

## Dry latrines in the Philippines: the case of Tingloy

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**Abstract.** This paper illustrates the implementation of a pilot dry latrine project in the Philippines in the light of the Household Centered Environmental Sanitation (HCES) approach. It entailed the construction of ecological sanitation toilets in Poblacion in the Municipality of Tingloy in the Philippines. The project encountered a number of problems which were the sum of circumstances in which a lot of organizations may find themselves. By analysing the implementation against the ten-steps of the HCES approach, the paper shows how next time a project like this can be done in a better and more appropriate way.

**Background and objectives.** Tingloy is a small island in the province of Batangas, about four hours' drive from Manila. It has 3227 households in 15 *barangays* (lowest administrative units). Poblacion, the capital, has three *barangays* which classify as urban; the other 12 are rural. Almost 95% of the land is used for agriculture. Farmers still use traditional cultivation methods and apply commercial fertilizers along with organic matter. The island does not host any provincial government body and is highly dependent on the mainland. It has few NGOs and the private sector is limited to small restaurants, grocery shops and small workshops. There are several primary schools and one high school. The municipal health office has one doctor and two sanitary inspectors and coordinates 107 health workers. For anything else, people have to travel to the mainland by private boat service (three trips/morning), hire boats or use their own transport.

Water from wells (deep and shallow) and springs is available year-round. *Brangay* officials construct wells and develop springs under supervision of Rural Sanitary Inspectors (RSI). In Poblacion the Local Water Utilities Administration provides piped water through metered house connections. For sanitation, pour flush toilets with a ceramic bowl are common. The Provincial Health Office distributed 300 squat-type pour flush devices among low-income families; 20% of these were not put in place. Some 40% of the households do not have a toilet, mainly due to costs. Families in the hinterlands defecate in the forest, those in the built-up areas store their excreta in pans and buckets and empty them into the sea or use the wrap and throw method.

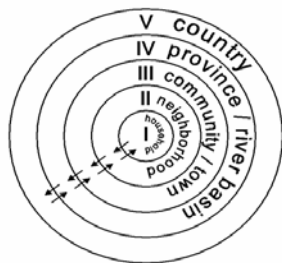
Up to the year 2001 the RSIs tested shallow wells and springs monthly on E-coli and bacteriological pollution. More than 50% of all shallow wells were polluted with E-coli. In the rainy season all had E-coli contamination. Deep wells were not polluted. If a well or spring was labeled positive, the RSI chlorinated the source with granules or educated the people on home disinfection using chlorine. Diarrheas and cholera are nevertheless not prevalent, probably due to the chlorination and people's immunity to infections from their own bacteria. During heavy rains some cholera cases are found.

The objectives of the pilot project were to introduce the ecological sanitation approach area and to demonstrate that it can be an attractive alternative by installing three pilot EcoSan toilets in three households, one in each *barangay* of Poblacion.

The Center for Advanced Philippine studies (CAPS) approached and contracted PCWS-ITNF to implement the project within the ongoing Integrated Sustainable Waste Management program. This program is funded by WASTE, a Dutch NGO advising on urban environment and development issues. The project activities were community organizing, training, design development and improvement, construction, information and reference material development, assessment of water and sanitation situation, monitoring and extraction of lessons learned.

**Household Centered Environmental Sanitation.** The Household Centered Environmental Sanitation approach is an evolution of lessons learned during the past decades, best practices and current thinking around environmental sanitation. It is based on the following principles:

- Problems are solved as near as possible to the point where they occur. This is done by creating a series of zones: single households, neighborhood, community, city, river basin catchments, country or some larger regional area (Fig 1) Problems are only exported to the next zone if they cannot be solved in the first zone, or if it is more cost-effective to deal with them on a larger scale, and if the receiving zone agrees. Stakeholders participate according to the way each zone is organized.



- Decisions are reached through consultation with all stakeholders affected by the decision, using methods selected by the particular zone such as voting, town hall meetings, and informal discussions.

Fig 1. The five zones of household-centered environmental sanitation

- Decisions and the responsibility for implementing them flow from the household to the community to the city and finally to the central government. Central government sets policies and regulations, delegating implementation down towards the households.
- Waste is considered a resource. Its management should be holistic and form part of a wider system of integrated water resources management, waste management and food production. (Schertenleib, 2001; Kalbermatten Associates, 2002)

The HCES approach consists of ten steps:

1. **Request for assistance.** Households themselves, or through representatives, request a municipality to assist in improving their environmental sanitation situation. They agree on the scope of work and identify a pilot area. There is a clear picture of who to involve in this (NGO, civil society, CBO or other social intermediary).
2. **Participatory planning.** All stakeholders, or their representatives, participate in a meeting or workshops. Together they develop a Memorandum of Understanding (including approval of HCES principles and the indicative wider process and timeframe) and decide which 'local champion' will organize and coordinate activities.
3. **Assessment of current status.** An interdisciplinary team involving the residents of the project area assesses the current status of environmental sanitation.

4. **Status report and priority discussion.** The outcome of the assessment is discussed and validated with households (men and women), community and other stakeholders.
5. **Identification of options.** Together the groups identify different activities and solutions and explore the implications and requirements.
6. **Evaluation of feasible service combinations.** A sequence of environmental sanitation service combinations is identified and evaluated on their feasibility.
7. **Preliminary planning.** An agreed HCES plan for the entire study area is developed.
8. **Interrelationships.** The relationship to other environmental sanitation activities within the municipalities is gone into, including their nature and areas of conflict.
9. **Monitoring, internal evaluation and feedback.** A strategy for monitoring, internal evaluation and feedback is developed. It includes a plan for collecting data, their critical analysis and use of the conclusions of the evaluation to improve the process.
10. **Implementation.** The plans are carried out, monitored and evaluated.

**Implementation of the project and relationships with the HCES model.** The project was implemented from July 2002 till March 2003. It had a budget of PhP 86,780 (US\$ 1,736). The project team consisted of a coordinator, a technical designer and a community developer. During the first phase (July–August 2002) the partner households and community representatives were insufficiently involved in planning, design and construction. Construction was not supervised carefully enough and too hasty as the ferrocement-technique and materials were locally unknown. As a result the three toilets could not be used as dry toilets. They had operation errors and were inconvenient to use. During this phase an eco-san training was conducted and information material developed.

During the second phase (September–October 2002), the community representatives were informed about scheduled activities and in-dept consultations were held with the selected households to find out per household what needed to be done to improve the facilities and adjust them so that they would classify as dry toilets. A new engineer joined and a new design was made. Two toilet facilities were converted into pour flush toilets with leaching pit and one family agreed to build a new eco-toilet. Local labor and materials were used for all (re)construction. During this phase reference material was developed.

The final phase (November 2002–March 2003) started with a monitoring/evaluation mission by CAPS and WASTE. PCWS-ITNF staff partly joined and the present water and sanitation situation was analyzed. It was found that the initially selected partner families were strategically not well chosen, the new design was still not optimal and the developed materials did not sufficiently reflect the local situation and practices. It was agreed to improve the design and after construction of one toilet PCWS-ITNF would pull out. A Terms of Reference guided the implementation during this phase. It defined the objectives, the responsibilities of the stakeholders and the approach, outputs and tasks. Although the design was improved and the stakeholders found it appropriate, it could not be constructed yet due to the pulling out of a family and difficulties in finding a new one.

The way the project was set up limited *a priori* the use of the HCES approach:

- The pilot project was created by PCWS-ITNF and CAPS for technology demonstration, not in response to sanitation demands. The area was chosen by staff and leaders only. It was not located where it would actually have made a difference. Two households lived near the forest and only one in the urban center. They had low

incomes and no sanitation facilities. EcoSan had the imago of being a solution for the 'poor' and for those living 'out there' in the forest. Because of this it was hard to find partner families.

- It was determined beforehand that PCWS-ITNF would be the 'champion'. No particular method was used for planning. During an initial site visit the project team met with the RSIs, health workers and some Barangay Captains. They explained the scope of the project and the background to EcoSan and decided when to start. The partner families and other stakeholders could not shape the project, were hardly involved in design/construction and did not really know what was going on.
- The chosen area and activities did not have a link with the present water and sanitation situation. This assessment was only done during phase 3 through a monitoring/evaluation mission of CAPS/WASTE and by interviewing the RSIs and collecting reference material that they used in the work.
- The priority discussion among partner families and other stakeholders was limited to where to implement EcoSan in the project area. The technology choice was always fixed. In phase 1 partner families had no say in the design and choice of materials. In phase 2 they could decide on reconstructing the built toilet or not and could select materials. In phase 3 the family was explicitly invited to give feedback on design and materials. No evaluation of the feasibility of EcoSan took place.
- Preparing an overall plan was left out, but it was anyway not applicable as the project did not entail the whole range of HCES aspects.
- The interviews in phase 3 gave an overview of organizations involved in sanitation, and their activities. However, this was only assessed. There were no linkages between the pilot project and other programs. The pilot was carried out in isolation.
- Monitoring and evaluation were not planned but did develop. The project team monitored the work implicitly. During training and household visits, PCWS-ITNF invited feedback from stakeholders and partner families on design, use, maintenance and process. The mission was another monitoring/evaluation point.

#### **Lessons learned and conclusions.**

- The *Tingloy EcoSan Pilot Project* mainly encountered problems because of lack of planning, preparation and assessment of the local situation.
- The problems cannot be ascribed to the common way of working and the capacities of PCWS-ITNF and CAPS but were a consequence of the novelty of the approach and related circumstances such as miscommunication, poor understanding of ecological sanitation concept, unexperienced project management, time pressure and so on. In practice, a lot of organizations would occasionally find themselves in situations like this
- The HCES approach is first of all a planning tool for integrating environmental sanitation activities and to develop sustainable service delivery. However, and as shown in this case, it can also be used as evaluation tool.
- Only by following a method or an approach from the beginning, a project can be properly evaluated.
- Using the HCES method and approach allows for planning of and preparing for a sanitation activity based on assessing the local situation and therefore is a way for achieving better project implementation.

## References

- Coad, A. (2000) *HCA – The Household-centered Approach, a new way to increase the sustainability of water and sanitation projects?* Report on the 16<sup>th</sup> AGUASAN Workshop (June 26-30, 2000)
- Kalbermatten Associates Inc. (2002) *Implementing the Bellagio principles: provisional guideline for decision-makers*. Draft outline, July 2002.
- Kalbermatten, J.M., Middleton, R., Schertenleib, R. *Household-centered Environmental Sanitation*. WSSCC website.
- Schertenleib, R. (2001) *Principles and Implications of Household Centered Approach in Environmental Sanitation*. Internet Dialogue on Ecological Sanitation (15 Nov. – 20 Dec. 2001).
- Simpson-Hébert, M. and Wood, S., eds. (1998) *Sanitation Promotion*. Geneva, World Health Organization/Water Supply and Sanitation Collaborative Council (Working Group on Promotion of Sanitation) (unpublished document WHO/EOS/98.5).