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# **CASE STUDIES ON PROMOTION OF APPROPRIATE SANITATION SYSTEMS**

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**May 1995**

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## INTRODUCTION

In this paper different case studies are presented in which appropriate sanitation systems for safe excreta disposal have been introduced. The aim of this paper is to identify the different methodologies that have been used to promote sanitation systems to the public.

In order to distinguish between different methodologies a number of factors will be reviewed. These factors are: initiator of the programme, methods used for promotion, health education, materials used, contributions made by the community, unit of decision and selection of technology.

- Initiator of the programme.

This factor indicates the agency introducing the programme. This could be a local NGO, the government, or a foreign donor.

- Method used for promotion.

This factor presents the method used to promote the programme. Usually extension workers contact communities and inform them about the programme. In some cases also a campaign is organized to promote improved sanitation on television, on the radio and in the newspapers.

- Health education.

When a household adopts a sanitary system health benefits will not become manifest unless the facilities are kept clean and users wash their hands after defecation. Also all households in the area need to improve sanitary facilities in order for health benefits to materialize.

This factor indicates what role hygiene education plays in the programme.

- Materials used.

Materials used for promotion and health education could be plastic models of the technology to be introduced, slides, flipcharts or posters and leaflets.

- Contributions.

This factor expresses how the household or community contributes to the programme.

- Unit of decision.

This factor expresses on what level in the community the decision is made whether or not to join the programme.

- Technology choice.

This factor describes whether only one technology is promoted in the project or users can choose from different technological options to improve sanitary conditions.

- Urban/Rural.

This factor indicates whether the programme was implemented in a rural or urban area. As the circumstances in urban or rural areas greatly differ, it is important to make this distinction and differentiate between the methodology used to promote sanitation or the type of technology promoted.

In the first part of the paper a short summary will be given of each of the cases. In the second part the factors are set out in tables to classify the methodologies that have been applied in the programmes and to identify characteristics of programmes promoting appropriate sanitation systems.

## CASE - SITES AND SERVICES IN INDONESIA

General outline: In 1977 pour-flush latrines were installed on 8,500 plots in the Klender housing scheme, which was carried out in a sub-urb in Jakarta (Kruiff, 1987). The programme was financed by the first World Bank Urban Loan to Indonesia. The planners preferred to install a sewerage system with waste stabilization ponds, as the population density was 335 persons per hectare and soil conditions were unfavourable, as the soil was clay. However, as a conventional sewerage system would not be affordable sanitary engineers chose for an on-site system, which only cost 25% of the conventional sewerage and is also less costly in operation and maintenance.

In this system, a traditional pour-flush toilet is connected to a small leaching pit. The leaching pit is 2m deep and has a diameter of 0,8m, which results in a volume of 1,000 liters. Sullage is disposed of in footpath drains.

After the housing plots had been inhabited for seven years UNDP carried out an evaluation of the sanitation system. A survey was done at 500 households.

It appeared that people found the leachpits too small, as they filled up too fast. 70 percent of the households had enlarged the pit so it could hold 4,000 liters. The larger leaching pit would be located below the floor of the house, as the land above the old pits next to the toilet was needed for development. A small opening was left to enable future desludging. In 1984 the cost of enlarging the pit to a volume of 4,000 liters was Rp 100,000 (US\$100). The developer had invested Rp 50,000 (US\$50) in the construction of the smaller pits with a 1,000 liter volume (GNP per capita was US\$580 in 1984).

The municipality provides desludging services and charges less than Rp 10,000 (US\$10) for desludging. The municipality has desludging trucks with a 2.5m<sup>3</sup> volume and a hose with a length of 80m. After five years of use 17 per cent of the enlarged pits and 50 per cent of the non enlarged pits needed to be desludged. A non-enlarged desludging pit needs to be desludged every 300 days once it has been emptied for the first time. Also the non-modified leaching pits rapidly fill up with liquid due to the clogging of the natural soil surface. This is not so for larger leaching pits.

### References:

- Kruiff, G.J. de (1987): A feasible sanitation alternative. In: Developing World Water. Grosvenor Press, Hongkong.

<u>Programme initiated by:</u>	In 1977 by foreign donor
<u>Promotion:</u>	By delivering sites and services
<u>Hygiene education:</u>	No
<u>Materials used:</u>	None
<u>Contributions:</u>	Costs of latrine are included in the rent of the plot
<u>Unit of decision:</u>	Part of the house construction
<u>Technology selection:</u>	Initiator of the project selects technology
<u>Urban/rural:</u>	Urban



## CASE - THE IMPROVED LATRINE PROJECT MOZAMBIQUE

General outline: Because of intervention of the government by a massive national latrine-building campaign a coverage rate of 72 percent in urban areas had been attained in Mozambique by 1984 (Paqui, 1988). However, the quality of the constructions was bad as some structures collapsed and the wooden floor could not be cleaned which meant a health hazard for the user.

Since 1979 UNDP and IDRC supported research to develop technically sound and hygienic latrines (Brandberg, 1985). It was decided to decentralize production and set up workshops in neighbourhoods. In 1980 the first pilot workshop was set up just outside Maputo city. In this workshop people were trained how to produce latrine slabs and construct latrines. Trained latrine builders were encouraged to set up their own workshop or start a cooperative.

Slabs cost US\$10 dollars each in 1985, which covered the costs of material, of labour, of equipment and of administration. The GNP per capita was US\$160 in 1987 (no earlier data available).

Public hygiene education was supported by posters, leaflets and puppet theater.

In the beginning of the programme no attempts were made to push sales, even though local authorities were informed about the availability of latrine slabs. Despite lack of promotion sales went up from less than 20 in 1980 to 120 in 1982 in the pilot workshop of Maputo.

At the pilot workshop in Maputo 350 people worked as professional latrine constructors and community motivators in other communities.

In 1988 there were 13 cooperatives in Maputo. The total production of the cooperatives was 40,000 latrine slabs since 1979. In other cities 3 cooperatives and 6 workshops were set up with a total production of 5,000 latrine slabs since 1979 (WHO, 1988).

### References:

- Brandberg, B. (1985): The latrine project, Mozambique. IDRC Manuscript report. IDRC, Ottawa, Canada.
- Paqui, H. (1988): Low-cost sanitation in Mozambique. In: Waterlines, vol.7, no.1.
- WHO (1988): Water supply and sanitation in Mozambique. Inter-agency meeting on water supply and sanitation. Joint planning 28-30 November 1988. Harare, Zimbabwe.

<u>Programme initiated by:</u>	The national government and foreign donors.
<u>Promotion:</u>	Workshops sell slabs in neighbourhood. Demonstration model is built at workshop.
<u>Hygiene education:</u>	By puppet theater and by distributing posters and leaflets.
<u>Materials used:</u>	Posters, leaflets, puppets
<u>Contributions:</u>	Household pays full price
<u>Unit of decision:</u>	Household
<u>Technology choice:</u>	One technology is presented
<u>Urban/rural:</u>	Urban

## CASE - RURAL SANITARY MARTS IN INDIA

General outline: During the Water Decade the policy of the Indian government to promote sanitation coverage was to provide subsidies to individual households. This strategy proved to be very expensive and did not lead to a satisfactory increase in latrine owners. As a result, the Indian government looked for alternative strategies.

In 1991 UNICEF initiated a new strategy of Rural Sanitary Marts (RSM). The aim of this strategy was to commercialize the supply of sanitary facilities and to promote private initiative (Global meeting of UNICEF WES professionals). The function of the RSM is twofold. On the one hand RSMs sell construction materials for latrines, such as pans, traps, footrests of different types, pit covers and on the other hand items related to the use of latrines, such as soap or brushes for cleaning. On the other hand RSMs serve as a resource centre and advise users which sanitation system to choose. Also RSMs keep a list of addresses of trained masons, so that households can approach them if they want support for the construction of a latrine.

A RSM could be set up through the government, private sector channels or established NGOs. However, an implementing agency should have commercial experience and should be located at strategic places so as to also reach the rural hinterland.

UNICEF provides a subsidy for the first investment of starting a RSM. The amount is 25% of the expected turn-over in the first year with a limit of 50,000Rs (1575US\$) (Visscher, van Wijk, 1994). The GNP per capita was US\$330 in 1993. Also UNICEF provides management training for shopkeepers.

The first RSMs were set up in Uttar Pradesh in 1991 and they can now also be found in other states. The government of India supports the new strategy by providing financial assistance for establishment of RSMs.

### References:

- Global meeting of UNICEF WES professionals. Rural Sanitary Marts. Unpublished.
- Samantha, B.B. (1994): Rural Sanitary Marts. UNICEF, India country office, Delhi.
- Visscher, J.T, Wijk, C van (1994): Travel report Nepal-India, may 1994.

<u>Programme initiated by:</u>	In 1991 by foreign donor
<u>Promotion:</u>	RSMs sell latrines and components
<u>Hygiene education:</u>	By giving advice on hygienic use of latrines
<u>Materials used:</u>	None
<u>Contributions:</u>	User pays full price
<u>Unit of decision:</u>	Household
<u>Technology choice:</u>	User chooses from different options
<u>Urban/rural:</u>	Urban and rural

## CASE - CONDOMINIAL SEWERAGE SYSTEM IN BRAZIL

General outline: In 1981 a low cost sewerage system was introduced in two slum settlements Rocas and Santos Reis in Natal in the north-east of Brazil (Hart, 1991). The design for this unconventional type of sewerage was developed in the early 1980's by the Sanitation Research Unit of the State Water and Sewerage Company (CAERN).

Instead of connecting each house separately to the main sewer line, the system connects the houses in a cluster with small diameter pipes and connects the cluster to the main sewer line. By laying small diameter pipes in people's backyards and in small alleys a lot of costs can be saved.

To implement the programme CAERN approached communities and meetings were organized. The advantages and disadvantages of conventional and shallow sewers were explained. One cluster of houses was selected as a pilot area. Small contractors constructed the sewers connecting the houses in the pilot cluster and large contractors the main sewers. The inhabitants of the 28 houses in the pilot cluster agreed to have pipes and a connection block to the sewer being laid in their backyards.

People were encouraged by the project staff to visit the pilot cluster and talk to the people who were connected to the new sewer system. As a result of this introduction the design was accepted and many more people wanted a connection.

The investment made per household was US\$325 (UNCHS/HABITAT, 1986). Full cost recovery is achieved by a surcharge of 40% on the water bill. The GNP per capita was US\$1,720 in 1986.

Inhabitants are responsible for operation and maintenance of the length of sewer in their backyard. An inspection chamber is made for this purpose at each connection. CAERN takes responsibility for maintenance of the main sewers (Sinnatamby et.al., 1986).

In Rocas and Santos Reis 97 percent of the inhabitants were connected to the system. The use of this system is now widespread and can be found in many cities in Brazil. Also in Orangi, a settlement in Karachi in Pakistan, the system has been adopted.

### References:

- Hart,C. (1991): Classy "condo" sewers for Brazil's urban poor. In: Source vol.3, no.1, p.16-20.
- Sinnatamby, G.S. (1988): Shallow sewer system - a low-cost sanitation option. In:

Developing World Water. Grosvenor Press International, Hong Kong.

- UNCHS (1986): The design of shallow sewer systems. Nairobi, Kenya.

<u>Programme initiated by:</u>	In 1981 by the government.
<u>Promotion:</u>	CAERN contacts communities.
<u>Hygiene education:</u>	No
<u>Materials used:</u>	None
<u>Unit of decision:</u>	Household
<u>Contributions:</u>	Household pays all by surcharge on water bill.
<u>Technology selection:</u>	One technology option is presented.
<u>Rural/urban:</u>	Urban

## CASE - THE BALDIA SOAKPIT PILOT PROJECT IN KARACHI, PAKISTAN.

General outline: In 1979 in Baldia, a township in Karachi, a pilot project was started to improve the overall health in the communities by improving sanitation facilities (Bakhteari and Wegelin-Schuringa, 1992).

The Karachi Metropolitan Corporation who was responsible for the environmental upgradation of sub-standard areas in Karachi sought help from WEDC to design a sanitation device which was appropriate for the situation in the neighbourhoods. Funding was provided by UNICEF and the Pakistan Jaycees (a service organization like Rotary or Lions). WEDC designed an improved soakpit latrine.

In the first phase of the programme the Turk colony was designated as a demonstration area and an approach was developed in which a technical and social oriented strategy were combined.

In the second phase of the programme the Turk Welfare Society took on the responsibility of promotion of the programme to other communities. The community organizer of the Turk Welfare society would go to other areas and inform people about the project. The existing community organizations in the area would be contacted and a meeting would be organized. Members of the Turk Welfare Society would explain the people about their experiences in soakpit construction and organizing the community. They would show slides and people from the community could ask questions. After the introduction meeting a sanitation committee would be formed in the community. Households that needed support in subsidies would be identified. The less subsidy a community needed the higher their priority for the programme. In 1981 the construction costs of a double vault soakpit latrine were Rs 1200 (approximately US\$90). The GNP per capita in that year was US\$260. During construction the social organizer of the programme informed the women in the households on maintenance of the latrine and the importance of hygiene.

After six years a local NGO was set up to continue the project.

A survey organized in 1985 indicated that by the end of the project a coverage of 80 percent had been reached and that most of the latrines were still in use and functioning well.

### References:

- Bakhteari, Q.A, M. Wegelin-Schuringa (1992): From sanitation to development: the case of the Baldia soakpit pilot project. Technical Paper Series 31, International Water and Sanitation Centre, The Hague.

<u>Programme initiated by:</u>	In 1979 by the local government
<u>Promotion:</u>	In the first phase a demonstration area was designated. In the second phase the project was transferred to other communities.
<u>Hygiene education:</u>	Community organizer gives hygiene education at time of construction.
<u>Materials used:</u>	Slides
<u>Contributions:</u>	Some households would receive a subsidy from UNICEF, and other better-off households would only receive limited material or technical support. Masons are paid by UNICEF.
<u>Unit of decision:</u>	The community
<u>Technology choice:</u>	One technology option is presented
<u>Urban/rural:</u>	Urban



## CASE - PROMOTING SANITATION IN A DEMONSTRATION VILLAGE IN UGANDA.

General outline: In the 1960's in Uganda the latrine coverage was fairly high, but when colonial laws and by laws in which people were obliged to construct latrines stopped being enforced, the coverage rate dropped fast. WaterAid and the Jinja District Medical Office (DMO) decided to promote sanitation in the district by starting in a demonstration village (Causer, 1993). It was expected that people from other villages would come and see the changes in the demonstration village and decide to improve their own sanitation situation by upgrading their existing latrine or having a new one constructed.

A village was selected and two inhabitants, a man and a woman, were trained as a mason (*fundi*). They were taught how to make different types of latrine slabs and how to upgrade latrines. Training included producing a full-sized latrine slab, a smaller "sanplat" (sanitation platform), and plastering an existing mud floor in a latrine. In 1990 the full sized latrine slab cost US\$7.5, the sanplat US\$2.6 and plastering a mud floor US\$0.70 (GNP per capita was US\$280). After the training the *fundis* started producing latrine covers in the village. The health assistant was responsible for a health education programme and would stimulate the villagers to upgrade their existing latrine or constructing a new one.

In the first phase of the project the *fundis* charged the full price for the sanplats. As the government's water and sanitation programme working in the same area started subsidizing the price of the sanplat in order to stimulate people to improve latrines the price of the sanplat was reduced to the same level in the demonstration village. The sanplat now cost US\$0.60 and demand greatly increased. Upgrading existing latrines by plastering mud floors was abandoned.

In 1989 the coverage rate in the sub-county had been 30 per cent. In the demonstration village it was found that in 1991 out of 151 households, 146 had latrines. No data are given of the effect of the demonstration village on the surrounding communities.

References:

- Causer, H. (1993): Low cost techniques for improving latrines in a demonstration village in Uganda. In: Waterlines, vol.11, no.3.

<u>Programme initiated by:</u>	In 1990 by local government and foreign donor.
<u>Promotion:</u>	In the village the health worker promotes sanitation. Promotion to other villages had to take place through the demonstration village, no active strategy was adopted to inform people about the techniques.
<u>Hygiene education:</u>	Health worker in village is responsible for health education.
<u>Materials used:</u>	None
<u>Contributions:</u>	User pays for plastering existing latrine cover or concrete slab. User pays skilled labourer to dig the pit. Price of sanplat is subsidized by a foreign donor.
<u>Unit of decision:</u>	Household
<u>Technology choice:</u>	User chooses from different options
<u>Rural/urban:</u>	Rural

## CASE - SANITATION IN HENAN PROVINCE, CHINA

General outline: In China the coverage rate of latrines is high, but only a limited number of latrines are hygienic. A nation-wide survey held in 1993 by the National Patriotic Health Campaign Committee (NPHCC) indicated that of the 85.9% of the households which have a latrine, only 7% meet hygienic standards (De Jong, 1995).

Since the 1950's the NPHCC has been working on the promotion of latrines. Activities undertaken include organizing experience exchange meetings and clean city campaigns.

In Henan province in the late 70's Mr Song Lexin, physician of the Health and Epidemic Prevention station of Yucheng county and Mr Xu Guoxiong, chief physician of the provincial Health and Epidemic Prevention Station developed a double urn latrine which composts the excreta into manure. Excreta are fermented in the first urn and overflow into the second urn, from where the contents can be taken out and used as manure. Mr Song Lexin and Mr Xu Guoxiong had introduced the double urn latrine in a demonstration village. The success of the latrine was reported to the minister of public health and deputy director of NPHCC, who went to visit the demonstration village with the directors of the public health bureaus of the 12 provinces. After this mission a campaign was launched to promote the construction of double urn latrines in Henan province.

At provincial level a target number for the construction of double urn latrines was agreed upon and for each county, township, village and cluster within villages a target number was set. Local authorities were responsible for the promotion of the latrines and also village leaders, teachers and village doctors were expected to construct the latrine and in that way promote the use of latrines. Technical assistance teams visited the villages to train masons and technicians in the construction of latrines.

In 1991 in Nanle county 600 technical staff were trained, 2 to 3 masons in each village. The latrine was promoted on the radio, 70,000 printed materials were distributed and the slogan "improve our latrines and we can compete with the city" was put on the walls and on banners. The goal set by Nanle county was the improvement of 38,000 latrines. In one year the number of improved latrines had reached 50,000.

In Henan province in 1991 one million families had a new latrine or their existing one improved. In 1992 the additional number of families improving their latrine had gone up to 1.1 million. As reasons for adopting the latrine women mentioned the absence of flies and smell. Men on the other hand mentioned the good manure, which led to better crops (De Jong, 1995). In 1993 the success of the latrine promotion campaign changed when the

premier announced that burdens for the peasants should be avoided. When the premier declared that improving sanitation facilities was not considered as a burden the programme could be continued.

In June 1994 a total of 4.03 million latrines had been improved, serving 23.1 percent of the population. So far, the emphasis of the programme has been on construction of double urn latrines. It is planned to pay more attention to proper use and cleaning of the latrine. The NPHCC and the Ministries of Public Health, Agriculture and Communication are planning a health education campaign for 900 million farmers which will also focus on water and sanitation. Also arrangements need to be made for the poorer farmers, who cannot afford the present cost of the latrine (60 to 140 Yuan or US\$7 - US\$140 in 1993, GNP per capita was US\$370).

#### References:

- Jong, D. de (1995): Travel report. Mission to document the improved latrine promotion experience in Henan province, 29 December 1994 - 26 January 1995.

<u>Programme initiated by:</u>	In 1989 by the government
<u>Promotion:</u>	Local authorities promote the latrine. Technical teams visit villages and train masons. The latrine is promoted on the radio and in the newspapers.
<u>Hygiene education:</u>	None
<u>Materials used:</u>	Flyers, banners, slogans painted on walls
<u>Contributions:</u>	User pays the full price of a latrine
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Only one design is promoted
<u>Rural/urban:</u>	Rural

## CASE - STRATEGIC SANITATION PLAN IN KUMASI, GHANA

General outline: The city of Kumasi has a population of 700,000 people. Most of the inhabitants do not have hygienic latrines. 40% of the inhabitants use public latrines, 25% use bucket latrines, 25% use septic tanks, 5% use pit latrines and 5% of the population uses the bush (Saïda-Sharouze, 1994). The responsibilities for sanitation were divided between several institutions.

In 1989 a project was initiated which aimed to develop a Strategic Sanitation Plan and test this in a pilot area. The project was financed for the larger part by UNDP, ODA and IBRD and for the remaining part by the Ghana government and the Kumasi Metropolitan Assembly (KMA).

The project started with an assessment of the situation which included a review of the socio-economic conditions, physical infrastructure, existing sanitation facilities, preferences of households for different technology options and a willingness-to-pay survey.

Based on these data a Strategic Sanitation Plan was prepared and recommendations formulated to improve sanitation. At the institutional level it was suggested to establish a new institution for the management of human waste, the Waste Management Division (WMD). Also a training network centre was set up to train trainers of the village sanitation committees, to do research into technologies, inform water and sanitation specialists and train NGO project personnel.

Three sites were selected for pilot projects, one in the indigenous areas where the population density varies between 80 to 250 persons per hectare, one in the tenement areas where the population density varies between 300 and 600 persons per hectare and one in the central business district where a new approach for the management of public toilets was tested.

In the indigenous areas multiple families generally rent a building and sublet one or two rooms to other family members. For this area on-site sanitation (VIP latrine) was presented as the best option. The project staff had numerous meetings with representatives of the sub-metropolitan assembly, the chief and elders in the area. Sanitation committees were selected by the community members. Members of the committee were responsible for promoting the construction of latrines and collecting the monthly installments the people pay for their latrine. The project team and the sanitation committee promoted the use of latrines by organizing visits to households who had already constructed a latrine in the programme, by showing graphical presentations and using audiovisual aids. Also influential women of the communities were selected to promote latrines in order to involve women in the programme.

In 1991 a single pit latrine cost US\$126 and a double pit latrine cost US\$421. Households paid 64% (US\$ 80 or US\$270) of the cost, as they had indicated in the willingness to pay survey. The GNP per capita was US\$390. After an initial payment of 10 to 20 percent the remaining amount is paid in monthly installments over a period of 2 to 3 years. The monthly visits to the households by the members of the committee give them the opportunity to give technical advice on the construction or advice the users on maintenance and good use of the latrine.

In the tenement areas residents rent rooms in two storey houses and the population density is much higher. It was suggested to construct simplified sewerage as the area is densely populated and water use is fairly high. A sanitation committee was selected from community members and meetings with local leaders were organized. The project team would visit the community to explain about the sewerage system and ask the community members to participate in the programme. The users of the new sewerage system bear the cost of house connections to the collector sewers. To recover the costs a sanitation tax, based on the amount of water a household uses, will be added to the water bill. In Accra this tax takes up 35% of the water bill. The sewers are constructed by a contractor. No information is given on how many households were connected to a sewer system or how much money needed to be invested.

In the pilot project for public latrines the responsibility of management is handed over from the municipality to private contractors. The charge for using the latrine has gone up from 10 cedis to 20 cedis (US\$ 0.02) per visit. The private contractors pay part of the revenues to the municipality who will check whether the facilities are kept clean and well maintained. In 1990 twelve public latrine sites serving 20,000 people were given in hands of five private contractors (Kinley, 1992).

In March 1994 240 units of home latrines had been constructed in the three pilot zones and 6 blocks of public latrines were completed in the central business district. Outside the project 20 public latrines were upgraded by the metropolitan assembly.

## References:

- Kinley, D. (1992): Kumasi's people pay for better sanitation services. In: Source, vol. 4, no.1.
- Regional Water and Sanitation Group - West Africa. UNDP/World Bank water and Sanitation Program (1992): Sanitation planning: a challenge for the 90's.
- Saïdi-Sharouze (1994): Ouagadougou and Kumasi sanitation projects: A comparative study. UNDP - World Bank Water and Sanitation Program. Regional Water and Sanitation Group - West Africa.

<u>Programme initiated by:</u>	In 1989 by government and foreign donors
<u>Promotion:</u>	Home latrines: Project staff and sanitation committee contact community Public latrines: Private sector provides services
<u>Hygiene education:</u>	No
<u>Materials used:</u>	Home latrines: Audiovisual materials, graphic materials Public latrines: None
<u>Contributions:</u>	Home latrines: Users pay 64% of the costs (US\$80 or US\$270) Public latrines: Users pay per visit
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Home latrines: User chooses from two options. Public latrines: One technology option
<u>Rural/urban:</u>	Urban

## CASE - SOCIAL MOBILIZATION IN BANGLADESH

General outline: In 1986 the Bangladesh Rural Water Supply and Sanitation Programme, which had so far mainly been occupied with the provision of safe water was abandoned, because health benefits did not materialize (Boot, 1995).

The Integrated Approach started in 1986 in two thanas and has now expanded to other areas. Just as the Rural Water Supply and Sanitation Programme, the programme was implemented by the Department of Public Health Engineering (DPHE). The programme aimed to stimulate groups who applied for a tubewell to build sanitary latrines and adopt hygienic habits such as washing hands after using the toilet. During the first two years of the programme, each of the at least ten applicants for a tube-well were obliged to build a latrine, but later this condition was abandoned, as people's only motivation to build a latrine was obtaining a tube well and applicants did not realize the importance of latrines for good health.

In each thana one sub-assistant engineer (SAE) and four tube-well mechanics (TWM) promote the use of latrines and the adoption of hygiene practices. In the implementation of the programme also thana and union level authorities, government staff from health, education and agriculture, schoolteachers, NGOs and political leaders are important. At thana level and union level seminars are organized to stimulate them in distributing application forms for tubewells and to promote hygiene education and sanitation. At the start of the programme in a new thana also a seminar is organized to stimulate active participation of women.

In the 90's sanitation was not only promoted to applicants for tube-wells and in several thanas campaigns to promote sanitation were organized. Families were stimulated to choose a design that would be in accordance with their financial situation. Families were left to decide whether they would construct a pour-flush latrine, a do-it-yourself latrine, made of local materials, or a sanplat (Brandberg, 1993). The price of a waterseal latrine with 5 concrete rings to support the pit costs TK 600 (US\$16), but is sold at the subsidized rate of Tk 250 (US\$7). A waterseal latrine with one concrete ring was sold at a subsidized rate of Tk 100 (US\$2.5). The GNP per capita was US\$170 in 1990.

In 1978 DPHE established with support of UNICEF Village Sanitation Centres (VSCs) where parts for the waterseal latrine could be produced and sold at a subsidized price. By 1990 1000 VSCs had been established all through the country. The increasing demand for latrines resulted in private enterprises being set up. In 1994 a national survey indicated that a total of 4152 latrine producers could be found, of which 2500 were private producers (Luong 1995). Among the private producers were also 100 potters producing burnt clayware rings for lining



of latrine pits.

In a survey held in 1991 it was concluded that in 1991 26 percent of the rural families had a sanitary latrine, compared to 10 percent in 1989 and 16 percent in 1990 (Wan, 1992). Another survey however indicated that 17% of the families went back to open defecation after the pit was filled up, which would usually be within one year (Wan, 1992).

In February 1992 a conference 'Social Mobilization for Sanitation' was organized, indicating that the importance of sanitation was recognized at the national level. At the conference the Prime Minister launched a sanitation logo.

In 1992 the Social Mobilization for Sanitation Project was initiated as part of the Rural Water Supply and Sanitation Programme. In the programme sanitation is promoted at three levels. Advocacy at a national level, leading to commitment of political and social leaders. Social mobilization at a regional level, building alliances with schools, NGOs, the private sector, religious leaders, the civil defence force, service clubs and artists, entertainers, and programme communication at a local level, involving health workers, NGO field staff, tube-well mechanics and addressing the public by radio, television and folk media. As for women and girls, privacy and convenience is the motivation for constructing a latrine; these motives are used in promotion of sanitation, along with health education (Wan, 1992)

As the programme has only recently been launched no data are available yet on the results of this new approach.

#### References:

- Boot, M. (1995): Hygiene education in Bangladesh. UNICEF, New York, USA.
- Brandberg, B. (1993): A sanitation revolution in Bangladesh? In: Waterlines, vol.11, no.4.
- Luong, T.V. (1995): Safe disposal of human excreta. Low cost latrine technology options, Bangladesh. WES Section, UNICEF, Bangladesh.
- Wan, P. (1992): Social mobilization for sanitation. In: Water, environment and management. 18th WEDC Conference, Kathmandu, Nepal.

<u>Programme initiated by:</u>	In 1986 by the government
<u>Promotion:</u>	Project staff contacts communities. Seminars are organized
<u>Hygiene education:</u>	By tubewell mechanics at construction of tubewells
<u>Materials used:</u>	None
<u>Contributions:</u>	Users pay subsidized price
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Household chooses between four options
<u>Rural/urban:</u>	Rural

## CASE - LOCAL ORGANIZATION PROMOTES SANITATION, KENYA

General outline: Maina is a fast growing town near Nyahururu and has 13,000 inhabitants. Most people used unsanitary latrines and there was no garbage disposal facility. Diarrhoea was a common disease and mosquitoes were breeding in the puddles of wastewater that had formed on the streets.

In 1986 Nyahururu's Municipal Council and DANIDA initiated a programme to improve sanitation conditions in the unplanned settlements in four towns in Kenya (Kinley, 1992). The aim of the programme was to provide Maina with storm drains, a sewerage network, a latrine for each household plot and upgraded roads.

This attempt to improve the situation met with a lot of resistance from the residents of Maina. People in the community refused to cooperate because they feared that the improvements would result in higher rents or evictions. Others did not understand the importance of better sanitation.

In 1989 the responsibility of the project was transferred to the Kenya Water for Health Organization (KWAHO). They had a different approach to mobilize the community. Two KWAHO professionals worked on the project, of which one was working full time in the community.

The new project staff worked in the community talking with the village health committee, women's groups, landlords and local officials. As a result of these meetings "clean-up" days were organized and basic health messages extended to the residents. KWAHO encouraged religious, ethnic and secular community groups to form an umbrella organization, named *Kihato*, the broom. This organization helped to organize clean-up days and made people in the community aware of the importance of sanitation. Sixteen people from the community visited a similar project supported by DANIDA. Also KWAHO facilitated setting up a site committee, consisting of local village leaders, landlords, tenants, government officials. The committee oversees the construction of sanitation systems, drainage, and refuse disposal services.

In 1989 construction of sanitary facilities was initiated. The local authorities agreed to contribute US\$56 for each new household latrine that would be connected to the sewer system (GNP per capita was US\$330). Residents of Maina collected cement, timber, nails and iron sheets for the superstructure of pour-flush latrines.

In 18 months time, 112 residential sanitation units, each serving 6 to 10 households had been built and connected to sewerage system. Pour-flush latrines were built at the primary school.

Community organizations organized working days to compact the road and to dig stormwater drains.

References:

- Kinley, D. (1992): Bringing village people into planning. In: Source, vol.4, no.1.

<u>Programme initiated by:</u>	In 1989 by a local NGO
<u>Promotion:</u>	NGO contacts community and sets up local organization
<u>Hygiene education:</u>	NGO staff discusses benefits of improved sanitation with community
<u>Materials used:</u>	None
<u>Contributions:</u>	Residents collect building materials and provide labour
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Not mentioned
<u>Rural/urban:</u>	Urban

## CASE - LATRINES IN YALCUC, MEXICO

General outline: In 1951 the Instituto Nacional Indigenista (INI) implemented an Integrated Rural Development Programme in the highlands of Chiapas, Mexico (Miller, Cone). The programme's activities included road building, introducing new agricultural practices, setting up cooperative stores and providing medical services.

In 1957 latrines were introduced in Yalcuc community as part of the medical programme. A medical post was built to house a health promotor, who would treat patients, conduct immunization campaigns and provide health education. As with the medical post, the decision to introduce latrines in the community was taken in a public meeting. The proposal had been approved by the *comisariado* (head of the village) and was presented to the men in the community with his recommendation. As social pressure to comply with collective decisions is strong in the community 80% of the households in the community constructed a latrine. Of the latrines installed, 65% were actually used by the members of the household.

In 1978, 20 years after the medical post and the latrines had been constructed two anthropologists went to the village to review the use of the latrines. It appeared that of the twenty-five households that used their latrines in 1958 five no longer had one in 1978. These five families established new house sites and did not construct latrines at the new site. It appeared that households with latrines are wealthier, slightly larger, have been established longer, and are more likely to have electricity.

As the latrines fill up after seven or eight years households who built a latrine in 1958 have had to move the latrine to a new site twice. To construct a new latrine, households reuse the materials such as the concrete slab and the seat provided by INI and the pine planks and corrugated fiberboard used to build the superstructure. If the concrete slab is in bad condition, a new slab and seat can be obtained from INI at a subsidized price of 10 pesos (US\$0.45 in 1984). The GNP per capita was US\$2,270.

Of the seventeen new households in Yalcuc seven have constructed a latrine.

### Reference:

- Miller, F.C, C.A. Cone (1984): Behavioral case study no.3: Yalcuc, Mexico, twenty years later. In: World Bank. Appropriate technology for water supply and sanitation: seven case studies of rural and urban fringe areas in Latin America. Draft. Washington, DC, USA.

<u>Programme initiated by:</u>	In 1951 by a local NGO
<u>Promotion:</u>	Latrine construction is part of medical programme
<u>Hygiene education:</u>	Health promoters give hygiene education
<u>Materials used:</u>	None
<u>Contributions:</u>	Users dig the pit and construct the latrine. NGO provides concrete slabs and seats at subsidized price.
<u>Unit of decision:</u>	Community
<u>Technology selection:</u>	One option is presented
<u>Rural/urban:</u>	Rural

## CASE - INTENSIVE SANITATION PROJECT IN MIDNAPORE, INDIA

General outline: In 1990 the Intensive Sanitation Project was initiated in the district of Midnapore in West Bengal, India. The aim of the project was to introduce an alternative approach for the subsidy based programme of the government. The Intensive Sanitation Project aimed to make people aware of the importance of personal hygiene, safe excreta disposal, and safe water, to introduce an appropriate technology and to involve local youth clubs and women groups in planning and implementation of the programme.

A local NGO the Ramakrishna Mission Lokasiksha Parishad (RKMLP) was selected by the Indian Government and UNICEF to implement the programme through the network of youth clubs in the district.

The project encourages the installation of a number of facilities: household low cost latrines, bathing platforms, garbage pits, soakage pits, smokeless chulhas and Tara direct action handpumps.

The project has developed twelve models of latrines. The cheapest model costs Rs 230 (US\$7) and is the most popular. It consists of a mosaic pan and trap locked in a concrete slab. The superstructure is built by the user with local materials, such as bamboo, mud bricks and palmleaves. The most expensive option is a two pit latrine with a brick superstructure, which costs Rs 3,000 (US\$96). The GNP per capita was US\$330 in 1993.

The clubs in the district arrange for the pans and concrete slabs, or will provide loans for families in need of financial assistance. Also they supervise and monitor the installation during construction.

When 40-50 latrines have been installed in a village the project provides these families with a handpump. A seven member water committee is formed, of which four are women. The families make a total initial payment of Rs500 (US\$16) and each family contributes Rs 0.50 per month for maintenance of the pump. The villagers select 2 or 3 women-caretakers who will be trained by the project for the repair and maintenance tasks.

The project selects promoters for sanitation through the youth clubs and gives them a 2.5 day training. Each club has got at least one trained mason, 2 to 3 trained motivators and one smokeless chulha construction worker. The motivators are allotted 200 families to inform them about the importance of good sanitary facilities and to stimulate them to construct latrines. The motivators receive a bonus of Rs 30 per installation and many of them are masons who set up the toilets.

Group mobilization is another strategy to promote sanitation. In the villages in the district

village meetings are organized. Also Village Sanitation Camps are organized in which an exhibit is put up about sanitation and the project. The event lasts one evening during which songs on sanitation are performed, and slides and videos are shown on disease transmission and sanitation facilities. A number of materials have been developed to promote the installation of latrines, such as flash cards about the project, calendars, folders, leaflets about the project and about different types of low cost latrines, a question and answer book for volunteers, a technical drawing book of low cost sanitation facilities, audio cassettes of sanitation songs and video films.

Arguments used to promote the programme do not only focus on health but more on social aspects such as privacy of women, especially the grown-up girls.

By the end of 1993, 33 villages had achieved the distinction of Total Sanitary Village by installing 80% or more sanitary latrines.

By the end of 1993, 1068 Motivation Camps had been organized, where about 628,250 people participated. It appeared that especially women were very motivated to have a latrine and convinced their husbands of the importance. From 1990 to 1993 a total of 37,288 latrines had been installed.

#### References:

- Ramakrishna Mission Lokasiksha Parishad (1993): Intensive Sanitation Project Midnapore: Progress Report. West Bengal, India.

<u>Programme initiated by:</u>	In 1990 by government and foreign donor
<u>Promotion:</u>	Motivators visit households and organize village meetings
<u>Hygiene education:</u>	Motivators visit households and organize village meetings
<u>Materials used:</u>	Cards, calendars, folders, leaflets, books, audiocassettes, slides, video
<u>Contributions:</u>	Users bear the full cost of construction
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Household selects technology
<u>Rural/urban:</u>	Rural



## CASE - PAK COMMUNITY DEVELOPMENT PROGRAMME, PAKISTAN

Pak-CDP has developed out of a relief programme for refugees. A survey indicated that environmental conditions in the communities were even worse than in the refugee camps and since 1991 the programme also aims to improve water supply, sanitation and health conditions in the communities. The programme installs latrines, handpumps and trains female health workers.

To initiate a programme, the project team contacts influential persons in the villages in the project area and asks them to organize a meeting with a community. During these group meetings the advantages of safe water, designs for latrines, contributions from the community and the role of women in the project are discussed. If a village is interested, they are stimulated to form an organization which will take responsibility for this project. Before the implementation of the project an agreement is signed between the community organization and Pak-CDP in which the responsibilities of the two parties are described.

Pak-CDP provides training for masons and health workers at the community level. Also a master technician is trained to take care of major repairs. The project further assists the community in setting up a concrete factory in the village. In some cases the factory will only remain in the village during the project and in other cases it will remain after the staff disappears.

The user selects the type of the latrine that will be constructed.

To promote the construction of VIP latrines, Pak-CDP provides a latrine slab and a ventpipe including fly screen. The community members dig the pit and build the superstructure.

For the construction of a pour-flush latrine, the project provides the pan, the seal, the flushing pipe, one bag of cement and a mason or laborer. The community provides 450 fired bricks, a slab, a box cover and junctions. Also they provide sand, gravel and extra cement and they build the superstructure.

For the handpumps the project installs the handpump and trains a caretaker. The community improves an existing well or digs a new well or borehole including a headwall, apron and lining if needed.

In Tilla Band, a village with 750 to 800 inhabitants, a considerable number of people opted for the VIP latrine as people claim they cannot afford to buy the fired bricks and concrete slab needed for a pour-flush latrine and do not have sufficient water to flush.

In Tilla Band 665 latrines and one handpump were constructed between April 1993 until June 1994. The number of latrines includes six pour-flush latrines at three schools, 428 household

pour-flush latrines and 231 household VIP latrines. By the end of 1993 a total number of 6 female teachers had been trained and were still active and enthusiastic by June 1994. By that time another 10 women had been trained. Health Workers are paid by the community for attending births, Rs 200 (US\$7) per delivery (The GNP per capita was US\$400 in 1993). In 1994 12 deliveries had been attended by a female health worker. The project team gives hygiene education talks to all schoolchildren in the area. The subjects of these discussions are disease transmission and sanitation and water related diseases, personal hygiene, the importance of sanitation and safe water.

Health workers also visit the households separately to discuss these matters. As the men are usually not present during the day, health workers discuss health and the importance of sanitation with them during construction when the men are at home.

#### References:

- PAK - Community Development Programme (1993): First annual report. Peshawar, Pakistan.
- PAK - Community Development Programme (1994): Third progress report, January - June 1994. Peshawar, Pakistan.

<u>Programme initiated by:</u>	In 1991 by local NGO
<u>Promotion:</u>	Project staff contacts community
<u>Hygiene education:</u>	Project team visits schools and households. Project trains female community health workers.
<u>Materials used:</u>	None
<u>Contributions:</u>	Users receive subsidy
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	User chooses from two types of latrines
<u>Rural/urban:</u>	Rural

## CASE - SELF-HELP ENVIRONMENTAL SANITATION PROJECT IN BOTSWANA

General outline: In 1984, the Self-Help Environmental Sanitation project (SHESP) is set up as a follow up on the pilot programme the government of Botswana carried out in cooperation with USAID. This project is an agreement between UNICEF and the government of Botswana and was initiated in four districts (Government of Botswana, 1988).

In order to start the programme the District Sanitation Coordinator (DSC) approaches the headman of a village and informs him about the project. The DSC, headman and senior council officer explain the programme to village. If the village agrees to participate a Village Sanitation Coordinator (VSC) is selected to coordinate the construction of latrines and promotion of health education in the village. The village committee chooses a demonstration site. Households who want to participate in the programme, enroll with the VSC and pay a registration fee of Pula 30 (US\$15,60 in 1988). The GNP per capita was US\$840.

The project is responsible for constructing the latrine substructure and installs the ventpipe, a fly-screen and a seat. The project team gives advice if needed. In some districts the latrine door will be provided free of charge by the project if the household finishes the superstructure within three months. The household digs the pit and builds the superstructure.

The household bears 42% of the cost, while the district council and the donor provide the remaining costs. In 1988 the price of a latrine was US\$103 for a latrine in consolidated ground and US\$118 for a latrine in unconsolidated ground.

The health education component of the programme is linked up with the existing health care system (Land, Selotlegeng, 1989). The Village Sanitation Coordinator and health worker cooperate in promoting health education. Village Sanitation Coordinators are trained in this subject in health education workshops.

Health education is promoted at schools, in clinics and at health posts. In 1987 a Primary Health Care poster was distributed and monthly messages coincided with programmes on the radio.

In 1984 and 1985 only 500 participants joined the programme. In 1986 and 1987 this number had increased to over five times as much. Approximately 90% of the superstructures is completed within three months. In 1988 3497 latrine substructures had been built and 2821 latrine superstructures had been completed. The programme was extended from four to nine districts.

## References:

- Government of Botswana, UNICEF, The World Bank, UNDP (1988): Self-help environmental sanitation project. End of project evaluation report. New York, USA.
- Land, A.M., K.A. Selotlegeng (1989): Addressing rural sanitation in Botswana. In: Wray,
- A.(ed.) (1989): Water, engineering and development in Africa. The proceedings of the 15th WEDC Conference. Kano, Nigeria.

<u>Programme initiated by:</u>	In 1984 by government.
<u>Promotion:</u>	Project contacts community.
<u>Hygiene education:</u>	Village health workers assist in the programme, campaign is supported by messages on the radio.
<u>Materials used:</u>	Posters
<u>Unit of decision:</u>	Household
<u>Contributions:</u>	Household bears 40% of the cost (US\$43 or US\$50).
<u>Technology selection:</u>	One technology option is presented
<u>Rural/urban:</u>	Rural

## CASE - ORANGI PILOT PROJECT IN THE CITY OF KARACHI, PAKISTAN.

General outline: This self-help programme was set up in 1981 by Akhter Hameed Khan (Khan, 1983, 1985). He considers the Orangi Pilot Project (OPP) as a research institution which aims to discover the problems in Orangi and to find solutions for them through action-research and extension education. The OPP is sponsored by the BCCI (Bank of Credit and Commerce International) Foundation. The main activity of the OPP is enabling the construction of sewerage lines in the squatter area Orangi.

First the social organizers of the programme go to the residents of the area and inform them about the low-cost sanitation programme. They bring plastic models of a pour-flush latrine connected to the sewerage system to explain the construction. Also they show slides of the construction work in improved lanes.

It is explained to the residents that if they want a sewerage system in their lane, the OPP will arrange for a plan and a survey and give the residents an estimate of the costs. OPP will also provide technical training to the lane managers, lend them trolleys for transport and tools and hire an experienced plumber and mason to supervise the work. The lane manager holds meetings with the lane residents, creates consensus, settles disputes, collects individual contributions and supervises the work. The lane residents provide the full cost of material and labor and they also have to organize and execute the work by themselves. In 1991 the cost of the sanitary latrine, the house connection, the share of the sewerage line and the share of the secondary drain line was Rs1000 (US\$70) per household (Khan, 1992). The GNP per capita was US\$370.

Apart from the low cost sanitation programme, OPP organizes women's groups, kitchen gardens, tree plantation around the house and in the lanes, and immunization. Also a health education programme has started in which mobile teams visit women in neighbourhood meetings. In these meetings topics such as prevention of disease, methods of family planning, improved nutrition and hygiene are discussed.

The OPP's approach proved to be successful. In five years time, from 1980 to 1985 1273 lanes out of 3072 lanes in the area had sewerage lines constructed. In that same period 20,470 out of 43,424 houses had their latrine connected to the sewerage line.

### References:

- Khan, A.H. (1983): Orangi Pilot Project. Progress Reports April 1980 - June 1983. Press Syndicate Karachi, Pakistan.

- Khan, A.H. (1985): Orangi Pilot Project. Progress Reports. July 1983 - March 1985. Orangi Pilot Project, Karachi, Pakistan.
- Khan, A.H. (1992): Orangi Pilot Programs. Orangi Pilot Project, Research and Training Institute, Karachi, Pakistan.

<u>Programme initiated by:</u>	In 1981 by local NGO.
<u>Promotion:</u>	Social organizers go to communities and inform citizens about the OPP programme.
<u>Hygiene education:</u>	Mobile teams visit women in neighbourhood group meetings to discuss health issues.
<u>Materials used:</u>	Plastic models, slides
<u>Contributions:</u>	Residents cover all costs. OPP provides know-how, provides training to lane managers and lends tools and equipment. BCCI Foundation sponsors OPP.
<u>Unit of decision:</u>	Lane residents
<u>Technology choice:</u>	One option is presented
<u>Rural/urban:</u>	Urban

## CASE - A STRATEGIC SANITATION PLAN IN OUAGADOUGOU, BURKINA FASO

In Ouagadougou, a city with about 700,000 inhabitants, sanitation conditions were poor (Saïdi-Sharouze 1994). Even though 80% of the inhabitants had latrines, most of them were in bad condition. Another 13% of the population had septic tanks and 7% had no sanitary facilities at all. Waste water from the hospital, slaughterhouses, breweries and tanneries and faecal matter from septic tanks and pit latrines was discharged without treatment in the environment. Several public and private institutions were responsible for sanitation, but they did not cooperate and were therefore not effective. In 1991 a project was initiated with assistance of the World Bank to improve sanitation in Ouagadougou, financed partly by the UNDP and partly by the Burkina Faso government. The National Water and Sanitation Utility (ONEA) was responsible for the implementation of the programme. The aim of the programme was to develop a Strategic Sanitation Plan and test the recommendations in a pilot project.

In the first year of the project a number of surveys were done to study the technical, financial, institutional, geological conditions and willingness-to-pay among residents. It was suggested to develop a sewerage system and treatment facilities for the city center, the industrial zone and the hospital, and to promote the construction of home on-site latrines for the remaining part of the city.

Within ONEA a special sanitation division was formed who would be responsible for promotion of on-site sanitation, planning and inspection of constructed facilities. Also two ministers were involved to support the improvement of sanitation at the national level.

In two zones of the city pilot projects were set up. A local NGO was selected to promote improved sanitation and animators were trained. The aim of the project was to stimulate residents to improve sanitation and to link them up with masons who could assist in construction and give advice on operation and maintenance. Local builders were trained using audio visual aids and on-the-job training. In the pilot areas meetings were organized to inform residents about the project and posters illustrating the problems and possible solutions were shown. Also wooden models of the technology options, pour-flush, VIP latrine, or soakaway pit were presented.

The users bear 79% of the cost of latrine construction which is the amount of money people indicated they were willing to invest in improving sanitation in the willingness-to pay survey. In 1991 a household paid US\$244 for a VIP latrine, US\$229 for a pour-flush latrine, for a soakaway pit US\$37 and to upgrade existing facilities the average cost was US\$ 54 (GNP per

capita was US\$320). Households were obliged to hire builders trained by ONEA to benefit from the subsidy, but could negotiate the price with the builder, depending on the amount of work that needed to be done. The user had to collect the materials and dig the pit. This system fitted well in the local way of building houses, where improvements were made step-by-step.

Once the facilities have been constructed the level of maintenance was evaluated and users were encouraged to keep facilities clean.

Improved sanitation was promoted on the radio, on television and in the newspapers. A survey was done to determine which time would be best to broadcast messages and which tone would be most appropriate for the message.

Also recreational activities were organized to promote sanitation; dancing troupes would perform at compounds of traditional leaders or at public places. A football competition, the ONEA sanitation cup, was organized. Guided tours of neighbours to neighbours who had a latrine encouraged people to construct their own. Finally traditional communication networks, such as district meetings and ceremonies served to promote sanitation.

Between September 1992 and March 1994 a number of 993 sanitary facilities had been constructed in the two pilot areas. In all 135 VIP latrines were constructed, 18<sup>a</sup> pour-flush toilets, 401 soakaway pits and 191 shower units. In 248 cases existing facilities were upgraded. Outside the project 120 sanitary facilities were constructed in 28 other sectors.

#### References:

- Saïdi-Sharouze (1994): Ouagadougou and Kumasi sanitation projects: A comparative study. UNDP - World Bank Water and Sanitation Program. Regional Water and Sanitation Group - West Africa.



<u>Programme initiated by:</u>	In 1991 by government and foreign donor
<u>Promotion:</u>	NGO contacts community. Promotion of sanitation on radio, television and in the newspaper. Dance performances, distribution of flyers during football competition, neighbour-to-neighbour visits.
<u>Hygiene education:</u>	No
<u>Materials used:</u>	Flyers, wooden models of technology options
<u>Contributions:</u>	User covers 79% of the cost. Costs range from US\$37 to US\$244
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	User chooses from different options
<u>Rural/urban:</u>	Urban

**CASE - THE BLAIR VENTILATED IMPROVED PIT LATRINE IN ZIMBABWE.**

General outline: Before Independence the Ventilated Improved Pit (VIP) latrine was developed by the Ministry of Health in the mid-70's. This technology was chosen to be used in a national campaign in which the government aimed to make this latrine available to every household in the rural areas (Morgan, 1988). In this scheme the government provided a subsidy to enable each household to construct their own latrine.

By 1988 people in Zimbabwe were well informed about the VIP latrine. People were told about the VIP latrine in mobile cinema units, in the press and it appeared in school curricula. Also village health workers actively promoted the latrine.

Materials were developed explaining how to construct and maintain the latrine in order to motivate people to join the latrine building campaign (Laver, 1988). These materials were based on research on construction problems people had encountered, knowledge levels and perceptions held by village builders about latrine construction, and what people perceived to be the advantages of latrine construction.

In January 1986 the province of Mashonaland East the Ministry of Health supported by UK's Save the Children's Fund started an awareness campaign in the villages. Field officers would contact village committees and inform them about the project. Demonstration latrines were made and local builders were trained to make the construction. These courses to train builders would last one month and when the builders had completed the course successfully they would receive a set of tools.

At the phase of construction, the household would provide 1,200 burnt bricks, sand and stone. Also, the family would dig the pit and pay the builder for constructing the latrine.

The family was supported with 7 bags of cement, reinforcing wire, chicken wire and a fly-screen, with a total value of US\$25. The contribution of the family amounted to US\$43, almost two thirds of the total costs (GNP per capita was US\$760).

By the end of the programme, five months later in May 1986, 622 family structures and eight multicompartments school structures had been built. Since Independence in 1980 over 100,000 Blair latrines have been built in Zimbabwe.

## References:

- Laver, S. (1988): Learning to share knowledge - a Zimbabwean case study. In: Waterlines, vol.6, no.3.
- Morgan, P. (1988): Village level sanitation programmes in Zimbabwe. In: Waterlines, vol.6, no.3.

<u>Programme initiated by:</u>	In 1986 by the national government
<u>Promotion:</u>	Project staff contacts community. Active promotion at schools, in the press, on posters and leaflets.
<u>Hygiene education:</u>	Is combined with materials on maintenance of the latrine.
<u>Materials used:</u>	Cards and posters depicting the different stages in construction of a latrine.
<u>Contributions:</u>	Roughly two-thirds of the costs (US\$ 43) is borne by the user, the remaining part by the government and a foreign donor.
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	One technology option is presented
<u>Rural/urban:</u>	Rural

## CASE - SANITATION LOAN PROGRAMME IN HONDURAS

General outline: The population in Tegucigalpa has doubled in 10 years time from 350,000 to more than 700,000. The greater part of the population lives in unplanned settlements. It is estimated that at best, half of these people have a pit latrine (Peri-urban News, 1992).

In 1991 the Cooperative Housing Foundation (CHF) and UNICEF initiated a sanitation loan programme. This programme supports households in peri-urban areas by providing loans which can be used to invest in improving sanitary conditions. The CHF-UNICEF team started working with two local NGOs to develop the programme.

Based on research in two *barrios* sanitary engineers developed a menu of technologies which people could use to improve sanitary conditions. The research aimed to identify knowledge, attitudes and practices (KAP), and ability and willingness-to-pay for improved human waste disposal. It was concluded that social concerns were a more effective message for the promotion of sanitation than health benefits. People were more interested in safety and privacy and the possibility to use the latrine, wash clothes, or bathe in home without bothering neighbours or leaving children unattended. Promotor of sanitation, most of which were women, organized meetings and paid visit to households to inform the residents about the importance of sanitation. At these meetings the promotor would hand out leaflets depicting the technology options for improvement.

People applying for a loan could choose from different technology options. Families taking out a loan had to attend a one day course on hygiene. At this meeting, the importance of good sanitation for good health is explained and illustrated with texts on a flipchart. The promoters paid six monthly home visits to the families who had taken out a loan. These visits provided the promoters with the opportunity to check whether the facilities were kept clean and well maintained and also to further explain the importance of sanitation for good health. At these visits, a cartoon illustrating health messages was handed out and the family was given a calendar poster with instructions on proper use of the latrine.

The costs of improved sanitation varied between US\$100 to US\$400, depending on the technology that is chosen by the household (GNP per capita US\$590). The loans had to be repaid in three years, at 17% interest per year (Aasen, Macrae, 1992). A fee was charged to cover the costs of loan generation, technical assistance, health education programmes and supervision of construction.

Of the 150 families who had taken out a loan 85 percent built a combination of sanitation systems for human excreta, a "sanitation unit", consisting of a 0.5 cubic meter cement tank

with an attached washboard, a 0.75 square meter shower and a latrine (Aasen, Macrae, 1992). Most families chose a sewer connection or compost latrines, whereas only few opted for simple pit latrines.

References:

- Aasen, B., A. Macrae (1992): The Tegucigalpa model: water and sanitation through community management. In: Waterfront, issue 1, February 1992.
- CHF and UNICEF provide options for improved urban sanitation in Honduras. In: Peri-urban News, May 1992, 4-5.

<u>Programme initiated by:</u>	In 1991 by local NGO and foreign donor
<u>Promotion:</u>	Project staff contacts community. Promoters organize meetings and visit households.
<u>Hygiene education:</u>	Families taking a loan have to attend a course in hygiene. The promotor pays a number of visits to the household after construction of the equipment.
<u>Materials used:</u>	Leaflets, flip-chart, posters
<u>Contributions:</u>	User takes out a loan to pay for improvements
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	User selects technology
<u>Rural/urban:</u>	Urban

## CASE - IMPROVED SANITATION IN LESOTHO

General outline: In 1983 a three-year pilot Rural Sanitation Project was launched in the southern districts of Maseru's Hoek. The aim of the pilot project was to develop and test a plan for a National Rural Sanitation Programme (Blackett, 1994).

The technology chosen was the Ventilated Improved Pit (VIP) latrine, as this latrine was already known by the public and users of these latrines were satisfied with the technology. A number of designs was built on a pilot site and the most acceptable design selected.

The users pay the full cost of the latrines and also they buy materials and hire local builders themselves. The costs of a latrine vary between US\$75 and US\$150, depending on the materials used and the amount of labour contributed by the beneficiary. The GNP per capita is US\$370 (in 1987).

Trainings in building VIP latrines were organized at district level. Anyone interested in the course could enter. It was hoped that people who had followed the course would contact customers and start producing latrines on their own and that they would pass on their skills to others through traditional apprenticeships. The government also organized health and hygiene education. In the pilot phase health campaigns focussed too much on distribution of flyers and posters. This approach was not very effective.

In the pilot phase slightly more than 600 latrines were constructed, 200 more than the target set. In 1986 the government of Lesotho started a National Rural Sanitation Programme.

District by district the programme was expanded to a national level.

In the national programme a different method was used for health and hygiene promotion, focussing more on person to person contact. Firstly district sanitation coordinators were trained. They in turn would train extension workers who would go to the villages. In the villages issues related to hygiene and health were explained and related to the importance of latrines. Methods used in village meetings were interactive methods: games, map making, theater. This approach proved to be very effective. Health workers in villages were encouraged to take up sanitation promotion in their work, as they would stay in the village and extension workers would not.

Mid 1989, approximately 900 local latrine builders had been trained and an estimated 12,000 latrines had been constructed by the private sector.

### References:

- Blackett, I.C. (1994): Low-cost urban sanitation in Lesotho. Water and Sanitation

Discussion Paper Series 10, UNDP-World Bank Water and Sanitation Program.

- Evans, Ph. (1987): Planning self-sustaining programmes for sanitation: the Lesotho experience. In: Waterlines, vol.6, no.2.
- Evans, Ph. and Pollard, R.W. (1988): Local latrine builder training programme: contributions to rural employment and income generation. Ministry of Health, Lesotho.
- UNDP/PROWWESS (1990): Rural sanitation in Lesotho. From pilot project to national program. Water and Sanitation Discussion Paper Series 3.

<u>Programme initiated by:</u>	In 1983 by the government and foreign donor
<u>Promotion:</u>	By government by training builders and by organizing training on hygiene and health education.
<u>Hygiene education:</u>	Extension workers visit villages and teach about hygiene and health through interactive methods.
<u>Materials used:</u>	Games, maps, flyers, posters
<u>Contributions:</u>	User pays the full costs of the latrine. Government and foreign donors cover costs of organizing the programme.
<u>Unit of decision:</u>	Household
<u>Technology option:</u>	Project selects one technology
<u>Rural/urban:</u>	Rural

## CASE - PROMOTION OF SANITATION BY RADIO BROADCASTING

General outline: In South Sumatra, Indonesia a radio programme was used to raise awareness on issues related to water, health and sanitation among women living in rural communities. Radio is an important part of people's lives as it provides information and brings entertainment.

A programme was broadcasted especially for farm women every day at 5.30am. The programme consists of a dialogue of two farm women, named ibu Minah and ibu Siti. Ibu Minah will ask a question, which will be answered by ibu Siti. Topics discussed during the programme are the importance of boiling water and the importance of good latrines. The subjects of the dialogue and the text is based on interviews with farm families.

To evaluate the programme a competition was organized in which a question would be broadcasted for one week and to which the listeners could send a written answer. A jury would select the ten best answers and visit the villages. Of these ten villages three were selected and these contestants were given an award by the Governor and given the opportunity to join a special discussion called "Themu Wicara" in which they could communicate with the Governor.

In a village a survey was held after the radio broadcastings. It appeared that health habits had improved and that people were now drinking water from the well instead of the river and used latrines instead of defecating into the river.

### References:

- Fitri Aini (1991): Radio show spread the words about water, health and sanitation to islands in Indonesia. South Sumatra, Indonesia.



<u>Programme initiated by:</u>	In 1990 by a local NGO
<u>Promotion:</u>	Improved sanitation is promoted on the radio
<u>Hygiene education:</u>	Health messages are communicated to women living in rural communities
<u>Materials used:</u>	None
<u>Unit of decision:</u>	Household
<u>Contributions:</u>	User covers the full costs of improvement
<u>Technology selection:</u>	User selects technology
<u>Rural/urban:</u>	Rural

## CASE - PROMOTION OF SANITATION IN BANGLADESH

In July 1992 the Ramgoti Intensive Sanitation and Hygiene Promotion Programme was initiated. The programme aimed to bring about hygiene and sanitation education through interpersonal communication, bring about behavioural changes and to build effective grassroots organizations (Boot, 1995).

Households in the thana Ramgoti were motivated to construct latrines and adopt hygienic practices by home visits of village sanitation motivators (VSM). Out of more than 3,000 applicants 133 VSMs have been selected to serve the 46,549 households in 85 villages in Ramgoti. 70% of the village sanitation motivators are women. VSMs work 6 days a week and six hours daily to travel and motivate people and visit households. A VSM has to visit each household in his or her area at least four times during the project (which lasted 14 months). During these visits the benefits of safe water, sanitation and hygiene are explained using a flip-chart. A record is kept of each household.

The VSMs are supervised by Field Sanitation Supervisors (FSS), of which six are male and one is female. The FSSs are responsible for day-to-day guidance, on-the-job training and quality control of the motivation and education activities (Boot, 1995:71). Also management, financial control and establishment of good contacts with government agencies and other NGOs in the area were part of their activities. FSSs and VSMs would meet every two weeks. The FSS would accompany a VSM once a week on visits to households.

Before the promotion campaign began, a baseline survey was organized. Further data on current ideas, beliefs and constraints were acquired by the VSMs during the first household visits.

As men would work outside the house during the day only the women could be reached by household visits. For the men weekly meetings would be organized to discuss topics related to health and sanitation.

During the project, which ran from July 1992 to September 1993, 226,560 household visits were made and 42,878 meetings were organized for men. The latrine coverage rate rose from 1.6% to 59% and the rate of people washing their hands after defecation using ash or soap rose from 4% to 74%.

## References:

- Boot, M. (1995): Hygiene education in Bangladesh. UNICEF, New York, USA.

<u>Programme implemented by:</u>	In 1992 by local NGO
<u>Promotion:</u>	By home visits to households for women and general meetings for men.
<u>Hygiene Education:</u>	Main focus of the programme
<u>Materials used:</u>	Flip charts
<u>Contributions:</u>	User pays full price for a latrine
<u>Unit of decision:</u>	Household
<u>Technology selection:</u>	Users choose own improvement
<u>Rural/urban:</u>	Rural

## ANALYSIS

In order to analyse the case studies and classify different methodologies the factors that have been described in the introduction are set out in tables.

A total number of seven methodologies have been distinguished. In table one the case studies representing the first three methodologies are set out. The second table entails the case studies that represent the fourth methodology. In the third table the case studies representing the remaining three methodologies are shown.

Table 1 Private sector/ Demonstration area/ Outside agency contacts community

Case	Programme initiated by	Promotion	Hygiene Education	Materials used	Contributions	Unit of decision	Technology selection	Rural/urban
Indonesia Pour-flush toilet 1977	Foreign donor	By delivering sites and services	-	-	Sanitary facilities are included in plot	Not applicable	One option is presented	Urban
Mozambique Latrine slabs 1979	Government	Workshop sells latrine slabs	By spreading posters, leaflets and by puppet theater	Posters, leaflets	User bears full cost	Household	One option is presented	Urban
India Latrines 1991	Foreign donor	RSM sells latrines	By giving advice on hygienic use	-	User pays subsidized price	Household	One option is presented	Rural and urban
Ghana Public toilets 1989	Government and foreign donor	Company provides services	-	-	User pays per visit	Not applicable	One option is presented	Urban
Brazil Shallow sewers 1981	Government	Project staff contacts community Demonstration block is connected	-	-	Users bear all costs	Household	One option is presented	Urban
Baldia Pakistan Soakpit latrines 1979	Government	Project initiated in demonstration area	By project staff during construction	Slides	Some households receive subsidy	Community	One option is presented	Urban
Uganda Latrine slabs 1990	Government	Government sets up demonstration village	Village health workers assist programme	-	User pays subsidized price	Household	User chooses from different options	Rural
China Composting latrine 1989	Government	Local authorities promote sanitation Technical team contacts community Promotion in the press	-	Leaflets, banners, slogans painted on walls	User pays full price	Household	One option is presented	Rural
Ghana Latrines 1989	Government and foreign donor	Project staff and sanitation committee contact community	-	Audiovisual materials, graphic materials	User pays subsidized price	Household	Projects selects technology	Urban

Table 2 Outside agency contacts community

Case	Programme initiated by	Promotion	Hygiene education	Materials used	Contributions	Unit of decision	Technology selection	Rural/urban
Bangladesh Latrines 1986	Government	Project staff contacts community Seminars are organized	By technicians during construction	-	User pays subsidized price	Household	Household selects technology	Rural
Kenya Pour-flush latrine 1989	Local NGO and foreign donor	Project staff contacts community and sets up local organization	Local organization raises awareness, by clean-up days	-	Users provide building materials and provide labor	Household	Household selects technology	Urban
Mexico Latrines 1951	Local NGO	Latrine construction is part of medical programme	Health promoters visit households	-	User constructs latrine and receive subsidy	Community	One option is presented	Rural
India, Midnapore Latrines 1990	Government and foreign donor	Motivators visit household	Motivators visit household	Cards, calendars, folders, leaflets, books, audiocassettes, slides, video	User bears full cost of construction	Household	User chooses from different options	Rural
Pak CDP Pakistan VIP latrines, pour-flush 1991	Local NGO	Projects staff contacts community	Project trains community health workers. Project team visits households and schools	-	Users receive subsidy	Household	User chooses from two options	
Botswana VIP latrine 1984	Government	Project staff contacts community	Village health workers assist programme. Health messages are broadcast on the radio	-	User bears 40% of the cost	Household	One option is presented	
OPP Pakistan Shallow sewers 1981	Local NGO	Project staff contacts community	Mobile teams organize neighbourhood meetings	Plastic models, slides	Users bear all costs and provide labor	Lane residents	One option is presented	

Table 3 Social marketing/ Government trains private builders/ NGO initiates hygiene education programme/ Radio broadcast

Case	Programme initiated by	Promotion	Hygiene education	Materials used	Contributions	Unit of decision	Technology selection	Rural/Urban
Burkina Faso Pour-flush, VIP latrine 1991	Government and foreign donor	Project staff contacts community and trains sanitation promoters Social marketing, using different media	-	Flyers, wooden models	User covers 79% of the cost	Household	Project selects technology	Rural
Zimbabwe VIP latrine 1986	Government	Project staff contacts community Village health workers promote sanitation Social marketing, using different media	People are urged to keep latrine clean on posters and information cards	Posters, leaflets, cards	User bears two thirds of the costs	Household	One option is presented	Rural
Honduras On-site sanitation 1991	Local NGO and foreign donor	Promoters organize meetings and visit households Social marketing	Applicants for a loan have to attend a hygiene course. Promoters visit households	Flipcharts, cartoons, calendar	Users take out a loan, pay full price	Household	User selects from several options	Urban
Lesotho VIP latrine 1983	Government and foreign donor	Government trains builders Village health workers promote latrines	Extension workers visit communities	Games, maps, flyers, posters	User bears full cost	Household	Project selects technology	Rural
Indonesia Radio broadcast 1990	Local NGO	Promotion in radio programme	Main focus in the radio programme	-	Users pay for improvement	Household	User selects technology	Rural
Bangladesh Latrines 1992	Local NGO	Project staff visits households	Main focus of the programme	Flip charts	User pays for latrine	Household	Users choose own improvement	Rural

## METHODOLOGIES

The programmes presented in the case studies range from an approach in which technology plays a central role to an approach where improvement of hygienic behaviour is the aim of the programme. The cases presented can be placed along a continuum that goes from technology-oriented approaches to introduction of sanitation systems in hygiene education programmes. The methodologies are introduced in a this order, beginning with a technology-oriented approach and heading to a programme where sanitation technologies are introduced in a hygiene education programme. Seven methodologies can be distinguished:

### 1. Sanitation systems or services are sold in private sector

Indonesia, Mozambique, India, Ghana (public latrines)

In these projects sanitary facilities or services are sold to the user. Emphasis is on the technology and no attention is paid to promoting improved hygienic behaviour such as washing hands or keeping facilities clean.

The strong point of this approach is that entrepreneurs will be motivated to promote the system as their income depends on it.

The weak point is that if the users do not adopt improved hygienic behaviour health benefits will not materialize.

### 2. Government sets up demonstration area

Brazil, Uganda, Baldia in Pakistan

In this approach sanitation systems are promoted by implementing the programme in a demonstration area. Only limited attention is paid to the hygiene component of the programme.

The strong point of this approach is that future users can visit the demonstration area to see the technology and discuss advantages and disadvantages with the owners of the sanitation systems.

The weak point is that the method may not be very effective in promoting sanitation as the target group has to go to the demonstration area, instead of extension workers visiting the target group.



### 3. Government or NGO contacts community

China, Ghana, Bangladesh (Social Mobilization), Kenya, Pakistan (Pak CDP), Botswana, OPP Pakistan, Mexico, India (Midnapore)

In this approach project staff contacts the community and offers them a predefined structure in which community members can participate in order to improve their sanitary facilities. The main focus of the programme is on promotion of sanitation systems. The role of hygiene education in the programme varies. In some programmes the focus is on construction of sanitary facilities, while in other programmes hygiene education and construction receive similar attention.

The strong point of this approach is that in person-to-person contact promotion can be very effective.

A disadvantage of this approach is that construction and hygiene education are treated as two separate activities in the programme, which makes hygiene education less effective.

### 4. Government or NGO contacts community and uses social marketing strategies

Burkina Faso, Zimbabwe, Honduras

In this approach project staff contacts communities to promote the use of improved sanitation systems. Also the project promotes the use of improved sanitation systems in the media, after surveys have been done to discover which arguments will be most effective to convince people to adopt the new technology. The role of hygiene education in the programme varies.

The strong point of this approach is that the combination of person-to-person contact and repeated promotion in the media make the message more effective and will spread the messages faster over greater areas.

The aim of this approach is to identify people's needs and respond to these. Care needs to be taken that these marketing strategies give people the opportunity to make informed choices and are not used to manipulate the public.

### 5. Government trains private builders and initiates hygiene education programme

Lesotho

In this approach a combination is made of hygiene education and introducing sanitation systems by the private sector. The government organizes trainings for builders and stimulates them to start producing and selling latrines on their own. Also extension workers are sent out to teach community members about hygiene and the importance of latrines.

The strong point of this approach is that the new entrepreneurs will start looking for clients and in this way a great numbers of people can be reached.

A weak point of this approach is that too much focus on speed by the builders can lead to bad quality of the latrines. Therefore quality control is needed.

#### 6. NGO initiates hygiene education programme to promote latrines

##### Bangladesh

In this programme the main focus is on hygiene education. Health workers are sent out to discuss issues related to health and sanitation with households. In these visits issues related to health and hygiene are discussed and people are stimulated to improve or construct latrines.

The strong point of this approach is that person-to-person contact and repeated visits to the household will make the health messages effective.

The weak point of this approach is that too little emphasis on technical issues may result in the construction of poorly constructed, unsafe or unhygienic latrines.

#### 7. NGO promotes improved health behaviour in the media

##### Indonesia

In this approach a radio programme is broadcast in which improved health behaviour is discussed.

The strong point of this approach is that a large group can be reached by radio broadcasting.

The weak point of this approach is that the absence of person-to-person contact may prevent a detailed explanation of technical details of the construction of latrines which may lead to construction of unsafe or unhygienic latrines.

## CHARACTERISTICS OF SANITATION PROGRAMMES

### Initiator of the programme

The initiator of the programme could be the government, a foreign donor or a local NGO.

### Promotion

For the promotion of sanitation different methodologies are used, as was elaborated earlier. In a number of programmes sanitation is promoted by stimulating small entrepreneurs to construct and sell latrines. In a number of other programmes the construction of sanitation facilities is promoted in a hygiene education programme. In the majority of the cases an outside agency contacts a community and offers them a package deal. In a number of cases the project staff is assisted by volunteers who have been selected by the community.

### Hygiene education

In most of the programmes hygiene education is seen as a separate activity. In some cases health workers are trained in the community or health workers already working in a community are involved in the programme, teaching community members how to improve hygiene behaviour and relating these issues to the importance of good latrines.

### Materials used

In order to inform people about the programme and to stimulate community members to adopt hygiene practices a number of materials have been used. In some cases small models or slides of the technology are shown to community members in order to clarify the construction. Also leaflets, posters, calendars and cards are used to inform people about the importance of good sanitary facilities and proper maintenance of the equipment.

### Contributions

In thirteen cases the project covers part of the costs as an incentive for construction. In the other cases user had to pay the full cost of the investment. In the case of China this led to difficulties for the poor in adopting the new latrine. In Honduras a different solution was found. The project provided a loan to the community members interested in constructing a sanitation system. The loan had to be paid back at interest within three years.

### Unit of decision

In most of the cases presented the household decides whether or not to adopt a new technology.

### Technology selection

In seven cases users can choose from several technology options. In other cases a survey is done in the area and based on physical conditions and users preferences the project staff selects one technology for the community.

### Urban/rural

With respect to the differences between urban and rural settings, some patterns can be discerned. Programmes in which sanitation systems are introduced in the private sector can only be found in urban areas. Whereas on-site sanitation systems are used in rural as well as in urban areas, sewerage systems are a viable option only in urban areas, where population densities are higher.

## CONCLUSIVE REMARKS

To prevent transmission of diseases two types of barriers exist: the primary barrier is to prevent infectious organisms from getting into the environment and the secondary barrier is to remove or destroy infectious organisms before they enter the mouth (Boot, Cairncross, 1993). To prevent infectious organisms from getting into the environment sanitation systems need to be constructed to dispose of human excreta in a safe manner. To remove or destroy infectious organisms before entering the mouth several measures can be taken: washing hands after defecating and before handling food, keeping cooking utensils clean and disinfecting water before drinking and food preparation. For an effective prevention of diseases a combined strategy including the introduction or improvement of sanitation systems and changes in hygienic behaviour is needed.

To change people's behaviour it has recently been acknowledged that people do not change their hygienic practices because of expected health benefits. Reasons for changing behaviour can be privacy, convenience, status and fashion (Muturi 1992). In a number of the more recent programmes that have been presented in this paper social marketing strategies have been used to influence people to change their behaviour. Social marketing has developed from commercial marketing strategies and addresses social problems (McKee, 1992). This method has also been applied in developing countries in the field of family planning, diarrhoeal diseases and immunization.

Another trend that can be observed is that in recent sanitation programmes social mobilization plays an important role. Social mobilization is defined as the process of bringing together all feasible and practical inter-sectoral social allies to raise people's awareness of and demand for a particular development programme, to assist in the delivery of resources and services and to strengthen community participation for sustainability and self-reliance (McKee, 1993). An example of social mobilization is Bangladesh, where allies were sought at all levels of society, from national government level to community groups to promote sanitation.

### References:

- Boot, M. T, S. Cairncross (eds) (1993): Actions speak. The study of hygiene behaviour in water and sanitation projects. IRC International Water and Sanitation Centre. The Hague, The Netherlands.
- McKee, N. (1992): Social mobilization and social marketing in developing communities: lessons for communicators. Southbound. Penang, Malaysia.
- Muturi, J. (1992): Social marketing in sanitation programmes. In: Water and Sanitation News, vol.1, no.8, p.10.