



**Water and
Sanitation
Program**

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

Achieving Sustained Sanitation For The Poor

Policy and Strategy Lessons from Participatory Assessments in
Cambodia, Indonesia, Vietnam



**Water and Sanitation
Program for East Asia
and the Pacific**

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Why a Multi-Country Study of Sanitation Experience?

Rural sanitation projects have, by and large, not enjoyed high levels of success in developing countries. Many lessons have been learned about what does not work, from the numerous broken down, unused or discarded “improved” latrines dotting the rural landscape and the still high mortality and morbidity from water and sanitation related diseases. There is little known documented evidence however, of what does work for rural sanitation, and why. What makes services sustainable and what leads to their effective use by all? This multi-country study therefore set out to find communities where sanitation interventions have been relatively more successful and learn from them what contributed to the success.

Policy formulation efforts are under way in Cambodia, Indonesia and Vietnam, in the sanitation and water supply sector. The aim was to feed into this effort by investigating how positive outcomes such as high sanitation coverage came about in the selected communities in each country and what influencing factors helped or hindered those outcomes. The consultations also explored to what extent community hygiene behaviors had changed towards more health protecting practices, and what actually sustains access of the poor to sanitation, over the long-term.



Villagers mapping who got access to new services: Sumbawa, Indonesia.

The findings point to a few trends and outcomes that seem to apply to sanitation programs regardless of the country situation. The findings also illustrate areas where country and culture specific factors can make major differences to outcomes. The lessons emerging provide insights as to how those factors could be managed to maximize desired outcomes and what might be the right incentives and disincentives to build into policies and strategies for sanitation in each country.

Sample and Methods

A total of 36 communities were consulted in Cambodia, Indonesia and Vietnam. In each country the common criterion for selection was “rural communities with unusually high sanitation coverage rates”, interpreted as a coverage rate of household latrines at least twice the national average. In addition, each country used certain criteria for diversification of the sample such as geographical spread and topography (hills, plains or coastal areas) and a range of project funding sources. In each community, field researchers used a specific sequence of techniques developed for the study, combining tools from the Methodology for Participatory Assessments

(MPA), Participatory Rural Appraisal (PRA) and Participatory Hygiene and Sanitation Transformation (PHAST). Field researchers were drawn from local NGOs and academic institutions. Local government personnel accompanied some teams as observers of the process. WSP-EAP professionals developed the methodology, trained study teams, accompanied parts of field work and guided data analysis.

Equal numbers of men and women, both poor and better-off, were consulted in the selected villages of Indonesia, Cambodia and Vietnam about why they had built their household latrines, how worthwhile their investment has been, what behavior changes they have or have not adopted and why.



Women's group in Cambodia assessing changes in the community's water use practices after project intervention.

Communities Participating in the Assessment

INDONESIA (2000)

No.	Communities	Province / Island	Last project intervention*
1	Lewoloba	NTT (Flores)	FLAWS (AusAID)
2	Mokantarak	NTT (Flores)	FLAWS (AusAID)
3	Sakuru	NTB (Sumbawa)	ESWS (AusAID)
4	Sesait	NTB (Lombok)	ESWS (AusAID)
5	Dukuh	West Java	WES (UNICEF)
6	Rambatan Wetan	West Java	WES (UNICEF)
7	Panyindangan Wetan	West Java	WES (UNICEF)
8	Piyanggang	Central Java	WSSLIC (World Bank)
9	Sawal	East Java	WSSLIC (World Bank)
10	Genting	Central Java	WSSLIC (World Bank)
11	Trimulyo Mataram	South Sumatra	RWSS (ADB)
12	Kepuhardjo	Central Java	NGO (Dian Desa)
13	Cibodas	West Java	CARE
14	Dersono	West Java	CARE

CAMBODIA (2001)

No.	Communities	Province	Project intervention from
1	Rang Krol	Battambang	SEILA (UNDP/CARERE)
2	Kuok Trop	Battambang	CASD (UNICEF)
3	O Nhor	Battambang	CASD (UNICEF)
4	Balang Krom	Battambang	CASD (UNICEF)
5	Kuok Khpos	Battambang	CASD (UNICEF)
6	Sam Rit	Kompong Speu	CASD (UNICEF)
7	Pech Sang Va	Kompong Speu	CASD (UNICEF)
8	Aun Dong Sla	Kompong Speu	CASD (UNICEF)
9	Praveuk Pong	Kompong Speu	WORLD VISION
10	Srer Chenda	Kompong Speu	WORLD VISION

VIETNAM (2001)

No.	Hamlet / District	Province	Project intervention from
1	# 1 / Hoa Lu	Ninh Binh	UNICEF
2	# 2 / Hoa lu	Ninh Binh	UNICEF
3	# 4 / Hoa Lu	Ninh Binh	UNICEF
4	# 5 / Hoa lu	Ninh Binh	UNICEF
5	# 8 / Hoa Lu	Ninh Binh	UNICEF
6	# 2 / Quang Xuong	Thanh Hoa	UNICEF
7	# 5 / Quang Xuong	Thanh Hoa	UNICEF
8	# 7 / Quang Xuong	Thanh Hoa	UNICEF
9	# 9 / Quang Xuong	Thanh Hoa	UNICEF
10	# 10 / Quang Xuong	Thanh Hoai	UNICEF
11	Ban Cai / Phu Luong	Thai Nguyen	CIDSE
12	Xom Ha / Phu Luong	Thai Nguyen	CIDSE

* - Sanitation interventions had been made in many of the Indonesian communities from more than one source during the course of the past 20 years. It was difficult to fully isolate the impact of the different projects. The study focused on the current sanitation situation which was most influenced by: a) the last project intervention and b) the communities' own initiatives after the last project.

1. WHAT “Coverage” Monitoring Does Not Reveal



Mapping ‘access’ instead of counting coverage.

The studies deliberately sought out communities where coverage rates were unusually high as compared to country averages. This meant Indonesian and Vietnamese communities where, on an average, more than 80 per cent of the households had their own latrines and Cambodian communities where more than 30 per cent did so. The type of latrine was not considered at the time of selection since such records were not available. National averages for population sanitation coverage in Cambodia, Indonesia and Vietnam at the time were estimated to be around

9 per cent, 54 per cent and 50 per cent respectively.

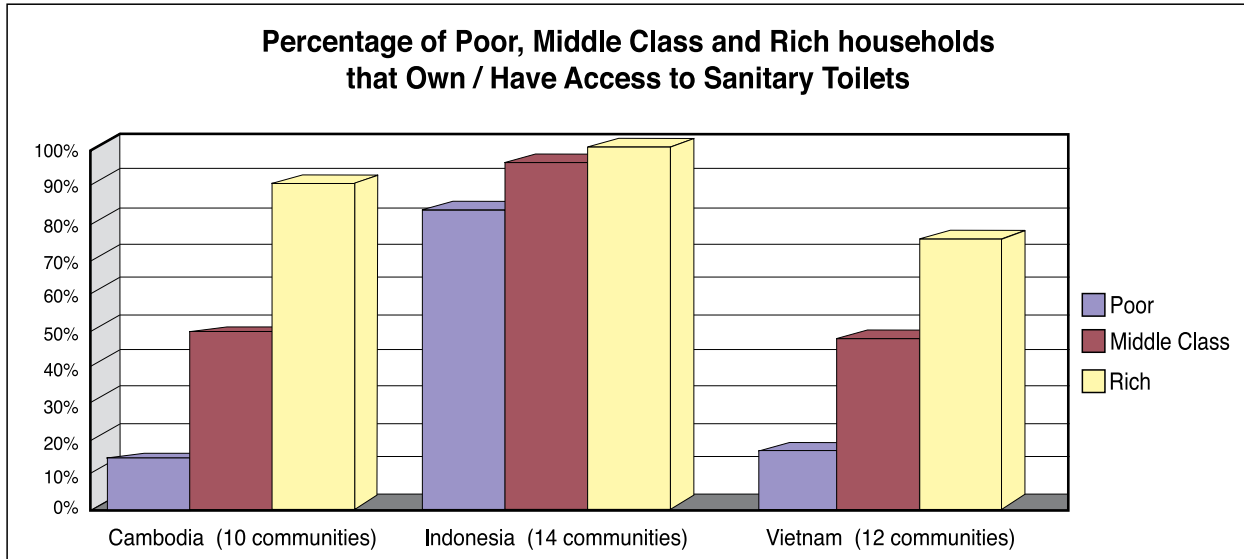
High ‘coverage rates’ have traditionally been used as a measure of success in sanitation programs. However, *participatory mapping* exercises that mapped the access of each household to latrines, their own or shared, quickly revealed the weaknesses of using ‘coverage rates’ as a means of monitoring progress. There were several trends that counting ‘coverage’ did not reveal, which have important bearings on the sustainability of services and community health impact, as explained below.

Are the Poor Gaining Access to Sanitation?

Although the communities had been selected on the basis of high coverage rates, substantial variations in access to latrines was found among different socio-economic

classes. (See Figures 1a and b and Table 1). Each community classified its households as “rich”, “poor” and “middle-income” using its own local criteria. The categories do not represent standard definitions and vary widely between communities. Their validity for this study lies in the fact that only the local people know who are really poor and who are not poor in their communities and why.

Figure 1a



NB : These communities do not represent the country’s average situation. They were selected on the basis of higher than - country - average sanitation coverage rates, in order to understand factors that led to the unusually high coverage rates, and draw policy lessons about the promotion of sanitation in each country.

Figure 1b

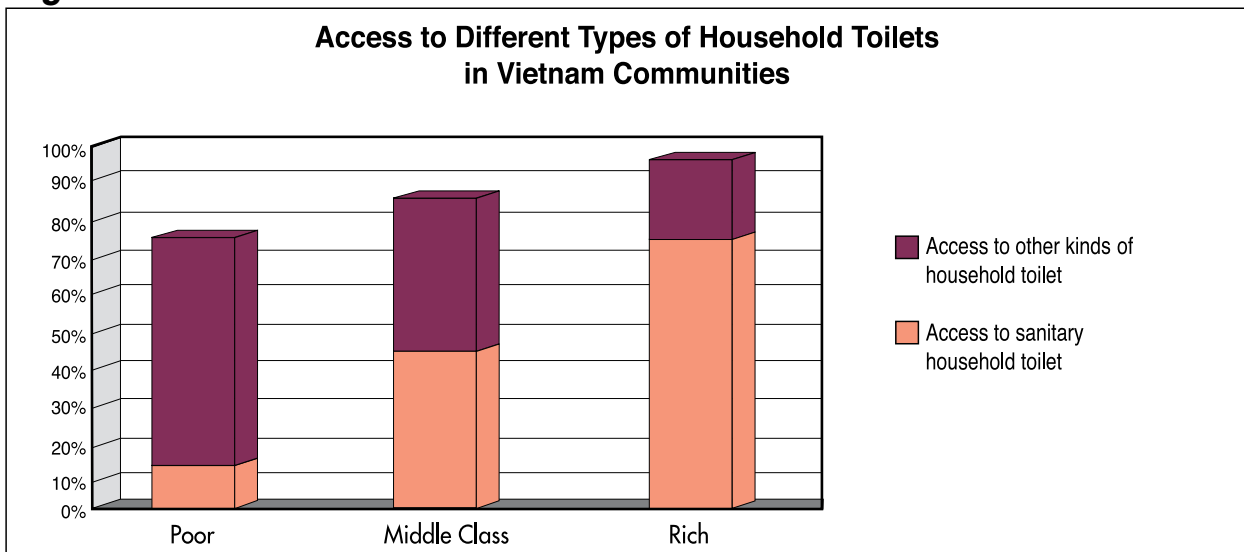


Table 1

<u>Access of the Poor, Middle-Income and Rich Households to Sanitary Household Toilets in the Study Communities*</u>				
		Poor HH	Middle-Income HH	Rich HH
CAMBODIA	% of Community households	54%	38%	8%
(10 communities)	Average % in each class having access & using sanitary toilets	13%	48%	86%
	Range of access across 10 study communities	3 – 26 % of poor hh	15 – 73 % of middle inc. hh	32 – 100 % of rich hh
INDONESIA	% of Community households	44%	45%	11%
(14 communities)	Average % in each class having access & using sanitary toilets	80%	93%	98%
	Range of access across 14 study communities	52 – 100 % of poor hh	77 – 100 % of middle inc. hh	85 – 100 % of rich hh
VIETNAM	% of Community households	19%	62%	19%
(12 communities)	Average % in each class having access & using sanitary toilets	12% (75% all types)**	44% (84% all types)**	73% (94% all types)**
	Range of access across 12 study communities	0 – 50 % of poor hh	10 - 90 % of middle inc. hh	48 – 100 % of rich hh

N.B.: * - Communities were purposively selected to represent the highest sanitation coverage levels currently found in rural areas, since available data are in terms of “coverage” ACCESS was then assessed with each community.
 ** - In 7 out of 12 communities in Vietnam 38 – 65% of all latrines were open pit / dug holes, not considered as sanitary toilets. Bracketed figures show access to all types of latrines, both sanitary and unsanitary. Elsewhere “access” means access to sanitary toilets, pour-flush, dry pit, single or double-vault types.

Coverage figures mask the public health implications of the question “Who and how many in the community have access to which type of latrines?” As the table above and Figures 1 a and b illustrate, poor households had extremely low rates of access to sanitary latrines in Vietnam and Cambodia (12-13%), which contrast sharply with the access rates of the middle (44 - 48%) and upper income classes (73 – 86%). The poor, incidentally, also constitute the majority of the population in the Cambodian communities. In Vietnam communities coverage was uniformly high for all social classes as almost everybody had access to some

kind of latrine. But a large proportion of those were unsanitary pits, meant mainly to collect and store excreta for use as manure. The poor particularly had far lower access to sanitary latrines than the non-poor classes. The Indonesian communities on the other hand showed high access rates across social classes for sanitary types of latrines. As explained later in the report, project interventions and market development for sanitation had a longer history in the Indonesian communities as compared to the other two countries. There is also no tradition of using human excreta for agriculture in Indonesia.

“Coverage” is assessed by counting the number of households that have latrines out of all households in the community. This does not mean the same as access and use. The study used participatory mapping to understand which households had access to and used sanitary latrines regularly, regardless of ownership. This revealed the proportion of constructed latrines that were actually functional. It also revealed that several poor households often jointly construct and use the same household latrine and many households tend to use their neighbors’ latrines on a regular basis. Sharing was most common among the poorest section of the community in Indonesia, and among the middle-income group in Vietnam.

The access of the poor to sanitation has a significant bearing on the community health impact from sanitation projects, since the poor often constitute the majority of populations in communities of the developing world. Using their own community – specific criteria, people classified an average 54 per cent of the total households as ‘poor’ in the 10 Cambodian communities. The ‘poor’ comprised 44 per cent of the Indonesian sample but only 19 per cent of the Vietnam sample.

The economic heterogeneity within communities, combined with differentials in latrines coverage rates achieved to date illustrate that single-product-based program approaches cannot expect to achieve the goals of universal access or desirable community health improvement. **Product and service delivery options have to be developed particularly for the poor. Methods then have to be institutionalized to identify and target interventions to the poor and monitor access rates of poor households within communities. Without the use of such options and methods, coverage rates could be quite misleading while the goals of access and community health impact may forever remain out of reach.**

Is There Really a Change in Behavior?

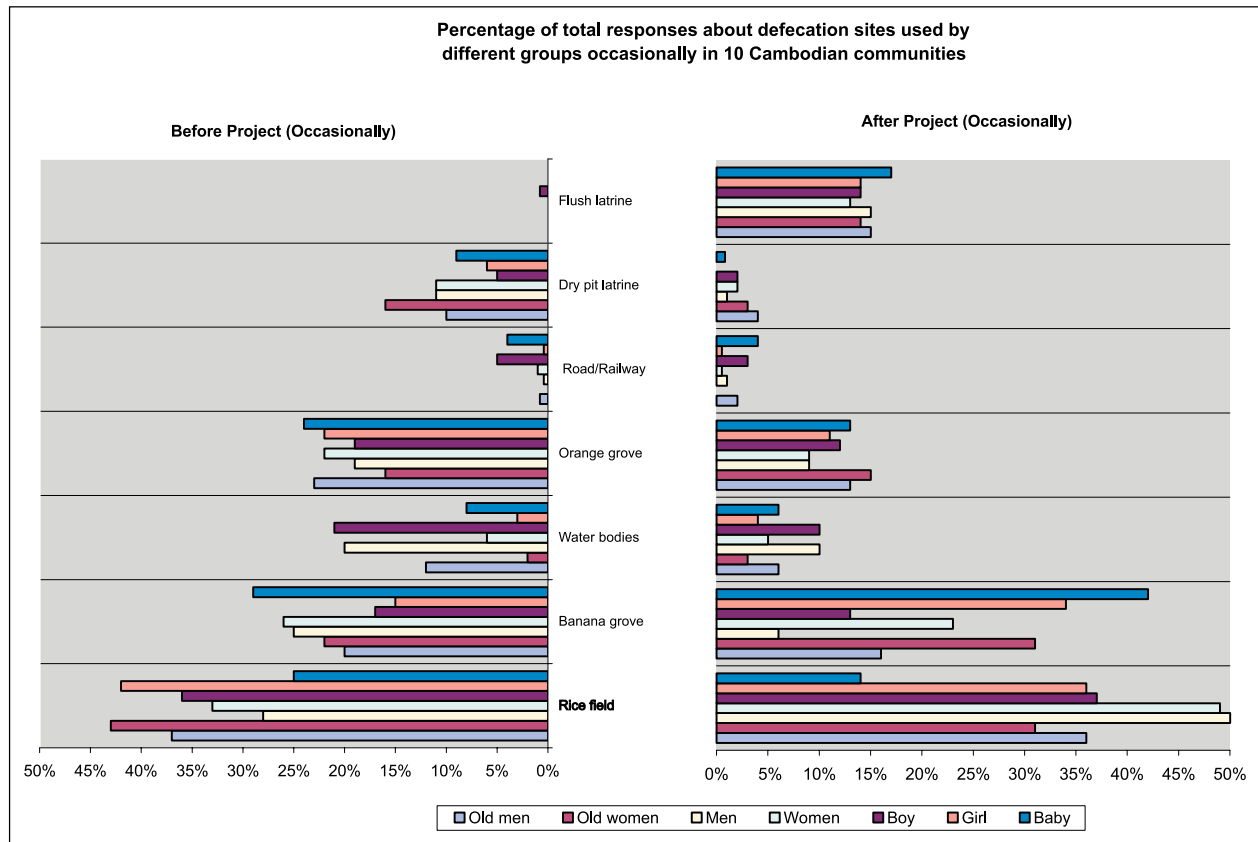
The study found evidence in all 3 countries that the ownership of a household latrine (i.e. coverage) does not imply a consistent change in the household’s sanitation behavior.

Pocket voting exercises were used to find out which defecation sites are used by different age-sex groups of people, both before and after a household latrine is acquired. Invariably, all groups were found to use several sites, both before and after getting their latrines. Figures 2 and 5 illustrate the typical situation using data from Cambodian communities. They show that a large proportion of people have started using sanitary latrines in preference to other sites regularly, but widespread “occasional use” of traditional sites such as rice fields and backyard banana groves still continues.

In general, actual access to and use of latrines tends to be lower than the coverage rate in communities where: a) traditional open air sites are within easy reach, e.g. beaches; b) where latrine usage requires water which is not available at the household level; c) where the latrine design does not match local lifestyles and livelihoods.

Households in Vietnam coastal areas reported some family members using latrines while others from the same household still preferred to go to the sand dunes. In Cambodia and Indonesia the improved household latrines were reportedly used more often by the female members of the family, specially by old women and girls. As shown in *Figure 2* from the study in Cambodia, and also true of Indonesia, both men and women of productive age tend to use rice fields and irrigation canals near fields even when they had household latrines, because they spent a large part of the day in the fields which were often far from homes. Those who stayed home, such as old women

Figure 2



Note: The patterns illustrated in the figure are more important than the actual percentages. The pattern shows a definite shift in community behavior from using dry pit latrines to flush latrines, and a reduction in the use of water bodies or orange groves as sites for occasional defecation. The large proportion of people using banana groves and rice fields for occasional defecation however remains almost unaffected by the introduction of improved latrines in the community.

and young girls also used the banana groves behind homes when water was unavailable for flushing or the latrine was occupied. Baby’s feces were thrown in the compost heap or in the banana grove occasionally, even when there was a household latrine. The perception that babies’ feces are harmless is widespread, although in truth they contain higher pathogen loads than adult feces.

The findings illustrate why a reliable assessment of community health impact from sanitation interventions must include a tracking of changes in community sanitation behavior¹.

To maximize the diagnostic power of behavioral assessments, research methods need to go beyond asking “Yes” or “No” questions and use tools that explore people’s rationale for change or lack thereof.

Footnote

¹ For this purpose counting latrines constructed is relatively futile. Review of health center records misses large proportions of diarrhoeal disease cases that are unreported. Household surveys using recall of disease incidence fail to provide diagnostic data that is essential to the design of corrective interventions.

What Happens to Latrines Once They Are Constructed?

The research teams used a common checklist to observe a randomly selected number of household latrines in both poor and better-off parts of communities in the three countries. A total of 140 latrines were observed in Indonesia, 95 in Cambodia and 110 in Vietnam.

Average use and maintenance scores for latrines observed in Cambodia and Indonesia (pour-flush type mostly) were between 72 – 83 per cent of a maximum of 100 per cent, indicating a fairly regular use and satisfactory maintenance in all the communities².

Some noteworthy variations found were:

- Latrines built without any project assistance, i.e. totally self financed, were better maintained and of higher quality as compared to project-provided ones. These were more likely to be the latrines of better-off households, and built as toilet-cum-bathing places.
- In 2 Cambodian communities where an NGO had provided a number of free latrines (not requiring any cost – sharing by households), one third of all the latrines observed were broken up and abandoned, just three years after construction.
- In Vietnam, where people prefer latrine designs which allow them to access night soil, a large number of project-provided pour-flush latrines were found to have been discarded or converted to dry-pit types. Average use and maintenance scores for latrines in Vietnam were lower at around 60 per cent due to the large number of vault latrines being maintained somewhat unhygienically in a way that allowed fresh excreta to be periodically removed as manure.



Users like to make a latrine cum bathing area, if they have a choice and water is available.

The lessons from this exercise seem to be that firstly, latrines that people pay to get are better used and maintained than what they get for free. Secondly, the more choice they have about what they pay for – the better they sustain it.

Footnote

- ² Each latrine observed was scored between 0 – 10 using a 10 – item dichotomous checklist. The checklist included 3 items on functionality, 3 items on technical quality, 4 items on hygienic quality of use and upkeep. Scores from all latrines observed in the village were averaged and converted to a percentage, taking the sum of maximum possible scores (10 per latrine) as 100%.

2. WHAT Influenced Demand for Household Latrines?

A review of factors stimulating or hindering demand for sanitation facilities in the 3 countries provides evidence why sanitation facilities need to be seen and managed as consumer goods, if the goals of universal access, effective use and community health improvement are to be realized.

What Helped Increase Demand for Household Latrines?

It was a revealing finding that a few common factors were instrumental across the 3 countries in influencing demand for household latrines (See Figures 3a and 3b). The most mentioned demand stimulating factors, in decreasing order of frequency of mention were:

- a) **Popular awareness of defecation in latrines as a “higher level of living / better way of life”** compared to defecation in the open. This awareness could have come about from promotional activities in the village or through exposure to the outside world through visitors and relatives/neighbors going to the cities to work.
- b) **Easy availability of sanitation materials and construction skills** from projects or markets, to meet the demand for household latrines.



Presence of a water jar and permanent enclosure – indications of a latrine in regular use in Cambodia.

- c) **Lack of access to traditional sites for defecation**, such as beaches, rivers or canals, forests or rice fields, due to increasing population pressure on natural resources, or simply because the households are located far from such sites, and hence no such alternatives are available.
- d) **Social status /prestige** reasons: The desire to appear modern and able, save face with guests, and get respect from neighbors is an important demand-generating factor.
- e) **Economic prosperity** leads to a desire for better housing and household facilities. Improved economic

status also often means greater access to water supply, which people consider a pre-requisite to getting sanitation facilities.

As Figure 3a clarifies, there are also country – specific factors that push up demand for household latrines. Availability of land within or around homes was an important factor in Indonesia where the study villages were larger and more crowded than elsewhere. In Vietnam a very strong demand – promoting influence was sanitation promotion by local governments and village development boards, which along with local medical authorities conducted community campaigns for cleaner villages and generated peer pressure on families to conform by building household toilets.

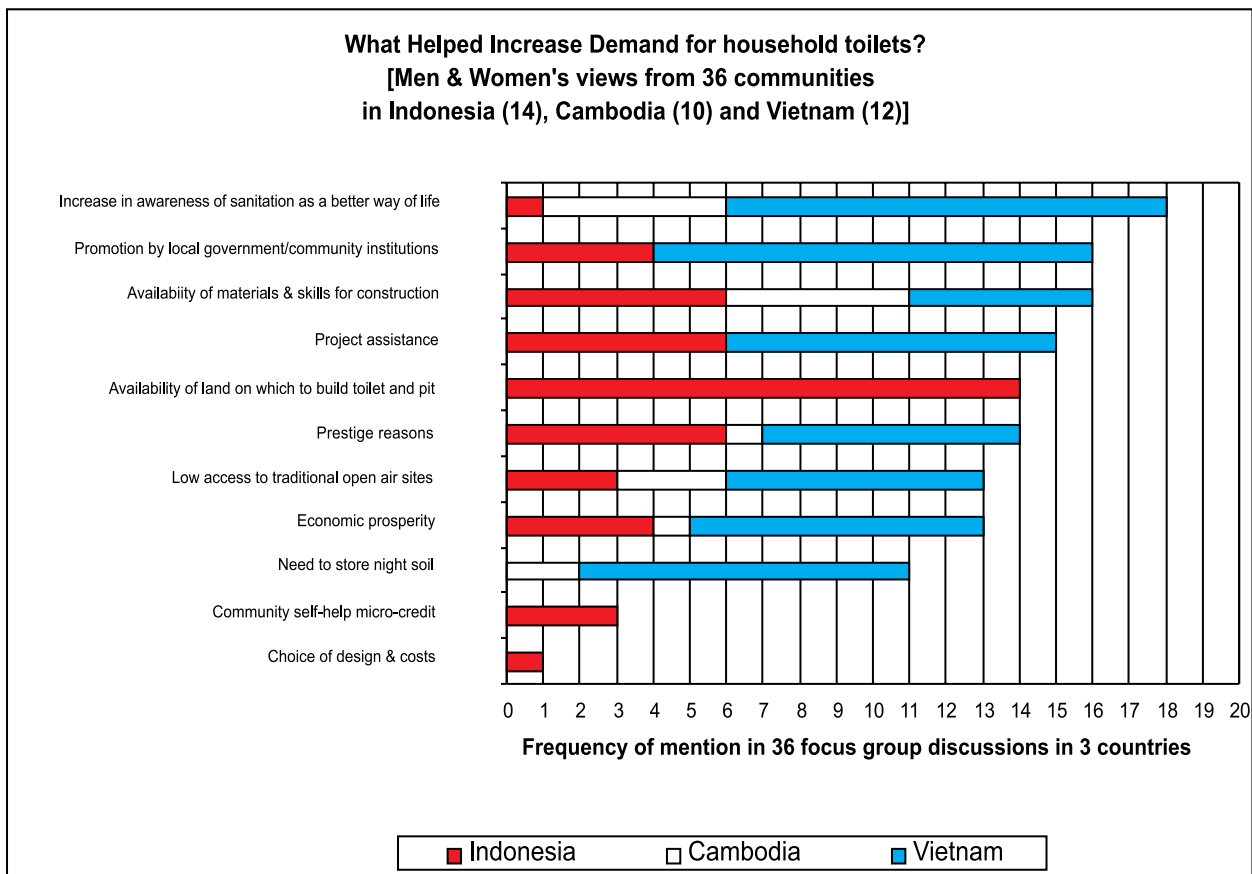
“Project assistance” was mentioned as a factor in Indonesia and Vietnam, but not in Cambodia. Interestingly,



Crowded villages may have demand for household latrines but no land to site them on.

in Cambodia the study communities had fewer supply options than elsewhere and got their latrines mainly through projects. Local sanitation promotion was also not mentioned as a demand-stimulating factor in Cambodia.

Figure 3a



The match between local practices related to disposal or use of human excreta and the sanitation technology or design being promoted makes major differences both to demand for sanitation, effective use of facilities and consequent community health impact. A good illustration of this is the “need to store night soil” being a potent stimulator of demand for household latrines in Vietnam and to a lesser extent in Cambodia. The night soil is used directly as fertilizer for local agriculture. This has led to the growth of unsanitary latrines, unsafe night soil handling practices and related health risks – as will be explained in Chapter 3.

What Hindered Demand for Household Latrines?

In most developing countries whenever sanitation projects are reviewed, two reasons are invariably cited as being responsible for low levels of success and slow progress of sanitation programs: (a) people’s preference for traditional practices of defecation in the open and (b) poor people’s lack of resources for investing in latrines. The study looked at the problem through the eyes of user communities and found some surprising insights to challenge such blanket assumptions. (Figure 3b).

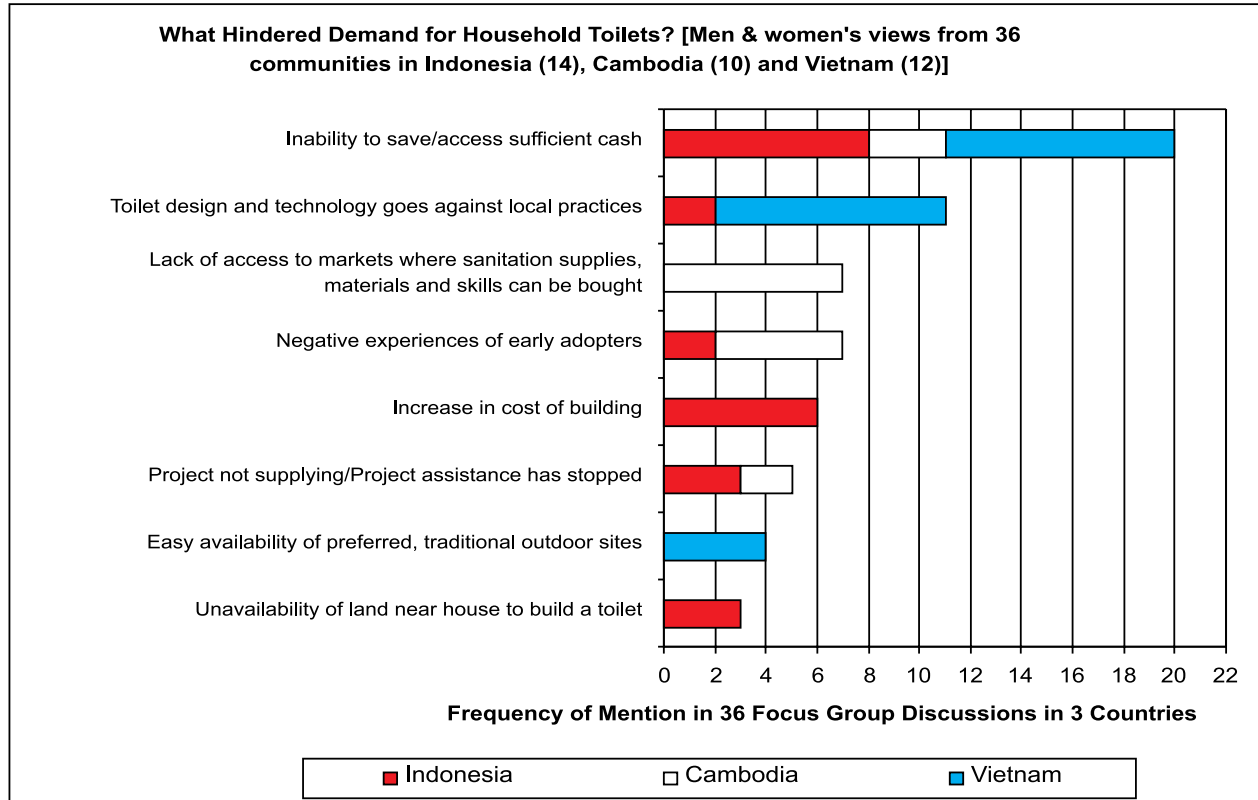
- **Preference for traditional practices of open-air defecation** was mentioned, as a factor that hindered demand, but only in 4 out of 36 communities in the 3 countries.
- **Lack of resources** was mentioned in 20 communities out of the 36 – but the problem was the **form** in which resources were required from the poor, rather than the absolute amount. Poor households everywhere reported being unable to save or access sufficient cash either to buy sanitation materials and skills from markets or pay their share of costs to sanitation projects that supply material assistance.

In Cambodia the rural laborer’s daily wage in 2001 is around 3000 Riels a day, which does not suffice for a family’s basic meals for one day. Such a family may never be in a position to pay the 30,000 – 40,000 Riels in cash which is the amount currently required as the user’s share of construction cost in sanitation projects. Figure 1 shows the consequent lag in access rates of the poor as compared to the middle-income and better-off classes.

Experience in many parts of the world show that the poor are better able to pay their share if allowed to do so in kind, for instance in the form of labor, construction materials or household produce. Where project rules allow, communities have been able to adjust payments rules for the poorest, by spreading them over several months or even several harvest seasons. Family groups in several Indonesian villages initiated community level savings and credit schemes to enable poor members to access cash.

- **Latrine designs and technology that interfered with local practices** for use of human excreta represented a major demand-inhibiting factor. When local practices of breeding pigs, fish-farming in ponds, fertilizing crop fields and home gardens are dependent on a regular supply of human excreta, latrine designs that prevent regular access to feces are clearly unacceptable.
- **Lack of supply options** for sanitation facilities was a potent inhibitor mentioned in Cambodia, where many study communities could acquire cement rings, latrine pans and slabs and construction

Figure 3b



know-how only through sanitation projects. Project authorities could supply a fixed number of material packages, regardless of the number of households requesting them. Sanitation projects also did not include interventions to build local supply capacity and encourage local enterprise. Lack of supply options was not a major issue in Vietnam and Indonesia where local masons and markets could provide both materials and skills if people were willing to buy them.

- **Negative experiences of early adopters of latrines** were mentioned in Cambodia and Indonesia as a factor that effectively dampened interests of friends and neighbors in the village, thus decimating future demand. This was blamed on the early adopters' lack of technical skills or lack of technical guidance from projects. When early adopters had their latrines collapsing into pits or pits being flooded and

making a stinking mess, it invariably scared many households away from the idea of latrines.

How Does Demand for Sanitation Evolve?

The three country situations represent somewhat different stages in the evolution of demand for household latrines. *Timeline* explorations with the communities showed the following trends.

In Indonesia rural communities have had sanitation promotion and project interventions since the 1970s. These were mostly simple direct pit or offset pit designs which did not achieve high popularity. In the late 1980s, with the introduction of flush toilets, consumer interest began to grow. Coupled with greater infrastructure development in the country, private sector enterprise also began to develop to respond to the emerging demand. Sanitation projects routinely

offered training in construction skills and sometimes also supported the marketing of those skills. Once supply options became more available, it became easier to promote sanitation facilities and mobilize community demand for sanitation .

In Vietnam promotional activities through village cooperatives had been initiated in the 1960s, but due to economic difficulties, unavailability of required skills and materials in the countryside, the war and the resulting disruption of community life, sanitation interventions did not pick up pace for a long time. By the beginning of the 1990s the economy began to thrive and sanitation programs were being aggressively promoted through village development boards and local governments. Projects offered technical guidance, latrine construction materials and even cash assistance. Where water supply became available close to homes, sanitation demand increased. However, the practice of offering only the pour-flush toilet design seemed to have inhibited the process somewhat, as it did not match local practices.

In the Cambodian communities, particularly those far from urban markets, the only way to currently acquire latrines is through project assistance. The private sector is not yet involved in rural service delivery. Projects are not yet making inputs for local enterprise or supply capacity building. There seems to be unmet demand in communities. During the study some communities expressed disappointment about *“the project not supplying as many latrines as we asked for”*.

A Process Model for Evolution of Demand

From the experience of the study communities a pattern seems to emerge about how demand for sanitation begins and progresses in rural areas of developing countries (see Figure 4).

Stage 1 EXPOSURE AND AWARENESS

Communities unfamiliar with sanitation facilities are usually first exposed to the idea of using latrines for defecation, by outsiders. They tend to defer making clear judgements and decisions until they receive greater endorsement of the idea from some insiders. Most people wait till a trusted and known person checks it out. Such persons could be the well-off, early adopters who can afford to risk some resources. It could also be relatives or neighbors who have seen and used latrines during their trips outside the village.

Stage 2 OVERCOMING LIMITING FACTORS

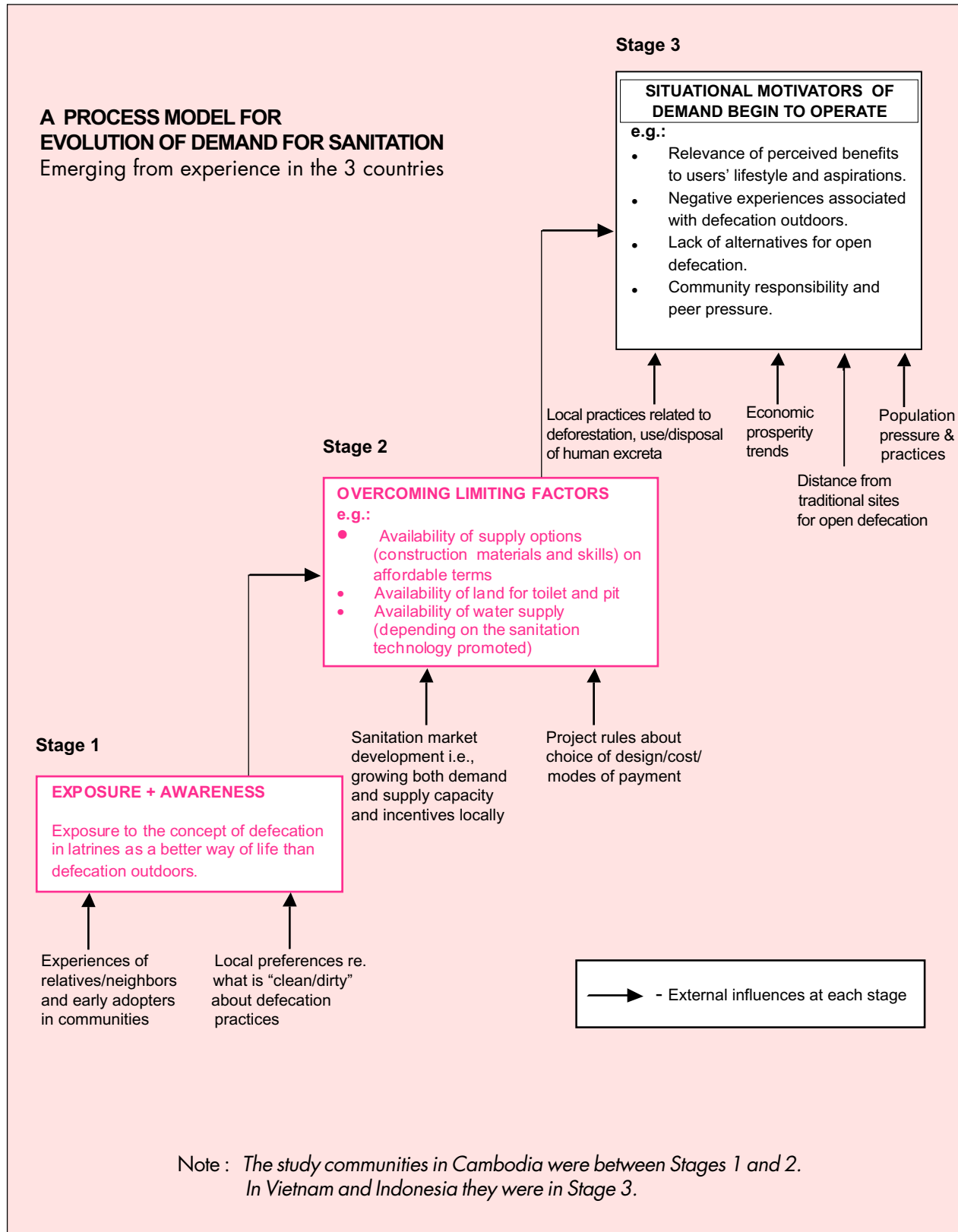
After people receive sufficient positive endorsement of the idea, they move on to the stage of considering how much of a change they are willing to make and what it will take to make the change. The process can stop at this stage if the limiting factors are too severe and no alternative solutions are possible e.g. lack of land and space to site latrines and pits in a crowded settlement. Inadequate water supply facilities or inflexible and unrealistic project rules could also become limiting factors.

For progress beyond Stage 2, the supply side of the equation should begin to develop. This can take various forms. Training of local masons to construct latrines and produce latrine parts is an example. Encouragement to local enterprise for service delivery by procuring initial supply orders or facilitating transportation for marketing their production are others. Stage 2 is where sanitation projects can make the greatest difference to the sustainability of outcomes, provided they strive for a self-sustaining sanitation market for all population segments, rather than just constructing a finite number of facilities.

Stage 3 SITUATIONAL MOTIVATORS OF DEMAND BEGIN TO OPERATE

When the limiting factors have been overcome, household demand is relatively free to grow. The pace at which it will grow is influenced by local practices and experiences related to open defecation and use of human excreta. It is also influenced by wider economic

Figure 4



and environmental conditions. If Stages 1 and 2 have been executed with appropriate support to market development, Stage 3 should see market forces picking up and managing situational motivators and inhibitors of demand and supply sustainably.

Conclusions emerging from the findings about demand point to several policy and strategy recommendations:

- a) **Sanitation projects should focus on long term sustainability by stimulating both demand and developing local supply capacity to respond to demand.**
- b) **Sanitation projects should offer a range of options**

and information about those options to potential customers, to help them make informed choices in terms of technology, design of facilities, cost and modes of payment.

- c) **Projects should subsidize technical assistance, awareness promotion and local enterprise development, rather than subsidizing construction.**
- d) **As with the introduction of any new product or services, sanitation projects should ensure that early adopters' experiences are positive – by paying sufficient attention to the technical and social suitability of sanitation services to communities.**



Village artisans trained by sanitation projects producing supplies for the local sanitation market: Indonesia.

3. Sanitation Behavior Change – Much More Than a Matter of Time



In view of the goal of desirable community health impact, desirable change in community sanitation behavior is defined for this study as “a large enough majority (75 per cent and above) adopting consistent use of sanitary latrines for disposal of human excreta”. The 3 country situations revealed varied reasons why this is still a goal not achieved.

Demand for Latrines Does Not Necessarily Mean Desirable Change in Sanitation Behavior

People acquire household latrines, but then do not consistently use only latrines for defecation. Also, they

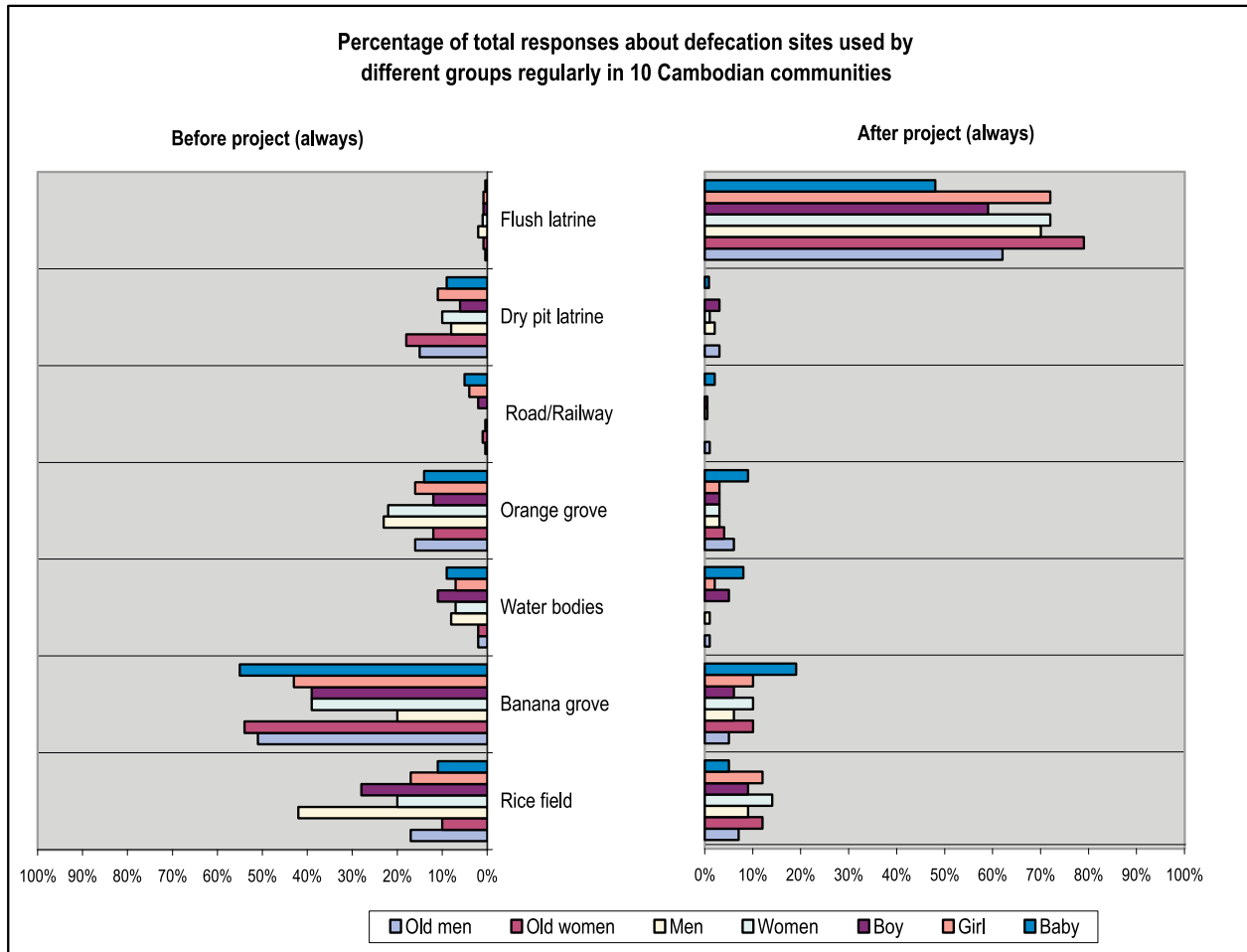
acquire latrines for a wide variety of reasons, not necessarily due to health awareness. Why they change behavior is another matter altogether, and one that continues to generate volumes of research globally.

Sanitation projects have to differentiate between the twin challenges, namely, a) demand generation along with supply capacity, and b) bringing about sustained improvements in community sanitation behavior. Both challenges must be managed.

Large scale behavior change had not yet happened in the study communities in Vietnam where sanitary latrine usage is still low, and in Cambodia where overall sanitation coverage rates are still below 30 per cent. *Figures 2 and 5* illustrate that there is widespread use of rice fields, banana groves behind homes and orange groves/plantations for regular defecation by those having no access to latrines, and for “occasional defecation” and disposal of babies’ feces, even by households that have access to sanitary latrines.

Access rates in the Indonesian and Vietnamese communities were higher than 80 per cent. Yet, in Indonesia the condition of consistent use of latrines was not satisfied. *Pocket voting exercises* revealed that people used their sanitary

Figure 5



household latrines when at home, at night, during rains and when water was available at or just outside the latrine. The distance of forests and crop fields from homes contributed to people continuing to use rivers, irrigation canals, forests and crop fields for defecation. In these situations sanitation behavior is determined by the proximity and convenience of the site and availability of water - because most people have not made a conscious decision to stop open defecation, although they have gotten themselves latrines at home.

On the other hand, inconsistent use of latrines is not a real problem in Vietnam. It is the large proportion of household latrines that are not sanitary and less than

sanitary usage of latrines by people. The popular practice of using night soil as an agricultural fertilizer has led to latrines being seen primarily as the means to collect and store excreta rather than dispose of it. In 10 out of the 12 communities studied, 15 – 65 per cent of the latrines were unsanitary, open-pit dug holes. Most single and double vault latrines (designed as sanitary latrines) were not being used as intended and failed to meet the criteria of cleanliness, dryness and tightness of lid closure. Some had no covers, had no urine separation and were full of flies and unpleasant smell. In violation of the original sanitary design, both compartments of the double vaults were often used simultaneously, the separating wall between vaults was often deliberately demolished and toilet

covers were removed to make night soil collection easier. The research team also observed night soil being handled in an unsafe manner, posing health hazards for all.

These findings illustrate why sanitation behavior change objectives have to be area – specific, based on existing community behaviors related to use or disposal of human excreta. Sustainable improvements in sanitation behaviors can only come about when people make a conscious decision to adopt a new practice consistently, for whatever motivations that are relevant to them.

This is easier to do when the proposed new behaviors accommodate existing livelihood– related practices, or at least when alternative solutions are available for traditional practices that are required to be abandoned. One way to arrive at the most workable solution is to offer several latrine design options coupled with behavioral options that allow local practices to be continued with greater safety. This requires a high level of creativity and hygiene awareness on the part of behavior–change agents (community health workers, extension communicators, school teachers) so that key behavior changes are locally decided with user communities in order to block the routes of disease transmission operating locally.

Time Frames for Behavior Change

In the three country situations the pace of change in sanitation behavior was related to:

a) the availability of design and cost options to suit local lifestyles, affordability and the water supply situation; b) availability of supply options for sanitation materials and skills for construction. Promotional efforts were important too. They were present in all 3 countries but it was not possible to isolate their effects on the pace of change.

In all 3 countries the community’s first exposure to latrines was reported 30 – 35 years ago, in the 1960s. The very first toilets were built as traditional pit latrines or single vault latrines, by a few of the wealthier community members or health department staff (in Vietnam) who were expected to set good examples for their communities to follow. During the 1970s and 1980s there was no great change in the demand for community sanitation services. In the 1990s the promotion of the pour-flush type of toilets seems to have provided an impetus for change in all 3 countries, because they came with the promise of



Beachfront communities generally have low demand or satisfaction facilities. Beaches and sand dunes are traditionally preferred sites for open air defecation.

the absence of bad smell even if built next to one's home, and were usually accompanied with incentives such as training for construction and latrines parts, and in Cambodia and Vietnam even cash assistance.

Promotion of a single type of toilet, the pour-flush single or double-pit design, was found to be a common feature of sanitation promotion through development projects in the 1990s in all three countries. This had consequences for the pace of growth of coverage and demand.

- The pour-flush water seal toilet is a higher-cost sanitation facility than dry pit latrines. In the study communities pour-flush latrines were being used regularly only when water supply was available at or very close to homes. Where water has to be carried to the latrine from even 20 meters away, people in Indonesian communities preferred not to construct latrines, nor use them if constructed by projects. In the inland plains of Vietnam, people in some communities did not want to construct or use flush latrines until they could get a household connection of piped water supply, as the water from local ponds or wells tended to discolor the ceramic latrine pans.
- In many cases the poorest households could not muster enough cash for this design.
- In Indonesia and Vietnam many communities reported being dissatisfied with the low-cost cement closets provided by several development projects and aid agencies. They said that cement closets were not smooth like ceramic pans and thus difficult to clean. They absorbed urine and caused unpleasant odors. The water seal got blocked and excreta stuck to it. People who saw this happen in their neighbors' latrines decided not to build one for themselves.
- People abandoned the use of latrines that did not meet their expectations, or modified them to suit their needs, by cutting off water-seals, converting pour-flush to dry-pit latrines or opening up septic tanks to extract feces and sludge for use in agriculture.

- In Cambodia, half of the sample communities were situated far from urban areas and were totally dependent on sanitation projects to get supplies of sanitation materials. In these communities it took 8 years for coverage to grow from 0 to 30 per cent. In contrast the other 5 communities were either closer to urban markets or had good access to them through paved roads and public transportation. These communities received sanitation project assistance and were also able to procure supplies from urban markets. In this group coverage grew from 0–30 per cent in only 4 years' time.
- In the sample communities in Indonesia and some in Vietnam access and coverage grew from 0–80 per cent or more in 30–40 years. However, most of the expansion happened only over the last 10 years, since the introduction of the pour-flush toilet, along with improved access to water supply in the 1990s.

The findings above suggest that time frames of about 8–10 years could be appropriate for sanitation projects. However, since sanitation is usually combined with water supply in project designs, it is rarely afforded this time span. Water supply projects are generally planned as 4–5 year interventions and the sanitation component is subjected to the same time limit.

Sector policies need to recognize that sanitation interventions can improve community health status only if they are designed and implemented using approaches that: a) first seek to understand existing community practices and preferences and, b) base behavior-changing interventions on that understanding. For sanitation behavior changes to be sustainable, people must be able to make properly informed choices between types of toilet designs and levels of service and behavioral changes, at costs that they consider worthwhile. Projects should therefore help to develop both the demand and the supply sides of the equation, without which informed choice is not possible. All this can take twice the time it takes to establish sustainable water supply services.

4. WHAT Benefits Matter Most to Users?



A women's group in Cambodia doing a cost-benefit assessment for household latrines.

The most important benefit from having household latrines according to men and women users in all 3 countries was “a clean home and village environment free of bad smell and flies”. “Convenience” was almost as important everywhere. It included the savings in time and energy, ease of access at all hours of day and night, under all weather conditions and specially when one is sick and having diarrhea. Health benefits ranked third overall, followed by economic benefits. Figure 6 shows how benefit perceptions were distributed in the 3 country samples.

Some interesting variations emerged in country-specific perceptions of benefits. In Cambodia “safety”, mainly from criminals and to a lesser extent from wild animals and snakes was a highly regarded benefit, even more important than health benefits and privacy, and was mentioned both by men and women. To both women and men in Cambodia ‘privacy’ was more important and mentioned more frequently than in other countries. Health benefits were one of two most important benefits perceived by both sexes in Vietnam, where sanitation had been aggressively promoted by health authorities.



"Clean, smell-free home and village" the most important benefit according to many.

Economic benefits were perceived in more ways and mentioned more often by both men and women in Vietnam and Cambodia as compared to groups in Indonesia. The Vietnamese and Cambodian groups counted the cost savings due to availability of manure from toilets, reduction in diarrhoeal epidemics and savings of medical treatment costs and wages saved due to fewer days of illness. Social prestige and harmonious neighborhood relationships were mentioned as benefits in all 3 countries, but only in a few instances.

Sanitation promotion has traditionally tended to emphasize only health benefits, perhaps because Health Departments are generally responsible for sanitation programs and they are staffed largely by medical personnel. The study findings suggest that sanitation promotion could be made more effective if other known local motivating factors are also used creatively in promotional efforts. Some examples are suggested below.

- Comparing benefit perceptions with factors stimulating demand (*Figure 3a*) shows that people acquire household toilets for one set of reasons, but continue to use them for a somewhat different set. Health benefits are typically perceived not before acquiring toilets but after people have used their toilets for a period

of time. In contrast, social status reasons which are potent motivators for acquisition of toilets seem to become less important during usage. Promotion targeted at first-time buyers should therefore emphasize social status enhancement from latrine ownership, in addition to health benefits.

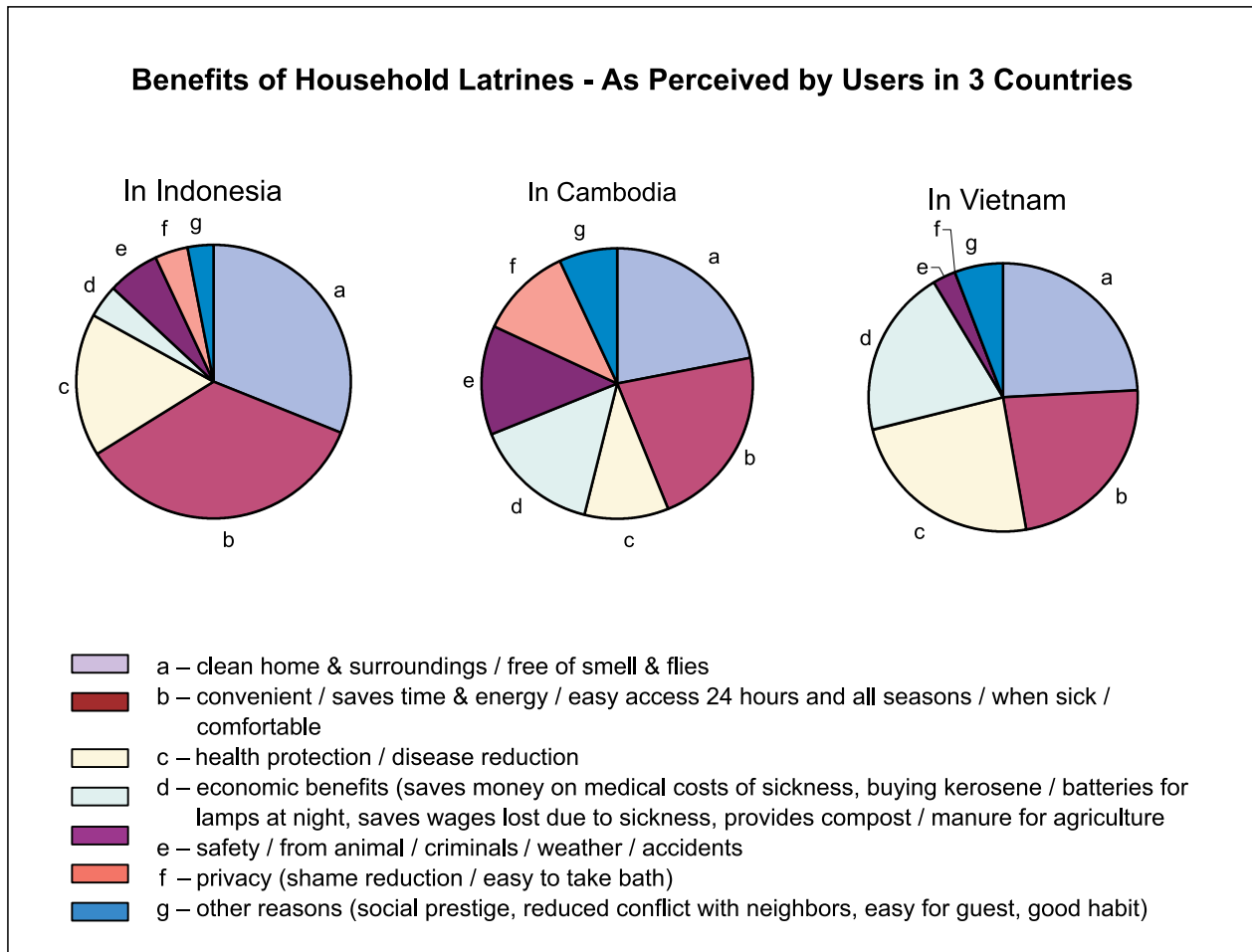
- Benefits such as convenience, and economic benefits of compost, saving money / time or energy are strong motivators of sustained use almost everywhere. In addition, country or area-specific motivations exist which could be better utilized in sanitation promotion, e.g. 'safety' as a benefit perceived in Cambodia. Promotional campaigns for increasing demand for sanitary toilets could be based on 2-3 strong initial motivators such as people's desire for clean, smell-free homes or a higher lifestyle, convenience and economic savings. In Cambodia promotion may be made more appealing by adding 'safety for the family' as a major advantage of owning a latrine. In Vietnam the economic advantages may be highlighted more in promotion.

The implication is that sanitation promotion and interventions need to be designed on the basis of understanding of local motivating forces for acquiring and using household latrines, rather than on the sole basis of standard medical advice and educational approaches stressing only health benefits. Such understanding can be obtained through participatory or formative research. Sanitation programs thus need to incorporate skills, capacities and approaches used in consumer selling.

Are the Benefits Worth the Costs?

In Indonesia and Vietnam people agreed that the value of the benefits from household latrines exceeded the costs of construction and maintenance. In Cambodia the value

Figure 6



of the benefits were perceived to be marginally lower than costs. In all 3 countries however, women considered household latrines to be more worth their costs than men did. Women in all three countries consistently gave higher 'value for cost' scores to their toilets. Women also mentioned more benefits than men did, in Indonesia and Vietnam. The specific benefits that women consistently valued higher than men in the three countries were convenience (including privacy) and the cleanliness of the home environment. Men in Cambodia and Vietnam valued the night soil availability from latrines marginally more than women did.

Women's greater interest was also evident from the finding

that women initiated the process for acquiring family latrines in 18 out of 24 communities in Indonesia and Cambodia. Men alone did not initiate discussions to acquire a family latrines in most communities. In Vietnam men in the family made the decision on the basis of discussion between men and women. In Cambodia and Indonesia, men and women decided together in half the cases. The other half of the time men decided in Indonesia and women did so in Cambodia.

In view of women's greater interest and influence on family decisions regarding sanitation improvements, projects **should evidently treat women as 'valued customers' and seek to strengthen their voice. This**

can take the form of ensuring that women are fully informed of options and costs. It can also mean more actively promoting women's access to empowering inputs such as credit for sanitation and offering women training in income generating skills such as mason training for sanitation.

How Satisfied are the Users with Their Facilities?

Men and women users rated their satisfaction with their household toilets on a 0 – 100 per cent visual rating scale on the ground, on which groups marked their consensual position after discussion. The 0 and 100 points represented 'zero satisfaction' and 'full satisfaction' respectively. All points in between represented a continuous scale. In Cambodia and Indonesia the rating pertained mainly to pour-flush type toilets. In Vietnam three ratings were given by each community for 3 different types of toilets commonly in use.

In general, users of pour-flush toilets in all 3 countries were close to or fully satisfied with their toilets (75 – 100 per cent satisfaction), provided water was available close by for flushing. Women were more satisfied than men in all country situations. As the data from Indonesia showed, the dissatisfaction with pour-flush toilets comes out of having to carry water from a distance or from the low quality of the low-cost cement pans provided by projects. Women in Cambodia and Indonesia complained that cement pans were difficult to clean. They were waiting to be able to replace them with ceramic pans as soon as they could afford.

It is worth highlighting that men did not generally carry water to toilets nor use them if there was no water available. It falls to the women to keep the latrine's water tank or bucket filled, thus adding to their long list of chores. The happiest pour-flush toilet users are those who have a house connection of piped water and have augmented

the facility to become a bathing place-cum-latrine. These are usually the 'rich' households.

In Vietnam the other types of toilets rated by users included the single or double vault types and primitive dug pits. On average, people were about 50 per cent satisfied with their vault latrines. Satisfaction with dug pits was very low, between 0 – 20 per cent. The vault latrines are not completely smell-free and sanitary, but they are still indoors and convenient and also supply night soil. The dug pits also provide night soil, but are both smelly and unsafe for children and old people. People who use them do so because they cannot yet afford better and more costly facilities.

There is thus a clear desire among rural people everywhere for upgrading one's facilities to a level which they may be unable to afford at the time a project makes its intervention. Sanitation programs can capitalize on this desire by offering a range of progressively upgradable sanitary options at a range of costs. Latent demand can be unleashed by the availability of options that can be improved further over time.



Men in an Indonesian community rating their satisfaction with household latrines.

5. Impact of Hygiene Awareness and Practices

Community health improvements do not result from the existence of sanitation facilities. People's use of water and sanitation facilities in ways that promote health is the critical issue. The study examined community beliefs and practices related to cleanliness and hygiene, using participatory diagramming (PHAST) methods separately with men and women's groups. The results showed some patterns common to all 3 country situations. Some area-specific hazardous practices also come to light.

Personal Hygiene Practices

- Everywhere, women were somewhat better aware of hygiene practices than men.
- Among men and women in all 3 countries there was fairly high awareness³ that:
 - a) the use of sanitary latrines blocks disease transmission routes;
 - b) food should be kept covered;
 - c) water should be boiled before drinking and
 - d) food, water and hand are the three major routes of transmission of fecal-oral contamination.
- Awareness of hand washing as a means to block fecal contamination and disease transmission was universal in all Indonesian communities, but mentioned



Mapping community awareness of how fecal contamination spreads, in a Cambodian village.

in half or fewer communities in Cambodia and Vietnam. In Indonesia and Vietnam at least half of the groups identified hand washing as necessary before eating. But less than a quarter everywhere identified the need to wash hands before feeding children. The need to wash hands with water and soap was identified by two thirds of the groups in Indonesia, just over half the groups in Vietnam and less than a third of the groups in Cambodia.

Footnote

- ³ "High awareness" means that these practices were identified by 60 – 100 per cent of men and women's groups in each country, in open-ended research explorations.



Hygiene promotion: Not a matter of “educating” people, but offering behavior options and facilitating people’s own decisions for change.

- The efficiency of hand washing, even if mentioned, is highly suspect. About half of the community groups everywhere identified the need to wash hands after working in the fields, but less than 20 per cent identified the need to do so after defecation. Nearly half of the communities in Indonesia and Cambodia said that hand washing is necessary after cleaning up baby’s feces but less than 20 per cent said so in Vietnam. Also in some communities in Vietnam the study team found dangerous anal cleaning practices using cloth or sticks which are used many times by all family members and stored in the toilet.
- The study teams did not find hand washing facilities (water and soap or ash) in or near latrines in 80 per cent of the latrines observed in Cambodia and Vietnam. 80 per cent of the latrines observed in Indonesia had water that could probably be used for hand washing but soap was available less than half the time.

- Another hazardous practice noted was the disposal of babies’ feces anywhere in and around homes and yards. Infant feces are considered harmless by most communities, but they actually contain higher concentrations of pathogens than adult feces. Only in Vietnam mothers routinely disposed of babies feces into latrines. Indonesian communities did likewise only 40 per cent of the time. It was done about 20 per cent of the time in Cambodia – where even households with latrines tend to throw babies feces in the garbage heap or in the banana grove behind the home.
- Hygiene education activities had been carried out in all 3 country situations. The near - universal awareness of some simple standardized hygiene education messages like boiling water, covering food, using latrines rather than outdoor spaces for defecation – bear testimony to the fact. The current practices however leave many routes of pathogen transmission wide open in the communities. “Hygiene education” using didactic approaches and standardized messages has evidently failed to bring about community-specific key hygiene behavior changes that target hazardous practices prevalent therein.

Communities worldwide have provided ample evidence, repeatedly, that they have certain beliefs and specific reasons underlying their practices. Standard educational messages do not cause an automatic change of behaviors. Institutions managing sanitation programs need to accept and internalize this fact.

Rethinking hygiene promotion as the facilitation of informed choice by communities about the behaviors they need to change offers an alternative paradigm. It fits well with the global sectoral move towards demand-driven approaches that require consumers to make informed choices about the services they want to buy.

6. WHAT Strategies Worked for Sustained Sanitation?



Men and women's groups confirmed that locally devised strategies were the most effective in not only promoting demand for sanitation but also to change community behavior and sustain improved hygiene – sanitation practices.

The types of strategies reported include one or more elements from the following four. The more of these elements were included, the more successful the sanitation intervention in the community was.

- Choice of sanitation facilities and costs
- Peer pressure / appeal to people's collective community responsibility

- Use of neighborhood networks and community institutions to spread the message of change.
- Development of local enterprise related to sanitation services.

Choice of Sanitation Facilities and Costs

Availability of choice between designs, types and costs of sanitation facilities emerges as a prime requirement for sustained sanitation services in a community. Sanitation projects that offer single options and make no attempt to find out how it fits local preferences are doomed to wasteful failure from the start. Some Vietnamese communities in Quang Xuong, Hoa Lu and Phu Luong districts offer explicit examples of what happens when communities dependent on agricultural practices using fresh human excreta are persuaded to accept the pour-flush latrine design which prevents their access to feces for several years (i.e. until a pit gets full, and pit contents are sealed and left to decompose anaerobically). In order to comply with local government instructions for developing "cleaner villages", people in these communities built the pour-flush latrines promoted by the authorities. But afterwards, many households changed them to dry pit latrines and opened

up the septic tanks to access the pit contents regularly. Many others simply discarded the project - given cement pans without building the pour-flush toilet, or installed the pan on the pit but never built enclosures around it and hence did not use the toilet. They told the study team that they would have preferred to build double-vault latrines.

The opposite kind of example was seen in some Indonesian communities where community members and local masons were given training in casting cement closets and latrine construction. The producers of cement closets were well aware of local preferences for smoother ceramic pans. They took the initiative to develop a small range of choice within their limited production capacity, in response to their potential customers' preferences. They added white cement glazes over cement pans to make them smoother and tinted the white glaze blue or pink to have a choice of colors. They also sold pans pre-cast in circular or rectangular concrete platforms at a price that competed well with the price of buying a closet plus paying a mason to build the platform. The net result was that sanitary facilities of a range of perceived quality and cost became available to their communities. This generated demand from a larger section of the community and increased income for the producers .

Peer Pressure and Collective Community Responsibility

When a behavior change is promoted as a community responsibility and a matter of collective shame or pride, the peer pressure generated in small rural communities to 'do one's share' and conform is powerful. The pressure may be generated by external intervention or by consensus from within the community. Examples from the study show how it works.

Local government authorities in Vietnam have been very effective in mobilizing rural communities to commit to targets for improved sanitation practices. This is done



Schools have proven to be effective channels for transforming community hygiene situations.

through agreeing targets with households for building toilets, water wells, animal pens, by ensuring people's contribution to common funds for developing common services like waste disposal, treatment sites and by organizing commune cleaning events where everyone should contribute their time and effort. The agreed targets (i.e. facilities constructed) are periodically monitored by local government and village development boards and the results are made public.

Village development boards in Vietnam also monitor public compliance with agreed hygiene behaviors. Those who do not use their toilets or leave them dirty may suffer the embarrassment of having their names announced publicly over the commune radio systems. In Indonesia a form of peer pressure found in Lombok where a community had agreed not to pollute the river. The village youth committee kept watch at the river bank and anyone found defecating in the river had his or her name announced over the village public address system following the Friday communal prayers. Religious leaders helped bring about a wholesale adoption of sanitary toilets in some Indonesian villages in the sample, when they declared open air defecation as tantamount to sacrilege, because the smells from defecation in the open disturbed those praying in the village mosque.

Use of Neighbourhood and Community Networks

Rural communities tend to be cohesive. People are more easily convinced by their neighbors' experiences and tend to trust those they live with rather than outsiders. When a new facility is introduced, its pros and cons must be fully understood before it gets accepted. Explanation by outsiders may serve to inform people, but they trust and accept the information to be true only when a relative, neighbor or a local leader checks it out and confirms it. Communities in Cambodia said that many people decided to build their own latrines only after they saw their neighbors do so and appreciate the benefits. On the other hand, a neighbor's negative experience with a new latrine turned many people off latrines indefinitely.

Likewise, for hygiene behaviors, some of the most potent channels for change were religious leaders and the village schools. In Indonesia many communities reported that the impetus to change hygiene behaviors came through schools and school-initiated neighborhood competitions. Children pressed their parents to convert their households into "healthy homes" which had a latrine, a simple garbage and waste water disposal system, and soap for hand washing. The desire to win competitions and not be classified as 'backward' worked both on children and their parents. The schools that were most successful in this regard also ensured that pupils had access to school toilets and hand washing facilities in the school.

Development of Local Enterprise

Projects initiate interventions, but can rarely sustain them over the many years that it takes for community awareness and demand for sanitation to grow. Sustained sanitation thus calls for developing both demand and supply aspects

so that a local market mechanism is established for long-term sustainability of services.

Communities in Indonesia and Vietnam where local capacity developed to supply materials and skills for sanitation – saw faster and more sustained growth of latrine users in the community. Local masons, wherever trained, found ways to promote their business and thus add to the number of facilities. Local enterprise to produce concrete from local raw materials enabled an isolated mountainous community in Vietnam to build more and cheaper toilets without depending on external supplies.

In Vietnam and Indonesia hands-on construction training was provided to community members during the building of the very first latrines. Depending on the quality of this training, the skill developed helped construction by other households. Where training was not made available or done badly, it inhibited further consumer demand. Cases were reported from all countries where initial toilets had collapsed or been flooded due to faulty construction or unsuitable soil and groundwater conditions. People complained that inadequate technical guidance from projects had led to such situations.



Summary Findings and Policy and Strategy Implications

Sustained sanitation for the poor requires attention to two fundamental policy and strategy areas:

- for sustaining access to improved services
- for sustaining improved sanitation behaviors.

Sustaining Access to Improved Services

Finding 1:

Sanitation programs are only as effective as their performance indicators

When program goals are to promote access of the poor to services and community health impact, the traditional approach of monitoring sanitation coverage is inappropriate, inadequate and can be misleading. In this study the coverage data masked large social class differentials in access to services and failed to identify significant differences between communities in terms of actual use and maintenance of sanitary facilities.

Sanitation program impact assessments can fail to diagnose causal factors of the community health situation if assessments do not assess community behaviors and

use only traditional approaches such as recall surveys of disease incidence, review of health center records and quantitative questionnaires on community Knowledge, Attitudes and Practices.

Implications:

- Sanitation projects need to use outcome indicators that measure progress towards the goals of sustained access of the poor and improved community health, e.g.,
 - = Access to and use of improved sanitation facilities by the poor within communities, as compared to the better-off,
 - = Quality of use and maintenance of facilities,
 - = Changes in community sanitation behavior.
- Methods then have to be institutionalized to track the equity of outcomes. These methods need to identify and target interventions to the poor and monitor access rates of the poor households within communities.
- Assessment of community health impact from sanitation interventions can be more reliable when it includes the tracking of changes in community sanitation behavior. Moreover, to maximize the diagnostic power of behavioral assessments, research methods need to go beyond asking Yes/No questions and use tools that explore people's rationale for change or lack thereof.

Finding 2 :

Demand-responsive approaches are essential for sustained sanitation, since sanitation services have the characteristics of consumer products.

Project agencies, have tended to see and manage sanitation interventions as public health measures. The mismatch between the type of product and approaches to manage and promote it has led to sanitation services not being demanded, used and sustained as intended. The study found that :

- The latrines that people pay to get are better used and maintained than what they get for free. The more choice they have about what they pay for – the better they sustain it.
- There is a clear desire among rural people everywhere for upgrading one's facilities to a level which they may be unable to afford at the time a project makes its intervention. Sanitation projects can ,but do not yet capitalize on this desire by offering a range of progressively upgradable and sanitary options at a range of costs. Demand that is currently latent due to only a single option being offered can be unleashed by the availability of options that can be upgraded over time.
- Single-product-based sanitation interventions tend to reach mainly the better-off minority sections of communities. Such approaches do not develop and offer choices appropriate for all sections of the population.
- People acquire improved sanitation facilities for many reasons. Health benefits are NOT necessarily an initial motivator. Some near-universal motivators found for getting household latrines include convenience, saving money, time or energy, prestige reasons, privacy and comfort. In addition, local specific experiences contribute to

motivations such as safety from animals/snakes/ criminals encountered during open defecation. Health benefits are perceived by users only after they have acquired and used their latrines for some time. Yet, sanitation programs everywhere use little other than standardized educational health messages in their promotional efforts.

- Women everywhere are more interested in sanitation improvements than men and tend to initiate or influence family decisions to invest in sanitation. Sanitation projects have not yet adequately utilized women's interest to maximize project effectiveness. Approaches that promote gender equity in community voice and choice are now proven to lead to more effective and better sustained project outcomes.

Finding 3 :

Sanitation program/project outcomes are more sustainable and impact community quality of life better when implementing agencies operationalize demand responsive-approaches in the following ways:

- Informed choice making by all categories of society, in terms of technology, design of facilities, cost and modes of payment, is incorporated in sanitation promotion.
- Projects do not subsidize construction. Instead they subsidize technical assistance, awareness promotion and local enterprise development.
- Interventions focus on long term sustainability by stimulating both local demand and developing local supply capacities to respond to this demand.

Implications :

Sanitation programs and projects need to adopt a consumer marketing approach to sanitation. This means :

- = Designing promotional efforts on the basis of researched understanding of local motivating forces for acquiring and using sanitary latrines and other

hygiene behavior changes.

- = Developing a range of sanitation improvement options at a range of costs to suit different levels of affordability of potential consumers.
- = Product and service delivery options have to be developed particularly for the poor, to ensure equity of choice for both the poor and non-poor within projects.
- = Projects should treat women not as passive beneficiaries, but as 'valued customers' and seek to strengthen their voice in communities and households. Ensuring that women are fully informed of options and costs and promoting women's access to empowering inputs such as credit or income-generating skill development for sanitation are possible examples.
- = Sanitation programs and project agencies thus need to incorporate skills and capacities used in consumer selling.

Finding 4 :

The evolution of demand for sanitation seems to follow a broadly 3-stage process which needs to be understood and supported appropriately by sanitation projects.

Stage 1 is when communities are first exposed to the idea of improved sanitation services and facilities, as an alternative to existing practices. Further progress of demand at this stage depends on the extent of endorsement that can be gained for the new ideas from insiders in the communities. Endorsement could be from insiders who have had exposure to the ideas before and from early adopters of the new services.

Implications :

- = In Stage 1 Projects need to involve community insiders in awareness creation and ensure that early adopters' experiences are consistently positive, by paying sufficient attention to the technical and social suitability of the product to client communities.

Stage 2 is when community members have had sufficient endorsement of the proposed sanitation improvements from their leaders, neighbors, relatives and want to try it out for themselves. Availability of essential limiting factors determines further progress of demand at this stage. Essential limiting factors could be lack of land to site latrines, a source of water too far, lack of access to materials and skills for construction, inflexible and unrealistic project rules. Sanitation projects initially supply the materials and skills, but unless they also start building local capacity and a market for such supplies, demand for sanitation will dissipate with the end of project supplies, as had happened in many study areas.

Implications :

- = In Stage 2 Projects can make the greatest contribution to the sustainability of sanitation by applying rules that enable all sections of the community to express their demand, by offering choices to and facilitating informed choice-making by all categories of consumers, and by fostering the development of a local supply capacity that will ultimately sustain itself by responding to local demand.

Stage 3 is when communities have overcome the essential limiting factors and household demand is free to grow, fuelled by positive experiences of adopters and other situational motivators e.g. lack of access to traditional open-air defecation sites, safety from snakebites in the forest, social status reasons etc.

Implications:

- = If project interventions during Stage 2 have produced local capacity to respond to the growing demand, a self-sustaining market mechanism gradually develops and sustains services. Projects may need to continue support for marketing of local production at this stage, to enable local producers develop marketing capacities, channels and contacts beyond small communities.

Sustaining Improved Sanitation Behaviors

Finding 5 :

Demand for sanitation facilities is not synonymous with desirable change in community sanitation behavior.

The study found evidence in all 3 countries that ownership of household latrines lowers the incidence of open defecation but does not eliminate the practice. People use their latrines only under certain conditions, and continue to use traditional open air sites when those are more convenient e.g. when people are away from homes and in crop fields or forests or when water is unavailable in the latrine. Sustainable changes in sanitation behavior do not happen due to the acquisition of facilities. They happen when people are able to weigh the pros and cons of changing their behavior and make a conscious decision to adopt a new practice consistently, for whatever motivations that are relevant to them. Sometimes traditional behaviors are linked to livelihoods, which make changes more difficult to contemplate or justify.

Implications :

= The success of a sanitation project depends on the extent to which it can facilitate conscious decision-making by potential consumers in favor of a more health-promoting new practice. This is easier to do when proposed new practices accommodate existing livelihood-related practices, or at least when alternative solutions can be suggested when such practices are required to be abandoned. Sanitation projects need to offer several design options for sanitation facilities, coupled with behavioral options that allow local practices to be continued with greater safety.

Finding 6 :

Even though some key sanitation-hygiene behaviors are universally relevant for all communities (e.g. hand washing after contact with excreta), the ways to promote them will vary widely across cultures because hazardous practices take many different forms.

No community is an empty slate in terms of hygiene beliefs and practices. The most relevant change-messages therefore are not known for every community and cannot be offered as standard educational campaigns. However, identifying them with specific communities and seeding community action to bring about change is possible through participatory analysis of hygiene behavior.

Finding 7 :

The study found evidence that communities know best what triggers behavior changes among their members.

Communities are able to devise the most effective ways to communicate messages for change, monitor effects of communication and adjust strategies in response. They are able to generate peer pressure for compliance and make effective use of neighborhood networks and community institutions to spread the message of change. Sanitation projects need to support user communities in planning and organizing their promotional efforts, once major community groups choose the behavioral changes they would like to see in their community.

Implications :

= Hygiene promotion needs to be seen as the facilitation of informed choice by communities about the behaviors they want to change, in view of the benefits they wish to derive from the change. The current global move towards demand-driven

approaches necessitates the making of informed choices by consumers about the services they want to buy. A parallel paradigm shift is needed in hygiene behavior promotion.

- = Sanitation project processes have to take responsibility for facilitating informed choice for behavior change. Participatory hygiene behavior analysis with communities can operationalize the process of informed choice making by men, women and children for hygiene behavior changes that will most benefit them. They are the ones who will have to pay the price for change in behavior – in terms of money, time, energy and effort. They must be able to: a) choose the changes they will make and b) get access to the information that can help them make the optimally beneficial choices.
- = Behavior change objectives need to be community-specific, decided with communities, based on existing community hygiene behaviors.
- = Projects need to plan sanitation and hygiene promotional efforts in consultation with communities, and support community efforts to effect behavior change.
- = Sanitation projects need to be structured and equipped with the required skills to function in the above manner with potential client communities.

Finding 8 :

Time frames for sanitation projects need to be longer than 4-5 years.

This is the usual time frame for integrated water supply and sanitation projects. Time frames of about 8 – 10 years are more appropriate for sanitation projects. Sanitation interventions improve community health status only when they are designed and implemented using approaches that: a) seek to first understand existing community practices and preferences and b) base behavior-changing and marketing interventions on that understanding.

Implications :

- = Integrated water supply and sanitation projects that try to do both within short time frames of 4 -5 years are not realistic. A phased approach is more appropriate, allowing sanitation facilities to begin to be constructed only after demand for sanitation has emerged. The initial years of sanitation projects should be invested in understanding existing local practices and people's rationale underlying them, assessing potential demand by facilitating informed choice by potential consumers and developing supply mechanisms to respond to the expected future demand.

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