

PEOPLE-CENTRED APPROACHES TO WATER AND ENVIRONMENTAL SANITATION

**Multidimensional on-site sanitation program serving the poor:
A case study in Vietnam**

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The purpose of this paper will be to present a Danida-funded urban sanitation sub-component's experience with on-site sanitation. The Project is located in the central highlands provincial capital city of Buon Ma Thuot City, Vietnam. This is as a case study for examining the implementation of a multidimensional on-site sanitation program by the Sub-Component's Information, Education and Communication (IEC) program and how such a program can directly benefit the poor in the peri-urban area, while creating greater awareness of health and hygiene.

Introduction

The Buon Ma Thuot Sanitation Sub-Component (hereinafter referred to as "the Project") is a Danida-funded urban sanitation intervention located in the central highlands provincial capital city of Buon Ma Thuot City, Vietnam. Whereas work on the Project is largely focused on providing sewerage and drainage infrastructure in the urban area, Danida has also funded outputs with expressed intention of serving the peri-urban poor families. Danida's intention is stated as a principal Project Output, as follows:

"Established or rehabilitated on-site sanitation facilities to poor families without access to the piped sewerage system and who suffer from unsanitary conditions."

As clearly stated in the Danida's output, improving the sanitary conditions to the poor is an important aspect of the Project, as it brings essential sanitary services to poor people in the peri-urban areas, who currently have no access to the Danida funded piped sewerage system.

A multi-Dimensional Program for Serving the Poor

The IEC-implemented on-site sanitation program, conducted during a two year period (2002-2003), was founded on a multi-dimensional program of support to the poor, including private latrines to households, public latrines to primary and secondary schools and public latrines to City health stations. Based upon a relatively modest DKK 2 million (USD 300,000) Danida-funded investment, an estimated 44,500 poor people in the peri-urban areas have received benefit from improved sanitation. (See the table No. 1)

The targeted area of the On-site Sanitation Facility Program were the outer communes not benefiting from the new piped sewerage system, and particularly, the administrative

Table 1. Scope of program and population served

Type	No. Planned	No. Constructed	Persons / Unit	Total persons
Public schools	43	43	Actual No. Students/ Teachers	35,982
Households	1,122	1,122	6	6,600
Health station latrines	09	09	200	1,800
Total				44,514

units with a large concentration of poor households. Specific sites would be chosen in each outer commune for the social marketing of sanitation facilities e.g. schools, health centers, public places, as well as private households. The beneficiaries would co-participate in the financing of the latrines, either by labor or by money. A maintenance system of the latrines was required as a pre-condition to the implementation of of the sanitary installation.

A key principle of the on-site sanitation campaign is to follow a demand-driven approach, so as to increase the sustainability of the activities. The construction of latrines is realized only if a demand has been delivered by the management board of a public place or by the owner of a private house. The potential beneficiaries are required to contribute a 10-20% contribution to the total cost of the installations, either in money /or labor. The beneficiaries must commit themselves to the establishment of a management system that will ensure the cleaning and the maintenance of the latrines. The final selection of the beneficiaries is made by the City Education Department and the IEC-Team when it concerns schooling establishments; and by the Commune People's Committee in cooperation with our Project Motivators, when it concerns private households.

The on-site sanitation campaign has also been based upon

another key principle, namely the strategy to propose less expensive and thus more sustainable sanitary facilities to the poor section of the community. After testing several different models of latrines, it was decided that the improvement of the Danish Red Cross design of pour-flush latrines was the best option for the targeted area.

Educating children through implementation of public school latrine

The public school latrine program is one of the cornerstones of the Project's On-Site Sanitation Program. Through this program, the sanitary conditions have been significantly improved at 43 primary and secondary public schools located in the peri-urban areas of Buon Ma Thuot, outside of the new piped sewerage system. By the time the public school latrine program was fully completed in February 2004, a total of nearly 34,000 school children and teachers were benefiting from the improved sanitary conditions offered by the public school latrines.

The public schools were selected on the basis of prioritized need, with all of the recipient schools having very substandard or non-existent sanitary facilities. The schools range in size from 200 to 1600 students, with a significant percentage of the students coming from poor households of ethnic minority groups. Financial participation of 10% investment from the recipient is required to ensure "ownership" of the completed facility, with this co-funding normally collected from the parents of the children. Once a school is selected for implementation of a public latrine, an extensive program of education and training is conducted with all the students and faculty to ensure that the sanitary facilities will be correctly utilized and maintained. The Project's IEC component utilizes classroom presentation, posters, and cartoon books, to illustrate and reinforce the benefits of proper sanitation, health and hygiene.

In addition to the direct benefit of improved sanitary facilities to these schoolchildren, the construction of public school latrines is also a very important first step in bringing the message of proper sanitation home to their families. Through improved education and awareness of health and hygiene issues, as first introduced through the children, we are able to broadcast our message with much greater efficiency and effectiveness.

Creating sustainable partnership with the poor through Implementation of appropriate, low-cost private household latrines

The private latrine program is an important component of the Project's On-Site Sanitation Program. Through this program, we significantly improved sanitary conditions at over 1,100 demonstration households located in the peri-urban areas of Buon Ma Thuot, outside of the new piped sewerage system. The improved sanitary facilities were distributed



Figure 1. A typical school latrine



Figure 2. School children washing hands

across the 15 communes contained within the Project area, and were further distributed within the administrative units within each commune.

Ten private latrines were constructed in each of the 100 administrative unit, as a means to demonstrate the benefits, low-cost and feasibility of the latrine. Each latrine site was carefully selected from a list of DOLISA – registered poor families and had to be approved by both the commune and the Project, prior to acceptance of the site. The recipient households each contributed 20% of the constructed cost of the latrine and participates in the digging of the soak-away pit for disposal of the wastewater. As this program was largely for demonstration purposes, it was intended that by construction of these latrines, we would increase the awareness in the community and demonstrate that on-site sanitation is both feasible and affordable. The private latrine program was being implemented by the 194-member motivator network, a group of persons trained by the Project IEC component to assist in the awareness campaign and to support the Project activities.

There are several types of latrine designs for on-site sanitary facilities. However, after having carefully con-

sidered the entire social, geographical and cultural aspects of the targeted area, the Project has focused on the use of low-cost pour-flush latrines, as being suitable to the local conditions and affordable to the poor. In rural communes of the City, most of the households have water supply sources for operating the latrines and have sufficient land, which allows designing soak-away pits in such a way which prevents contamination of the water supply. The basaltic soil of the area is also sufficiently permeable for the estimated quantity of effluent discharge into the pit to be able to leach away. The problems of flies, mosquitoes and smell can be overcome simply and cheaply by the installation of a water seal in the pour-flush discharging piping hole. Requiring a small amount of water for flushing, pour-flush latrines have the added advantage of reducing the risk of groundwater pollution. The pour-flush latrine system is very suitable to the Ede ethnic minority culture since Ede people never use human waste as fertilizer. The system is also easy to clean and not difficult to maintain. An additional advantage of the system is the fact that it is suitable for adults and children, who do not need to fear falling into the drop hole, unlike primitive pit latrines.

The Project-supported private latrine program constructs the working part of the latrine, namely squat plate, base, pour-flush piping and soak-away pit for a per unit cost of USD 30, which is 80% Danida-funded. The superstructure for the latrine is constructed by the household, in accordance with available materials and funds. One of the pre-conditions for benefiting of a private latrine is that the beneficiaries must commit themselves to diffuse the message to their neighbors about the advantages of having a hygienic latrine.

By the time of completion of the private latrine program in December 2003, a total of 1,100 households, approximately 6,600 people, were benefiting from the improved sanitary conditions and more than 700 other households in 15 peri-urban and rural communes under the Project area constructed low cost latrines on their own, according to the low-cost model designed by the Project.

Increased awareness of health and hygiene by education and demonstration

In order to increase the population's awareness of hygiene and sanitation, the Project IEC has been carrying out the multimedia information campaign based on television, radio, billboards, models and poster presentations. Multi-media IEC materials on the activities of the Project in general and the on-site sanitation in particular have been produced. The IEC materials are based on the recommendations of the local perception survey, on the request from the two other programs of the Project, on the work progress of the construction work, and on the assessment made by the IEC Team on the need for more information on specific issues. The awareness activities have been directly implemented by the motivator network, which installs a trained person in each of the commune units. The 12 sanitation trainers em-



Figure 3. School children washing hands

ployed directly by the Project have been working in different communes in a close cooperation with related stakeholders, informing the population and students regarding health and hygiene issues. These sanitation trainers monitor the hygiene situation in schooling health establishments, health stations, hotels, restaurants and other public places, including building of the City administration.

During the implementation of awareness activities, the IEC-P always maintains a continuous line of communication with local authorities, related sectors and mass organizations at the City and at grass-root levels. The IEC Team has also coordinated its activities related to hygiene and sanitation in Buon Ma Thuot City with those launched by the City People's Committees, the City Health Center, related sectors and different mass organizations. The successful implementation of the On-site Sanitation Program is convincing evidence of the good cooperation between the Project and its stakeholders. The IEC-P has been carrying out its different activities in the schooling establishments, including the support to the teachers in hygiene education, as well as building the awareness "link" between school hygiene education program and the construction of public school latrines. A close coordination with the City Education Department has been maintained all the time during the construction rounds of school-demo-latrine. The IEC-P has been also coordinating with the Education Sector in the regular supervision of hygiene situation in schooling establishments. Significant IEC materials targeted at schoolchildren have been produced, e.g. booklet about

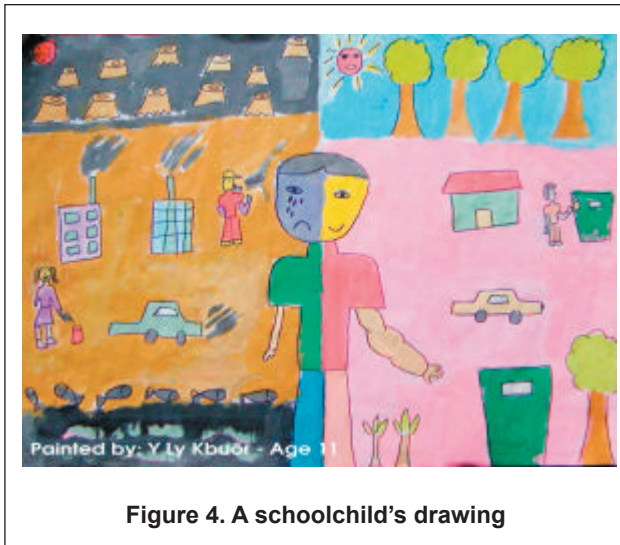


Figure 4. A schoolchild's drawing

worm diseases, cartoon on personal hygiene habits, manual about the use of school latrines, notebook with information about the Project, calendars with children's drawings... to highlight specific health awareness topics.

The local authorities at a grass-root level play a key role in the implementation of the IEC activities. Commune and unit leaders monitor the motivators in their respective units and also bring an essential support to the sanitation trainers. They participate in the final selection of poor households, which are beneficiary of the Private Demo-Latrine Construction Program. They are also involved in the supervision and the handover of low-cost latrines.

Conclusions and lessons learned

The on-site sanitation campaign has increased the communities' awareness of the necessity to improve the sanitary facilities, both for private households and in public places. Both public school latrines and private low-cost latrines have a very high demonstration impact.

Through the implementation of the Onsite Sanitation Construction Program under the Buon Ma Thuot Sanitation Project, we have learned the following lessons:

- Sufficient and clear information for the population about different solutions to acute problems related to sanitary facilities should be provided.
- An appropriate and affordable type of sanitary facilities should be introduced to the population.
- Close cooperation between the Project and stakeholders in implementation of the Program is essential.
- Participation of the beneficiaries to all the processes of the Program is a pre-condition to ensure its success.

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