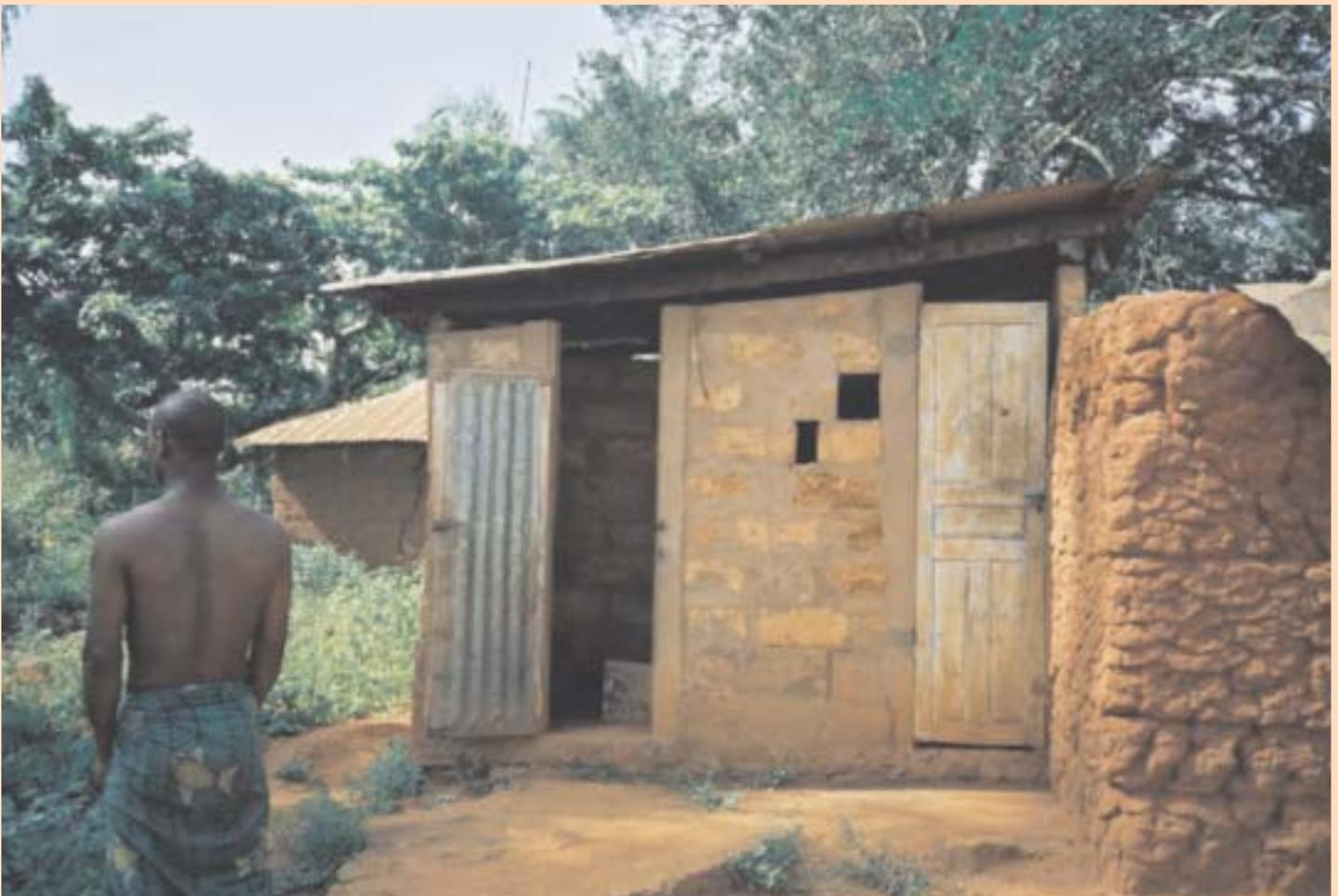


Who Buys Latrines, Where and Why?

This field note aims to explain the concept of household demand for sanitation in developing countries, what stimulates demand among new adopters, and how this knowledge can be used to develop marketing strategies to accelerate sanitation uptake. It draws these insights from an in-depth study of household latrine adoption behavior in rural Benin.



Why Understand Demand for Sanitation?

The challenge to reach the Millennium Development Goal, of halving the proportion of people without access to basic sanitation by 2015, is enormous. Put simply these targets mean that at least 1.47 billion more people will need services. Though the majority of the unserved are in Asia, steadier progress is being made in most Asian countries than elsewhere. Many countries in Africa, and other parts of the developing world, will struggle to meet numerical targets that seem almost insurmountable. At the very least it means the current rate of sanitation provision in Africa must quadruple. What can be done to meet the sanitation target by 2015?



A proud owner next to her outdoor toilet

Business as usual is not working

Between 1990 and 2000 an estimated additional one billion people gained access to 'improved' sanitation, but this pace was insufficient to keep pace with population growth leaving a widening gap in the number of unserved households.

Part of the failure to make significant progress lies in the fact that sanitation projects have relied on the same worn-out approach - heavily subsidized government or donor-sponsored latrine construction, coupled with health education programmes. This approach has significantly failed:

- to generate demand for sanitation;
- to produce products or services sustainable beyond the external subsidy;
- to provide solutions replicable at scale.

Marketing offers real promise for accelerating access

Most new sanitation in Africa and elsewhere has been, and continues to be, privately acquired by households through the market from small-scale providers. By building on the market's proven ability to respond to consumer demand, a marketing approach encourages the private provision of household sanitation, while simultaneously promoting new demand.¹

Demand is at the core of marketing

Successful marketing is based on understanding what people want and are willing to use and maintain, and on

¹ Sandy Cairncross, 2004. *The Case for Marketing Sanitation*. Field Note. Water and Sanitation Program-Africa, Nairobi.

Map of Benin



Source: *The World Factbook*, 2004

which sanitation technologies are locally appropriate. Households must truly want improved sanitation if sustained changes in behaviour are to occur. But, surprisingly, very little work has been done to understand demand and how it can be encouraged.

Based on an in-depth study of household latrine adoption behavior in rural Benin this field note aims to:

- explain the concept of household demand for sanitation in developing countries,

- investigate what stimulates demand among new adopters, and indicate ways in which this information can be used to develop marketing strategies which will accelerate sanitation uptake.

Households as sanitation consumers, not beneficiaries

Successful marketing recognizes that households seeking to solve their own sanitation problems are consumers, like any others, who make their own decisions and choices about how they raise their children, spend their money, as well as where they defecate. And like consumers everywhere they will have different preferences, resources, values, priorities and circumstances.

In this field note, sanitation demand is defined as the aggregated choice of individual households to pay for and install home sanitation facilities (or not) among a population group, at a given time.

Box 1: Typical steps in the decision to install home sanitation

1. Awareness of the personal benefits of sanitation through exposure to sanitation products and adopters, ideally in a familiar home setting
2. Learn about available technologies, how they work, and what they cost
3. Collect advice and opinions from trusted sources
4. Consult and negotiate with family or compound members about, sharing costs and use, and siting of latrine
5. Evaluate alternatives, including doing nothing or waiting
6. Begin accumulating necessary cash (this could take up to 3 years)
7. Search out pit diggers, experienced builders, detailed construction and operating information, costs of materials, and any required permits
8. Decide on design features and siting
9. Select mason, negotiate prices, purchase and transport materials, get permit
10. Oversee construction.

Motivation, opportunity, and ability

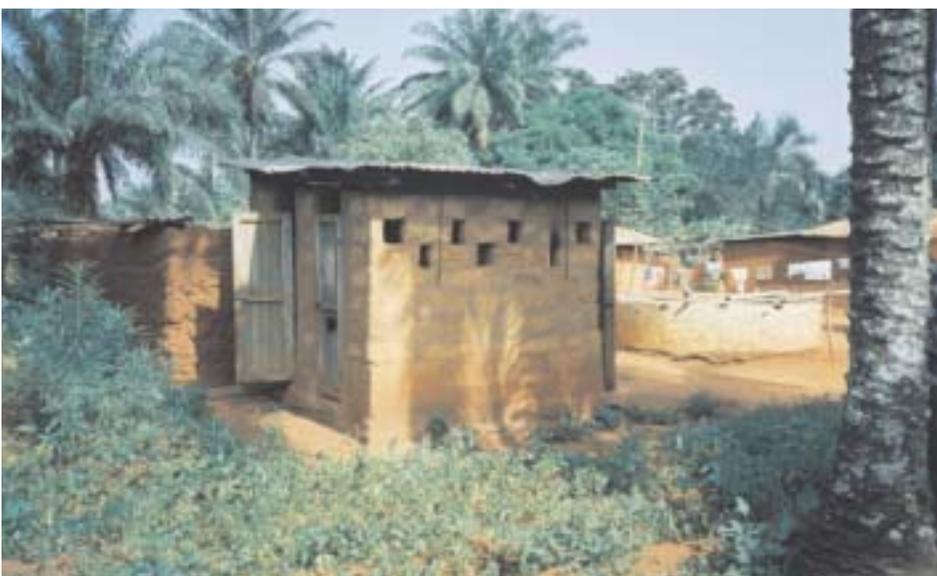
Demand is created when consumers have motivation, opportunity and ability to purchase sanitation technology which suits their needs. People require *motivation* to part with hard-earned cash. And there

is a considerable body of research which indicates that latrine adoption is rarely motivated by messages about health benefits alone. More important are the immediate and direct benefits of increased convenience, comfort, cleanliness, privacy, safety, and prestige offered by home sanitation.

However motivated they may be, consumers also need the opportunity and ability to purchase products or services that suit their household situation. *Opportunity* means access to good sanitation product information, builders, materials, and operating and maintenance services. *Ability* refers to the resources consumers must possess to make use of opportunities, including money, knowledge, skill, time, transportation, and control over decisions.

A consumer perspective on improved sanitation

For a typical consumer in a developing country, installing a latrine or toilet for the first time usually means two big changes:



A dual-purpose block of bath cabins and latrines over a single pit.



A new latrine under construction, using local materials, and adopted to incorporate a bath cabin.

- building housing-related infrastructure
- changing defecation and faeces handling practices.

These require a series of decisions before latrine construction actually begins. Consumers need to progress through most, or all, of the steps in Box 1. This ‘decision ladder’ provides a graphic illustration that installing a latrine is not a simple option and consumers can get ‘stuck’ at any of the ten levels.

Changing ‘primary’ demand for sanitation

Where sanitation coverage is low and latrine technologies unfamiliar, primary demand for sanitation must be created. Primary demand is demand for the product categories in the household’s expenditure

budget – and changing it means getting households to re-allocate their expenditures to include a new product category in their budgets. This requires a greater upfront investment in marketing and promotion than the effort to increase market share for a brand that already exists in the target household’s budget, for example, for a new flavour among consumers of soft drinks.

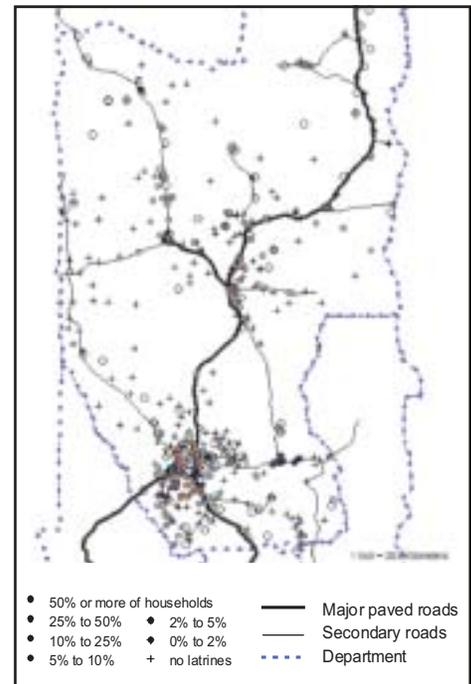
Examples of changing primary demand include the proliferation of home computers and mobile phones; demand that did not exist 10-15 years ago. Technological innovations spread slowly at first, because few consumers know about or understand them, but demand picks up as increasing numbers of consumers become familiar with the product. The Benin study illustrates how people learn about sanitation product innovations and how this knowledge and information spreads.

Demand for latrines in rural Benin

Between 1993 and 1996, in-depth research using a variety of methods (Box 3) was conducted in Zou Department in the Republic of Benin, West Africa. The goal was to find out why some households had decided to change from open defecation, the prevailing traditional practice, and install a pit latrine at home, and why most others had not. (In this field note the decision to install a latrine is referred to as adoption, and households which use a latrine are referred to as adopters).

Among the world’s poorest countries, Benin’s six million people have low

Fig. 1: Latrine adoption in 520 villages in Zou Department



average incomes and poor access to social services. The majority of the rural population works in semi-subsistence agriculture, while others support themselves through commerce, crafts, skilled trades, and cottage industries. Zou Department's urban center, Abomey-Bohicon, is the heartland of the Fon ethnic group and the Voodoo religion.

At the time of the study, only seven percent of rural households in Zou had installed some kind of pit latrine. There was no systematic latrine building program although health education messages about the need for improved sanitation had been delivered at clinics and through community development programs for many years. Households were making the

decision to install and funding the latrines entirely on their own. This situation offered a unique opportunity to study the forces that generate new demand for sanitation free from the distortions that often occur in publicly subsidized latrine construction projects.

The study began by creating maps of latrine installation rates in villages across Zou to reveal the patterns on sanitation demand. The maps (Fig. 1) showed:

- Large differences in demand existed across villages in the region, and as many as 2 in 5 villages had no apparent demand.
- Villages with greater demand were clustered around the urban center of Abomey-Bohicon, along the road network, and around a few smaller urban centers.
- Latrine adoption was spreading outwards from urban centers and along road networks. These trends were clearly visible in the area around Abomey-Bohicon. (Fig. 2)



A commonly-preferred pit latrine design.

Household latrine adoption dropped sharply from 38 percent within the first 3 kms outside Abomey-Bohicon, to 12.5 percent between 3 and 5 kms away, with a steady decline tapering to just 1.4 percent of households living between 15 and 20 km away. Latrine adoption was spreading outwards from urban centers and along road networks.

Fig. 3: Latrine uptake by rural households

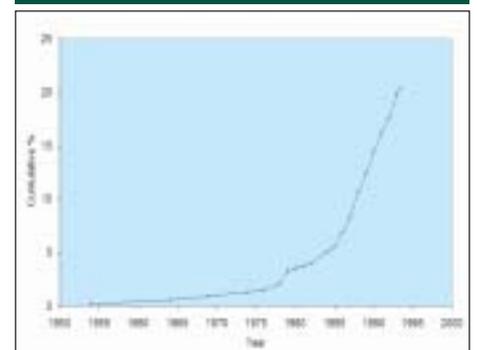
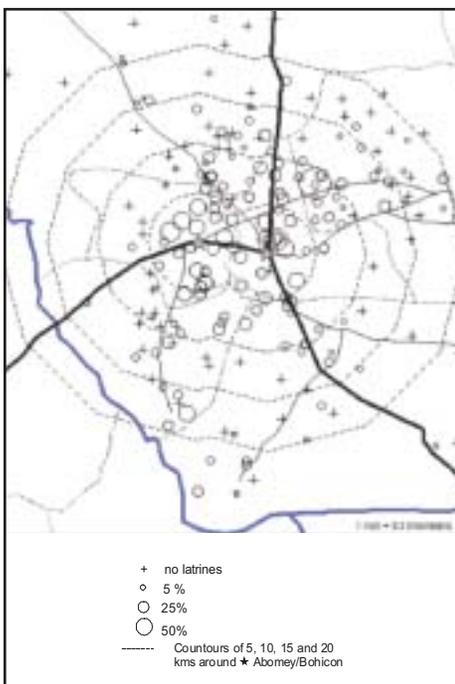


Fig. 2: Decreasing adoption with distance from Abomey-Bohicon



A graph of the adoption pattern over time was constructed using retrospective data from a representative sample of households in two of the sub-prefectures around Abomey-Bohicon. The first latrine was installed in 1954, but adoption built up very slowly over the next 20 years. It then

Household latrine adoption dropped sharply from 38 percent within the first 3 kms outside Abomey-Bohicon, to 12.5 percent between 3 and 5 kms away, with a steady decline tapering to just 1.4 percent of households living between 15 and 20 km away. Latrine adoption was spreading outwards from urban centers and along road networks.

Analysis of the village data showed a strong contagious aspect to latrine adoption in Benin. The higher the household latrine installation rate within a 2.5 km radius of a given village, the greater was that village's own adoption rate.

The spatial and temporal patterns of latrine uptake in Figs. 1-3 are typical of an innovation diffusion process where information about the innovation - in this case latrines - is spreading to new households in rural areas by direct exposure to latrines in the homes of adopters and by face-to-face communication with them. Without interventions designed to accelerate diffusion, adopters provide the only source of information about this new innovation in rural Benin.

Thus, home sanitation is likely to continue to spread relatively slowly and selectively by word-of-mouth to those rural households who have contact with adopters. And most of these adopters still live in or near urban areas.

Who wants a latrine, and why in rural Benin?

In-depth interviews with a wide range of household heads provided 11 distinct reasons, or drives for installing a latrine (Table 1); prestige and well-being emerged as the main motivations.

Prestige and status benefits of latrine ownership

The importance of prestige and status gained by latrine ownership in rural Benin may seem surprising. Owning a home latrine enabled the owner and his family to



Customization and personalization of a latrine.

Table 1: Drives motivating latrine adoption in rural Benin

| Category | Drive |
|-------------|---|
| Prestige | 1. affiliate and identify with urban elite |
| | 2. express new experiences and a lifestyle acquired outside the village |
| | 3. leave a permanent legacy for descendants (elevate postmortem inter-generational status within family/clan) |
| | 4. aspire to Fon royal class status |
| Well-being | 1. protect family health and safety from mundane dangers, accidents, snake bites, crime, and diseases associated with open defecation |
| | 2. increased convenience and comfort |
| | 3. protect personal health and safety from supernatural dangers associated with open defecation |
| | 4. increased cleanliness |
| | 5. visual, social, or informational privacy |
| Situational | 1. provide an alternative for individuals with restricted mobility (aged or disabled, or voodoo convent occupants) |
| | 2. increase rental income |

display their connections with the urban world, express modern views, aspirations, and new values gained outside the village, and emulate some of the privilege, wealth, and status of Fon Royalty. These symbolic values were accompanied by a strong element of pride, which was expressed by consumers in desires to:

- avoid shame and embarrassment when important visitors need to defecate
- make their house more comfortable
- make their house 'complete'
- make their life more modern
- leave a legacy for their children
- feel royal
- enjoy the 'good' life

Well-being benefits of sanitation

Five well-being drives in Table 1 all involved negative perceptions of the physical and social environment for open defecation.

People wanting a latrine desired to:

- avoid the long walk to open defecation sites
- avoid exposure to the elements and discomfort from getting scratched or stung, stepping on thorns or in mud, or dirtying one's clothes
- avoid trouble with village neighbors by mistakenly defecating on their land
- have a reliable and close place to go when ill or aged
- avoid the risks of smelling or seeing faeces, especially in the morning, a cause of disease, weakness, misfortune and bad luck
- avoid dangers of defecating at night, including crime and supernatural spirits
- reduce flies in and around the compound
- avoid encountering a snake in the bush while defecating, because of poisonous



Latrine ownership bestows prestige and status.

bites and the omen of impending death in the family;

- reduce accidents, injuries, and mischief that can occur when children go off to defecate in the bush
- protect one's faeces from enemies who steal it to use in sorcery against you;
- avoid being seen defecating or observed leaving one's compound;
- have more private or a more separate lifestyle from extended family and neighbors;

Preventing faecal-oral transmission of diseases (the classic health benefit used in most messages) was hardly mentioned in any of these contexts. When infectious



diseases were mentioned, they were traced to smelling or seeing human faeces. Beliefs that the smell of faeces made a person sick and weak, and that seeing it in the morning brought misfortune and bad luck, were near-universal in the study area.

Village types for demand

For most people, well-being drives for a latrine were traced to the decreasing availability of 'good' defecation sites within a reasonable distance of their home. 'Good' being synonymous with clean, visually private, safe and socially appropriate. As open defecation becomes unattractive

and problematic, people seek solutions. In an analysis of factors explaining adoption, increasing distance to the nearest open defecation site, (a good proxy for decreasing availability), emerged as a highly significant and strong influence on intention and choice to install a latrine.

At a village level, increasing population density in and around the village, large size, greater occupational and socio-economic diversification, increasing crime and presence of strangers associated with proximity to roads and cities, and more developed infrastructure were associated with higher levels of latrine adoption. This suggests that new demand for home sanitation will be most easily stimulated in villages with these characteristics.



A seat designed over latrine for comfort and relaxation.

In contrast, demand may be very hard to generate in small, isolated, off-road, less developed, sparsely populated, agriculturally homogenous villages (the crosses in Figs. 1-2) where open defecation is the accepted and preferred norm. Households in this type of village had significantly lower levels of preference for latrines, higher positive ratings of open defecation, and were less likely to express a prestige, convenience and comfort, or family health and safety drive for adoption.

Early adopters

Adopters in Benin were most likely to be male, with higher incomes and larger families, to have migrated and travelled to urban areas within Benin or in neighboring countries and be active members of a community group. Male farmers were the least likely group to express any of the 11 drives in Table 1.

When the benefits were rated in importance, adopters ranked three of the four prestige benefits significantly higher than non-adopters in addition to five well-being-related benefits, and one situational goal to increase rental income. The higher ranked well-being benefits included:

- avoiding the risk of smelling and seeing faeces in the bush
- having more privacy to defecate and for household affairs
- keeping house and property clean, and
- saving time.

Adopters also differed greatly from non-adopters in their higher positive rating of latrines on smell relative to open defecation. Early adopter characteristics and the reasons cited for latrine adoption highlight the promotional messages likely to



A customized pit latrine.

persuade households to install sanitation in the pioneering stages of demand creation. These messages may not, however, be the most appropriate to convince those who have 'resisted' adoption.

Constraints to acquiring a latrine

Though consumers may be motivated to install sanitation, they may meet insurmountable barriers. Important obstacles consumers cited in the Benin study were:

- lack of awareness and misunderstandings about how latrines function, safety issues, depth of pit, what to do when full, and cost concerns
- technical complexity of latrine construction; access to materials, skilled labor, expertise, special tools, etc.
- perceived poor design and performance of existing latrine products; longevity, safety and accidents, especially for children, pit collapse, and bad smells
- difficulty saving enough money and lack of options for financing or credit
- unsuitable soil conditions
- limited space

- extended family interaction problems, social norms and disapproval
- perceived benefits of open defecation for soil fertilization and privacy.

The most important of these constraints were lack of awareness and misunderstandings, technical complexity, difficulty saving money, and perceived poor latrine performance. Nearly 1 in 5 households had never thought of installing a latrine before the survey. Between 7-18 percent of non-adopters lacked good basic technical information and this lack was most pronounced in female-headed households (up to 40 percent).

Difficulty saving sufficient money was cited by 85 percent of non-adopter households and by 47 percent of adopters. Adopters frequently experienced delays of 2-3 years, or more, from the time of their decision to adopt to completion of their latrine, because of difficulties accumulating cash. However, only 11 percent of non-adopters said the cost of a latrine was too high.

Gender issues in sanitation demand

Women mostly wanted latrines for comfort, cleanliness, and convenience, rather than prestige, and valued the usefulness, suitability, and convenience of latrines more than males. They also rated all open defecation qualities, except privacy, lower than men, but had a more negative view of the smell of latrines.

On the other hand, male non-farmers were most attracted to the prestige benefits of a latrine. Male farmers rated latrines the lowest for most qualities, and expressed higher aversion to the perceived smell and dangers of latrines, and greater attraction to the fertilization and privacy offered by open defecation. Proportionally more of them also stated 'other priorities' as the main reason for non-adoption.

Despite their stronger motivation and appreciation of latrines, women faced more and higher barriers to adoption, so

that far fewer of them intended to install latrines than men. Women faced higher construction-related problems, and had less knowledge or understanding of how latrines function.

Implications for sanitation demand creation

The insights provided by the Benin study, combined with marketing advice for new product categories, (Box 2) suggest the following strategies could help to generate new sanitation demand:

Widely advertise and promote benefits and advantages of owning a latrine

A large-scale campaign, using a mix of mass media advertising, traditional channels, and face-to-face communication is needed to promote and advertise the benefits of installing sanitation. Messages must be crafted around consumers' felt needs for improved sanitation, with different



Pit collapse and cave-in, fueling perceptions of the dangers of latrines

messages tailored to different sub-groups. It is crucial to develop a local understanding of how individual households really feel about their sanitation problems and to be aware that, unlike most other everyday products, talk about defecation may trigger deeply-felt instincts of disgust and challenge ingrained social taboos regarding faeces. Marketing messages and latrine products must recognize and respect, these feelings.

Segmenting target populations for new demand

Clearly neither villages or individual households are alike when it comes to solving their sanitation problems. In the early stage of demand creation, it might be wise to start where that demand can most easily be stimulated. The lessons from Benin suggest concentrating initially in larger, denser, on-road villages and

Box 2: Marketing in the pioneering stage of a new product

In the early stages of marketing products in a new product category, there are four essential tasks required to generate demand:

1. Educate consumers about the new product category
2. Encourage trial usage
3. Build the distribution channel
4. Segment the market to better serve specific needs

Source: Haim (1997)

targeting larger, non-farm households with stronger urban ties and more income. Expansion and diffusion into smaller, neighbouring, villages can be more easily launched once demand, and a supply chain, have been established in the larger villages.

Create awareness and understanding of latrine technology choices

Consumers need to be educated and informed about different types of latrines, how they work, what they cost, what features they have, and how to acquire them. This is key for all consumers seriously considering installing a latrine. Product showrooms, tours of the homes of adopters, mobile promotions of latrine products, are all ways of providing opportunities to learn more about the benefits of improved sanitation and the technology to make this possible.

Lower the transactions costs of accessing good information, products and services

Consumers need help to progress easily and quickly through the steps in Box 1. Too much time and effort is often wasted just searching for basic information, finding providers, locating materials, and learning about technology options.

Providing simple-to-understand information, access to knowledgeable people, and financing opportunities available in one convenient location, a type of Toilet Information Center, will help consumers evaluate options, and make decisions much more quickly. Marketing strategies can be used to attract consumers to the information centers and to make their purchases as easy and conflict free. To address particular obstacles faced by sub-groups, such as female-headed households in Benin, targeted promotional events, such as showroom days, and well designed literature can be organized to target women.



Village health workers and the field research team who conducted the Benin study.

Improve the design, performance and range of products available

A key problem uncovered in the Benin study was the poor smell, safety and durability of current latrine models. An inventory of designs also showed a high degree of personalization and variation in styles and cost among early adopters.

To match individual needs and preferences, affordable and appropriate technologies must be developed if demand is to be stimulated on a significant scale. Public investment is needed to create incentives for local technical and institutional innovation which ensures that new approaches develop technologies to match the needs of different types of households.

Facilitate payment by instalment

For most families in the developing world installing a latrine is a major expense which will have to be financed from hard pressed budgets and compete with other household priorities. Household cash flow will often dictate if and when such an investment can be made. Even motivated households in Benin faced years of delay because of the almost insurmountable problem of saving up the full lump sum needed to begin construction.

Others were simply overwhelmed by the task of trying to save up for the full cost of a latrine. Establishing a system of payment by instalment and breaking down construction into incremental steps matched to manageable instalment payments would generate demand and lead to more rapid sanitation coverage.

Investigate demand in the target area

Formative or market research is critical to identify the market segments, motivational drivers, approaches to communication, and to assess purchase opportunities and the financial abilities of different types of households in a study area. A guide to doing this is in preparation and includes the methods shown in Box 3.

Box 3: Benin latrine adoption study methods

Mapping and modeling household adoption levels in villages

Village-level data sets, including spatial location, from the health and water ministries, and the census office were cleaned and merged in a geographic information system with 1993 data on the number of latrines installed in 521 villages, representing more than 75 percent of Zou's population. Multivariate modeling was then used to examine village factors associated with different levels of village latrine adoption.

Plotting household latrine adoption over time

Latrine adoption rates over time were constructed from retrospective data obtained from a survey in two sub-prefectures. Each household that had a latrine in the representative sample of households was asked for the year when their first latrine was installed.

In-depth interviews with household heads

Forty heads of households from seven villages were interviewed in depth using open-ended questions. Included were 7 women heads, of which 6 were adopters, and 33 men of which 19 were adopters. Content analysis was performed on the interview transcripts to identify the motivations for and constraints on latrine adoption.

Latrine design inventory

For the 25 adopter households in the in-depth interview sample (above), an inventory of construction and design features was made for the installed latrine and information collected on the cost and use of different materials. Adopters were asked to explain their choices. A wide range and variety of design features was revealed, demonstrating consumers' needs for choice.

Quantitative survey of household preference and choice

A survey of stated preference and choice to install a latrine was designed based on the in-depth work and administered to 320 heads of household in 6 villages to measure the level of demand for latrines. Attitude measurement methods were used to rate qualities of latrines and open defecation, the importance of different advantages and disadvantages, and measure presence of constraints on adoption.

See Jenkins (1999) for more details on the study methods and results.

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WSP Field Notes describe and analyze projects and activities in water and sanitation that provide lessons for sector leaders, administrators, and individuals tackling the water and sanitation challenges in urban and rural areas. The criteria for selection of stories included in this series are large-scale impact, demonstrable sustainability, good cost recovery, replicable conditions, and leadership.

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