



## **Water and Sanitation Program**

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

# **Myth vs. Reality**

In Sanitation and Hygiene Promotion

Water and Sanitation Program  
for East Asia and the Pacific

## **Field Note**

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Photographs by WSP-EAP.

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## MYTH VS. REALITY IN SANITATION AND HYGIENE PROMOTION

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Sanitation and hygiene behaviour are not predictable like pipes and pumps. They have earned themselves the reputation of being the slow-moving and difficult components of water and sanitation programs.



A participatory evaluation activity

They are known to be essential for health impact, yet no one seems to have fail-proof formulas to make them work.

A number of myths have germinated and grown into the gaps that exist in sector knowledge about how to do sanitation and hygiene programs right. Myths probably born of failures to see things from a perspective other than our own. Looking through the eyes of poor rural communities, some insights emerge as self-evident.

This Field Note presents some ground realities to challenge the myths. These were encountered during participatory research carried out during 1997-1999 by WSP-EAP in 40 communities served by five large-scale rural water supply and sanitation projects<sup>1</sup> in Indonesia.

### Footnote 1

NTB Environmental Sanitation and Water Supply (ESWS) Project supported by AusAID, UNICEF Indonesia's Water and Environmental Sanitation Program, Water Supply and Sanitation for Low Income Communities (WSSLIC) project financed by the World Bank, Flores Water Supply and Sanitation project (FLOWS) supported by AusAID, RWS project financed by the Asian Development Bank.

## **MYTH# 1**

### **"Demand-Responsive Approaches (DRA) work for water, but not for sanitation"**

Personnel from sector agencies have often voiced such opinions when introduced to the concepts of DRA. There is concern born of past experience that attempts to use DRA in sanitation projects may delay implementation forever because demand for sanitation facilities is hard to come by in poor rural communities habituated to defecation in the open.

Recent participatory research experience in five provinces suggests that this may well be fallacy. Demand-responsive approaches are even more crucial to the success of sanitation interventions than to water supply.

Water being a basic necessity, project-created water supply facilities are generally used by the client community, whether or not they were established in a demand-responsive manner. That they may not be properly operated or maintained by them is another matter, though. On the other hand sanitation interventions are not even used, leave alone maintained, when they are built without reference to community demand.

Innumerable broken-up, abandoned, incompletely built, unused toilets strewn across the country testify to the fact. At the same time, researchers found communities where almost every household owns, uses and maintains sanitary toilets; few of which were built with project assistance.

Clearly there are conditions under which demand for sanitation exists or can be generated. Not enough is known about why and where. Some examples of possible influencing factors are reported below.



The difference a house connection of piped water makes to latrine use and maintenance



This villages had public dug wells for water facilities

### **Choice of technology**

The AusAID-supported Environmental Sanitation and Water Supply (ESWS) project evaluation in West Nusa Tenggara found that 95-100 per cent of toilets in one group of villages was being used, kept clean and in good condition. Another group of villages in the same region had toilets without protecting walls and damaged by roaming cattle, in disrepair, abandoned and only 10-36 per cent of those constructed were in use. The villages were alike in all ways except one. The first group had piped water supply. The second group had public dug wells. Toilets in both cases were the single-pit, pour-flush type.

Project authorities had decided water supply and sanitation technologies for both sets of villages unilaterally. Cheaply available house connections of piped water in the first set of villages had catalysed demand for household (pour-flush) toilets. In the second set, water had to be carried for flushing from public wells to household toilets, a potent disincentive to building or using one. The same trend was found in UNICEF - assisted project areas, where people in villages not well served with water supply systems had refrained from building toilets although they had received toilet pans, pipe and cement from the project four years ago.

### Location of the community

Participatory Learning and Action (PLA)<sup>2</sup> assessments in North Sulawesi found demand for household sanitation facilities varying with the location of villages. Among communities alike in other ways, demand was lowest in beachfront communities. Defecation is traditionally a nightly or pre-dawn beach activity with faeces being conveniently washed away by the morning tide. Demand was highest in communities far from a river or the sea, provided water supply facilities delivered water at or close to homes, as the only sanitation option offered was water-intensive.

### Local preferences for materials

Villagers in Sumbawa reported problems in expanding their sanitation coverage, as the polypropylene squat plates provided by the ESWS project were no longer available after the project closed. In Lombok and West Java, however, two villages with piped water and household connections were found to have constructed several times as many toilets as originally provided by AusAID or UNICEF assistance, using their own funds. Many have chosen to use more expensive ceramic toilet pans instead of the cheap, plastic ones still available. Women say they find them easiest to keep clean.

### Myth# 2

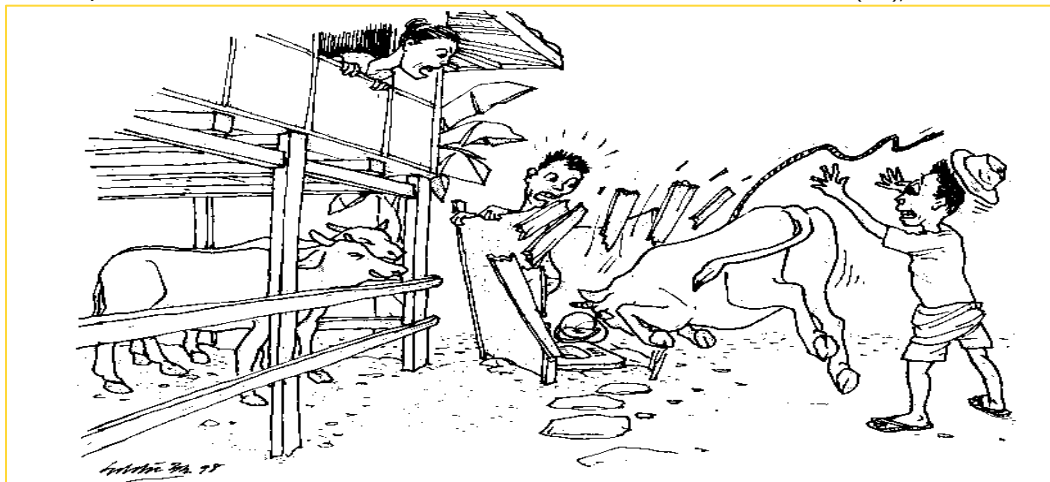
**"Contribution for construction = Willingness to pay = Demand for sanitation"**

Initial payments by potential users of water and sanitation services were not found to be true indicators of demand in two large-scale RWSS projects in Indonesia.

In both cases the project authorities offered community members little or no choice in the type and level of services to be created.

### Footnote 2

Participatory Learning and Action Initiative. A global effort launched in 1998 to explore links between Sustainability of services and Gender and Poverty-sensitive, Demand-responsive approaches. Collaboration between the global Water and Sanitation Program and the International Center for Water and Sanitation (IRC), Netherlands.



**What then, might be an indicator of demand for sanitation?**

The popular, currently used definition of demand, i.e., 'willingness to pay', based on 'informed choice' seems inadequate for sanitation, which is not a physical commodity but is actually a complex of knowledge and beliefs and behaviours connected with water and sanitation facilities. Assessment of real demand for sanitation requires measuring more than the willingness to pay or build sanitation facilities. Demand for sanitation might be more appropriately defined as the desire to change behaviour, backed by willingness to pay for that change, whereby payment covers the sum of cash, kind, effort and time invested in making and sustaining changes in habits .

User contributions for construction were mandatory, but not decided in consultation with the majority of users. The village chief, a member of the village elite, decided locations for facilities, management committee members, persons to be trained, amounts and modes of community financing, with project functionaries.

Households were chosen by the village chief to receive project-provided "sanitation stimulant packages" (toilet pan, a length of pipe, some cement), based not on the household's interest but on the village chief's perception of who was appropriate or eligible. In order to achieve prescribed targets, project functionaries at times forced stimulant packages upon certain households that the village chief thought could afford a toilet. The average user household consequently perceived its contribution to be a kind of tax to be paid rather than its own investment.

A further coercive influence complicated the issue on the island of Lombok. In Indonesia the government organizes and facilitates trips to Mecca for the thousands of people making the Haj pilgrimage every year. The West Lombok District Administration has decreed that a household must first construct its own sanitary toilet before any of its member can be eligible to make a Haj pilgrimage.



One irate farmer in West Java remarked All except 8 families in the village have now got their own latrines, thanks to the sanitation project. I now have to pay people to come and defecate in my fish pond!

Evidently, initial contributions by households for sanitation can mean many things other than "willingness-to pay" and could be highly misleading as an indicator of sanitation demand.



The helicopter toilet on the river

Contribution without choice and voice in decisions does not represent consumer demand and does not foster ownership. This could be a possible explanation why the global synthesis of PLA assessments found high initial payments in cash and/or kind to be negatively related to the sustaining of water and sanitation services.

**MYTH# 3**

**"Sanitation coverage = Access and use = Health impact"**

Does the construction of household toilets mean that its members no longer defecate in the open?

The answer was resoundingly negative for up to 60-70 per cent of households consulted using focus group discussions and pocket voting in 38 villages.

Household toilets are used, but conditionally. They are used at night, when it is raining, when water is available for flushing (for pour-flush ones), by the old and the sick who stay at home, and mostly by women, as they value its privacy.

The overwhelming majority of those who have a sanitary toilet at home do not stop defecating in paddy fields, forests, rivers and irrigation canals. Crop fields and forests are usually far from homes. People go there early in the morning to begin the day's work. When someone needs to defecate, it is just not practical to trudge back home for the purpose.

Moreover, cultural factors intervene. In West Nusa Tenggara people consider it “cleaner and healthier” to defecate in running water. The water carries the dirt away. Also, flies can’t get to it. “Helicopter” toilets suspended over rivers, fishponds and paddy fields are popular as supports to small-scale fish-farming in many parts of Indonesia. Balinese communities that have transmigrated and settled in Lampung, Sumatera reported using the night soil along with organic garbage to feed their pigs. They fence off low-lying areas at a distance from homes with vegetation and locate their traditional latrines to discharge night soil into those areas accessed only by pigs. They did not tell project functionaries that this was the reason they were reluctant to change to sanitary pit latrines promoted by the project. The design was not open to discussion.

Thus, sanitation coverage rates may have nothing to do with keeping excreta from polluting the environment or producing discernible community health impact. This is probably why educational campaigns about “sanitary toilets for better health” rarely convince villagers.

In the 38 communities visited, owners of sanitary toilets frequently acknowledge benefits such as privacy, convenience and prestige. Health was mentioned by only 30 per cent of those consulted. They reported that project personnel did not, however, use any arguments other than health benefits to promote sanitation. Nor did they try to find out what kind of sites/facilities people prefer for defecation and why. The facilities they promoted often went against local beliefs about “clean” and “healthy”. At times even the technology promoted was locally inappropriate, leading to smelly, flooded toilets which earned their owners much social displeasure and headaches. Why would anyone want to buy such problems? More so, when there was always the sea or the river next door?

#### MYTH# 4

“Hygiene education will change hygiene behaviour”

The futility of using educational approaches (inherent in the term ‘hygiene education’) to change behaviour was vividly illustrated in the evaluations of the UNICEF and ESWS projects.

Participatory exploration of hygiene awareness in 30 communities showed a high level of awareness coupled with somewhat contradictory hygiene behaviour.



River favourite place for washing, bathing, defecation

Focus group discussions in almost all villages identified defecation in the river as the starting point for disease transmission. Yet, the river continues to be a favourite site for defecation. Defecation in a toilet was identified as a way to block disease transmission in 10 villages from the ESWS project. Yet, in some of them less than 10 per cent of the households had toilets and the highest coverage rate was only 48 per cent of households. Although all 20 communities visited in UNICEF project areas identified open defecation as the root of disease transmission, only 6 of them identified sanitary toilets as a means to prevent it. In one village the sanitary toilet was considered a health hazard as it was thought to pollute the river.

Hand washing before eating and feeding and boiling drinking water were universally identified as good preventive practices. But hand washing with soap was rarely mentioned and drinking water was not being consistently boiled in practice.

A PHAST<sup>3</sup> tool was used to map people's perceptions of how contamination travels to the mouth. It allowed the creation of pictorial flow diagrams by groups of men and women. The diagrams produced by focus groups in 30 communities showed considerable confusion about cause-effect relationships between steps in the process. People knew what was supposed to be good or bad for health without being quite clear why it was so.

People in different villages recalled hygiene education messages in exactly the same Bahasa Indonesia words, indicating their exposure to standard messages from educational materials and extension workers. Messages had been delivered through one-way channels. There had not been any discussion of the rationale behind the messages and their relevance to local practices. Awareness did not necessarily translate itself into understanding, conviction and practice.

Particularly when the suggested new behaviour went against long-standing and traditional habits, people either ignored the messages or adapted them in unpredictable ways. In the villages visited in South Sulawesi and East Nusa Tenggara people were found to be boiling drinking water and then mixing it with unboiled water before drinking, to "cool it for drinking" or "to replenish some of the taste lost by boiling!"



PHAST tool in use

**Footnote 3**

*Participatory Hygiene and Sanitation Transformation (PHAST). A set of tools for participatory analysis, planning, monitoring and evaluation designed specifically for water and sanitation programs. Developed jointly by WHO and UNDP-World Bank Water and Sanitation Program (presently the Water and Sanitation Program).*



## MYTH# 5

**“Water supply and sanitation services should be planned and delivered together as a package”**

Although such a strategy may seem to offer time and cost savings in service delivery, in reality it often ends up damaging the sanitation component of the program.

Unless people already have established water systems, demand for water supply services exists in all communities. The demand is quickly expressed, easily measured and community investments are possible to mobilize within relatively short periods. Sanitation demand takes much longer to emerge and get expressed. Unless proper social intermediation methods are used, sanitation demand may not even emerge. Whereas water supply investments are required at one point in time within the project cycle, investments in sanitation services can, and should be spread over many months or even years, often going beyond project life. Packaging the two together can lead to an implementation environment that is detrimental to the sanitation component.

The ESWS project gave its community facilitators a target of one year within which to complete the process of construction of water and sanitation facilities in a community and then move on to working in another.

They concentrated on fulfilling construction targets by working with the village leaders who were powerful members of the community and could get projects implemented fast. This happened at the cost of wider community consultation, information dissemination and community mobilization activities. By the end of the year the required number of dug wells, public taps and hydrants and household toilets had been built. Many toilets remained without protective enclosures above the ground, indicating the real extent of their use.



Construction target fulfilled - but evidently not in use

While people did want the water facilities and the whole community paid for their construction as well as use, the sanitation component was limited to the selected households assigned “stimulant packages”, who were obliged to build toilets using the package.

People who received them did not receive sufficient explanations or training in construction. They thought the water-seal was “dirty water” collecting in the latrine pan and cut it off, with the result that the toilets later were a source of bad odour and their owners sealed them.

Demand did not surface in villages served with dug wells and a large proportion of project-assisted toilets is now in disrepair. No other sanitation or hygiene related improvements happened in those communities, although some communities which were able to expand their piped water systems later expanded sanitation coverage along with house connections of piped water.

In several UNICEF-assisted villages, toilets built 6-7 years ago were found to be usable no longer. People said that the pit was full and the toilet had to be sealed up. To speed up construction targets the



Community self-analysis of hygiene behaviour and consequences-more effective basis for behaviour-change interventions

implementing agency had pushed only the single-pit option and sometimes connected several household toilets to a single pit. They had not discussed with the households how to sustain the use of the toilet, once the pit was full. The more sustainable twin-pit version<sup>4</sup> was not promoted as it cost more, needed more explanatory dialogues with potential user communities and hence more time to promote.

14 communities from different project areas were found to have reached more than 80 per cent coverage and regular use of household toilets by 1999. They had taken between 10 to 30 years to move from 0 to 80 per cent coverage.

**Footnote 4**

**The double-pit toilet** can be used one pit at a time while the other pit contents gradually turn to manure and can then be safely emptied. Thus if one pit is full, it is sealed and the toilet pan connected to the second pit without interrupting use of the toilet.

## Lessons Learned

- Demand-responsive approaches are indispensable to sanitation. Demand for sanitation can be influenced by an unpredictably wide array of situation-specific factors, which makes generalizations implausible. There seem to be no alternatives to community-by-community demand assessment before deciding supply interventions. Past experience of failures in sanitation programs were mostly due to a failure to invest resources and time in understanding existing local demand or the lack thereof.
- The goal of sanitation programs is to change behaviour. Yet, performance indicators and targets are still defined in terms of construction of facilities and contributions for construction. To make tangible progress towards the goal requires that a strong behavioural bias be built into the definitions of project objectives, project components, implementation mechanisms and performance monitoring indicators.
- As compared to water supply projects, sanitation projects need greatly different time frames, planning and implementing procedures and skill-mixes among implementing agency personnel. Present sector agencies are designed and equipped predominantly for delivering water supply services. Institutional appreciation of the special requirements of sanitation programs and institutional capacity to manage the non-technical aspects of sanitation are still very limited.
- Service delivery agencies need to adopt market-oriented approaches that are more conducive to promoting behavioural change. This implies first understanding the client community's existing sanitation and hygiene behaviour and motivations; using that understanding to develop a range of feasible options to improve current behaviour; marketing the different options with client communities; and setting up supply mechanisms to respond to choices made by different communities at a range of costs that they can afford.

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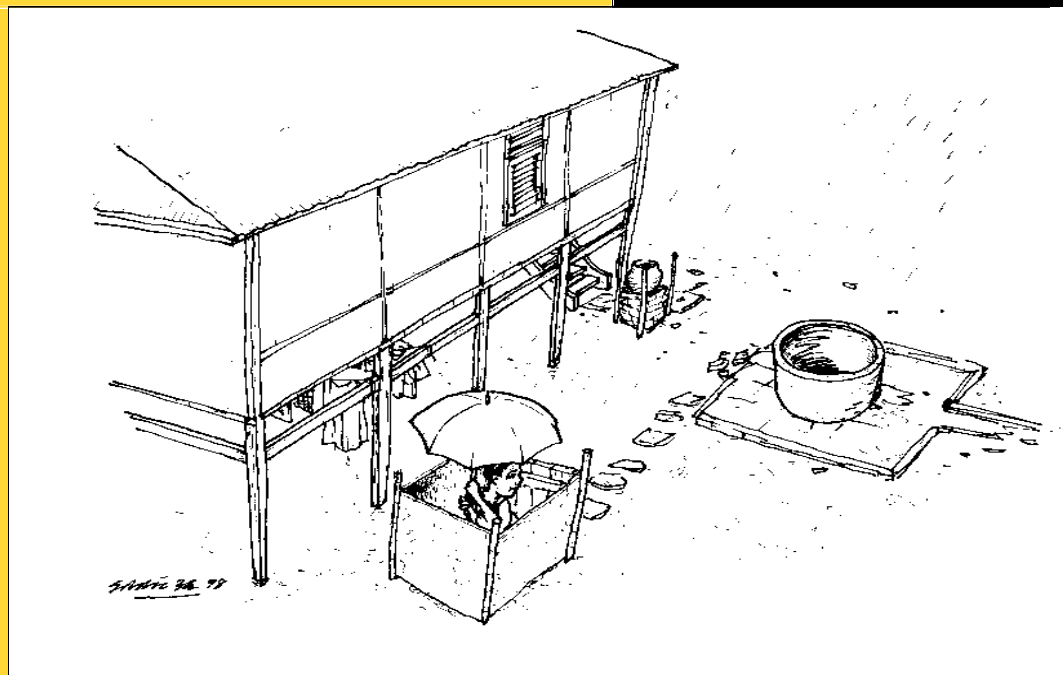
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