

PEOPLE-CENTRED APPROACHES TO WATER AND ENVIRONMENTAL SANITATION

**Private sector supply chain for home toilets in rural areas**

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*Although poor demand is often cited as the major factor for low toilet coverage in rural areas of India, there is enough evidence that it is actually absence of adequate number of convenient supply points that limits coverage. This is particularly true of the densely populated Gangetic plain, where land use is intensive and population densities are high resulting in very little surplus space which people can use as open toilets. This paper describes an evolving strategy which encourages small scale entrepreneurs in rural districts of Bihar, India to establish supply points for a range of four alternate designs of leach-pit toilets costing between \$15 - \$145. Promotion campaigns are organised in the catchment of these supply points which informs the potential adopters regarding the “product” features. Trained motivators convey the orders to the production centres or orders are placed directly by the customers against cash advances and on completion of installation, full payment is made. The margin of profit for the “suppliers” is in the range of 15%. Since there are no capital subsidies for the private supply points, the indications are that this might be a relatively more sustainable option in the long run.*

**Does toilet coverage depend on subsidies alone ?**

Data on ownership of and access to sanitary toilets collected around the beginning of 1990s in India indicated that there was a substantial growth in toilet coverage taking place in the countryside, which could not be explained by the provision of fully or partially subsidised toilets. Extrapolation of data from 1991 Census and surveys conducted by the National Council of Applied Economic Research (1994) indicated that 6.1 Million households had installed their own toilets without any subsidy. If all the toilets installed after providing subsidies in the national programme and other subsidised programmes were accounted for, it was estimated that for every toilet installed through subsidies, 2.4 toilets were self-financed. This multiplier varies greatly across states. The figures for the State of Bihar are as follows:

**Table 1. Households with toilets in Bihar 1991/ 2001**

Description	1991	2001	Increase
No. of rural households ( in million)	12.25	12.66	0.41
No. of households with toilets	608,045	1,761,591	1,153,546
Percent households with toilets	4.96	13.9	8.94

Source: Census of India, 1991, 2001

Of the net increase of 1.15 m. toilets during the period, only about 22,000 were installed under the government programme – the Centrally Sponsored Rural Sanitation

Programme (CRSP), which provides subsidies for home toilets for the rural poor. This means that the multiplier for Bihar could be as high as 50 or more.

This increase indicates an important change that is taking place in the countryside: that people in rural areas are not necessarily dependent totally on subsidies to build their toilets. Increasing densities in population (880 persons / sq km in 2001), drastically reduced or encroached common land in rural areas and increased areas under cultivation means that the little space where people could perform a routine act like defecation is becoming more and more scarce. The problem is particularly acute and distressing for women, due to lack of privacy. Toilet habits are changing: from village commons, people have moved to roadside, as anyone travelling in Indian countryside in the late evenings is bound to notice. Therefore, toilets are becoming a necessity, not for health reasons alone but also for privacy.

Clearly, there is a substantial section of population which is motivated enough to install toilets ( for whatever reasons) and which does not look up to subsidies available from government programmes. The absence of adequate “supply points” is one reason why this need is not satisfied. The paradox is that enough “suppliers” are not there in the countryside because there is no visible demand. In spite of the fact that the substantially cheaper leach pit design (as opposed to the much more expensive septic tank option) have been introduced in this State- this is the home of the famous Sulabh Sauchalay- the market does not seem to have confidence in this cheaper option. It is possible that because the leach pit design was promoted in the subsidized programme, the technology itself was not rated very highly by the people

at large. Indifferent quality of construction in the subsidy-driven (and therefore, not demand based) programme could have contributed to this perception.

### Rural sanitary marts: Moving away from subsidies

The Rural Sanitary Mart (RSM) as a stand-alone concept or combined with a Production Centre was the first attempt in the national programme to move away from subsidies. This followed recognition in the national government policy on rural sanitation- the CRSP- as early as in 1993 that a stand-alone subsidy-propelled programme would not be able to help reduce the huge gaps in coverage in the rural sanitation sector. By the late 90's RSM had become a feature of Rural Sanitation Programme (RSP) in many Indian states. Typically this involved setting up a production centre or a market outlet for low-cost sanitary hardware in rural growth centres. UNICEF had been advocating for establishment of Rural Sanitary Marts from 1992 onwards primarily guided by the initial success reported from Uttar Pradesh and from Medinipur in West Bengal.

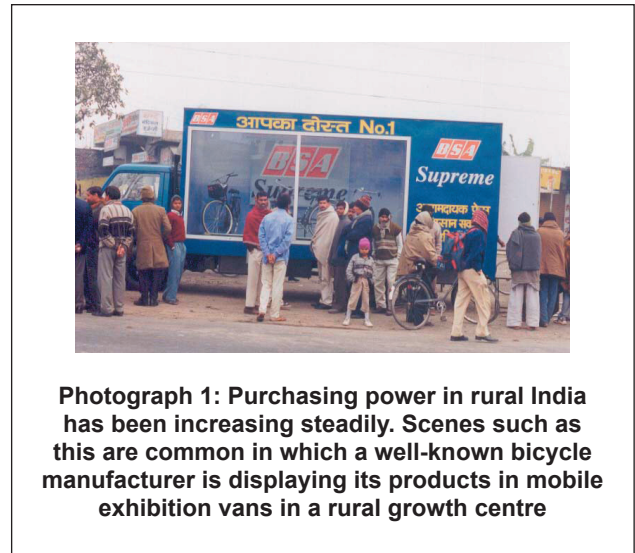
RSMs were expected to complement government efforts and accelerate toilet coverage by affording easy access to construction material, trained masons and tendering advice on appropriate technical options and costs to enable potential adopters to make informed choices. It was also expected that they must operate as viable concerns after withdrawal of initial external support. (Thus, the number of toilet sets sold or toilets installed outside the government supported subsidized programme becomes a generic indicator of the success of the concept of RSM).

In other words, the sustainability of an RSM rests crucially on continued production of toilet components and their sales. It also requires an entrepreneurial outlook to generate demand on a continuous basis, which is difficult to ensure within a typical government or NGO set-up neither of which work in an "enterprise" mode.

In 1999 the evaluation of UNICEF's water and sanitation programme in India over thirty years pointed out that "the concept was not as successful as many had hoped. Some RSMs had gone out of business, while those still active were either in deficit or barely breaking even. One of the more successful ones claimed its success was attributable to being slightly cheaper than the private sector, which belies the idea of a gap in the market." (Learning from experience: Evaluation of UNICEF's Water and Environmental sanitation Programme in India, 1966-1998: UNICEF Headquarters, New York, Nov 2000; p.20)

### Private sector supply chain: An alternative

The private sector supply chain initiative rests on the premise that there is a strong demand for toilets in rural areas, which is latent. The demand is not currently met simply because



**Photograph 1: Purchasing power in rural India has been increasing steadily. Scenes such as this are common in which a well-known bicycle manufacturer is displaying its products in mobile exhibition vans in a rural growth centre**

adequate supply points are not there. Since the market is dormant, the process can be triggered off by establishing a sufficiently large number of supply points and offering a convenient range of toilet options. The supply chain can be formed by a group of entrepreneurs who have to be motivated to invest in installation of toilets. Once this group is motivated and the constituents understand the technology, the "product" (or rather the service) has to be standardised. A range of options have to be provided to cater to the broadest possible sections of adopters.

Increased revenues would induce the entrepreneurs to increase sales of toilets which, would mean an increase in toilet coverage. This is one of the major objectives of the rural sanitation programme anyway. Besides, when a person invests his/her own money in building a toilet, it is reasonable to assume that the toilet will be used. There is therefore no need to monitor "use" intensively, which is a key issue in most rural sanitation projects.

The rationale for private sector intervention can be argued as follows:

1. There is a latent need for toilets in densely populated rural areas, such as the river-plains of Bihar. The need does not get translated to demand simply because there is no convenient price range to suit the paying capacity of the average rural population.
2. There is very little knowledge of leach-pit pour-flush type of toilet in the rural areas, in spite of the fact that the design has been introduced in India on a large scale for nearly two decades. People still think that the only "good" toilets are the septic tank design, which are far too expensive to build (Rs 25,000 /- or about \$ 530); masons who are the main "advisers" or counselors for any construction work in the rural areas reinforce this belief because the larger the value of construction, the larger is their share in the transaction.
3. On the other hand the market for toilets, in terms of the crude gap, is huge. For instance, in Bihar the coverage by the beginning of 2001 was around 14% (Census, 2001).

This means that of the approximately 13.5 million rural households, only 1.89 m have toilets. Let us assume that this number does not include any BPL\* households. The percentage of households above poverty level in Bihar is estimated at around 57% and it is safe to assume that at least the top half of this segment i.e. nearly 30% have the necessary surplus income and can afford about Rs 4000-6000 to build a fully finished toilet. In that case there is potentially an immediate market for at least 2.16 m. toilets.

4. But this market has to be created. It is not a ready market. Once entrepreneurs are made aware of the potential size of the market, they can explore the opportunities.
5. It is extremely difficult to demonstrate the health benefits of using sanitary toilets to a population in the short run. Therefore the motivation would essentially be convenience and privacy. The fully finished twin-leach pit four flush sanitary toilet may have to be repositioned as an asset associated with "higher social status", since they have been somewhat devalued in the perceptions of potential adopters. This may seem to counter the interests of the poor and disadvantaged groups, but in this case, ends justify the means.
6. Adoption of toilets is essentially a social behaviour and the socio-economically disadvantaged groups would model on the behaviour of the socially higher reference group, somewhat like the hundredth monkey parable. Once a "critical mass" is reached, toilet adoption would accelerate.

## The process

The process of establishment of private sector supply chain follows the following sequence:

- Survey to assess the existence of enterprise in the district. This is conducted by the Institute for Entrepreneurship Development (IED) which is an autonomous organisation partially funded by the Department of Industries, Government of Bihar whose mandate is to promote small enterprise in the State. The survey lists out dealers in cement and building hardware (asbestos sheets, sanitary fittings, MS rods etc) as well as small production centres which manufacture troughs, water tanks, pipes, ventilator grills etc., using cement concrete. The survey provides information on the following aspects:
  - Estimate of the size of off-take of RCC and ceramic sanitaryware in the region
  - Location and catchment characteristics (of the potential supply chain)
  - Capital invested, turnover and profitability of units
  - Profile of the entrepreneurs
  - Possibilities of institutional tie-up and receptivity of the sector to collaborate and engage with the Total Sanitation Campaign in the district
  - Profile of the typical consumer who finances his own toilet

The survey in Muzaffarpur was carried out between January and April 2001 in the course of which 86 hardware dealers/cement fabrication units in different rural pockets of the district were identified.

- Identification and short-listing of potential production centres. This involves discussion with the most motivated entrepreneurs from among those listed in the survey. Only those who appear convinced and are willing to invest their own capital are shortlisted. Brief interviews and follow up visits are made by IED's field staff to ascertain how many of these entrepreneurs are willing to be associated with the rural sanitation programme. In Muzaffarpur 40 such persons were short-listed. They were either dealing in cement, asbestos sheets, steel rods etc or were running workshops for making cement rings, ventilators, flower pots etc. It was explained clearly in these meetings that no capital support would be provided for starting production of toilet components.
- Induction workshop: The short-listed entrepreneurs were invited to participate in a two day workshop in which the objectives of the rural sanitation programme, the technology of leach pit toilets and various options therein and the size of market in Muzaffarpur district were discussed in detail. The participants were asked to pay a token fee of Rs. 100/- mainly to restrict the participation to those genuinely interested. This workshop was held in June 2001 in which 15 persons participated. The current toilet coverage in the rural areas, gaps and potential market-both subsidised segment provided for in the TSC and the non-subsidised segment were discussed to motivate the potential entrepreneurs.
- Training of masons: At the next stage, the potential entrepreneurs identified masons who were to be trained in the techniques of construction of four designs of toilets. The masons were usually already working with the respective units or are attached as a part of the market service network. A five-day training schedule is adequate to ensure an understanding of the techniques since these are always practicing masons.
- Exposure visit to convince the entrepreneurs regarding the commercial viability: A seven day visit is organised to another state where large-scale production-installation is going on (West Bengal and Orissa) to increase the level of confidence of the group, during which they can get first hand experience of the market in another state and get answers to all apprehensions they might still have regarding the market as well as the technology itself.
- Identification of motivators and their training: After their return from the exposure visit, the group identifies motivators in their own catchment areas. The motivators are young, dynamic persons who "sell" the toilets in the villages by contacting potential adopters, and collect order for toilets. Typically each entrepreneur identifies 10-15 motivators. Motivators are trained for two days in the basics of sanitary toilets particularly in material used and price. They are also given some marketing tips. The



**Photograph 2: Production Center in Bochaha Community Development Block headquarter in Muzaffarpur district of Bihar**

motivators are paid a “commission” of Rs 50 for each order by the Production Centres themselves from their profit margin.

- **Demonstration units:** In order to show the potential adopters the actual models on offer, each production centre constructs the four models of toilets in their own premises with the name of the model and the cost displayed along side. The cost of constructing these models is provided as a (marketing) support through IED. To maintain uniformity and quality of the construction, shutterings and moulds for manufacturing rings for lining of pits is provided also as material support.
- **Communication campaigns:** Intensive communication campaigns are then organised in the catchment of the Production Centres by the IED. This includes large public meetings, small group contacts and hoarding, which provide information on the range of toilets, their features and costs. Additionally, leaflets, posters and brochures are also provided to the production centres by the IED.
- **Toilet construction:** The production centres then start planning their production based on “orders” confirmed by the motivators. A receipt book is maintained at each PC in which the amount advanced (usually at least 50% of the cost) is recorded along with address of the adopter. On completion of construction, the PC obtains the remaining amount against each order from the adopters.
- **Monitoring:** The IED monitors the number of orders procured and toilets units completed every month from the order and receipt books of each PC. This data is available on a computerised database.

### The range of toilet options:

Four designs are currently promoted by the private sector supply chain. Since field investigations have revealed that the label “low-cost” tends to undermine the value of the product, each model has been given a brand name to address different segments of the market. The brand names were decided in a training programme on social marketing which the programme managers from IED and UNICEF had participated :

- Single-direct unlined pit ; brand name- Janata Cost: Rs. 625 ( \$ 15 US)
- Single direct pit lined with RCC rings ; brand name - Sugam: Cost : Rs 1600 ( \$ 36 US)
- Single pit lined with provision for extension of second pit with junction chamber; brand name- Suvidha–1 Cost: Rs 2820 ( \$64 US)
- Two pit lined with RCC rings but without superstructure; brand name- Suvidha –2 Cost: Rs 4000 ( \$ 90 US)
- Two pit lined with RCC rings and fully finished with brick masonry superstructure; brand name: Pratistha Cost :Rs 6500 ( \$ 145 US)

There are 11 production centres in Muzaffarpur district which were commissioned in January 2002. These production centres have now registered themselves (November 2003) as a Cooperative Society. Together these production centres had installed a total of 1694 toilet units – all of them self-financed over a two-year period. However, the district requires more supply points to cater to the entire market.

There are 25 other entrepreneurs who have shown keen interest to join the group. After the IED team assesses their capability the supply chain will expand in Muzaffarpur.

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