creation process visualized in the project intervention.
- Process of development of community catalyst for implementing the program and scaling up the process in neighbouring areas.
- Process of innovation of Hygienic Latrine models for creating options to the community to selected appropriate one.
- Process of development of the CBOs and Linkage with other existing actors in the field.
- Participatory planning, implementation, monitoring and evaluation process in built in the project.

5.

OVERVIEW OF EACH WATSAN PROJECT REVIEWED INCLUDING IDENTIFIED ASPECTS OF INTEREST FOR EACH PROJECT.

The review and evaluation of service delivery models will mainly focus on water and sanitation projects in Bangladesh with special emphasis on participatory methodologies such as the Community Led Total sanitation (CLTS) approach and a review of World Bank funded project, NGO implemented projects and projects undertaken by the Government of Bangladesh.

Five projects have been selected for Rapid Review purpose as they have different approaches for implementation. The projects are as follows:

- I. WSP World Bank - DISHARI Project
- II. Partnership Program of NGO Forum
- III. BRAC - WASH Project
- IV. DANIDA-HYSAWSA Project
- V. VERC-CLTS Program

I. WSP World Bank-Decentralized Integrated Sanitation Hygiene and Reform Initiative (DISHARI) Project:

The project area covers 80 unions of 08 upazilas under 05 districts. The districts are - Gazipur, 2. Jamalpur, 3. Dinajpur, 4. Nilphamari, 5. Lalmonirhat

a. Community engagement:

Resource mobilization is the key strategy of DISHARI, which ensures participation of stakeholders including LGIs, community, teachers, religious leaders, children-adolescents, private latrine producers and local NGOs. These are regarded as key institutions to create movement for social development

The working plans in the communities are as follows –

- ❖ At Upazila level, the Upazila Task Force facilitated to organize meeting and workshop to review progress, prepare plan for action and identify next course of action.
- ❖ At Union level meeting was organized with Union Task Force, Local NGOs, Private Sector actors and other Stakeholders with increased participation where integrated planning is underway.
- ❖ DISHARI is all level provided continuous facilitation to strengthen local government and stakeholders' capacity that played a vital role in planning, implementing and monitoring of the total sanitation program.

- ❖ Training, workshops and different types of orientation played a significant role build-up institution capacity of LGI. These trained personal focused on LG structure, activities and roles, good governance and people's participation

b. Institutional arrangements:

Strategy of the Program

- ❖ Strengthen the institutional capacity of local government to play a steering order
- ❖ Ensured participation and co-ordination of NGOs efforts, stakeholders, local functional departments of GoB and local communities.

During the Dishari's embryonic phase, four major intervention strategies were developed which were reflected during implementation

- ❖ Partnership
- ❖ Coordination and Collaboration
- ❖ Capacity for Union Parishad
- ❖ Resource mobilization and community mobilization for total sanitation

Capacity Building:

Capacity building is one of the core activity of Dishari to strengthen the capacity of UP's, Ward Taskforces, Rural Sanitation Engineer and School Teachers. The main objectives are,

- I. To develop capacity for analysing this situation, planning, community mobilization and monitoring
- II. To build their confidence level to lead implementation by ensuring participation of all stakeholders
- III. Capacitate the Union Parishad bodies facilitate the issue based session with community

Under this capacity building, majority activities were conducted successfully through which resource pools were developed.

In line with National Sanitation Strategy Dishari is working with 'Totality Concept' in implementation of sanitation, hygiene promotion, use of safe water and environmental sanitation intervention in sustainable manner. Following major interventions were implemented with totality concept to achieve the above.

- Latrine at household and institutional level
- Hardware support for safe water and latrine at school and public places
- Hygiene promotion at community school and hat-bazar
- Disposal of solid waste water at households, school and hat-bazar

c. Technologies:

The promotion of indigenous types of low cost options was taken as good strategy to motivate the hard-core poor households to stop their traditional practices on open defecation and adopt quickly the new practices of safe defecation. Technological upgrading of sanitary latrine is an important issue for sustainable total sanitation. The nation sanitation strategy has emphasised a wide range of sanitary latrine technologies depending on different socio-economic and hydro-geological condition. Therefore, Dishari is promoting indigenous low cost options like covered pit latrine, ventilated offset pit latrine to reach hardcore poor. These options were highly accepted by the local community.

d. Demand creation and marketing:

- Through community mobilization people were ignited and a demand was created for installation of hygienic latrine
- Para ignition sessions were conducted at para level to accelerate the installation of hygienic latrine in the community
- PRA tools were used for stopping open defecation and raise awareness of community of bed affects

e. Scaling-up and replicability:

Resource mobilization in terms of promoting total sanitation activities:

Dishari has ensured participation of all stakeholders and community people in planning, monitoring, reporting and implementing activities.

-In the community by conducting orientation and workshop increased the knowledge of stakeholders for resource mobilization. This also helped to explore the potentiality of people as well as local financial and human resources.

-Teachers, religious leaders, adolescent, children group and field staff of local NGOs were considered as human resources. They are key elements who create movement for social development.

Lessons Learnt and Challenges:

- ❖ Expectation of quick result of the project by the stake holders including the government is perceived as great challenges in achieving sustainable total sanitation. Community mobilization and getting positive response from the community can not be time bound. Community participation and awareness, thus required adequate time to get visible result.
- ❖ In char areas the soil type is sandy and is not suitable low cost options. On the other hand, the people living in these areas are hard core poor and can not afford costly option. As a result, prioritising sanitation other livelihood related development agenda through community process was very difficult.
- ❖ Many Dishari working unions are low lying and have the drainage problem during the rainy session, the problem hamper the process of latrine installation.
- ❖ Different NGOs with different strategies are working in the same field. Such as many NGOs are conducting program by providing ring slab on subsidy basis which contradicts the Dishari concept of mobilizing the people to explore their own potential to construct latrine without external intervention. So the job of Dishari is becoming difficult.
- ❖ UNO and UP leadership can excellerate implementation of sanitation program. Local government is able to street an achieve success once they are given responsibilities from the national government.
- ❖ Poor and under privileged are easily motivated to latrine installation. Community mobilization is the most important strategy for construction of sanitary latrine. Subsidy is required for hard-core poor but they should be taken place after community mobilization or up gradation of the options or construction in public places.
- ❖ Exposure visits by the UP Chairman and Members were very effective for generating positive attitudinal changes towards total sanitation
- ❖ Stakeholders felt comfort to implement issues one after one not together.

II. Partnership Program of NGO Forum:

NGO Forum is the apex networking service delivery agency of NGOs, CBOs (Community Based organization) and private sector and civil society actors who implement and sanitation (WatSan) programs at the unnerved and underserved rural and urban communities.

NGO Forum works as development partners with all relevant national and international agencies and stakeholders ranging from the government and civil society to donor organizations.

a. Community engagement and Institutional arrangements:

Program Implementation Approach

- ❖ Operate in line with the national policy for safe water supply and sanitation
- ❖ Institution building of the partner for WatSan & hygiene promotion as human rights
- ❖ Integration of hardware and software WatSan supports
- ❖ Community management of WatSan and hygiene programs
- ❖ Gender balanced WatSan program
- ❖ Focus on poor in unserved & disadvantaged communities in the line with the pro-poor strategy

- ❖ Demand responsive & decentralized service ensuring good governance
- ❖ Participation & cost sharing by community through participatory methods
- ❖ Ownership to the community to ensure sustainability of the support
- ❖ Beef up supporting and complementing the national initiatives in the Watsan sector

The Network

NGO Forum maintains a nation wide working structure to facilitate the supports in a decentralized fashions. Through its country-wide working structure in communion with 735 partners NGOs & CBOs, NGO Furum's entire working area is encompassed into 14 Regions with administrative and management set-up at each of the regional offices. In line with its organizational mandate NGO Furum maintains a dynamic network with relevant national and international agencies and stakeholders ranging from the government and civil society to donor bodies.

Implementation Strategy:

NGO Forum, in facilitating the implementation of the NGOs and Civil society Networking projects have made a shift in its strategy. It has initiated to enhance the capacity of LGIs to take a lead role in promoting CLTS, safe water for all and undertaking intensive campaign for improved hygiene behaviour in collaboration with other civil society groups. NGO Forum has linked the LGIs with local NGOs to assist them in community mobilization through organizing cultural events, maintaining strong network and facilitating promotional activities to ensure that the NGOs can extended necessary support to LGIs effectively, it has initiated to build social, technical managerial competencis of this NGOs through extensive training. To respond to WatSan demands generated through community mobilization and motivational campaign, NGO Forum has been assisting PSOs with capacity building support and started-up fund to produce and supply WatSan hardware at the local level. One of the key roles NGO Forum has enhanced to build alliance a network with policy makers, civil society and other stakeholders whose cooperation and support bear ample applied significance on the performance of the project.

NGO Forum has concentrated on strengthening the capacity of PSOs to meet the emerging demand for watsan hardware generated through organizing cultural events and promotional interventions. It has been catalyzing and developing latrine producers in the project areas providing with technical as well as financial support to produce and sell a range of latrine options that are cheap and affordable and also assist them to develop mobile center in remote areas. In case of water supply, NGO Forum has been facilitating the LGIs, NGOs and PSOs in the process of instillation of low cost water supply technologies. In order to establish the sustainability of WatSan Services, NGO Forum tends to create ownership feelings among the beneficiaries through ensuring close participation of community people from strata. Village Development Committee (VDC), a community base group is formed with the membership of local elites, indigenous leaders, influential people and common people from the respective villages ensuring the participation of both sexes. In urban areas, Slum Development Committee (SDC) is formed to promote Watsan and hygiene situation in the urban slum. The VDCs & SDCs cooperate the partner NGOs in carrying out WatSan activities in their communities look after the services and finally take the role of catalysts to bring about the WatSan and hygiene changes in communities.

NGO Furum facilitated dynamic, need based and time fitting training program targeting to build the capacity of the implementing actors viz. the partner organizations, the LGIs, private sector actor, community allies, the community peoples and so on. Leadership and managerial capacity of the LGIs and community allies are enhanced through training while the beneficiaries are imparted with training to become and enabled of proper operation and maintenance of their WatSan facilities and get actively involved in WatSan activities. The partner NGOs are training-up in the line with enriching human resource in the line with proper implementation of Watsan activities.

NGO Forum's training package is clustered in two categories viz. the human skill development training and the technical skill development training. These training courses impart basic knowledge of Watsan program, planning, management, communication, supervision, monitoring, evaluation, facilitation, leadership and so on. Different cross cutting issues like gender, good governance, human rights, poverty alleviation etc also covered under the human skill development training.

b. Technology Promotion:

Union-based Total sanitation:

With a view to achieving faster sanitation coverage in a wide range NGO Forum started implementing Union-based Total sanitation targeting the total households of a union or a community. Under this approach, at the very initial stage of sanitation intervention in the target unions the Forum sensitizes the concerned Local Government Institutions (LGI) to be involved actively in the promotion of sanitation. Being sensitized, the Local Government Institutions (LGI) play the lead role in the entire process of Union based total sanitation.

Sanitation Facilities for the Urban Slums:

NGO Forum has been addressing the sanitation problem of urban slums in a limited scale. In order to ensure basic sanitation facilities in the urban slum the Forum has been provided two types of latrine support, which include construction and renovation of cluster latrine, construction and renovation of (single & double) pit latrine, etc. sanitation facilities in urban slums are ensured through strong networking and collaboration with concerned authorities of the City Corporation.

Village Sanitation Center (VSC):

Village Sanitation Centers (VSC) play a vital role in increasing sanitation coverage in rural Bangladesh. Considering the fact, NGO Forum has been operating Village sanitation Centers (VSCs) through its partner NGOs, CBOs and private producers with a view to contributing to the faster and sustainable sanitation coverage. The unserved and disadvantage areas where demand is high are given priority while setting up the Village sanitation Centers at the community level and usually the VSCs are set-up where no other VSCs are run by DPHE or other agencies. For the convenience of the community people demonstration of different technologies like water-seal, offset, home-made pit, twin pit etc has been organized at the premises of the VSCs with relevant information i.e. price, feasibility as per soil condition, installation techniques, hygienic use of sanitary latrine, etc. Ring mould sets are also distributed among the VSCs as production tools to make the center equipped.

c. Demand creation and marketing:

Mass awareness and social mobilizations are the effective tools to bring about the changes in knowledge, attitudes and practices (KAP) of the community people in this regard. In order to create mass awareness and social mobilization, NGO Forum design and facilitated the conduction of different promotional activities considering three key issues: capacity building, community mobilization and hygiene promotion. The process of facilitating the promotional activities in the field always plays due emphasis on the involvement of mass people and images of the key community figures like local opinion leaders , religious leaders, school teachers, students, LGIs and staff of the partner NGOs. The partner NGOs implements the promotional activities at the community level. NGO Forum supports them with technical knowledge information, promotional messages on water, sanitation and hygiene. Relevant IEC and BCC materials are used to support process of creating mass awareness and social mobilization towards safe water, sanitation and hygiene behaviour.

d. Scaling-up and Replicability:

- To respond to WatSan demands generated through community mobilization and motivational campaign, NGO Forum has been assisting PSOs with capacity building support and started-up fund to produce and supply WatSan hardware at the local level.
- NGO Forum has concentrated on strengthening the capacity of PSOs to meet the emerging demand for Watsan hardware generated through organizing cultural events and promotional interventions. It has been catalyzing and developing latrine producers in the project areas providing with technical as well as financial support to produce and sell a range of latrine options that are cheap and affordable and also assist them to develop mobile center in remote areas.
- In order to establish the sustainability of WatSan Services, NGO Forum tends to create ownership feelings among the beneficiaries through ensuring close participation of community people from strata. Village Development Committee (VDC), a community base group is formed with the

membership of local elites, indigenous leaders, influential people and common people from the respective villages ensuring the participation of both sexes. In urban areas, Slum Development Committee (SDC) is formed to promote Watsan and hygiene situation in the urban slum. The VDCs & SDCs cooperate the partner NGOs in carrying out WatSan activities in their communities look after the services and finally take the role of catalysts to bring about the WatSan and hygiene changes in communities.

III. BRAC-WASH Project

BRAC-WASH programme will ensure that 17.6 million people—spread over 150 Upazilas— have access to sanitation services that are effectively used, including consistent hygiene practices. In addition to this, more than 8.5 million people will be provided with safe water supply services. The programme will ensure that existing water supplies are sustained, well maintained and managed by the community.

a. Community engagement and Institutional arrangements:

The micro-strategy, described in detail later, is to stimulate bottom-up participation and planning through purpose-organized WASH committees at the village level whose members represent the entire village (and particularly the poor women), including other committees and other agencies or NGOs that may be active in the village. Thus the project will begin by learning how to reach out beyond the BRAC network. The plans are developed and negotiated at the village, and later aggregated at the Union level with a multi-stakeholder group. These action plans will have a similar core of contents, with variation beyond this for the different villages. The village Shastho Shebika (SS) will be supported by a trained WASH supervisor and the staff of the BRAC local offices throughout. Overall, this is an innovative learning project. It contains a preparation phase of 6 months followed by a start-up period of 1 ½ years. During this initial 2-year period, there will be action research and experimental or comparative trials on issues.

At the national level, coordination will mainly be done through the National Forum for Drinking Water Supply and Sanitation, which is formed by the Local Government Division under the Ministry of LGRD&C and consists of members from GOB, donor and NGO sector (including BRAC). At the district levels BRAC participates in the monthly district development and coordination committee meetings which are organized by the district administrative head (Deputy Commissioner) and includes participation by the major NGOs. The project objectives and progress will be shared with the other development partners to optimize and to resolve any difficulties.

At the village level, BRAC will set up a new committee for sanitation, hygiene and water. This WASH committee will be composed of people who represent all sections and other groups in the village, particularly poor families and groups linked to other institutions and other NGOs, to ensure coordination and to ensure that the benefits of the programme are accessible to all community members. In particular, all community members will, through one channel or another, receive hygiene promotion/education to varying degrees of intensity. Participatory planning will take place, with the committees planning for a core of common activities but also formulating plans for activities that reflect their own situation and their own assessment. The community schemes prepared with the village WASH committee will be formally endorsed by it. BRAC will develop effective means for establishing committees that are pre-poor yet represent key groups in the community. It will also ensure that simple rules are understood, and followed for adding or dropping committee members (for example, if someone does not attend 3 meeting in a row, they may be replaced) as well as rules that enable a committee to be disbanded if it is not functioning. Transparent and open decision-making will also need to be ensured, particularly where this involves provision of subsidies or cross-subsidies to the hard-core poor. In communities where there is a piped water system, it is preferred to have one committee, handling water, sanitation and hygiene to ensure integration. This will be tried out. In view of the difficulty in setting up and sustaining new committee, progress will be reviewed after 6 months and again after one year, with the option of modifying the plan. For example, in some communities, it may be as effective but easier to work through an existing committee. The UPs together with BRAC staff will guide the programme in setting priorities and mobilizing the village committees.

Strategies specific to this programme

Within the programme the following strategies have been designed to ensure that a clear focus on the poor and hardcore poor is maintained.

- Selection of the extremely poor families.
- Specific support measures—a loan from a revolving fund and a grant—have been included in the programme to ensure the poor and the hardcore poor access will be able to construct a sanitary latrine.
- The total sanitation strategy will create inter-community pressure to construct sanitary latrines and adapt hygienic behaviour. The better-off groups within the communities are expected to play an advocating role.
- The village WASH committees will have representatives of all income groups within the communities. The use of well-designed PRA-methodologies will ensure that all these groups will be able to participate in a meaningful manner in the decision making and planning process.
- The monthly water user charges of the poor and hardcore poor will be cross-subsidised through the monthly user charges for better-off groups in the villages.

Selection criteria of hardcore poor

Socio-economic mapping or equivalent participatory activities will be carried out to identify, with the community, the extremely poor families in the programme. This will be cross-checked, for example, by home visits. Mapping (or its equivalent) can be a useful way to ensure that each family has access to hygiene, sanitation or sanitation promotion and safe water. The selection of hardcore poor households for additional support or cross-subsidizing will be based on the criteria defined by the GoB, which if needed will be refined according to local circumstances:

- Landless households.
- Pavement dwellers or homeless households.
- The main earning person or the head of the household is a day labourer, owning less than 50 decimal of agricultural land or residing in a rented premise less than 200 square feet, and having no fixed source of income.
- Households headed by disable person, woman, or elderly person (65 +).

b. Technologies:

The beneficiaries of the WASH Programme will be required to make a financial contribution to the services for water component. The programme will follow policy guidelines of the GoB wherever possible.

Sanitation

In line with the policies of the GoB, the proposed programme has allocated financial support for hardcore poor families to install slab latrines. Each of these hardcore poor families will receive a sum of Tk. 1,000. The remaining sum, approximately Tk. 500, will be contributed by these families in the form of labour and other related costs. Additionally, poor families will be supported through a loan from a revolving fund that will be established from combined funds from the programme and BRAC's micro-credit programme.

Deep Tubewells

Guidelines of the Government of Bangladesh state that user groups of DTWs are required to make a contribution of 25% of the total construction costs and bear the total costs of O&M. The proposed programme requires individual households to make a total contribution of 30%.

The user groups, with a typical average size of 10 families, will be asked to make an up-front contribution of 10% of the total investment costs. BRAC will provide the user groups with a loan to cover the remaining 20% of the users' contribution.

Through a monthly user fee, the users of the deep tube wells will:

- Repay the loan in a period of 5 years against a subsidised interest rate of 10% or possibly less.

- Cover operation and maintenance costs, which are estimated to be around 10% of the total investment costs per annum.
- Reserve funds for a complete renewal of the piped water supply system. The life span of the system is expected to be around 15 years.

Community Managed Piped Water Supply

The GoB has not yet issued clear guidelines for the users' contribution to the investment costs of village-based piped water supply schemes. However, the GoB has stated that users should contribute 20% of the investment costs for deep hand tube wells and other technologies for difficult areas.

Within the framework of a World Bank project, the communities need to make a total contribution of 50% of the total investment costs. However, the World Bank is experiencing problems to find partners for this project as the partners need to pre-finance the community contribution and this is apparently perceived as too risky by most stakeholders in the sector. Calculations of the monthly user fee by BRAC indicate that a required contribution of 50% will result in a monthly user fee that is beyond the ability to pay of the hardcore poor. This finding is further substantiated by the fact that in India communities are required to make a contribution of 10% of the total investment costs. Considering these arguments, the community contribution to the initial investment costs has been put at 30%. This is similar to the contribution for a deep tube well.

The communities will be required to make an up-front contribution of 10% and pay a monthly water user fee to:

- Repay the loan in a period of 5 years against a subsidized interest rate of 10%.
- Cover operation and maintenance costs, which are estimated to be around 10% of the total investment costs per annum.

To ensure that the poor and the hardcore poor are able to pay for the monthly water user charge, their monthly user fees will be cross-subsidized through the user fees of middle and high income groups in the communities. For this purpose, three different services levels will be introduced:

- Shared stand post for small cluster for poor and hardcore poor families. These families will pay a minimal user fee between Tk. 10 and Tk. 50 per month.
- Individual yard connection for middle-class families. These families will pay a user fee of Tk. 150 – Tk. 175 per month, part of this user fee will be used to cross-subsidise the monthly water bill of the poor and hardcore poor families.
- Individual and multiple house connections for better-off families. These families will be a monthly user fee of around Tk. 300, part of this fee will be used to cross-subsidise the monthly water bill of the poor and hardcore poor families.

Other water activities

The cost of renovating ponds and existing water facilities will require labour from community members. Inputs from BRAC will relate to supplies, mobilization and some technical advice if needed.

c. Demand creation and marketing:

The Shastho Shebika (SS) and Shastho Kormi (SK) work to generate demand for safe water and sanitation facilities through household visits and health education forums on sanitation problems. The SS assists in providing loans to both households and local entrepreneurs for safe water and safe sanitation under the micro-credit system of BDP. The SKs use promotional materials like flip charts, posters, and leaflets to communicate their critical messages. In addition, information is also disseminated through popular theatre, workshops, rallies and campaigns as well as through the orientation of teachers, religious and community leaders. Another feature of this project is the promotion of private sector involvement in

service delivery. BRAC provides interest free loans of Taka 10,000-15,000 (€ 125 to €188) to local entrepreneurs for manufacturing slab latrines.

d. Financial and market development:

Subsidies will be provided to the hardcore poor for sanitation, amounting to Tk. 1,000 (about Euro 12). For water supply, the hardcore poor will receive cross-subsidies, although they too will be expected to pay an amount ranging from Tk. 10 to Tk 50 a month.

Some of the poor families will be supported, for latrine construction, from a revolving fund that will be established from combined funds from the programme and BRAC's micro-credit programme.

For Deep Tubewells and small piped water schemes, the programme operates as in a way coherent with the Government of Bangladesh. For example, GoB states that user groups of deep tube wells are required to make a contribution of 25% of the total construction costs and bear the total costs of O& M. The proposed project requires individual households to make a total contribution of 30% for new deep tube wells and for small piped water schemes. Cost recovery is based on ability to pay with monthly ranging from, it is currently estimated, Tk 10 to Tk 300.

- Within the programme two types of revolving funds will be created:
- A revolving fund to support micro-enterprise to start the production of slabs and rings needed for the construction of slab latrines.
- A revolving fund to support poor families to installation of slab latrines.

At the end of the programme, both revolving funds (revolving capital for production of slab rings and loan provision to poor families)—with a total value of Tk. 99.59 million (€ 1.24 million)—will be used to establish a revolving fund in each Upazila for poor and hardcore poor families for the maintenance and upgrading of their sanitary latrine. This fund will be managed by BRAC's micro-finance programme.

e. Scaling-up and replicability:

- The phasing of the programme is based on the micro-cycles that have been designed for an integrated implementation of water, sanitation, and hygiene activities in a typical village. Water and the development of the village WASH committee have been identified as the most strategic entry point on the basis of experiences elsewhere. Adaptations and further refining of this micro cycle will be done during the programme period.

The programme will start with an inception phase of 6 months. After this inception phase, the programme will start its activities in the first 50 Upazilas, 50 more Upazilas will be added in month 12, and the final 50 Upazilas will be started in month 18 of the programme.

- One mechanism for this would be the sale (at low mark-up prices) through BRAC volunteers in areas where such soap is not readily available. One advantage of this is that it would, in some communities, enable direct sale to women who are not always able to make such purchases. A second element of private sector collaboration will be village sanitation centres which BRAC has already demonstrated, at scale, to be viable and essential features of its work.

- Within the programme two types of revolving funds will be created:

- A revolving fund to support micro-enterprise to start the production of slabs and rings needed for the construction of slab latrines.
- A revolving fund to support poor families to installation of slab latrines.

Revolving fund for micro-enterprise development

Presently, around 4,200 private producers in Bangladesh are producing parts of latrines, mostly rings and slabs. They are known as Village Sanitation Centres (VSC). Most of these producers are located in rural areas and they are the most preferred provider by the people in the villages. In the last few years, BRAC has provided interest free loans to local entrepreneurs who produced 350 thousand slab latrines.

The programme will continue to promote the private sector involvement in service delivery by providing them with interest-free loans of Taka 10,000 (€ 125) to local entrepreneurs for manufacturing slab and rings. The entrepreneurs will be trained and be provided with different types of designs.

The fund will be managed through BRAC's micro-finance programme, which has extensive experience with loans to micro-entrepreneurs. In 2004, BRAC disbursed 56 thousand loans to support micro-enterprises with a total value of € 58 million. The loans will be repaid in a period of 8 to 12 months through equal monthly installments.

Revolving fund for poor families

Poor families will be entitled to get a loan of Tk. 500 (approximately € 6) from a second revolving fund to install a slab latrine. The revolving fund will be established with funds from the programme and funds for BRAC's micro-finance programme.

Similar to the revolving fund for micro-entrepreneurs, the fund will be managed through BRAC's micro-finance programme. In 2004, BRAC's micro-finance programme reached 4.86 million households who are organised through 142 thousand village groups. In that year, the project disbursed € 368 million to 3.99 million borrowers.

At the end of the programme, both revolving funds (revolving capital for production of slab rings and loan provision to poor families)—with a total value of Tk. 99.59 million (€ 1.24 million)—will be used to establish a revolving fund in each Upazila for poor and hardcore poor families for the maintenance and upgrading of their sanitary latrine. This fund will be managed by BRAC's micro-finance programme.

IV. DANIDA- HYWASA Project

a. Community engagement and Institutional arrangements:

The HYSAWA Project under the WSS Component of GoB-Danida will facilitate and promote Union Parishad (UP) based investments focusing on the poor, un-served- and under-served areas. The Local Government Support Unit (LGSU) established under the Project will facilitate capacity building support to the Union Parishads (Ups) to carry out their responsibilities. The capacity support to the UPs will furthermore be supplemented by engaging a Support Organisation (SO), typically a NGO which has capacity of both socioeconomic and engineering expertise or a consortium of an NGO and a Management/ Engineering Firm from the private sector.

Strategies

- Decentralisation Strategy

The project implementation modalities will promote decentralized service delivery. Direct funding to UPs without the influence of national politics or higher level authorities is the key to empower these Local Government Institutions and advance the decentralization process. The Consortium will enhance the capacity of the LGIs, CBOs and VDFs in order to smoothen the decentralization process.

- Community Level Implementation Strategy

To ensure effective design and sustainable use of the WSS interventions communities will be involved in planning, implementation according to their need and ability to pay. To ensure participation of all sections of population in a village or a peri-urban area, including disadvantaged groups like women and poor, a community organization will be formed e.g, Village Development Forum (VDF) or Community Development Forum (CDF) comprise of three groups (a) poor, (b) women and (c) general public including also the richer sections of the community. Community Management Promotion (CMP) methods will be used for planning, implementing and monitoring the community schemes. The Consortium will assist the community and enhance their capacity in order to form their own organizations and manage their schemes under the leadership of the Union Parishad.

- Union Parishad Level Implementation Strategy:

The UPs will receive requests for support to community schemes from village, appraise them, prepare a consolidated union scheme incorporating all the community schemes, and send them to Upazila Development Coordination Committee (UDCC) for validation. Once a union scheme is validated, the UP

will then send the proposal to the HYSAWA FMO with a request for funding. The Consortium (SO) will assist the UP in the community scheme appraisal, and in the preparation and processing of project proposals and fund requests. The UPs will not directly implement the community schemes but will manage the implementation by contracting out the different elements of the community schemes to suitable service providers like local NGO (e.g. for hygiene promotion and total sanitation) and private sector (e.g. contractors) for installations of different types of tube wells and piped water supply schemes as per local requirement based on ground water aquifer and water quality.

Cross Cutting Issues

The following cross cutting issues will be embedded into the community scheme preparation process and thus will be reflected in all implementation activities. The Consortium will orient the partners, stakeholders and key role players in addressing the cross cutting issues in preparing their schemes. The cross cutting issues mainly are:

- Poverty
- Human Rights and Gender
- Good Governance
- Culture and Development
- HIV/ AIDS
- Environment

The Project will adopt possible actions at the grass roots level in accordance with the Poverty Reduction Strategy Paper (PRSP), and the LGD pro-poor strategy.

Methodology

- SO shall focus on participatory bottom up approach while building capacity, facilitate and support the communities through the local NGOs engaged by the UPs. The local NGO will be capacitated by SO in the establishment of VDF/ CDF and in Community Management Promotion so that the poor community especially the women, hard core poor, children and representatives from vulnerable sections of the society would be able to play their specific and desired role in decision making process, in planning, implementing and monitoring of their own schemes and sub-project activities through out the project cycle.
- Above process and procedure shall reinforce the feeling of empowerment and ownership over the project by the communities who are targeted to be covered.
- All development activities will be participatory, community led and demand driven based on the societal context, values and culture.
- UPs shall be the focal point for managing the WSS schemes prepared and implemented by the communities and UPs will be directly funded by a central Fund established under the Local Government Division, GoB. Since the HYSAWA is a large scale investment project and direct funding to UPs in order to manage and supervise the community based WSS schemes the UPs management capacity shall be enhanced. Accordingly, the traditional attitude of the UPs in implementing development projects/ schemes needs to be changed so that the community can better play their expected roles through the process of Community Management Promotion. In this respect VERC-DevCon (SO) shall facilitate Community-based Participatory Management Mechanism through developing a process of Functional Participation and Interactive Participation.
- SO specially will follow SARAR and PRA methodology for building the capacity and facilitate VDF/VDC through local NGOs in order to ensure community participation (particularly the poor, hard core poor, women and all the vulnerable groups) through the process of Community Management Promotion for the sustainability of the project.
- Apart from the direct participatory process, SO shall also give emphasis on consultative process to ensure participation of other stakeholders in the development process.
- SO searches best practices, innovations and their learning from hands on experiences to incorporate those in its development initiatives. SO shall follow same policy and procedures

complying with the Project Implementation Manuals and Project Documents to support and assist UPs and VDF/CDFs in managing and implementing HYSAWA activities.

- Consultative Participation method will be followed for enhancing capacity and ignite the stakeholders like relevant Govt. Offices/ Officers at district and Upazila level (UDCC) so that they can provide their full support and cooperation in order to implement HYSAWA Project.

Capacity building Phase

- Orientation for Upazila WatSan/ Arsenic Committee/ Sanitation Task force
- Foundation Training for UP Chairmen and Secretaries
- Foundation Training for P-NGOs
- Orientation for Union WatSan/ Arsenic Committee/UST
- Foundation Training for Community Development Forum (CDF)/Village Development Forum (VDF)
- Basic orientation for union level other line ministry staff (service delivery)
- Basic skills development training on UP Financial and Office Management
- Skill development training on management and supervision of community Water Supply Sub-project/ schemes
- Basic skill development training on Community Based Participatory Monitoring System and Reporting
- Basic training on different technological options of alternative safe water supply
- Orientation for the Technical Service Providers (Contractors)
- Exposure visit for VDF/CDF leaders, UP Chairmen, Secretaries and PNGO staff

b. Technologies:

SO will provide necessary technical support in planning, designing and supervising the implementation of hardware components (different types of community latrines, drainage and waste management, safe drinking water sources like, Deep Set Pump, Dug Wells, Iron/ Arsenic Removal Units, Piped Water Supply Schemes, etc.).

d. Scaling-up and replicability:

- Sustainability

The HYSAWA Project will address sustainability of both the services provided and the capacity developed. The sustainability of the facilities will be relatively easily ensured as the technologies will be simple and the skill and spares required for implementation, O&M are readily available in the market. However, what is more important the sustainability of the provided services will be ensured if the capacity and the required skill of the users as well as quality of the service providers are enhanced. Other important element is the behavioral sustainability which is essential for continuing the good hygiene, sanitation and safe water use practices that are expected to be developed by the consortium (SO) for users community and local NGOs (community based participatory hygiene promotion tools and approaches).

- Long-term Development Strategy

The HYSAWA Project is expected to develop and demonstrate effective and sustainable service delivery of hygiene, sanitation and water supply through LGIs. The participating UPs will directly receive funds for community scheme implementation which requires extensive and complex types of capacity building provided by the Consortium through LGSU. It is assumed that as this model is based on permanent government structures and the capacities of the local NGOs and private sector is already prevailing (the prevailing capacity need to be enhanced in regards to hygiene promotion for sustainable behavioural changes of the population), it can be scaled up for undertaking large scale decentralized investment programme.

V. VERC-CLTS Program

a. Community engagement and Institutional arrangements:

Main entry point of the program is the community. Accordingly, each and every component of the program is community based. The process involves community people in all aspects of problem

identification, planning/resource identification, implementation, monitoring and evaluation from their own perspective. This introduces ownership of the program as well as ensures sustainability for the future. As part of the community, local Government body, GO, NGO, CBOs and other stakeholders are also to be involved in the process for greater involvement and efficiency of the program approach.

Key activities involved:

- **Entry PRA**

The main purposes being the collection of baseline data and the motivation of the community to change their WATSAN situation. A team of 3 or 4 Health Motivators and the APC uses transects, social mapping, well-being ranking and other tools to establish the current situation in the community over a period of 2-3 days. To help motivate the community to take action to change their WATSAN situation the affect of open defecation and unhygienic latrine use is highlighted.

- **Formation of a WATSAN Committee**

The key to the success of the approach is the involvement of the community members themselves in all aspects of planning, implementation and monitoring and evaluation. The WATSAN Committee is a community group that takes the lead. It usually involves both males and females from all economic groups in the community. This is important, as the emphasis is on the community as a whole making changes and the richer members supporting those less well off.

- **Meetings With The WATSAN Committee**

One of the first actions of the WATSAN Committee is to produce an action plan. The community members themselves are the main implementers of the action plan however; VERC has a key role to play in facilitating them. The committee plans for all sorts of activities, identifies required resources, assigns responsibility among actors, and fixes time for each and every action as well. They consider installation as the first and foremost task and ask for technology orientation for the committee along with other interested individuals from within the community.

- **Meetings with the Community**

As the community is encouraged to find collective responses to problems and help each other, meetings with groups of members of the community are important. They serve a variety of purposes such as to discuss progress, suggest solutions, explain technology and see where VERC's input is needed. Meetings are also held with the elite to engage their support and encourage their involvement.

- **Children's Group Formation**

The role of children in bringing about a sustainable improvement in WATSAN situations is believed to be important so children's groups are formed in communities to act as key motivators to the rest of the community. The children get involved in rallies and community cleaning exercises as well as individual motivational activities through friendship networks.

- **Community Cleaning Exercise**

When progress is being made at individual household level the community often holds a cleaning exercise to clean up public places.

- **Construction and Installation of Hardware**

People are free to select the latrine model that suits them best and get it from where ever they want. In total nine models of latrine are promoted at the outset of the approach along with any local designs that satisfy the criteria for being hygienic i.e.

- Preventing contamination of other things by faeces
- Free from odour
- Free from flies.

VERC provides some models and materials and trains the mason who is paid an agreed rate for the items constructed. The community then pays VERC a set cost (no subsidy) for the items purchased.

The subsidy for water points is set slightly lower than the government level. Construction of water points is done in association with the community with specialist contractors being used as necessary. Poor cluster is always in the choice for installation.

- **Health and Hygiene Education Sessions**

The whole approach depends on the promotion of good behavioural habits so Health and Hygiene education is crucial. Virtually all of the activities have some health and hygiene dimension but in addition four types of specific Health and Hygiene Education sessions are held; Courtyard Meetings, Film Shows, Health Campaigns/rallies and Child to Child Communication.

- **Monitoring Behaviour Changes**

Community monitoring is supported through the use of community held monitoring charts. Individuals take on responsibility for monitoring several households and individuals. The WATSAN committee also monitors progress against the action plan.

As expected there is a range of progress across the 427 communities that are currently involved in this approach but most have shown a good improvement in their WATSAN situation. The outcomes identified in fifty communities have shown that the 100% sanitation approach can bring about a significant improvement in the WATSAN situation in a community within 9 to 10 months. The approach works in a range of geographical and cultural areas and can be introduced in places where a household level approach was previously being used.

Whilst the initial motivational exercise places emphasis on hygienic latrines it is on use rather than just installation. The other aspects of 100% sanitation are introduced as the community plans and implements change.

Communities are also willing to act as promoters for other communities and so spread the message. This is important for the widening of the approach across communities as it is a more sustainable method of promoting 100% sanitation in the long term and helps when NGO resources are limited in the short term.

b. Technologies:

A single-model 'blueprint' approach for technology had not been advocated. The traditional approach has been to provide a few 'acceptable' technological options, such as the concrete ring-slab with water seal. In a move away from this approach where a single latrine design is advocated, a wide range of hardware options have been made available and users can choose an appropriate model based on affordability. Local innovations are actively encouraged to expand the range of options available. As of now, there are almost 30 options have been innovated and on use at the field level of whom 19 are innovated by community catalysts known as Rural Sanitation Engineering Group Members. They have done it considering the differential geo-physical conditions of seven different project locations. Generally, people prefers low-cost direct and offset-pit with plastic pan. Even families with limited funds could opt for appropriate options, depending on affordability, with models ranging from as little as Taka 105 (US \$1.8) to more sophisticated models at Taka 1,700 (US \$29.3). Households were at different levels of the sanitation ladder, and many had made a gradual shift from a low-cost temporary model to a permanent structure. Families were proud to show off their latrines, which are viewed as status symbols.

c. Demand creation and marketing:

The approach is based on the strength and willingness of communities to overcome their own WATSAN problems on their own. Therefore, the role of field workers is that of facilitator enabling communities to analyze their current situation, identify areas for improvement, plan how to improve them and then implement these plans. It focuses on social development using a process of institution building and community empowerment rather than concentrating on the delivery of WATSAN services. The approach also recognizes that in the area of WATSAN, the behaviours of an individual have a direct impact on the health and well being of others. Therefore, to bring about sustainable improvement in the quality of life and health of the rural people of Bangladesh a whole community and ultimately Union1 view has to be taken. The term 100% Sanitation is used to reflect this view.

VERC believes it is important that 100% sanitation goes beyond the installation of latrines and tubewells so field staff assisted the community to work out a behaviour focused definition of 100% sanitation.

- No open defecation or open/hanging latrine use
- Effective hand washing after defecation and before taking or handling food

- Food and water covered
- Good personal hygienic practices
- Latrines well managed
- Using sandals when defecating
- Clean courtyards and roadsides
- Garbage disposal in a hygienic way
- Safe water use for all domestic purposes
- Water points well managed
- Waste water disposal in hygienic way
- No spitting in public places

VERC maintains no subsidy for latrine installation. Community people get orientation on technology options ranging from no cost, low-cost to higher cost according to individual family choice matching with well-being status. Operation & maintenance of installation and use is of families in collaboration with WATSAN Committee. WATSAN Committee negotiates with cleaner as of charge against bulk demand from communities. Negotiations have ensured availability of service at a cheaper rate; besides, the cleaner has sufficient work and higher monthly income compared to the past.

d. Scaling-up and replicability:

- **Achievements so far:** Out of 75 Union /Pourasavas in eight Upazilas under six Districts, a total of 47 Unions (including 4 municipalities) have so far achieved total coverage of latrine installation. The area covers also three out of eight Upazilas of the working areas of VERC. Other visible achievements are
- **Most noteworthy achievement is the involvement of Local Government in the programme process.** Sanitation Taskforces constituted by the ministry at different tiers of the government have been actively involved in the sanitation process. They are planning, implementing, monitoring progress of sanitation coverage in respective jurisdictions. Holding seminar, workshops and rallies to give sanitation a high priority in development.
- The approach is now reflected in the national Sanitation Strategy document which is an indication of successful policy level advocacy initiative.
- SACOSAN – the regional sanitation platform is now an established inter-governmental forum to scaleup CLTS in the region. Main learning of CLTS practice was the driving force in the initiation of the forum. This forum is now an active process promoter in the countries concerned.
- VERC has imparted CLTS training to Care Bangladesh, Plan Bangladesh, Dhaka Ahsania Mission, World Vision, Danida, HEED Bangladesh, RDRS, Ganasasthya Kendra, SLOBP Bangladesh and ten partner organizations of WaterAid Bangladesh (the donor agency of VERC itself). This has created a broad base to scale up process of the approach in the country.
- VERC has also extended technical support to Cambodia, India and Nepal in adapting the lessons learnt to improve WatSan situation.
- Through experience sharing with VERC and community people of VERC working areas several African nations have learnt about the approach and started introducing the key strategies of community process promotion.
- Public place/institutions are also being given attention for the first time in the country to bring under WatSan coverage in a sustainable manner.

e. Lessons Learnt:

The main driving forces behind the paradigm shift in mindset and behavior are –

- A key feature is empowering communities to help themselves, and a shift from technocratic and financial patronage to participatory approaches. This requires a change in approach from training and management to an emphasis on empowering communities and strengthening local institutions.

- One of the most noteworthy features is the absence of household-level subsidy. Unlike earlier approaches, the process of behavior change was initiated without external financial support to households.
- By creating awareness within communities, a change in mindset is achieved. The shift from open defecation to fixed spot defecation is irreversible as, in addition to health benefits, it provides privacy and safety and people are likely to find it difficult to regress to traditional practices.
- The old mindset of promoting a single model approach for technology had not been advocated. Rather, a variety of innovative technology options were available on the ground. Households were at different levels of the sanitation ladder, and many had made a gradual shift from a low-cost model to a more durable one. Families are proud to show off their latrines as status symbols. Typically, a richer household allows access to members of a poorer household.
- The effect of peer pressure and participatory monitoring systems has ensured sustainability. Innovative systems are being used to police open defecation, for instance through watchmen and children's groups. The refusal of families to allow their daughters to marry into households without sanitation systems is an effective incentive for encouraging total sanitation practices.
- The variety of sanitation equipment on sale in the roadside shops indicates that there is a significant demand in the area. The introduction of cheaper materials and of multiple technology options has increased the demand, as a growing number of users are able to enter the market. It needed no special efforts to create the supply chain. Private producers of pit latrines and related equipment have largely met the growing demand.

Challenges ahead:

The approach needs to address the issues into account to become more effective in respect of replication and sustainability and they can be summed up as –

- Back up support to further try out the approach in broader area contexts in the country and region as well
- Institutional linkage between line actors as well as other stake holders to institutionalize the time consuming hygiene behavior change communication activities
- Integration of all stake holders including the donor community to carry forward the innovative approach to linkup with other development interventions
- Effective replication of the approach in the country is still very much dependent on advocacy at the policy level which is yet a big challenge as of its leadership and incorporating it into national policy

6.

Approach for Detailed Review:

Conducting Rapid Review for collecting relevant experience and sharing the approach, methodology, implementation strategy, scaling up process, phasing out strategy and market development process we have developed the list of potential organisations with consultation of LGED, World Bank Team and other important stakeholders in the related field. Then VERC organised a round table for knowing details on the TSC program in respective organisation. All together 12 representatives from 8 organisations attended the round table and shared their project details one by one. At the end of the sharing, open discussion took place including questions and answers. At the last part of the round table six organisations were selected for Rapid Review.

As per decision of the thematic round table team “A” and team “B” formulated the work plan for Rapid Review, name, date and place of the organisations are as follows:

According to the work plan VERC team have been conducted Rapid Review in respective six organisation in stipulated date and time. As per developed guideline the team members collected various information

regarding TSC related program activities including CLTS following the pre-developed open ended questionnaire and guideline. Team members tried to get interview from different level of staff members in various organisations for collecting authentic information and triangulation the information for eliminating the biasness. The team members review the program related documents like project proposal, reports, guideline/manuals for getting more and indebt ideas on different initiatives taken by the organisations in different geographical location and different socio-cultural perspectives.

7. Methodology for Detailed Review

A very useful and need based participatory and modified conventional methods has been used for Rapid Review in different organisations. Following methods and techniques were used for finding out the quantitative as well as the qualitative progress, constraints, challenges and opportunities of the program:

- a. Open ended questionnaire
- b. Moderate type of interview
- c. FGD
- d. Review/study.

8. Conclusion:

The main aim of the rapid review is to identify suitable service delivery models from selected WatSan and household energy project which are being implemented the country for application in designing the future IAP mitigation project. For this purpose there are five different distinct projects on WatSan have been selected for rapid review and they are initial investigation was completed. During the rapid review, it has been found different perception on different aspects of the project which will be helpful in designing the future project.

9. Appendix

Appendix-2

Rapid Review of Water & Sanitation Projects in Bangladesh

Sl. Nos.	Name of the Organisation & Program	Date of visits	Name of the Visiting Team	Name of the Person Interview
1	WSP World Bank – DISHARI Project	22 Oct. 2007	Dr. A.M.H.R. Khan Anowar H. Mollah	Shafiul Azam Ahmed
2	Partnership program of NGO	11 Oct.2007	Md. Yakub Hossain Dr. A.M.H.R. Khan Anowar H. Mollah	Mr. Ziual haque Mr. Rafat
3	BRAC-WASH Project	24 Oct.2007	Md. Yakub Hossain Dr. A.M.H.R. Khan Anowar H. Mollah	Mr. Milon Kanti Barua Program Head
4	DANIDA-HYSAWA Project	17 Oct.2007	Dr. A.M.H.R. Khan Subash Ch. Saha Anowar H. Mollah	Mr. Mufazzal Haque Kamal Uddin
5	VERC CLTS Program	23 Oct.2007	Dr. A.M.H.R. Khan Anowar H. Mollah	Masud Hasan Subash Ch. Saha Quamrul Islam

B. Mini Report of Detailed Review on WatSan Projects

I. SOCIAL ENGAGEMENT

Introduction:

The study on the process of community mobilization through a sustainable institutional arrangement towards an effective WatSan program under different NGO working areas is an important assignment for the VERC-WI team. To this effect community led total sanitation has been selected to be studied and draw the main learning so as to make recommendations for adaptation in the piloting design for IAP reduction in Bangladesh. It is observed that number of initiatives was formerly undertaken to this effect by government agencies and NGOs in the country but they did not sustain and could not bring about visible success. Main difficulty was with the implementation process especially the community engagement strategy that was adapted to this effect. Community people had little access to the decision making process that is key energy to make the process move ahead. They were not involved in the planning of intervention rather the project design was developed taking into account the experience of the implementing agencies which was not based on the assessment of beneficiary community. Most of the hardware designs and cost options were even decided by the implementing agency without taking into account the affordability status of the community people concerned.

The process of community engagement in all the studied organizations are almost similar and that is ensuring people's participation in all the project processes which starts through the holding of Entry PRA session for entry into a community. This exercise is done through mapping of the geo-physical context i.e., roads, lanes, crop fields, households, water points, installed latrines in the community with indication of hygienic/unhygienic status and institutions (religious and educational). Seasonality trend analysis of diseases, availability of water round the year is also done through discussion with the community people attending the session. Defecation site visit and feces calculation are also helpful to make analysis of the affect of open defecation on environment and health and family income. All these analysis made on the prevalent situation enables community people to draw an understanding that unsanitary living condition is unwanted and then they collectively get ignited to have a change to the entire situation. And to this effect, a committee comes into formation for taking the leadership initially preparing a detail plan of action and sharing it with the community people on another day for ratification and support and direct involvement. This is in brief the practice in CLTS practitioner NGOs towards a total coverage.

The skill of facilitation in NGO staff members to this effect can be replicated for other interventions towards a sustainable change of situation and more specifically to address the public health and environment issue of Indoor Air Pollution.

Key findings:

3.2.1- Ignition Point for change in behavior

Entry PRA exercise being used for ignition in communities to install use and maintenance of hygienic latrine, safe water point and changing behavior at personal and domestic levels. In the whole process the ignition point is realization of each of the community people to stop open defecation by triggering the conscience.

3.2.2. Process for Community Mobilization

There is the practice of effective and related PRA tools and techniques for community mobilization. The following PRA and other participatory techniques are being used at different steps and stages of community mobilization:

- **Transect walk:** For becoming familiar with the villagers and rapport building in addition to have a first hand over view of the prevalent WatSan situation.

- **Social Mapping:** Social Mapping is done for identification of the Resources, Household locations, Water Points, Latrines etc. This visual arrangement of the prevalent situation of the village help initiate dialogue with the community to explore the situation, make analysis and reach a point of consensus on focused issues.
- **Wellbeing Ranking:** Wellbeing Ranking has been used to identify real classification of the households of the community through the process. The ratio of rich, middle class, lower middle class, poor and hard core poor are determined through discussion by the participants. This in turn helps determining the deserving poor category of households in need of hardware support from potential sources.
- **Seasonality trend calendar:** Seasonality trend calendar is used for identifying the season specific diseases, water scarcity, water logging, natural calamities, variation in income level in communities etc.
- **Open defecation site visit:** For effective sensitization of the community people and leaders of LGI, facilitators invite them to visit a common open defecation place and try to visualize the real situation. The facilitators explain the situation on the spot to create additional embarrassment and get the sensation deeper so as to help them for more effective realization of the situation.
- **Feces Calculation:** After completion of open defecation site visit community people return to the discussion session and starts calculation of feces with the facilitation of NGO workers. At one stage community people estimates the huge quantity of human excreta in the community which already is disappeared. Then they realize in some ways the human excreta has gone to different destinations including people's stomach.
- **Flow Chart Analysis:** At this stage the facilitators initiate the discussion on the mode of disappearance of feces. At one stage the community easily identifies the contamination routes through which the excreta get in to the stomach to cause diseases. They also realize the cause of diarrhoeal diseases in this process community get ignited effectively to stop open defecation and use safe drinking water and adoption of hygiene practice.
- **Drawing Action Plan:** The members of the CBO sit together to draw an action plan covering at least a calendar year to stop open defecation through installation of hygienic latrine and water points for improved safe drinking water access and for hygiene practice promotion activities.

3.2.3. Process of CBO Formation:

The outcome of situation analysis in Entry PRA session ignites community people to have change of the WatSan situation of the community and to this effect, they form a CBO (VERC terms it as Community WatSan Action Committee – CWAC, NGO Forum terms as Village Development Committee-VDC; Dishari says it as Para Action Committee-PAC) to take on the responsibility on behalf of the community. **Venn diagram** is exercised at this stage for the purpose of committee member selection which is in fact considering the personal profile of individuals in respect of acceptability, intelligence, willingness to serve the people etc. so that a bias-free assessment of individual is done and the right type of individuals are selected for inclusion in the committee. All the participants are encouraged to give opinion irrespective of wellbeing status and thus a process of leader selection in a democratic manner is ensured. To make the committee more effective and related with the local government body, the UP members concerned is also included as a mandatory practice. Thus the selection process is really helpful in finding out the pro-active individuals for the purpose of community mobilization for total sanitation in a given community. The first and foremost task for the committee is to draw a detail plan of action for the community which is ultimately shared with the community people in general at a later date for ratification putting into operation.

3.2.4. Resource Mobilization at Community Level:

Community ownership is the most important point of CLTS implementation. Facilitating organizations like VERC is able to achieve 100% latrine installation coverage with their own resource without subsidy and the support from outside. Regarding water point, the facilitating

organizations are able to sensitize community for cost sharing on the basis of ability to pay in case of every water point installation efforts at community level as well as at institution and public place level for fixation of cost sharing basis. Now community people specially poor and hardcore poor people have got chance to participate in the whole process of both software and hardware.

3.2.5. Implementation Arrangement:

When the action plan is prepared considering the number of households, population and geographical spread of the community, wellbeing status of people, activities to be done for the improvement of sanitation status, resources available within the community with the support giving NGO and from local government, responsibilities like monitoring of progress, assigned to individuals and timeline within which the activities will be performed, then the committee takes up latrine installation program at the 1st instance. For this purpose, a technology orientation on latrine models with cost options is held for the committee selected catalysts. These catalysts in turn help other people of the community understand the technology aspect. At this stage individual households take steps to install latrine for each of them. The trained catalysts (ultimately named as Rural Sanitation Engineers) extend technical assistance to households where necessary and complete the latrine installation task. Formerly this task took month even which has now come down to a few days only. The other important task the committee initiates is hygiene education for all the women of the community so that all the households get access to hygiene messages so that hygiene practice is taken up by all the individuals. The committee decides the number of spots required, considering easy mobility of women. In this regard, the committee requests the NGO concerned to offer facilitation support for holding education session.

For implementation of safe water access promotion, the committee forms a water point management committee taking representatives from each poor households of the cluster where there is scarcity of safe water for want of tube well or ring wells. As water point installation is highly subsidy backed and meant for the poor clusters, committee encourages the deserving households to select a common site for the installation and collect the participation cost as determined by the NGO (sometimes it is Union Parishad - DPHE supported) for payment and get the delivery from the NGO selected supplier of the hardware. The water point management committee also selects one male and a female caretaker for each water point to be trained on the technology so that the installation remains running round the year.

The CBO also takes care of the common places to ensure cleanliness and disposal of garbage in proper manner. To this effect, all the households of the community are asked to keep the yards clean and garbage are disposed in a fixed place to ultimately take them to the crop fields for use as green manure.

Institutions if at all there exist, that is also brought under coverage of sanitation through discussion with the management committee. To this effect, hygiene education is imparted initially by the NGO staff members for practice promotion and monitoring of actions/installations in the community. Virtually, the CBO of the frontline is the prime mover of activities under CLTS process. All its activities are documented for reference and record. This documentation of events help review and sustain the committee activities.

3.2.6. Monitoring Arrangement:

Each and every component of activities under CLTS is backed by effective participatory monitoring arrangement. On completion of each day's session, the NGO facilitator of hygiene education session identifies the key behavior change points and asks the participants by when the household members will adopt the practice and who is going to cross check the progress in the community, then the participants willingly takes the responsibility indicating the number of households within reach for monitoring purpose. This way the practice monitoring is being carried out in communities in a self-supportive fashion.

The latrines installed in a community also require regular monitoring in respect of use and maintenance; this is done through the hygiene education participants in addition to children's

group members. If any fault is detected, the same is brought to the notice of the household concerned for corrective measure. Water points are monitored by the water point management committee so that it runs smoothly round the year. Usually the monitoring task involves no cost at all under CLTS. Monitoring is also done by the Union Sanitation Taskforce to ensure quality of the reported progress. In fact, Monitoring is tri-party arrangement including the facilitating NGO, Local Government Institution and the community level committees. THE Upazila Sanitation Taskforce also undertakes monitoring to assess the quality and quantity of progress as reported by the Union Sanitation taskforce committees. Finally, the qualitative assessment is done at the time of declaration by the government by higher tier sanitation Taskforce committees to recommend for recognition and rewarding for total coverage.

3.2.7. Role of CBO After Project Support is Withdrawn

According to the plan and strategy of facilitating organizations particularly in VERC case, a phasing out strategy is in place in the process. After 2 to 3 years, the facilitating organization will phase out and the CBO takes on the responsibility of monitoring and follow-up of the use and maintenance of hygienic latrines, water points and the hygiene practice promotion activities with active support of USTF and WSTF.

3.2.8. Incentive for Catalysts to Function Afterwards

Through out the detail review of the four implementing organizations, we could not find out the effective mechanism to provide proper incentive for Catalysts for functioning after project support is withdrawn. In the case of VERC CLTS working areas one mechanism has however been observed as of incentive from the ADP allocation of the Union Parishad. Some of the Unions are presently following this practice and the same gradually may come up as an established mechanism. Other than this, there is no other possibility in the vicinity as of now.

Success or failure virtually depends on proper adaptation of participatory approach by facilitating NGOs in assisting the government and to make CLTS effective and sustainable in the country. This requires consideration of situation and selection of appropriate tools for facilitation and ensuring participation of various stakeholders and community people at large.

II. INSTITUTIONAL ARRANGEMENT

The study on the process of community mobilization through a sustainable institutional arrangement towards an effective WatSan program under different NGO working areas is an important assignment for the VERC-WI team. To this effect community led total sanitation approach has been selected to be studied and draw the main learnings so as to make recommendations for adaptation in the piloting design for IAP reduction in Bangladesh. It is observed that number of initiatives was formerly undertaken to address the safe water supply and sanitation needs by government agencies and NGOs in the country but they did not sustain and could not bring about visible success. Main difficulty was with the implementation process especially the institutional arrangement to be active in the implementation process and carry forward the interventions. The institutions that were engaged for the purpose had little access to the end users/beneficiary people. Their voice and choice was not well taken in the process for which the interventions could not make way forward. Potential local resources and people's capacity were not duly recognized and put into use for the purpose. The initiatives were sometimes unfamiliar which created complication at later stages in respect of mobilization and continue with the introduced technologies. Only technology aspect was given attention but the institutions that are important as carriers of the intervention were not properly identified and their capacity was not built for the purpose through training and orientation. Technology was rather under grip of technologists of the project, people had little access and control over the process. Under the total sanitation program, the community people are in the lead role and the institutions are built exclusively with a clear understanding of the problem issue based on the understanding of the context, resources and potentialities of the people concerned. It starts with the identification of poor sanitation problem, exploring the causal background, identifying ways to overcome the problems. Once the needs are identified and actions are determined with the understanding of available resources, community people builds up institutions to take the responsibility and sustain the changes.

A. Process of the Study:

The study process used secondary sources of information on CLTS like project proposal, action plan, monitoring system documents, regarding WatSan program. The study team has discussed with the staff members of respective sector NGOs to extract information on the program and process. Undertook field visit to working areas of VERC, Dishari, NGO Forum and SEDA had been of use to the purpose. The visits had been helpful to explore people's views in connection with the process of CLTS implementation.

Round table session for awareness building had also been helpful to extract the views of the cross section enlightened people of the society. During the talks, they explained their role/responsibilities to make CLTS and other community development interventions successful.

B. Key Findings:

Under CLTS, main institutions are spreading across different tiers though the prime mover institution is the grass root level CBOs formed in different names in different NGO working areas. The other important institution is the local government bodies at different level. The Union Parishad is the key institution that has been playing important role in carrying forward the mission of total sanitation in the country. The Union Parishad is very much influenced by its immediate upper tier the Upazila Parishad. Once the Upazila Parishad is clear about the mission of achieving 100% sanitation coverage by the year 2010 and its process as decided by the Ministry of Local Government Rural Development and Cooperatives, it activates the concerned Union Parishads to take action so that the initiative really gains ground and moves ahead.

Organizations working in the community: The NGOs that are successfully practicing Community Led Total Sanitation Approach in the country has rightly identified the institutions and has extended technical support to take part in the implementation of sanitation program. Local government institutions involved in the process include Upazila Sanitation Taskforce, Union Sanitation Taskforce, Ward Sanitation Taskforce. The informal institutions involved in the process under CLTS includes CBOs formed in different names under different facilitating NGOs (Community WatSan Action Committee CWAC in VERC), Water Point Management Committee, Hygiene Education Group, Children's Group, Adolescent Girls Group for Reproductive Hygiene, School/Madrassa Management Committee, Market Management Committee, Rural Sanitation Engineering Group, Cultural Group and Hygiene Practice Monitoring Group. These groups are assigned with specific tasks of water sanitation and hygiene behavior change promotion activities. Taskforces are mainly responsible to steer the over all process under its jurisdiction and report to the immediate senior management Taskforce for coordination and monitoring purpose. Thus, the formal and informal institutions are interlinked with each other for planning, implementation, monitoring and evaluation of WatSan activities in Communities/Wards/Unions.

Informal institutions are usually meant for the community level initiatives and they are formed as outcome of process facilitation by outside agencies (facilitating NGO) in collaboration with the formal local government institution representatives (i.e., UP member, UP Chairman). CWAC is the outcome of entry PRA exercise facilitated by the NGOs named - VERC and DISARI. Immediate after formation of committees, they prepare action plan for total sanitation, indicating resource (material and human; internal as well as external) and fixes timeline. They take steps to implement planned activities by making use of material and human resources, monitor progress and evaluate outcome/ impact of activities towards achieving total coverage and making interventions sustainable.

Formal institutions are involved as per the circulation of the ministry in accordance with the mandate of national sanitation strategy. The facilitating NGOs organize orientation workshop for the Upazila, Union and Ward sanitation taskforces. This orientation activity is carried out simultaneously with the community level exercise of entry PRA for ignition and mobilization for sanitation. First of all, the Upazila Taskforce is given orientation on CLTS. Mainly the Union Parishad Chairman attends this session and head of Upazila level Govt. Development departments. They assess the WatSan situation of the entire Upazila and then identify the lacking, identify actions, estimates availability of resources for the purpose, fixes timeline for each Union in consultation with respective Union Parishad Chairman. They also assign responsibility to actors including the facilitation task assignment to the facilitating NGO. This way the Union and Ward

level exercise integrates the local government bodies into the process to make sanitation program successful and making it sustainable.

The alliance of formal and informal institutions creates the environment to achieving sanitation coverage in communities. Facilitating NGO plays the intermediary role to get the local government agencies oriented and involved through advocacy workshop along with initiating community mobilization through situation analysis exercise in communities and drawing action plan. Action plans are drawn both at community level and at Local Government level through orientation. As operational strategy, both the plans reflect the importance of involvement of each other in the program. From that point of view, CBO becomes the implementing organ of the CLTS while the local government body becomes the support giving agency. NGOs extend the capacity building support to both the segments in line with the program implementation strategy so that the planned activities achieves sustainable sanitation coverage.

The following table explains the situation more elaborately:

Name of NGO Studied in Detail	Name of Institution	Role/Responsibility
VERC	<p>Formal:</p> <ul style="list-style-type: none"> i) Upazila Sanitation Taskforce ii) Union Sanitation Taskforce iii) Ward Sanitation Taskforce <p>Informal:</p> <ul style="list-style-type: none"> - CWAC (Community WatSan Action Committee) - Hygiene Education Group - Waterpoint Management Committee - Children's Group - Hygiene Practice Monitoring Group - School/madrassa Mgt. Committee - Cultural Group - Market Management Committee - Adolescent Girls Group for Reproductive Hygiene 	<ul style="list-style-type: none"> i) Plan and coordinate activities of Union level activities within the Upazila ii) Plan and coordinate activities for Ward level within the Union iii) Plan and coordinate activities for Community level within the Ward - Plan, implement and coordinate activities for the community concerned - Exclusively look after the Hygiene Education through holding session with the women of the community - It takes all mobilization and other preparatory works for installation of waterpoints for the poor cluster of households by collection proportionate participation cost. Also responsible to keep the installation running round the year - Community level campaign, monitoring of hygiene practice at institution and neighborhood level - The activists from within the Hygiene E Group, looks after the practice status at individual and household level - Looks after the institution based hygiene education and practice promotion activities guided by school teacher along with improvement of WatSan facilities - This group performs folk songs and drama to popularize WatSan and hygiene issues - Market place WatSan and Hygiene promotion activities are undertaken by the committee with assistance of LGI and facilitating agency - These are institution and neighborhood based groups to discuss and promote reproductive hygiene practice promotion along with sanitation - This is a group of technology catalysts meant

Name of NGO Studied in Detail	Name of Institution	Role/Responsibility
	- RSEG – Rural Sanitation Engineering Group	for each Ward to look after the latrine installation and maintenance promotion. They maintain coordination with the Ward and Union Sanitation Taskforces.
Dishari	<p>Formal:</p> <ul style="list-style-type: none"> i) Upazila Sanitation Taskforce ii) Union Sanitation Taskforce iii) Ward Sanitation Taskforce <p>Informal:</p> <ul style="list-style-type: none"> - PAC – Para Action Committee - CAT – Child Action Team - SAT – School Action Team - RSE Team - Rural Sanitation Engineering Team 	<ul style="list-style-type: none"> i) Plan and coordinate activities of Union level activities within the Upazila ii) Plan and coordinate activities for Ward level within the Union iii) Plan and coordinate activities for Community level within the Ward. Para level catalysts represent the forum <p>- CBOs formed as a Para Action Committee (PAC). In order to assist the PAC, Children Groups and Monitoring Groups are formed. Apart from that some specialized Catalysts are developed to facilitate and motivate communities.</p> <p>- Para Action Committee represent into the UP Ward Sanitation Task Force.</p> <p>- Community level campaign, monitoring of hygiene practice at institution and neighborhood level</p> <p>- Looks after school based hygiene education, practice promotion and maintenance of WatSan facilities within the school premises</p> <p>- This is a group of technology catalysts meant for each Ward to look after the latrine installation and maintenance promotion. They maintain coordination with the Ward and Union Sanitation Taskforces.</p>
BRAC	<p>Formal:</p> <ul style="list-style-type: none"> i) Upazila Sanitation Taskforce ii) Union Sanitation Taskforce iii) Ward Sanitation Taskforce <p>Informal:</p> <ul style="list-style-type: none"> PAC – Para Action Committee 	<ul style="list-style-type: none"> i) Plan and coordinate activities of Union level activities within the Upazila ii) Plan and coordinate activities for Ward level within the Union iii) Plan and coordinate activities for Community level within the Ward. Para level catalysts represent the forum <p>Para Action Committee motivates and mobilize the communities and implement the planned</p>

Name of NGO Studied in Detail	Name of Institution	Role/Responsibility
		activities. This also maintains linkage with the Taskforces to seek support for various WatSan activities within the para.
SEDA (NGO Forum partner)	<p>Formal:</p> <ul style="list-style-type: none"> i) Upazila Sanitation Taskforce ii) Union Sanitation Taskforce iii) Ward Sanitation Taskforce <p>Informal:</p> <ul style="list-style-type: none"> - CWC - Community WatSan Committee - Children's group - Hygiene practice monitoring group - Cultural group 	<ul style="list-style-type: none"> i) Plan and coordinate activities of Union level activities within the Upazila ii) Plan and coordinate activities for Ward level within the Union iii) Plan and coordinate activities for Community level within the Ward <ul style="list-style-type: none"> - Plan, implement and coordinate activities for the community concerned - Community level campaign, monitoring of hygiene practice at institution and neighborhood level - The activists from within the Hygiene E. Group, looks after the practice status at individual and household level - This group performs folk songs and drama to popularize WatSan and hygiene issues

B. The Most Important Organization:

Community WatSan Action Committee is the most vital organization in promoting CLTS. This key organization in fact is the initiator and coordinating body to create opportunity for the people to start thinking of the situation and decide taking action for the change. First of all the facilitating NGO workers meet with community people and hold PRA session to effectively assist them in making analysis of the prevalent situation and decide actions within the limits of available resources and skills. As the outcome of interaction with the facilitating NGO, people form the committee to materialize the plan of action towards improved sanitation. On the basis of presentable success at the community level, other organizations can realize that 100% sanitation coverage target is achievable. Accordingly, the CWAC members turn into active catalysts for CLTS promotion by building coalition with Union and Ward level Taskforces. The coalition further empowers them to be more effective and help sustaining the interventions.

C. Interventions under CLTS help building confidence and becoming self-supportive:

a. Entry PRA – This intervention basically enables community people to make assessment of the situation and identify the gaps, needed action, required resources choosing technology according to affordability status. Ultimately, they form the needed people's platform to fight out the poor sanitary status. Use of PRA tools enables people to be integrated in the process from the very beginning.

Hygiene Education Sessions:

Interactive communication materials are used to conduct sessions for women, children and adult male. The issues are visible with affects of poor hygiene practice on health and loss of resources and health leading to increased poverty. The actions seem easy to follow and easy to monitor. Totality aspect becomes clear as strategy to be followed. They can understand that an individual's wrong actions affect the health of others in the community as such a collective responsibility and pressure is generated for achieving the collective wellbeing. The decisions taken as outcome of interactive hygiene education sessions help them to be equally responsible to bring about the desired change in behavior. Open defecation being identified as root of all practice related diseases, they decide to stop it by installing

latrine and for that purpose they seek for technology orientation on a wide range of technology options. This helps bringing all the households under coverage of latrine installation.

Hands on orientation – Very much effective to enable people explore their own capacity of installing and making use of the latrines. This generates a sense of ownership of the technology and enables them to maintain them for continued use. Initial installations are of low cost and made of locally available materials people can take on the responsibility of being supportive to others to install latrines within the community agreed time limit as crush program. This can be treated as a visible indication of becoming self supportive in respect of technology.

Water Point Installation:

Water point installation support is provided to communities at a subsidized rate as per project provision and national policy. These are mostly meant for poor and poorest households. The CBOs identify the Facilitating NGOs help People choose technology and makes understanding with facilitating organization through negotiation and making contribution of participation cost as per project provision. All these are done under guidance of Local CBO (CWAC in case of VERC) and Local government body. To this effect, the beneficiary households of the poor cluster from a committee titled as Water Point Management Committee. This institution takes care of the issue of enhancing access to safe water. This committee is exclusively meant for installation and management of water points by mobilizing the beneficiary households and resources within reach. This committee selects two caretakers for technical operation and maintenance of the water point to see that the waterpoints are functioning round the year. Facilitating NGO imparts training to the Caretakers.

D. Ways the service-provider organizations can be more effective: The following points can be mentioned here to this effect:

- i) The institutions that are functioning under CLTS in communities can be more effective if these organizations can include the local government representatives in the mobilization process since the initial stage. If they are in the exercise of problem identification and resource mobilization modalities, that ensures their pro-active role at the later stage. This also helps improved access to GoB resources meant for sanitation purpose available with the Union Parishad.
- ii) The other aspect of making institutions more effective is record of events like meeting and decisions taken there in for implementation, monitoring and further planning. Most of the organizations if found not maintaining the record of events give rise to confusion and ambiguities thereby weaken the base of institution itself. This aspect is thus very much important to enhance the level of efficiency.
- iii) Catalytic elements if can be rightly identified from within the community and necessary skills are installed in them other than depending on skills and expertise from the outside can help strengthening the efficiency of local institutions.
- iv) A community resource base if created in communities that can help increase the efficiency of the institutions to carry on interventions leading towards sustainability.

E. Institutional Arrangements of Organizations Concerned:

Four of the detailed reviewed organizations can be understood from the under-mentioned format:

Organization	Progr. Magt Unit	Union Level set up	Remarks
VERC – interventions continue for 2.5 years in each Union to bring all the 60 - 65 communities (CBO jurisdictions) under coverage of safe water access, latrine installation, garbage disposal and	Upazila (to cover all the Unions)	Sr. Health Motivator -1 Health Motivator - 3 Community Volunteer - 6 [In addition, they are assisted by the multidisciplinary team of senior level staff based at Upazila level]	CVs are temporarily hired against nominal amount of honorarium

Organization	Progr. Magt Unit	Union Level set up	Remarks
hygiene practice promotion			
Dishari	- Do -		
BRAC	- Do -		
SEDA – NGO Forum	Union level	Field Organizer – 1 Volunteer - 3 [In addition, the PC and the Monitoring Officer assistance is available for field level activities]	- Full time staff -Temporarily hired against nominal amount of honorarium

F. Incentives and Barriers for Key Actors to Provide Services:

Incentives are usually given to community catalysts to compensate the loss of working hour. The involvement of the Community Volunteer in VERC program is moderate and that is Tk.600.00/month (working hour is limited to few hours of the day). This moderate honorarium is presently paid by VERC. In course of time, the Union Sanitation Taskforce takes on the responsibility; they are paid from the GoB ADP allocation meant for the development activities to undertaken in the Union. Some of the VERC phase out Unions has started paying the honorarium to the volunteers to carry on the interventions within the Union. Some of the unions are still struggling to manage the fund from the Union budget though this is a general circular of the Ministry to this effect as per the national sanitation strategy document.

Other informal volunteers/catalysts are trained on sanitation by VERC but they are not paid for their services. They are still very important from sustainability point of view. VERC has however, engaged them in imparting training to other organizations to scale up the approach on demand and in these cases, they have been remunerated by the assisted NGOs working on WatSan in non-VERC areas of the country. This kind of recognition and remuneration has been encouraging to the volunteer/catalysts. Unfortunately the amount of involvement and earning is still disproportionate and not that much encouraging to retain interest in the volunteers. In VERC ICS program intervention areas, the catalysts being trained on the technology making fairly good income by producing improved cook stoves for selling them to user households. In this case, the training offered is the incentive to the catalysts. In case of sanitation, there is still limitation of sufficient demand creation in the sector. On the other hand, remuneration backed voluntarism is not feasible as well as justifiable.

The WatSan skills once installed in interested individuals in the community on nomination by communities induces an individual to extend technical support to the community in need of the type of assistance towards improved sanitation. Sanitation on the other hand is a collective wellbeing issue which is based on active involvement of all living in a given area. From that point of view, incentive provision for voluntary services should not be for unlimited period rather it should cover the initial phase of any intervention. It is encouraging that the Key Catalysts involved in CLTS like – tubewell caretakers, hygiene monitoring group members, WatSan Action Committee members are not compensated for their services in any manner which we can recommend for replication in other development interventions.

G. Services for Hardcore Poor:

In CLTS, there is no subsidy provision from the facilitating agency side but service priority is for the poor and hardcore poor. There is no subsidy from facilitating NGO on household level latrine installation but the institution and public place level sanitation blocks are installed with subsidy support. There is subsidy provision for safe water access for the poor and hardcore poor under an institutional arrangement. In line with that GoB also provides subsidy on water for the poor households under an institutional coverage while it also extends subsidy support to cover the poor households in case of latrine installation along with financial assistance to install sanitation blocks at institution and public places.

The subsidy provision is good to bring poor and hardcore poor under coverage of sanitation but the problem lies with the task of identifying the target households. In this case, CLTS enables communities

to take the lead role in forming institutions and preparing list of poor and hardcore poor which is used by the Union sanitation Taskforce at the time of sanitation installation coverage. This is taking place as there is a close collaboration between the Union/Ward Sanitation taskforces and CBOs. This type of cooperation and collaboration among facilitating sector NGO, Local Government bodies and CBOs have made subsidy provisions meaningful and drawing benefits to the people in general.

H. Service Delivery after Project Support is Withdrawn:

This aspect of CLTS to make absolute comments is yet to be observed in practice. Some of the Unions that are experiencing partial withdrawal of support indicate that continuity of program process greatly depends on the following –

- A strong catalytic base – catalysts available with right type of skills in the community
- Local Government Institution is well integrated with the project intervention since the 1st date of Facilitating NGO workers visit communities, simultaneously, the District, Upazila, Union and Ward level taskforces need to be oriented on CLTS with clear directives to clarify their role/responsibilities
- National policy advocacy intervention yet another important component to keep the going on even after phasing out of NGO support
- The Facilitating NGO staff need to have right type of training on people's participatory intervention promotion so that a dynamic outlook is installed in them to empower communities to take on responsibilities, make use of available resources making things adaptable to community people
- Institutional capacity built by the Facilitating NGO within the project time span so that interventions can continue
- Accessibility to basic minimum resource to local institutions to keep things going on

I. Analysis on Field Finding:

The observations made as of institutional arrangements under CLTS are not absolutely of similar in the practitioner NGOs. They vary from each other in respect of staffing, building staff capacity thereby process facilitation which ultimately is reflected in the community level institutional arrangement for implementation of program. People led process facilitation can ensure a proper institutional frame work for CLTS promotion. There is degree of variation in NGOs in this regard, this is one important pre-requisite towards successful process facilitation other than which strong institutional structure building will not be possible.

The growth process of CLTS was backed by VERC donor agency WaterAid Bangladesh, World Bank Offices in New Delhi and Daka, DFID also the involvement of the Ministry of LGRD & C of Bangladesh. Their involvement has helped policy decision making and spreading CLTS for wider its campaign

III. MINI REPORT ON TECHNICAL ASPECT

This section deals with the technical aspects of the each of the reviewed WatSan Projects. Generally, technical aspects of a project consists of hard wares and its maintenance, repair and monitoring. Technical aspects of the reviewed projects are being analyzed as follows:

1) Pakundia Bahumuki Safe Water Pipe Line Supply Committee, Vill.:Palundia Upazila: Sonargaon Dist: Narayangonj.

TECHNICAL ASPECTS OF THE PROJECT:

i) Hard wares:

The technological parts of "Safe Water Pipeline Supply" consists of following hard wares:

- a) One deep tubewell which was sank to 650 ft. below the ground level having pipe dia. 6 inches.
- b) One electrical motor having capacity 20 HP
- c) Two tanks for collecting water having capacity of 3500 litres each. One tank is on the ground level and the other is overhead.

At the beginning of the project, the deep tubewell was sunk with 250 feet depth but the water contains higher concentration of iron. After some time to overcome this problem, a ground level tank was installed for iron removal. Subsequently, it was found that this treatment step of underground water involved additional cost to the supply water. However to reduce the cost of the supply water, after some time deep tubewell was redesigned and sunk with a depth of 650 feet to get iron free clean water. Therefore, at present ground level water tank is not on use and since then only the overhead tank is being used.

This project covers a small community area comprising of 180 households. The necessary pipeline connections have been made to all the households. Each house has one tap connection. The deep tube well is operated 5-6 times daily to draw water from the under ground source and storage in the overhead tank. Each time it operates for around two hours. The community people get water during 24 hours.

ii) Maintenance:

The executive committee of the safe water pipeline have been recruited an operator for operation and maintenance of the project. At present Mr. Farhad Hossain is working as a pump operator and he was trained on how to operate, maintained and repaired the deep tubewell from Bogra Rural Development Academy.

It has been reported by the operator of the project that after about three months, there is thick deposit of mud and sand at the bottom of the tank which deteriorate the quality of supply water. Therefore, after every three months removal of thick layer, the overhead tanks are being cleaned with bleaching powder and other cleaning materials. The operator also after two-three months checks the water supply line and all the tape connections.

iii) Repair:

In case of any fault in the electrical motor or other parts of the system he repaired it from nearby workshop. In case of minor fault the operator himself repaired it. When there is leakage or blockage in the water supply line, the operator immediately repaired it.

iv). Monitoring:

The committee members of society regularly monitor the operational aspects of the project. It is worth-mentioning that general secretary of the committee is a UP member. He takes keen interest for monitoring whole project. In case of any major problem, they discussed it to the regular quarterly meeting of the executive committee and find out its solution.

2. DISHARI –Decentralized Total Sanitation Project, Vill : Kawraid, Upazila : Sreepur, Dist : Gazipur.

TECHNICAL ASPECTS OF THE PROJECT

i) Hardware:

In all, five types of sanitary latrines are on use in the area, they are as follows:

- | | |
|--|------------------|
| i) Sanitary Latrine (off set) | TK.1000-1400.00 |
| ii) Sanitary Latrine (off set) | TK.500.00-700.00 |
| iii) Hygienic Pit Latrine (off set) | TK. 320.00 |
| iv) Hygienic Pit Latrine (direct) | TK.90.00 |
| v) Extreme Low Cost Pit Latrine (direct) | TK. 30.00 |

Broadly, there are two Types of Latrine:

A. Off-set type

Where the tank or latrine pits (with or without rings) installed at least 3-5 feet distant from the defecation place. The defecated excreta falls on pan and when flushed with water, it passed through the siphon and drain pipe, finally deposited into the pit/ tank either made of bricks, rings or simple earthen pit. As because the pit or tank set or installed off from the slab and pan it is called Off-set latrine. The tank/ pit is indeed, connected by a drain pipe.

B. Direct type:

Where the tank or Pit is set just under the pan it is called direct latrine. The slab and pan with siphon is placed directly on the pit hole(the slab is set as a cover of the tank or pit covered with rings. While people defecate on the pan, the excreta directly goes to the pit/ tank through the siphon.

The first two types of Sanitary Latrine as mentioned above: (i) & (ii) consists of : pan , slab, ring, drain pipe and exhaust gas pipe. The third one (iii) consists of pan, slab, pit, drain pipe and exhaust pipe. The fourth one (iv) consists of cement of pan made with motka (earthen big pot) and an old used folded pieces of tin and slab made of bamboo and clay mixed with cow dung.

Different Parts of the Latrine:

- a) Pan:** The pan where people defecate, the excreta slipped/ passed from the pan and go to the pit/ tank.
- b) Slab:** The slab is a cover with a hole for defecation set on the pan with two feet rests. It is either made of RCC or bamboo fence with mixture of mud and cow dung. The slab is used for easy defecation and for easy maintenance and operation of the latrines (for hygiene and cleanliness).
- c) Ring:** Ring is very popular material of latrine. A set of rings is used to make a tank or protect the pit where the excreta are being deposited and later on is composed if soaking process works in the earth. Usually the rings are made of RCC. Sometimes in order to make it low cost the wire-net is used instead of iron rod.
- d) Drain Pipe:** The Drain-pipe is a connector in between the pan (with siphon) and the ring tank/ pit (where excreta are being deposited) installed a bit off from the defecation place. The drain pipe is used for draining the excreta from pan to the pit.
- e) Exhaust gas pipe:** Exhaust gas pipe is an out let of gas formed inside the covered and sealed (for bad smell) excreta tank (made of rings).

The price of each model varies from TK. 30.00 – 1400.00.

ii) Repair and Maintenance:

Local masons are available for repair and maintenance works of the sanitary latrine. They charged minimum amount of money for maintenance and repair works of the latrine. But actually it depends on nature of the works. Users are regularly cleaning their sanitary latrines. As a result there is no water borne diseases in this area. The overhead and maintenance costs of the latrine are borne by the users themselves.

iii) Monitoring

There is a CBO in the community. They are regularly monitoring the sanitary activities in the area. There is 100% coverage of sanitary latrine in the area but still the CBO is active and performing other development activities. The visiting team during field visit discussed with community people regarding role of clean energy technologies viz. ICS, Biogas Plant and Solar Devices in reducing IAP in the rural area.

The community people took keen interest to have clean energy technologies in their premises with their own cost.

This area has already been phased out by Dishari but still they are regularly monitoring the sanitary activities in the area along with DPHE.

3. VERC Community Led Total Sanitation (CLTS) Project Vill : Kushumba, Masterpara, Upazilla.Manda, Dist. Naogaon.

THE TECHNICAL ASPECTS OF THE PROJECT:

i. Hard wares:

There are six types of sanitary latrines are being used in the area .They are as follows:

- i) Sanitary Latrine (off set) : Price TK.1200.00-1400.00
- ii) Sanitary Latrine (off set) low cost : Price TK.700.00-800.00
- iii) Plastic Pan Latrine (off set) : Price TK.300.00
- vi) Plastic Vent Pipe Model (off set) : Price TK.300.00
- v) Plastic Pipe Pit Latrine (off set) : Price TK.140.00
- vi) Modka Model Pit Latrine (off set) : Price TK.80.00

All the model are off set type. The prices of the each model varies from TK.1400.00-Tk.80.00

ii. Maintenances and Repair:

Locally skill technicians are easily available for installation, repair and maintenances of different types of sanitary latrines. Most of users are regularly clean their latrine, as a result there is no water borne diseases in the area. Gradually users are moving towards better option of the sanitary latrine.

iii. Monitoring:

There is a CBO in the Community. They are regularly monitoring the sanitary activities in the area. But after phasing out VERC (NGO), CBO is still active. They are performing other development activities in the area. But VERC still monitor the sanitary activities along with children group & DPHE in this area. During the field study, the visiting team discussed with community people regarding clean energy technologies viz. ICS, biogas technology and solar devices, which can play an important role for mitigation of IAP in rural area. They showed keen interest to have these technologies in their premises with their own cost.

4. SOCIO ECONOMIC DEVELOPMENT AGENCY (SEDA)-Community WatSan Programme (CLTS) Supported By NGO Forum. Vill. Mahazanpara, Upazilla.Shivalay , Dist. Manikganj.

THE TECHNICAL ASPECTS OF THE PROJECT:

i. Hard ware:

There are five types of sanitary latrine are being used in the area. They are as follows:

- i) Sanitary Latrine with Septic Tank (off set) : Price TK.40,000.00
- ii) Sanitary Latrine (off set) : Price TK.3,500.00
- iii) Sanitary Latrine (off set) : Price TK.1,500.00
- iv) Hygienic Pit Sanitary Latrine (direct) : Price TK. 600.00-800.00
- v) Pit Latrine (direct) : Price TK.350.00

Out of five models three are off set and remaining two are direct. The prices of the each model varies from TK.40, 000.00- TK.350.00

ii. Maintenance and Repair:

Locally skill technicians are available for repair and maintenance works of the sanitary latrine. Users are regularly clean their sanitary latrine as a result there is no water borne diseases in this area. The overhead and maintenance costs of the latrine are borne by the users themselves.

There is a CBO in the community. They are regularly monitoring the sanitary activities in the area. There is 100% coverage of sanitary latrine in the area but still the CBO is active and performing other development activities. The visiting team during field visit discussed with community people regarding role of clean energy technologies viz. ICS, Biogas Technology solar Devices in reducing IAP in the rural area. The community people took keen interest to have clean energy technologies in their premises with their own cost.

This area has already been phased out by SEDA but still they are regularly monitoring the sanitary activities in the area. Sweepers are locally available for cleaning and dumping the sludge. Dumping is usually done by digging a hole on the ground, then the sludge dumped in the pit and finally it covered with tree leaves straw, mud, etc.

iii. Monitoring:

There is a CBO in the community; they are regularly monitoring the sanitary activities in the area. But after phasing out SEDA (NGO), CBO is still active. They are performing other development activities in the area. But SEDA is still monitoring the sanitary activities in this area. During the field study, the visiting team discussed with community people regarding clean energy technologies viz. ICS, biogas technology and solar devices, which can play an important role for mitigation of IAP in rural area. They showed keen interest to have these technologies in their premises with their own cost.

Analysis on Field Findings:

It has been observed in the Pakundia Bahumuki Safe Water Pipeline Supply Project, that there is a CBO who regularly monitor the technical aspects of the project. The committee engaged a trained operator to look after the operation of different machineries of the project. As a result project runs smoothly without any difficulties. Therefore, a well organized CBO and some technical persons are necessary for smooth running of a project.

In the other three projects, sanitary latrine installation in three different areas, community people are gladly accepting different models of sanitary latrine in their premises with their own cost. The prices of these models varies from TK.30.00- 14, 000.00. As a result different cross section of people from the community can chose their desired model according to their economic condition. A special type: Sanitary Latrine with septic tank developed by NGO-Forum cost is Tk. 40,000.00. This model is suitable for very rich people only. Another important observation is that the community people realized that sanitary latrine is essential part of their daily life. Because it will save them from various water borne diseases. Some of the important findings are given below:

- All the visiting project areas have CBOs. They are functioning properly.
- A strong and dedicated CBO and trained technical persons are necessary for sustainability of a Project.
- There are some skilled technicians have been developed in the project areas who can make the sanitary latrine with locally available raw materials. They can also build any type of sanitary latrine in the users premises.
- Local entrepreneurs have been developed in this area .They are producing all the parts of the sanitary latrines and selling them to the users with reasonable prices.

- It has been observed that all the sanitary latrines are so designed that from hard core poor to rich family installed them accordingly to their economic conditions.
- By introducing sanitary latrines in the project areas there is employment generation activities have been achieved.
- It has been reported by community people by introducing sanitary latrines in the project areas there is remarkable decrease of water borne diseases viz diarrhoea, dysentery, skin diseases etc.
- Visiting team observed that during transect walk in the community, there is no bad smell and the yards of the every house holds are clean.
- The children group played an important role in popularization sanitation activities in the areas.
- The community people feel proud and happy because they have sanitary latrines in their premises.

Recommendation for Future IAP Mitigation Projects:

- i) The existing CBOs in the community can be used for implementation of IAP pilot project and union health workers may promote the awareness campaign in the rural areas.
- ii) A group of skill technicians should be developed by providing necessary training in union and upazila level who can install, repair & maintain the clean energy technologies, viz. ICS, biogas technology and solar devises.
- iii) Some entrepreneurs should be developed in the union and upazila level who can produce different parts of clean energy technologies and sell them to the users in a reasonable prices.
- iv) Some display centers of clean energy technologies may be established in union and upazila level, where community people can chose their desired models for their own use.
- v) LGI representatives, teachers of the educational institutions, local clubs, bazar committees etc. should be involved in IAP pilot project.
- vi) Some loan should be provided for users (who needs) for installations of biogas plant and solar panel. The users will repay the loan in easy installments.
- vii) A strong monitoring team should be formed for monitoring the project areas, specially to look after whether the technologies of clean energies are functioning properly.
- viii) LGED should include some NGOs for implementation of future IAP project in the country.
- ix) Small industries, hotels and institutions who use traditional fuels for cooking and heating purposes, they should be included in the project as stakeholders.

iv. Mini Report on Financial Arrangement

1) Name of Project: Pakunda Bahumuki Safe Water Pipeline Supply Committee, Vill: Pakundia, Union: Jampur, Ward No. 1, Upzila : Sonargaon, Dist : Narayangonj

Basic Information on financial arrangement:

- The construction of the project was started in October 2001 and completed in September 2002.
- The total cost of the project was Tk. 20 lac
- The user's group of the community contributed 20% of the total cost amounting to Tk. 4.0 lac. only and the rest of the money was paid by BRAC.

- At the beginning of the project each household contributed Tk. 3000.00 for getting the connection of water supply to their households.
- Each household pays Tk. 60.00 per month as a service charge for water supplying Tk. 10,800.00 (per month). as service charge to the committee.
- It is worth mentioning that after installation of deep tubewell and get necessary water connection in to the households, they enjoyed one year free service.
- For operation and maintenance of the project, the committee recruited an operator (Mr. Farhad Hossain) and his monthly salary is Tk. 3,000.00
- The committee also pays Tk. 6,000.00 (Approx) as a electricity bill per month.
- The committee also spends some money for repairing the deep tubewell, pump machine and for repairing pipe lines. The committee has a joint Bank account and it is jointly operated by 3 Treasurers of the committee.

2. Name of the Project: “Dishari- Decentralized Total Sanitation Project” Kawrait, Upazila: Sreepur, District: Gazipur.

Basic Information on financial arrangement:

- *As per the existing policy of the government, there is no subsidy for individual latrine installation. But in case of hard-core poor, there is a provision of 100% subsidy from the UP’s ADP allocation.*
- Usually the users utilize their own fund for installation of latrines as they have already mobilized and motivated because it is essential for their health and hygiene.
- On the basis of local demand and on principle of market economy, some local entrepreneurs have been emerged to produce the different types of sanitary latrine items.
- Masons for sanitary latrine installations and repair have also been developed.
- As a result, employment generations have been created in the project areas.

The prices of the different sanitary latrines are given below:

- | | |
|---|--|
| i. Sanitary latrine (Off set) | :PriceTk.1000.00 to 14.00.00 (depends on numbers of rings and pan types) |
| ii. Sanitary latrines (Off set) Low cost | : Price: Tk.500.00 -700.00 |
| iii. Hygienic Pit sanitary latrine (Off set); | : Price: Tk.320.00 |
| iv. Hygienic Pit sanitary latrine (Direct) Low cost; | : Price: Tk.90.00 |
| v. Extreme low cost latrine (Direct pit); | : Price: Tk.30.00 |

**3. Name of the Project: “VREC Community Led Total Sanitation (CLTS) Project”
Aspects of Specific Information (Financing and Enterprise Development):**

Basic Information on financial arrangement:

- *As per the existing policy of the government, there is no subsidy for individual latrine installation. But in case of hard-core poor, there is a provision of 100% subsidy from the UP’s ADP allocation.*
- Usually the users utilize their own fund for installation of latrines as they have already mobilized and motivated because it is essential for their health and hygiene.

- On the basis of local demand and on principle of market economy, some local entrepreneurs have been emerged to produce the different types of latrine items.
- It is worth mentioning that Mr. Shahidur Rahman was previously community catalysts by dint of hard labour, he became owner of three production centers of sanitary latrine and supplies sanitary items throughout the whole upazila.
- Masons for sanitary latrine installations and repair have also been developed.
- As a result, employment generation have been created in the project areas.

The prices of the different sanitary latrines are given below:

i. Sanitary latrine (Off set)	: Price: Tk.1200.00 -1400.00
ii. Sanitary latrine (Off set) low cost;	: Price: Tk.700.00 -800.00
iii. Modka Model Pit sanitary latrine (Off set);	: Price: Tk.80.00
iv. Plastic Pipe Pit sanitary latrine (Off set) Low cost;	: Price: Tk.140.00
v. Plastic Pan sanitary latrine (Off set);	: Price: Tk.300.00
vi. Plastic Vent Pipe sanitary latrine (Off set);	: Price: Tk.300.00

4. Name of the Project: “SEDA- Community WatSan Programme (CLTS)” Supported by NGO Forum.

Basic Information on financial arrangement:

- As per the existing policy of the government, there is no subsidy for individual latrine installation. However, in case of hard-core poor, there is a provision of 100% subsidy from the UP’s ADP allocation. But the UP charged a nominal price for each set from the poor only for their ownership feeling. Otherwise, they might take it as a relief, subsequently could not install and use it.
- Usually the users utilize their own fund for installation of sanitary latrines as they have already mobilized and motivated because it is essential for their health and hygiene.
- On the basis of local demand and on principle of market economy, some local entrepreneurs have been emerged to produce the different types of sanitary latrine items. There are 3 entrepreneurs have been developed in the area.
- It is worth mentioning that SEDA provided Tk. 18,500.00 as credit support to the entrepreneurs for their capital development.
- Masons for sanitary latrine installations and repair have also been developed.
- As a result, employment generation has been created in the project areas.
- Employment for the sweepers has also been created.

3. Analysis of Field Findings:

Under the detailed review study two types of project viz. ‘Community Based Safe Water Pipeline Supply’ and ‘Sanitation Project’ were visited. In the ‘Community Based Safe Water Pipeline Supply’ it is found that the beneficiaries contributed 20% of the total construction cost as per the project guideline. The monthly service charge systems are available in the project and the beneficiaries are willing to pay the service charge on time.

The repair and maintenances costs bear by the beneficiaries. There is a committee consisting of 15 members involving the local government to look after the project. After phasing out the project, the committee is continuing the project smoothly and successfully.

It has been observed during field visits the poor section of the community after observing benefit of this scheme they are also interested to have water connections at their household premises.

In the sanitation project, it is observed that six types of sanitary latrine models have been developed in the project areas according to the affordability of the community. The highest price of the sanitary latrine is TK. 40,000.00 and the lower cost is Tk.30. It was also found that after motivation people started using hygienic but low cost sanitary latrine and gradually they are going to better options which indicates that the choice of the users for getting the sanitary latrine is increasing. All organizations have followed the existing governmental subsidy policy for example no subsidy for individual sanitary latrine installation, but in case of hard-core poor, there is a provision of 100% subsidy from the UP's 20% ADP allocation.

Depending on the local demands, some entrepreneurs have emerged to produce different types of sanitary latrine items and at the same time masons for sanitary latrine installation and repair have also been developed in the community. This is also interesting that a well mechanised service delivery system between entrepreneurs and masons has been developed. As a result, an employment generation has been created. For promoting the products, entrepreneurs as well as masons play a vital role. Some local and national NGOs help them to run the business by providing credit support for demand creation in the area.

4. Recommendations for the Future Project:

- Motivate the community people to install sanitary latrine and clean energy technologies viz ICS, Bio-gas plant and solar energy devices by their own cost
- There should be provision for subsidy for the hardcore poor.
- The project operating committee (CBO) should consist of all sectional peoples.
- Flexible and easy accessible credit support system needs to be introduced from local financing organizations
- Marketing system for promoting the clean energy technologies needs to be emphasized.
- Skill development training is needed for the entrepreneurs and masons for quality products, so that it could be marketed easily.
- Motivation and campaign should be continued for durability of the technologies, so that products of local entrepreneurs would have better marketed. As a result more employment will be generated for its production, installation and repairs over time.

v. Mini Report on Scaling up and Replicability

The analytical framework is mainly socio-anthropological and participatory.

Findings

The scaling up and replicability of the programme is being done while it is widely acceptable to the community, sustainable in terms of affordability of the user community, involvement of different stakeholders including LGIs and CBOs. Generally, scaling up depends on the popularization process of the programme. The findings from the detailed review particularly on the Scaling up issues are given below.

1. Name of Project: Pakunda Bahumuki Safe Water Pipeline Supply Committee, Vill: Pakundia, Union : Jampur, Ward No. 1, Upzila : Sonargaon, Dist : Narayangonj

Basic Information on scaling up and replicability:

- A CBO has been formed to run the water supply project. There is a 11 members Committee which look after the piped water supply system, its regular operation and maintenance. The scheme brings the safe drinking water at the door steps of the users' community. Previously there was no source of safe drinking water supply. It is to be mentioned that the area particularly the shallow aquifer of ground water is highly arsenic contaminated. Accordingly it is worth mentioning that the scheme should be scaled up in the neighbouring area or other parts of the district.
- The community people of this area are enjoying safe drinking water and leading a healthy life.
- Observing the success of this scheme, the people of the neighboring areas are also willing to install a similar type of facilities for safe drinking water.

2. Name of the Project: "Dishari- Decentralized Total Sanitation Project" Kawrait, Upazila: Sreepur, District: Gazipur.

Basic Information on scaling up and replicability:

- It was found that different models of sanitary latrines with prices were displayed in front of UP Office by the Dishari Project. UP Chairman, Ward members, Ansar-Village Difference Party (VDP) campaigned for popularizing different models of sanitary latrines among the communities for achieving 100% sanitation coverage. Besides UP is one of the important stakeholders and lead partner of the project.
- UP distributed sanitary latrines among the hard-core poor from their ADP allocation.
- The visiting relatives in the village learns about the positive result and immediate effect of the hygienic sanitary latrines and about different types of available technologies so that they were inspired and ignited to install the same kind of technologies of sanitary latrine at their own premises according to their capacity and affordability.
- Capacity building of the community and their motivation, effectively involving them in the 100% sanitary latrine coverage, which made it possible to scaling up the learning and approach to replicate it in other areas.

3. Name of the Project: "VREC Community Led Total Sanitation (CLTS) Project"

Basic Information on scaling up and replicability:

- There is a display of different models of sanitary latrines with prices in front of UP Office. UP took the lead role in 100% sanitary latrine coverage and to popularize different sanitary latrine models among the communities as per their affordability. Besides UP is one of the important stakeholders and lead partner of the project.
- UP distributed sanitary latrines among the hard-core poor from their 20% ADP allocation. But the CBO played an important role in order to identify the real hard-core poor together with the UP Ward member through Venn Diagram and Ranking Process (PRA Tools). Total community was involved in the process.
- The visiting relatives in the village learnt about the positive result and immediate effect of the hygienic sanitary latrines and about different types of available technologies and their cost so that they were inspired and ignited to install the same kind of sanitary latrine at their own premises according to their capacity and affordability.

- Capacity building of the community and their motivation, effectively involving them in the 100% sanitary latrine coverage, which made it possible to scaling up the learning and to replicate the process and approach in other areas.
- Campaign through religious and educational institutions took place under the leadership of UP Chairman and members to replicate and scaling-up the program in the neighbouring communities, villages and other unions.
- The community level catalysts have also played an important role for popularizing and campaigning for the sanitation program. This approach, implementation process and locally available technologies were easily scaled up and replicated in the neighbouring villages and unions.

4. Name of the Project: “SEDA- Community Watsan Programme (CLTS)” Supported by NGO Forum.

Basic Information on Scaling Up and Reliability:

- There is a display of different models of sanitary latrines with prices in front of SEDA Office. UP takes the lead role through SEDA in order to popularize the different sanitary latrine models among the communities and users. Besides, UP is one of the important stakeholders and lead partner of the project.
- UP distributes sanitary latrines among the hardcore poor from their ADP allocation.
- The visiting relatives of the villagers learnt about the positive result and immediate effects of the hygienic sanitary latrine installation and its use. They also learnt about different types of available models and its costs so that they were inspired and ignited to install the same kind of models of sanitary latrine at their own premises according to their capacity and affordability.
- Capacity building of the community and their motivation process, their effective involvement in the 100% sanitary latrine coverage made it possible to scaling up the learning and approach to replicate it in other areas.
- UP introduced awards/ incentives for the most successful motivators and CBOs for 100% sanitary latrine coverage.
- SEDA has provided micro-credit for the households who wanted to purchase sustainable sanitary latrines.
- SEDA also provided credit facilities to sanitary latrine producers/ entrepreneurs in order to expand their business/ production centers in other areas for scaling up and replicability of the programme.

5. Analysis on Field Finding:

In order to make the programme sustainable, the scaling up and replicability is quite important. Above findings showed that in all the projects role of Union Parishad and their involvement in the CLTS projects were more or less same in order to achieve total sanitation by the year 2010 to reach the MDG goal. The role of UP found similar in different projects in different areas because they were actually implementing the programme of the Government of Bangladesh. On the other hand, sanitation is one of the important civic and municipal responsibilities of the UPs. In fact, if UP is properly guided and supported with appropriate expertise from supporting organizations they would be able to implement their own programme.

Moreover, different donors, national and local NGOs came forward to support and facilitate the Government and LGIs (Union Parishad) with their knowledge, skill and expertise. The international NGOs provided their support and experience gained from other countries and cultures which was

accommodated in Bangladesh context. Besides, different international NGOs have gained potential learning from Bangladesh (100% Sanitation Model of VERC) and replicated it in other countries.

The Government of Bangladesh, particularly, the Local Government Division played a dynamic role by introducing a safety-net system (20% from ADP allocation of the UPs) for the hardcore poor, providing them 100% subsidized sanitary latrines (with three rings and one slab) for total sanitation. They also allocated Tk. 200,000.00 (two lac) Block Grant for development purpose as award to the successful 100% sanitized unions. It inspired other unions and upazilas and accordingly, the scaling up and replicability of the programmes became boosted up.

Apart from that, LGD of the Ministry of LGRD & C strengthened and empowered the LGIs by changing Watsan Committees into Sanitation Task Force which became more dynamic to carry out CLTS activities which in fact, accelerated the scaling up of the programme.

Local entrepreneurship developed with skill development and capacity building support from locally active NGOs (some NGOs also provided credit support to them in order to scale up their enterprises/ business) made it possible to scale up and replicate the programme elsewhere, mostly to neighbouring villages, unions and upazilas. This is one of the crucial and elementary for the sustainability and scaling up where types of technologies, spare parts, technical skills for installations, repair and maintenance are locally available. Most important findings are that those technical hands and the entrepreneurs are being emerged from the localities/ communities.

Community based participatory approach with bottom-up planning, successful application of MPA and PRA tools for community ignition, situation analysis, planning, implementation and participatory monitoring and evaluation were the important elements for scaling up the programme. In this respect, effective community ignition was one of the key issue for sustainable sanitation programme and its scaling up.

Community catalysts, private sectors (local entrepreneurs), NGOs, LGIs and finally the public sectors (concerned Government Departments, viz., DPHE) played their expected roles to scale up and replicate the programme in other areas. Above all GO–NGO–Private sector and CBO linkages, its institutionalization is one of the important factors for the scaling up of CLTS programme.

The success of the CLTS programme ultimately led to the alleviation of poverty and towards the healthy society. So that it is being scaled up and replicated rapidly and spreading out all over the country and beyond the boundary of Bangladesh.

The 20% installation costs sharing of the community and high water tariff (Tk. 60.00 per month) of the BRAC supported water supply scheme made it very difficult to scale up and replicate the same type else were.

Similar types of schemes with different subsidy rate have been implemented by other donors like Danida through DPHE and World Bank through SDF and a National NGO like NGO Forum as pilot basis. But it is yet to be assessed its future sustainability.

However, piped water supply in the rural areas is becoming popular gradually. But it needs to be mentioned that the installation cost, rate of water tariff for regular O & M of the scheme should be within the affordability of the poor households.

Finally communities learn from the neighbours to bring success in their own life. Good news spread like fires to ignite others to change their life, families and environment. Findings showed that people want live in a healthy and hygienic environment, want a healthy family.

6. Recommendations for the Future Project:

- Community based participatory approach with bottom-up planning, successful application of MPA and PRA tools for community ignition, situation analysis and participatory monitoring system applied in CLTS programme could also be applied in designing the Pilot Project for addressing Indoor Air Pollution.
- A provision for safety-net for the poor section of the project area or extra subsidies for the hard-core poor is needed. Otherwise, the poor and ultra-poor will remain out of the pilot project.
- NGOs should come forward with a long term loan to install such type of community based piped water supply schemes.
- The Government of Bangladesh, particularly, the Local Government Division can play an important role by providing special Office Orders for the Union Parishad and Upazila Parishad, so that they would form either a new committee or may use existing committees (e.g., Environmental Sub-committee, standing committee for Health and Family Planning) to consider reducing IAP seriously and the use of clean energy technologies could expand and the programme could scale up rapidly.
- The skill of the locally developed entrepreneurs (on sanitary technologies) could easily be used for ICS and biogas technology if they are trained properly and efficiently for scaling up the programme. In this respect new entrepreneurs should also be developed with proper and appropriate skill development training.
- All the spare parts, particularly for ICS should be available locally, so that the user community can have easy access to those parts for its repair and easy maintenance.
- Usually the poor mothers and children are the easy victim of different types of diseases because of their malnutrition. Accordingly, the clean energy technologies should be affordable by the poor as per its types for its scaling up
- It is suggested that micro credit should be available for both the users' and entrepreneurs in order to popularize the clean energy technologies.
- GO–NGO–CBO and Private sector linkages, its institutionalization and operational mechanism should be developed during the designing of the pilot to reduce IAP.
- Use of popular theatre, development drama, folk song, Gambhira and other cultural events according to local context could be used to popularize and scale up the clean energy technologies to reduce IAP.

C. Case Studies

Case study (Dishari)

Interview with Technical Assistance/Entrepreneur

Project : Dishari (Dhaka Ashanian Mission)

Name : Md. Shahid, Kowraid, Sreepur, Gazipur.

A. Background Information:

Md. Shahid belongs to a lower middle class family of Kwaid village, Sreepur. His basic education level is VIII. He has been living in this village since last 15 years. He got married here and got three children. He used to do different kinds of business and day labouring. Later on he started a job as an apprentice under a sanitary mason and entrepreneur. Now he is capable to make slab, ring etc. In this way he learn sanitary business and capable to install sanitary latrine independently. Then he started sanitary hardware construction business.

B. Institutional Arrangement:

He did not receive any significant support the Dishari project, however he has good communication with the project staff. He did not receive any training or any technical support from any organizations. He is a self-learned and a self-made man, he did not receive any support from the UP, but he has liaison with UP.

C. Technology:

Mr. Shahid gained experience in sanitary technology, its installation and repair and maintenance. However, the post installation maintenances lies upon the user/customer. But when it is beyond the capacity of the customer to repair and maintain installed latrine set, he has to do his business.

The customer basically like best to install latrine by him and the customer like least to maintained it by him because customer like to maintain the latrine.

D. Enterprise Development and Financing:

He has received credit support from different organizations such as ASA, Pritom to continue his business and he repay the instalment by weekly basis. If any organization likes to provide technical support to him, he is willing to receive it.

E. Demand Creation and Marketing:

He has two helpers for latrine and platform construction for installed water point in the community. He produce ring, slabs for latrine, constructed tube-well plat form and other related materials are also being sold from his production centre. He regularly communicates and coordinates with potential customer, NGOs and Union Parishad for promoting his product. He usually receives complains against his product from the customer. The customer likes durable and likes new design of latrine that look nice.

His major challenge is to establish his business and make his product popular within the whole upazila.

F. Scaling up and Replicability:

There is potential and possibility to scale-up his business as because 100% sanitation program is being scaled-up in the area, from village to union and to upazila. While, social mobilization and campaign is going on, communities are being motivated, his project and his enterprise is also going to be scale-up and expended in the whole union even to Sreepur Upazila. According to the motivation and upgradation of the community knowledge the communities are moving gradually from lower bottom technologies (low cost pit latrine) to upper level sanitation ladder. Therefore, demands of his products (sanitary materials) is being increased simultaneously. In addition, the growth tendency is being replicated in the neighbouring villages and unions.

Note: Mr. Shahid is a “Entrepreneur” as well as “Technician” of Sanitary Latrine.

Interview with Local Government Chairman (LGI)

Project : Dishari (Dhaka Ashanian Mission)

Name : Md. Harun Fakir, Chairman, 05 No. Kawraid Union, Upazila: Sreepur, District: Gazipur.

A. Background Information:

This is water, sanitation related project that aims at providing technical support for coverage 100% sanitation with the involvement of community people and local government. The Union Parishad as well as the Chairman has been involved in the project activities since its commencement. He participated with most of the interventions and campaigns of Dishari such as rallies, latrine demonstration activities etc under the project. He has been found regular in all Union Sanitation Task Force Meeting,

He expressed his utmost satisfaction that all of his Ward members including him have been participating in the project activities, in fact, he mentioned it was the responsibilities of the Union Parishad/ Union Sanitation Task Force to make the project sustainable while Dishari has been assisting them.

He mentioned that because of the project some direct result/ benefit have been gained, are:

1. Decreased incidents of diarrhoea and cholera,
2. Reduced other water born diseases,
3. No open defecation; and
4. The project adequately addressed the poor for improving the sanitation status in the communities, villages and in the union.

He suggested that all the Union Parishad Chairman and Ward members should equally participate in the project so that the community would get better and more fruitful result out of this type of Sanitation project. He also recommended that the project activities should be continued for more few months so that the users would be more capable to carry out the project activities effectively and smoothly.

Major concern:

In order to reduce environmental health hazard especially related to mother and child health for example, to reduce Indoor Air Pollution he mentioned that clean energy was quite important to be introduced in the community. In respect of clean energy he mentioned Solar Pannel would not be feasible for the common people, but *Bari* (a cluster of 5-10 households) based Bio-gas Plant and Improved Cooking Stove would be quite feasible and effective.

Actually community would assess their own needs using PRA tools. In this process the real needs of the poor, their own capacity, requirement and what types of supports they actually needs in order to adapt the

new technology would be identified. Then as per UP rules and regulations, UP's own fund and from project's assistance necessary support to the hard-core poor could be provided. In this case CLTS is the best example, where poor have support from the UP's ADP allocation, scope of low cost technology installation for 100% coverage.

B. Scaling up and Replicability:

For sustainability of the project, the following activities could be carried out, are:

1. Extensive awareness activity among the community
2. VGD card can be provided poorest people only after ensuring the hygienic latrine installation
3. Formation of the para committee, Union Watsan Committee and make them active and prepare action plan for them. Regular follow up and monitoring of activities of different committees
4. Involve religious leaders throughout the project and provide credit support for latrine buying.

Interview with Community Based Organization (CBO)

Project : Dishari (Dhaka Ashania Mission)

Name : Md. Rafiqul Islam, Secretary, Para Committee, Bopta Purba para, Kowraid Union, Sreepur, Gazipur.

Occupation: Business

A. Background Information:

Before the project intervention, open defecation was very common in these areas, as a result, people in these areas were suffering from diarrhoea, dysentery and other water related diseases regularly. On the other hand, people were used spent more money behind medical purpose. Since then some people were thinking to bring a solution to cope with this above-mentioned problem. At that time Dhaka Ashnian Mission came forward with Dishari project.

The major objective of a CBO is to ignite the community on sanitation issue and to mobilize as well as motivate the community.

Mr. Rafiqul Islam has been involved in this project since its inception and he received a 7-days training from the project. After the training, he was ignited as well as motivated and understood how to motivate the community and how to form different committees for community ignition, motivation and mobilization.

The major activities of the CBO in implementing the Dishari project are as follows:

1. Participation in the awareness activities
2. Ignite, motivate and mobilize the community people
3. Conduct a baseline survey for situation analysis
4. Actively participate in related trainings organised and conducted by Dishari and formation of Para Committee
5. Community mapping, which indicates how and where the waterborne diseases affect the human body, over all transmission of diseases and project the total scenario of the village/ Para so that the community would understand their own situation.
6. Help the poorest people to get latrine from the Union Parishad under its ADP allocation

B. Community Engagement:

Community was engaged through following activities in order to achieve CLTS objectives, are:

1. Organize awareness session involving community people, school teachers, local elites and religious leaders.
2. Organize meeting in every para frequently

3. Committee formation at the different tiers (para level, village level, union level, upazila level)
4. Committee regularly organize meeting involving Local Government Institution (LGI)
5. Children group formation and organize various activities with them
6. Identify, train and gradually develop Community Catalysts from the community and provide regular support to them, monitor and follow up them.

C. Scaling up and Replicability:

In order to scale up the programme and replicate it in other areas following activities were done:

1. Campaigning and displaying the success stories, its direct result and benefit to the people
2. Regular discussion in the UP meetings regarding the success of the particular community in achieving the total sanitation
3. Arrange exposure visits
4. More technical support and assistance from Dishari project
5. Information dissemination through relatives and kin members
6. Finally communities learn from the neighbours to bring success in their own life. Good news spread like fires to ignite others to change their life, families and environment.
7. Community catalysts, private sectors (local entrepreneurs), NGOs, LGIs and finally the public sectors (concerned Government Departments, viz., DPHE) played their expected roles to scale up and replicate the programme in other areas.

Case study- (VERC CLTS)

Interview with Technical Assistance/Entrepreneur

Project : CLTS (VERC)

Name : Md. Biraj Uddin, Kusomba Union, Manda Upazila.

A. Background Information:

Md. Biraj Uddin is belongs to middle class family. He got married and having three children. He completed Secondary School Certificate (SSC). Before sanitary business, he used to involve in the agriculture and farming activities. During the time he could not maintain his family smoothly. About 20 years back, with the help of Grameen Bank he started sanitary business in this union. Later no with the success of his business he spread out his business through the whole upazila. According the customer require and desire, he slight changes the design with the concern of local DPHE representative. This is mentionable here that he is latrine installer as well as entrepreneur.

B. Institutional Arrangement:

He has received training from the DPHE whereby he understood how to install latrine, how to do repair and maintenance and how create awareness. He believes that this training really helped him to continue and expand his business. If such training arrange regularly then there could be more involvement with this business. He could not receive any credit support from any organization. He has a good coordination and communication with union parishad.

C. Technology:

Md. Biraj Uddin has received training on sanitary latrine installation from DPHE by which he gained experience in sanitary technology, its installation and repair and maintenance. According the customer require and desire, he slight changes the design with the concern of local DPHE representative. However, the post installation maintenances lies upon the user/customer. But when it is beyond the capacity of the customer to repair and maintain installed latrine set, he has to do his business. The customer basically like best to install latrine by him and the customer like least to maintained it by him because customer like to maintain the latrine.

D. Enterprise Development and Financing:

Although his business is profitable but did not receive any credit support from any institution. So he believes that for expansion of his business he need credit support and If any organization likes to provide technical support to him, he is willing to receive it.

E. Demand Creation and Marketing:

He has hunged few signboards for promoting his business in different areas of this area which are helping in promoting the business. He regularly communicates and coordinates with potential customer, NGOs and Union Parishad for promoting his product. He usually give six month guarantee for his product. He usually receives complains against his product from the customer. The customer likes durable and likes new design of latrine that look nice.

His major challenge is to establish his business and make his product popular within the whole upazila.

F. Scaling up and Replicability:

There is potential and possibility to scale-up his business as because 100% sanitation program is being scaled-up in the area, from village to union and to upazila. While, social mobilization and campaign is going on, communities are being motivated, his project and his enterprise is also going to be scale-up and expended in the whole union even to Sreepur Upazila. According to the motivation and upgradation of the community knowledge the communities are moving gradually from lower bottom technologies (low cost pit latrine) to upper level sanitation ladder. Therefore, demands of his products (sanitary materials) is being increased simultaneously. In addition, the growth tendency is being replicated in the neighbouring villages and unions.

Note: Md. Biraj Uddin is a “Entrepreneur” as well as “Technician” on Sanitary Latrine.
Interview with Local Government Chairman (LGI)

Project : CLTS (VERC)

Name : Md. Mokbul Hossain, Chairman, Kusumba Union, Manda Upazila.

A. Background Information:

This is true that before intervention of this project in this union, I did not have right idea on CLTS, even it out of my dream that without financial support the community can coverage 100% sanitation. The finest thing of this approach is to involve the Local Government Institution throughout the whole process, hence the community as well as the LGI feels the ownership. I think this is the best approach to bring 100% sanitation coverage of any community. It is worth mentioning that this union declared as a 100% sanitation coverage union by the Government of Bangladesh and stood the second position. The project adequately addressed the poor people needs.

I have been involved since its commencement. I have participated with most of the interventions such as rallies, union sanitation task force meeting, and latrine demonstration activities etc under the project. Even now whenever the project staffs calls for any meeting, I do try my best to attend in the meeting because I usually give it the top priority.

I am happy with my participation with the project but I do believe that if all the members and chairmen are participated equally then the community will get more fruitful and sustainable result. However regarding this matter I have received full support from the community and I am thankful to them.

My main suggestion is to continue the project for at least six months after the phasing out so that the users will be more capable to carry out the project activities effectively and smoothly.

Potential benefits:

- reduced diarrhea and cholera
- reduced water born diseases
- morbidity and mortality rate reduced
- no open defecation
- people are in good health

Major concern:

- To reduce environmental health hazard especially related to mother and child health for example indoor air pollution
- How to introduce Improved Cookstove for fuel and time saving
- How to provide need based support to the poorest section.

B. Scaling up and Replicability:

For sustainability of the project, the following activity can be carry out,

5. Replicate the model elsewhere in Bangladesh
6. Extensive awareness activity can be conducted
7. VGD card can be provided poorest people only after ensuring the latrine
8. Formation of the para committee, Union Watsan Committee and make them active and prepare action plan for them. Follow up the their activities
9. Reactivate the existing committee
10. Involve religious leaders throughout the project and provide credit support for latrine buying.

Interview with Community Based Organization (CBO)**Project: CLTS (VERC)**

Name: Momotaz Begum, Community Catalysts, Kusumba Union, Manda Upazila.

A. Background Information:

I have been a great fascination to work on development issues since my childhood. VERC has given me the opportunity to work on sanitation issues. Before involving with the project, I did not know what CLTS is and how it involves the community people to latrinize the whole community. Previously in kusumba union, open defecation is very common, as a result, people in these areas are suffering from diarrhoea, dysentery or water related diseases regularly. On the other hand, people were used more money for medical purpose. But after implementing the project by VERC the union got 100% sanitation coverage. The project adequately addressed the poor people needs.

The major objective of a CBO is to ignite the community on sanitation and other development issues and also mobilize as well as motivate the community.

I have been involving this project since its inception and I have received several trainings on water and sanitation and behaviour change communication from the project. After the training, I was ignited as well as motivated and understood how to motivate the community and how to form various committee etc. Besides I was taken several exposure visits in those areas where people are using sanitary latrine by the project.

The major activities of CBO under the project are as follows,

1. Participation in the awareness activities
2. Ignite, motivate and mobilize the community people
3. Conduct entry PRA for situation analysis
4. Participated in related training and formation of Community Environmental Committee
5. A community map formation in which indicate how and where the waterborne disease affected into the human body.
6. Help the poorest people to get latrine from the Union Parishads under its ADP allocation

B. Community Engagement:

1. Awareness session organized involving community people, school teacher, local elite people and religious leaders
2. Organize meeting in every community frequently
3. Committee formation at the different tiers (para level, village level, union level, upazila level)
4. Committee regularly organize meeting involving Local Government Institution (LGI)
5. Children group formation and organize various activities with them
6. Community catalysts and CBO formation from the community and provide support.

C. Scaling up and Replicability:

1. Continue the Environmental Committee Meeting and regularly visit latrine
2. Need to be involved more monitoring system
3. More technical support required from CLTS project
4. Provide training (refresher)

Interview with User

Project : CLTS (VERC)

Name : Ms. Alaka, Kusamba Union, Manda Upazila

A. Background Information:

Ms. Alaka is belongs to lower middle class. She got married early twenty and having two daughters. Her husband is a daily labour and sometimes do seasonal business and she is helping her husband for his business. Very unlikely she received help from her husband in household work. But in the respect of decision making for any major issue, they take participatory way.

Around two year back they came to know from other villagers that VERC has been working on sanitary latrine in their village and at the same time they hard from community catalysts (developed by VERC) of the consequence of open defecation. Since then they decided to install sanitary latrine in her household at a minimum cost. The VERC project staff trained us for operation and maintenance of latrine. The VERC staff also arranged courtyard meeting where they flip chart and flash card to making them easy understanding of behaviour change communication. Due to using the sanitary latrine, diarrhea and other water born diseases have not been occurred in my family. This is mentionable here that we use to do open defecation.

Now I am understand the impact of sanitary latrine due to this project and I am telling other peoples here and other areas to install sanitary latrine, of course many people have installed sanitary latrine after hearing from me.

Case study- (SEDA-NGOF)**Interview with Technical Assistance/Entrepreneur, Project: NGO Forum**

Name: Md. Abul Kalam, Mahadebpur, Shibalay Upazila, Manikgonj

A. Background Information:

Md. Abul Kalam belongs to lower middle class. He was migrated from the neighbouring district to here. He married here and having three sons and one daughter. He went to school, but could not complete SSC. Prior to start business, he had been working in the construction firm for 12 years and from there gained knowledge on construction activity. His average monthly income is Tk. 5,000. His major challenge is to establish his business and make his product affordable by the local customers and as per quality it should be more durable.

B. Institutional Arrangement:

He has three helpers who took orders from the customer and as per the choice of the customers, they install the latrines. He has received training from SEDA whereby he understood how to install latrine, how to do repair and maintenance and how to create awareness among the users about its use and maintenance. He believes that this training really helped him to continue and expand his business. If such training is being arranged regularly then more people could be involved with this business. He received credit support of Tk.18,500.00 from SEDA but no support from the UP. However he has a good coordination and communication with Union Parishad. He mentioned that some others have also received credit support from SEDA.

C. Technology:

Md. Abul Kalam has received training on sanitary latrine production and installation process from SEDA by which he gained experience in sanitary technology, its installation and repair and maintenance. According to the customer requirement and desire, he slightly changes the design with the concurrence of local DPHE and concerned organization's representative. However, the post installation maintenances lie upon the user/customer. However, when it is beyond the capacity of the customer to repair and maintain the installed latrine set, he has to do his business. The customer basically like best to maintain latrine by himself and the customer like least to install it by him because customer like to maintain the latrine.

D. Enterprise Development and Financing:

Although his business is profitable but did not receive any credit support from any institution. He received credit support from SEDA to run his business which is not adequate. Therefore he believes that for expansion of his business he need credit support and If any organization likes to provide technical support to him, he is willing to receive it.

E. Demand Creation and Marketing:

He has hanged few signboards for promoting his business in different spots of this area which are helping in promoting the business. He regularly communicates and coordinates with potential customer, NGOs and Union Parishad for promoting his product. He usually gives six month guarantee for his product. He usually receives complains against his product from the customer. The customer likes durable and likes new design of latrine that look nice. His major challenge is to establish his business and make his product popular within the whole upazila.

F. Scaling up and Replicability:

There is potentials and possibilities to scale-up his business as because 100% sanitation program is being scaled-up in the area, from village to union and union to upazila. While, social mobilization and campaign is going on, communities are being motivated, his products and his enterprise is also going to be scale-up and expanded in the whole union even to Shibalay Upazila. According to the motivation and upgradation of the community knowledge the communities are moving gradually from lower bottom technologies (low cost pit latrine) to upper level sanitation ladder. Therefore, demand of his products (sanitary materials) is being increased simultaneously. In addition, the growth tendency is being replicated in the neighbouring villages and unions.

Note: Md. Abdul Klam is a “Entrepreneur” as well as “Technician” on Sanitary Latrine.

Interview with Local Government Chairman (LGI), Project: NGO Forum

Name: Rojina Akther, Member, Nos. Wards: 7,8 & 9, Mohadabpur, Shibalay

A. Background Information:

Rojina Akther is a female member of ward no no no 7, 8 & 9, , Mohadabpur Union, Shibalay. She completed SSC; due to marriage she could not complete the rest of her study. She has two daughters and her husband is a businessman. This Watsan Project helped them to understand: what is a sanitary latrine and what is hygiene behaviour and how to operate and maintain the latrine etc. She mentioned that she has been involved in the project since its commencement. She participated with most of the interventions such as rallies, union sanitation task force meeting, and latrine demonstration activities etc under the project. Even now whenever the project staffs calls for any meeting, she tries her best to attend in the meeting because she usually gives it a top priority. Rojina mentioned that she is quite happy with her participation in the implementation of the project activities. She does believe that if all the members and Chairmen participate equally then the community will get more fruitful and sustainable result

Her main suggestion is to continue the project for at least six months after the phasing out so that the users will be more capable to carry out the project activities effectively and smoothly. This is because of the characteristics of the area which is flood prone and the recent floods have washed away all the latrines which required to be installed again.

Potential benefits:

- reduced diarrhea and cholera
- reduced other water born diseases
- Children and maternal morbidity and mortality rate reduced
- no open defecation and no bad smell around the area
- Unemployment reduced
- Expenditure behind treatment of diseases also reduced
- people are in good health condition

Major concern:

- To reduce environmental health hazard especially related to mother and child health for example Indoor Air Pollution
- How to introduce Improved Cookstove for saving fuel and time
- How to provide need based support to the poorest section.

B. Scaling up and Replicability:

For sustainability of the project, the following activity can be carried out:

1. Replicate the model elsewhere in Bangladesh
2. Extensive awareness activities can be conducted
3. VGD card can be provided poorest people only after ensuring the sanitary latrines
4. Formation of the Community Watsan Committee, Union Sanitation Task Force should be reactivated and prepare their action plan yearly basis. Regular monitoring and follow up of planned activities
5. Reactivate the existing committees
6. Involve religious leaders throughout the project and provide credit support to the poor for purchasing durable latrine sets..

Interview with Community Based Organization (CBO), Project: NGO Forum

Name: Menu Rani Pal, Secretary, SEDA Samity, Mahadabpur, Shibalay.

A. Background Information:

Menu Rani pal is 34 years old with one son. Her husband is Bikash Chandra Pal is a potter. They help each other in running their respective works and family business. They earn Tk. 6,000 per month on and average.

Open defecation and safe drinking water has been a major issue in this area as this is a poor and vulnerable district as compare to other districts in Bangladesh. SEDA (a local NGO) with the technical and financial assistance of NGO Forum has been implementing this project. . The project motivated and mobilized local communities to install hygienic latrine and provided them the source of safe drinking water. This is worth mentioning that they got credit support from SEDA for installation the latrine.

The major objective of a CBO is to develop alternative job opportunity, to strengthen the existing project and to run the project smoothly and also ignite the community on sanitation and other development issues and also mobilize as well as motivate the community.

The major activities of CBO under the project are as follows:

1. Participation in the awareness activities
2. Ignite, motivate and mobilize the community people
3. Conduct baseline survey for situation analysis
4. Participated in related training and formation of Community WatSan Committee
5. A community map formation in which indicate how and where the waterborne disease affected into the human body.
6. Help the poorest people to get latrine from the Union Parishads under its ADP allocation

B. Community Engagement:

1. Awareness session organized involving community people,
2. Involve school teacher, local elite people and religious leaders
Organize meeting in every community frequently
3. Committee formation at the different tiers (Community level, village level, union level, upazila level)
4. Committee regularly organize meeting involving Local Government Institution (LGI)
5. Children group formation and organize various activities with them
6. Community catalysts and CBO formation from the community and provide support.

C. Scaling up and Replicability:

In order to scale up the programme and replicate it in other areas following activities were done:

1. Campaigning and displaying the success stories, its direct result and benefit to the people
2. Regular discussion in the UP meetings regarding the success of the particular community in achieving the total sanitation
3. Arrange exposure visits
4. More technical support and assistance from the project
5. Information dissemination through relatives and kin members
6. Finally communities learn from the neighbours to bring success in their own life. Good news spread like fires to ignite others to change their life, families and environment.

Community catalysts, private sectors (local entrepreneurs), NGOs, LGIs and finally the public sectors (concerned Government Departments, viz., DPHE) played their expected roles to scale up and replicate the programme in other areas

Key findings of interview with Upazila Engineer of DPHE

Date: 21 January 2008

Time: 10:30-12:00 A.M.

Place: DPHE Office, Lalmohan, Bhola

Mr. Md. Nizam Uddin, Upazila Engineer, DPHE, Lalmohan, Bhola was interviewed at 10:30 A.M. on 21 January 2008 through the guided questionnaire and participatory consultation. The following facts have been documented below:

1. Evidence of CLTS Success:

- Awareness building in the community as whole.
- Active participation of different stakeholders like Teacher, Imam, LGI Leaders, Women, Children, Disabled and GoB Officials etc in the initiative.
- Government commitment and initiatives towards Total Sanitation Coverage
- Political willingness is another factor to scale it up nation wide
- Integration of the initiators in the WatSan field
- Active involvement of Union Parishad representatives and Community Leaders to implement safety-net program for pursuing to accept Total Sanitation

2. How to Build in CLTS

- Effective process of motivation
- Participation of all segment of community people
- Continuous monitoring and back up support provided by the NGO and other actors of the WatSan field.
- It is a life long process.

3. Role and Potentials of LGI for Household Energy

- LGI leaders should be the focal point for implementation IAP program like Total Sanitation.
- LGI leaders mainly Union Parishad Leaders will play the role of monitor and they will be responsible to monitor use and maintenance of technology and use of renewable energy and mother and child health status.

4. Quality and M&E

- For ensuring quality of CLTS program, Upazila Administration and DPHE have been playing a vital role as the monitoring organ simultaneously with the CBOs
- Mandate of DPHE should be duly put into practice effectively.
- A realistic strategic plan being developed to ensure quality of the safe water supply, environmental sanitation and hygiene promotion through continuous monitoring and periodic evaluation.
- LGI leaders should be more dedicated and committed to play their effective role as the driver of the approach.
- Sensitization process should be continued by the local government representatives during and after phasing out of the areas.

5. Subsidy and Micro Finance

- Subsidy for the ultra poor should be continued for construction of hygienic latrine
- Water Seal Latrine should be installed instead of low cost latrine
- ADP allocation for the ultra poor people should be continued.
- Local Entrepreneurs should be developed
- Micro Finance facility will be available for the rural entrepreneurs ensured.

The Upazila Sub-Assistant Engineer, DPHE, Lalmohan, Bhola, mentioned during the KII about CLTS are:

- Government commitment and initiatives towards Total Sanitation Coverage is important
- Political willingness is another factor to scale it up nation wide
- Integration of the initiators in the WatSan field
- For ensuring quality of CLTS programme, Upazila Administration and DPHE have been playing a vital role as the monitoring organ side by side with the CBOs
- Mandate of DPHE should be duly put into practice effectively.
- A realistic strategic plan needs to be developed to ensure quality of the safe water supply, environmental sanitation and hygiene promotion through continuous monitoring and periodic evaluation.
- LGI leaders should be more dedicated and committed to play their expected effective role as the facilitator of the approach
- Continuous monitoring and back up support provided by the NGO and other actors of the WatSan field.
- Sensitization process should be continued by the local government representatives during and after phasing out of the areas.

D. Exposure Visit, Thematic Roundtable and Workshop:

ICS Programme Area, VERC, Date of visit: 14 November 2007

Purpose:

The main aim of this issue is to ignite communities towards adapting best practices of clean energy technologies and bring behavioral change in IAP reduction and household hygiene, similar to sanitation. The awareness raising consists of conducting exposure visits, thematic roundtables and workshops in different places in the country to increase awareness about the benefits of using clean energy technologies viz. ICS, biogas technology and solar devices and possible health benefits.

There are 3 (three) different places in the country have been selected for awareness raising of clean energy technologies and to develop commitment, particularly among the local governments and communities for participation in IAP reduction programs.

The places are :

1. Saydpur Upazila, District: Nilphamari
2. Sitakunda Upazila, District: Chittagong
3. Rajshahi Sadar Upazila, District: Rajshahi.

Objective :

The over all objectives of the exposure visit, thematic round table and district level workshop are as follows:

- Share the experiences gained on CLTS programme in different area of the country ;
- Share the experiences on use of Clean Energy technologies viz. ICS , biogas & solar devices;
- Share the area specific knowledge and experiences on applied approaches and methodologies.

Sayedpur Upazila, Dist. Nilphamari

ICS Programme Area, VERC. Date of visit : November 14, 2007

For exchange of experiences and ideas , three UP Chairman from Naogaon district : Md.Abdul Jalil, Md. Mokbul Hossain & Mr.Ahsan Habib and one catalyst Momtaz Begum Muki from 100% coverage CLTS areas were invited to Sayedpur ICS programme area , to participate in exposure visit, roundtable conference & workshop on Indoor Air Pollution.

i. Exposure Visit:

The name of the place visited is Islambag Ward No. 3, Sayedpur Municipality area, where a large number of community people are using ICS and leading comfortable life. In 2005 VERC and W.I jointly implemented a project entitled **“Reduction of Exposure to Indoor Air Pollution through Household Energy and Behavior Improvements”** Funded by USAID The project lasted for 2 years and ended in May 2007.

This area is a camp of stranded Pakistanis. The people of this area are mainly poor and very poor . Most of them are day laborers, hookers, rickshaw pullers, operating small business etc.

Before starting for exposure visit to Islambagh, the delegates from Naogaon district. Ward commissioners of Sayedpur municipality, local elites, housewives, local teachers, VERC and WI team members gathered at VERC office, Sayedpur at about 9:30 A.M.

Mr. Subash Chandra Shaha, Coordinator, Training & Communication VERC, welcomed all the guests and introduced each other. Dr.A M Hasan R. Khan explained in detail on Indoor Air Pollution and its affects on women and children, particularly on lactating mother and her baby, different types of clean energy technologies and its advantages on human life and environment in the context of Bangladesh.

In the morning at around 10:30 A.M. visiting team reached Islambag. Whole team visited about 5-6 nos. households where women are using ICS. All the users explained the benefits of ICS viz fuel saving, less cooking time, comfort in coking, no smoke & heat inside the house etc. to the visiting team.

During the exposure visit in the community Reshma Naz one of the calalyst of this area has explained the different tools of MPA for intervention of CLTS to the visiting team. The MPA tools are: social mapping, wealth classification, seasonal calendar, three piles sorting, body mapping, stove option, managements & decision making, voice & choice, training need assessment, gender issues & time division and planning. She also narrated how their community was ignited and started to using ICS in every household in this area.

Naz has already installed about 50 nos. of ICS in different area of Saidpur upzila. She usually charged Tk. 250.00 for installing one ICS in the users kitchen. The users bear the cost of the materials which are necessary of ICS construction. Thus Naz every month earns about Tk. 800.00-1000.00 by installing ICS.

After visiting the Islambag area, whole team visited the house of Mr. Ziaul Haque Zia, ward commissioner Sayedpur municipality. Mr. Zia and his brother using two double mouth improved cooking stoves in their houses more than 18 months. The visiting team talked with Mrs. Marina Parveen, wife of Mr. Zia and his brother's wife Mrs. Milli. They expressed their satisfication about different benefits of ICS. They saved 50% fuel, less cooking time as compared to traditional ones, and there is no smoke & heat inside the kitchen; thereby reducing the IAP. They are very happy with the improved cooking stoves

ii. Thematic Roundtable Conference:

After completion of exposure visit all the members of the visiting team gathered at the VERC office, Sayedpur at 14:30 P.M. for thematic round table. Mr. Subash Chandra Saha, Coordinator VERC conducted the session. Most of the members of the visiting team narrated their personal experiences from this exposure visit.

After detail discussion the following field findings & recommendations were made:

A. Field Findings on ICS:

The main structure of the ICS installed in this area are made of mud. The other accessories of the stove are one chimney made of cement having 7-8 feet height 3.0 inches diameter, one cap made M.S. sheet and a grate made of iron rod, the distance between two rods is 0.5 inches.

All the ICS are functioning. But accurate dimensions of the stoves are not maintained during installation. Some of the important finding of ICS in Islambag are given below

- I. In most cases selection of place in the kitchen/house for installation of ICS was not proper
- II. In some cases chimney of stove was taken out the kitchen/house by making a hole of the thatched roof and proper height of the chimney from the roof was maintained. This may causes fire hazard. In such cases chimney should be placed out side the kitchen/house by making hole on the wall of the kitchen.
- III. In most of the cases placement of chimney in the stove was not proper. Before placement of a chimney in the stove, a square open space (5x5x10) inches is made by bricks/mud and two small pieces of rods are placed on the top. After that chimney is placed in the chimney holders. Sufficient open space should be kept below the bottom of the chimney.

- IV. The placement caps in the chimney were not proper. During placement of cap in the chimney, 3-4 inches open space between cap & chimney should be maintained
- V. In some cases outlet of chimney's wastages is missing. At bottom of the chimney in any side a holding, 3x3 inches should be made for removal of chimney wastages. During cooking this hole should be closed with a lid.
- VI. The distance between from the top of the stove to the grate should be 8-9 inches. If the distance is higher then efficiency of the stove will be less.
- VII. The smoke exit of the second mouth of the stove should be 2 inches dia. If this hole is bigger, then efficiency will be less and on the other hand, if it is smaller then smoke will come out through the feed hole of stove instead of going out through the chimney.
- VIII. The proper maintenance of the ICS should be made for longer durability. At least once in a week, stove should be rub with mud. The chimney should be clean at least once in a month.

B. Challenges

- Municipality will continue required assistance to the CBO in order to function the activities smoothly.
- To reduce the price of different types of ICS, which would be affordable by the poor communities.
- To change the cooking habit of women
- To use different types of fuel in one single model
- Stove accessories should be locally available at a reasonable price.
- The users prefer such models which are low cost, durable, looks good and easy to operate.

C. Recommendation:

- i) The different methodology for participatory assessment (MPA) tools viz. social mapping, wealth classification, seasonal calendar, three pile sorting, body mapping, stove options, management & decision making voice and choice, training need assessment, gender issues & time division & planning should be exercised in the new area before implementing ICS program.
- ii) ICS technicians should be well trained on construction, maintenance & repair of the stoves.
- iii) Before construction of ICS in the user's kitchen they should consult with the users regarding habit of cooking and type of fuel used by them.
- iv) After construction of ICS, technicians should explained the user how to use maintain & repair it.
- v) During first operation of the stove, technician should conduct control cooking test to give an idea to the user regarding saving of fuel, cooking time reducing IAP and other benefits of the stove.
- vi) Regular monitor of ICS should be done
- vii) Local entrepreneurship should be developed for supplying different accessories viz. chimney, cap, grate etc. of the ICS.
- viii) The different awareness raising campaign viz. display of documentary films on IAP, posters, leaflet etc. should be developed for reducing IAP pollution by popularizing ICS
- ix) Existing local entrepreneurs for supplying sanitary latrine should be encouraged to produce different accessories of ICS.

III. District Level Workshop:

Venue: Sayedpur Railway Auditorium, Upazila: Sayedpur, Dist: Nilphamari

Date: November 15, 2007

The main purpose of the workshop is to create awareness about use of clean energy technologies viz, ICS, biogas technology and solar devices in the country. Secondly to inform differ stakeholders, community people, GO and NGOs that the World Bank is designing a pilot project for mitigation of IAP for Bangladesh which will be implemented by LGED in the country. Thirdly to collect some feed back data from the workshops and exposure visits which will be useful in designing the pilot project on mitigation of IAP.

The workshop was presided by Mr. Akter Hossain Badal, Chairman, Sayedpur Municipality. The chief guest was Mrs. Sabina Alam, UNO, Sayedpur upazila. The other guest are Mr. Sadrul Islam, Upazila Engineer, LGED, Mr. Iftekhar Hossain, Deputy Divisional Engineer, Sayedpur, Bangladesh Railway and a team of representatives of IGI from Naogaon district. The other participants are : Mr. Suman Basnet, Mr. Mashiur Rahman and Mr. Redwanoor Rahman from Winrock International and Dr. A.M. Hasan R. Khan, Mr. Quamrul Islam, Mr. Subash Chandra Saha and Anowar Hossain Mollah from VERC were present.

The welcome address of the workshop was given by Mr. Subash Chandra Saha, Coordinator, VERC. He also facilitated the entire workshop.

Dr. A.M. Hasan R. Khan, Project Manager of the project explained in detail, the role of clean energy viz. ICS, biogas technology and solar devices for reducing IAP in the country. He also discussed the biomass energy situation of Bangladesh & its use, defects of traditional stoves and health hazard caused by the smokes and heats of traditional stoves.

After the introductory speeches by Dr. Hasan on role of clean energy technologies for reducing indoor air pollution there was open discussion and brain storming on the above mentioned issues. After detail discussion: following recommendations were made by the participants on different aspects; those are as follows:

1. Community Engagement :

- Ward Health Committee can be a platform to be approached for future pilot project.
- Local youth clubs/CBOs can be engaged
- Folk music, miking can be helpful for awareness of clean energy technologies.
- Ward level forums can be of use for coverage and of inclusion of all segment of people (teachers, imams and NGO representatives)
- Display center of ICS technology should be made in suitable public places. To familiar the ICS to the community people, a few numbers of ICS should be installed in the user's kitchen free of cost.
- UNO should take the lead role for awareness for IAP pilot project.

2. Institutional Arrangements :

- Ward Health Committee (that exists now) can be re-vitalized through wider participation
- School teachers can be of used for the campaign ICS
- Upozila administrative departmental heads can be integrated in the process
- UNO should take lead role and involve other government departments to popularize ICS.
- Health Department, DPHE, and Ansar - VDP can be intergraded with the IAP programme

3. Technology :

- Technology should be affordable and low cost to be accessible to all segments of people
- Budget provision should be there in the LGI fund for promoting ICS
- Motivation and demonstration centre needs to be established for publicity of clean energy technologies.
- A range of technologies needs to be developed to check Indoor Air Pollution (IAP)

4. Financial and Marketing Development:

- Necessary fund / Bank loan should be provided for entrepreneurship development, who will supply ICS and bio gas plant spare parts.
- R& D activities should be carried out to reduce the cost of the clean energy technologies.
- For popularization of Bio gas plant and Solar panel subsidy should be provided so that larger number of community people can enjoy the fruits of clean energy technologies.

5. Scaling Up and Reliability:

- Exposure visit and sharing of experience could be helpful for awareness of reduction of IAP
- Involvement of more catalysts could be helpful for implementation of IAP pilot project.
- LGI involvement would be extremely helpful awareness and implementation of IAP pilot project.
- Capacity building of different committees to scale up the project.

Sitakunda Upazila, Dist. Chittagong.

CLTS Programme Area, VERC, Date of visit: 28 November 2007

Six chairman for Nogaon and Nilphamari districts : Mr.Abdul Jalil, Md.Makbul Hossain , Mr.Ahsan Habib, Mr.M.H Paramanik, Mr.Akther Hissain Badal and A.Z.M Mentazul Haque and one catalyst Momtaz Begum Mukti form CLTS and ICS coverage area were invited to sitakunda in CLTS coverage area for participation in exposure visit roundtable conference and workshop on Indoor Air Pollution. But unfortunately due to some official engagement to chairman from Nilphamari district could not attend in the programme

I. Exposure Visit

The name of the place visited is Mohajan Para Union : Banasbaria, Upozila Sitakunda. 100% sanitary latrine have been covered in this area under a programme entitled Community Led Total Sanitation by VERC . There are 43 numbers of households in this area and having population of 254. The people of this area are mainly middle class and poor. Most of them are farmers , day laborers,operate small business etc.

• Methodologies Followed:

Briefing session by Mr. Abu Zaher , Area Coordinator about VERC, CLTS Programme and its evolution in Sitakund.Introductory session by Dr. A.M.Hasan Khan on Indoor Air Pollution (IAP) and its affects on women and children, particularly on lactating mother and her baby , different types of clean energy and its advantages on human life and environment.

Field visit in the village Mohajan Para divided into two different groups, viz., Watsan Group and Energy Group.

Both the groups attended a presentation session by a Community Leader, Namita Rani Devi, Vice-President of the Mohajan Para Health and Environment Development Committee.

The Groups visited and observed the village starting from two different areas following the below mentioned methodologies:

- Health Transact Walk;
- Spot Visit;
- Information from Key Informants
- Small Group Discussion; and
- Tea Stall Session

Community Session in the Village Mohajan Para:

A community session was organized by the Mohajan Para Health and Environment Development Committee at the courtyard of the Mohajan Bari which was the part of the exposure visit. Namita Rani Devi conducted the session. Local community catalysts, entrepreneurs, UP Ward members, school teachers and CBO members including the Visiting Team attended the session.

The session was visualized with a lot of communication materials, PRA/ MPA tools used by the by both NGO workers and the community since their inception for igniting the people for CLTS. There were a lot of queries from the visitors' team in order to exchange the views with the Mohajan Para CBO. The President and General Secretary of the CBO were also present for answering the questions from the visitors. The following PRA and MPA tools used were:

- Ignition with Health Transact Walk
- Watsan situation analysis with Social Mapping
- CBO formation process with Venn Diagram,
- Preparation of the work plan through Matrix,
- Community based participatory monitoring system using Matrix, Social Mapping and Pocket Voting Chart, and
- Community based Participatory Evaluation through Social Mapping before the project activities were phased out.

The community ultimately achieved 100% hygienic latrine coverage and gradually phased out, The success of the community achievement spread over and scaled up in the neighboring villages and gradually it covers the whole union. The Chairman of the Union Parishad, the concerned Ward member played an important role through the then Union Watsan Committee (Later on Union sanitation Task Force) and Ward Watsan Committee (WSTF). After phasing out, the CBO concentrated their activities in changing personal and other domestic hygiene behaviour of the community people. Whole area, the village pathways and the courtyards of the household were found clean.

In the community gathering the discussion on Indoor Air Pollution, clean and renewable energy, particularly, the improved cooking stove, bio-gas and solar panel system were discussed. The community showed their keen interest on bio-gas and improved cooking stoves while they understood the bad affect and health hazard caused from smoky and unhygienic traditional cooking stove. They also agreed that same CLTS approach and methodologies could be applied in order to introduce and social market the improved cooking stove and bio-gas technology which are environment friendly, low cost and hygienic. Demand has already been raised from the women community members who want to get rid of smoky, unhealthy and irritating traditional stoves. Dr. Khan took the lead role in discussing the above issues.

After that the team has been divided into two: Watsan Team, led by Md. Maqbul Hossain, Chairman Kusumba Union, Rajshahi, and Energy Team, led by Mr. Mashiur Rahaman. Both the team started their field visit with transact walk from two opposite side of the village and met at a certain point after completion of transact.

✚ Field Findings of the Watsan and Energy Groups :

During the transact health walk and field visit teams visited some households, observed their latrines discussed with them about the history and latrine installation process and its results. The team also discussed with a few small groups gathered on the village pathway while the team was walking, the team also gathered information from some Key Informants and arranged a short discussion in tea stalls to know the health and hygiene condition and awareness of the villagers as well as the hygiene awareness of the tea stall owners who serves tea, snacks, and drinking water to the customers. During the visit it was found that the people are mostly aware of:

- Visiting latrines with sandals.
- Wash hands with soap or ash after defecation.
- In some cases extra sandals for latrines were found available as well as soap for hand wash.
- In some cases soap and sandal were not available at the latrine sites. Might be those are kept in the house told by the house owners.
- Latrines were found almost clean with its surroundings. Some latrines were found inside the house premises and proper hygienically maintained and no bad smell was found.
- The courtyards of the visited houses were also found clean, they were regularly swept.

People were happy about CLTS programme, because it increased status of their village, improved their health and economic condition. The approach was good and acceptable because it was pro-people and community led. People decided themselves what to do and what not to do. They did not have to wait for others' decisions and instructions. They required little training, orientation and a-bit guidance from VERC. However they did it.

Discussion of traditional and improved stoves were also became an issue .The women were found not happy with their traditional cooking stoves and kitchen environment and of course subsequently about their children health. During the field visit energy group visited some households to observe how the community people cooking their foods with traditional stoves. The observation of the visiting team are as follows :

- All the households use traditional cooking stoves
- All the kitchens found dirty and smoky
- Traditional stove users are ignorant about health hazards caused by traditional stoves
- During cooking, while there is too much smoke they leave the kitchen
- The women spent about three hours to collect traditional cooking fuel (fuel wood, cow dung and straw, leaves etc.)
- The women spent almost four hours daily for cooking purpose
- Construction of one traditional stove takes about two days
- Some of the kitchen were found only with roofs without fencing
- Where kitchen and living rooms are closed together there is no out let for exit of smoke from kitchen and air ventilation is poor.
- The cooking utensils are found very dirty because of the smoke of traditional stove.
- Most of the houses of this area are made of bamboo, mud straw and tin fenced
- Almost all the households use electricity for lighting purpose. An average cost of electricity for each households per month Tk. 150.00
- Those who use kerosene oil for lighting purpose they spent Tk. 50.00 per month

One of the catalyst and the member of the Monitoring Group Miss. Razia Sultana a college girl mentioned that the women folk particularly the lactating mothers and their children are mostly victim of this traditional cooking systems. A part from that Sneha Bala Devi , Nepali Devi, Kali devi, Shila Devi and Bappi Devi of

mohajan para mentioned that they were suffering from different diseases from smoke and heat of traditional stoves. The diseases are as follows:

- Eye irritating
- Water falls from the eyes.
- Headache,
- Respiration problem.
- Hopping cough, chest pain, gastric etc.

However, people of the village express their utmost interest to installed improved cooking stoves in their kitchen, which is low cost fuel saving and environment friendly.

After the completion of field visit two groups started their brain storming in a buzz group in order to write down their field findings on the basis of two issues: Watsan issues and IAP issues of different aspects viz., Social Aspects, Institutional Aspects, Technical Aspects and Economic Aspects. After the group work the Group leader presented their field findings.

Social aspects:

- The Women are empowered
- The social status of the poor increased
- The relation between the Local Government (Union Parishad) and the community has become closer and increased

Challenges:

- Achievement of improved hygiene behaviour
- Coverage of 100% safe water supply
- Sustainability of CLTS

Institutional aspects

- CBO is active to achieve other objectives of CLTS
- Local Government and CBO (Mohajan Para Health and Environment Committee) has been working closely together.
- There are other three supplementary committees. Those are: Children Group, female Monitoring Group and Adolescent Group.
- UP is assisting the hard-core poor from its 20% ADP allocation to install sanitary latrines. But UP instead of giving the latrines free of cost charging a nominal value from the poor so that they can feel an ownership of the scheme. They will not treat it as a relief.

Challenges

- Future sustainability of this relationship based on other community related development activities.

Technical aspects

Two types of sanitary latrines were found:

- Ring slabs Offset Pit (Plastic pan, 5-6 rings, delivery pipe and gas pipe)
- Ring slabs Direct pit(Plastic/ cement pan , 2-3 rings)
- All the sanitary materials are locally available
- Local skills developed within the community / in the village so that all types of technical assistance for repair is available.

Challenges

Move forward to more improved and sustainable technology as per sanitation ladder which will be durable for more years.

Economic aspects

- The users according to their capacity are more interested in the sustainable technology to install which will be durable even it might little bit high cost. Because they found its long term economic benefit.
- People are spending money behind installing a more sustainable and durable latrines.
- The poor who started with low cost hygienic pit latrines only for fixed defecation, they now moved to second or third stair of sanitation ladder which is more sustainable and more hygienic with water seal.
- Medical expenses decreased because health condition of the user households improved due to decrease of water and excreta borne diseases decreased.
- Accordingly rate of unemployment also decreased. And
- Child and maternal mortality has also been decreased.

Challenges

There is no real challenge while people are ignited, motivated, united and indeed, determined to achieve something. But still the hard-core poor have to have the long term durable and sustainable latrines.

II. Thematic Round Table CONFERENCE:

After group presentation there was a Round Table. The summary and recommendations of the round table are given below:

- CLTS approach introduced and practiced by VERC in this area is highly acceptable and effective for the community in order to achieve the target of total sanitation.
- Structured GO-NGO-Private Sector and Community collaboration is very much elementary for this type of programme.
- Most effectively community participation with positive support from LGIs is very important elements for this programme.
- This approach could easily be applied in order to introduce and popularize the ICS and other Clean Energy Technologies in this area to reduce the Indoor Air Pollution (IAP) because CBOs are still active.
- There are some entrepreneurs have been developed in this area , they may be motivated for manufacture and supply the accessories of ICS and bio gas technology to the community people.

III. District Level Workshop

Venue : Upazila Auditorium, Sitakunda, District, Chittagong

Date : November 29, 2007

To popularize the clean energy technologies and to reduce Indoor Air Pollution (IAP) a workshop was organized jointly by VERC and WI at Sitakunda Upazila. The workshop was presided by Mr. Alhaj Abul Kalam Azad Chairman Sitakunda Municipality. The Chief Guest was supposed to be Mr Akhteruzzaman,

UNO, Sitakunda Upazila. But he could not attend the workshop due to his urgent business in Chittagong with DC. The other Upazila officers namely, Mr. Yusuf Hasan Chowdhury, Cooperative Officer, Mr. Shah Alam, Jubo Unnayan Officer, Mr. Anowar Hossain, Upazila Engineer, LGED, Mr. Golam Mostafa, Upazila Agriculture Officer and Mr. Abul Basar, Upazila Fishery Officer were present in the workshop. There were also some NGO representatives, Municipality Ward Commissioners, UP Chairmen, School teachers and other elites of the Upazila attended the workshop. Apart from that, there were four UP Chairmen and one Community Catalyst from the Northern Districts of the country as delegates to share their experience. There were representatives from VERC and WI attended and facilitated the workshop. Local VERC Officials have also attended the workshop to share their experience.

The welcome address of the workshop was delivered by Mr. Subash Chandra Shaha, Coordinator, Training and Communication Section, VERC. He also facilitated the whole workshop. After welcome speech all the participants introduced themselves.

Dr. A. M. Hasan R. Khan, Project Manager, VERC-WI-World Bank Project delivered his speech in which he mentioned the detailed of indoor air pollution in Bangladesh and globally. He also explained the role of clean energy technologies viz. ICS, Bio-gas technologies, and Solar devices to reduce indoor air pollution. He further mentioned about the design of the future pilot project on reduction of indoor air pollution (IAP) from the rural households setting which will be implemented by LGED, facilitated by NGOs and with the involvement of Local Government Institutes (LGI). The way CLTS has been popularized and become effective in Bangladesh for its unique approach and methodologies, the relevant approach and methodologies could be applied for the forthcoming IAP Pilot project design.

After introductory speech delivered by Dr. Hasan, there was open discussion and brain storming among the participants on the above mentioned issues. The four chairmen including one community catalysts from the Northern Districts shared their experiences and expressed their views with keen interest.

After thread-bare discussion, the following recommendations have been taken from the workshops which are as follows:

1. Community Engagement

- School teachers, imam, social leaders & others should be involved in the process to popularise the IAP Pilot Project
- LGI and NGOs collaboration is needed in order to support and facilitate the IAP project
- Regular meeting with all stakeholders should be organized for dissemination of information regarding the Pilot Project
- Courtyard meeting with vulnerable mothers with involvement of UP Ward members and other social elites is essential as a part of community mobilization
- Exposure visit to other IAP project areas should be made.
- CLTS approach found effective and well accepted by all stakeholders, so that it could be adopted for implementing the Pilot Project.
- From Gender perspective both men and women should actively be involved in the IAP intervention
- Adolescent groups should be involved in the project,
- Hotel and tea stall should also be addressed by the pilot project to reduce indoor air pollution.

2. Institutional Arrangements

- Users' committee should be formed as CBO where women and adolescent will play active role.

- Union parishad, bazar committee, youth clubs and other social organizations should be linked in the IAP pilot project.
- Existing CBOs will be responsible for implementation of clean energy technologies
- Linkage with CBO – NGO – LGI – GO and Private Sector (Entrepreneurs) is elementary for institutionalization of the Pilot Project.
- Revitalize the Union and Upazila Parishad based existing sub-committees to support and facilitate the IAP Pilot Project.

3. Technology:

- Community based Bio-gas plant should be introduced and popularised
- ICS technologies should be affordable by the poor community and the spare parts and materials should be locally available.
- The ICS technology should be low cost, durable and also looks good
- Solar panel could be used by a group of households for lighting purpose which will reduce the consumption of kerosene oil
- Those who can not use clean energy technology their kitchen should be well ventilated, so that the smoke from traditional stove can let out
- Credit facilities with low interest for the poor should be available from the partner NGOs for installation of clean energy technologies.

4. Financial and Market Development:

- Investment and fund support should be provided from the financing organizations for entrepreneurship development
- Micro-credit facilities should be provided for installation of clean energy technologies
- Cost of clean energy technology should be affordable for the all cross sectional people.

5. Scaling-up and Replicability :

- Capacity building of CBOs and other local committees should be strengthen for better Implementation of pilot IOP project.
- Benefits of clean energy technologies through street drama, folk song and cultural activities should be presented in the community people for scaling up the project
- Demonstration of clean energy technologies at Hat/bazaar/Union Parishad Educational Institutions etc should be made for public awareness. .
- More exposure visits should be arranged to share the experience and learning about the clean energy technologies
- If traditional stoves can be improved by simple modification, the financial involvement will be less.

Information dissemination by relatives who visit the IAP project area