

Rural water supply, sanitation and health education in Thailand: can success follow success?

by Nongluk Tunyavanich and Kevin Hewison

The authors here discuss some of the many kinds of infrastructure required to achieve sustainable rural development. The major stumbling block remains the difficulty of changing people's behaviour.

THAILAND'S RURAL drinking-water programme has been remarkably successful and, likewise, rural sanitation extension has increased markedly. The government set 1991 targets of 95 per cent of the rural population having safe drinking-water (at two litres per person per day, but later rising to five) and latrine coverage of 75 per cent, a target which has since been raised to 90 per cent.¹ These targets are within striking distance (Table 1 shows the figures).

One of the leading programmes in achieving high levels of drinking-water coverage has been the cement rainwater jar programme. These jars, each of about 2,000-litre capacity, are now a common sight in much of rural Thailand, with almost nine million jars built by 1988.² Latrine coverage has advanced steadily, with villagers constructing and paying for these facilities, while technical assistance has come from the government.

Problems remain however. Reports suggest some resistance to latrine use. For example, latrine coverage in southern Thailand (only 43.5 per cent) is well below the national average. Additionally, the young and the elderly do not fully utilize latrines; while they may use latrines for defecation, they will not use them for urination. Also many jars do not have taps, meaning unsanitary water abstraction. In addition, while the jar reservoir might be relatively clean, handling practices *within* the household can increase

bacteriological contamination. And, as villagers do not ration jar water, they return to unsatisfactory sources once the jars are empty.

In order to reap the health benefits of improved quality and quantities of

drinking-water together with greater latrine coverage, health education becomes a crucial factor. But what exactly is meant by health education?

Health education

'Health education' means different things to different people. Some argue that it is essentially a public relations exercise, to publicize the health activities of the government. Others see it as the transfer of health information from health professionals to lay clients. For most, however, there is little difference seen between health education and the mass campaign.³

Table 1. Drinking-water and latrine coverage for rural households

	1981	1983	1985	1987	1988
Drinking-water	26.3%	54.4%	66.0%	74.3%	76.7%
Latrines	42.3%	43.5%	47.1%	61.8%	63.4%

Source: Ministry of Public Health



Old ways of water collection have been replaced by the success of the jar programme. There are now nine million jars in villages.

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Many jars do not have taps so there must be careful abstraction.

Unfortunately health education in Thailand is primarily directed to promoting 'hardware' such as rainwater jars and latrines. Currently Ministry of Public Health (MOPH) programmes are of two types.

○ **Educational** (mass media and school curricula): mass media include films, posters, pamphlets, radio announcements, cassette tapes played over village loudspeakers, and public lectures given to various target groups. School curricula include both regular school classes and adult education courses sponsored by the Ministry of Education.

○ **Self-help:** villagers are encouraged to participate in water and sanitation training programmes. They are trained to be sanitary craftsmen, to build rainwater storage containers and latrines. At the same time, community development funds are made available to allow villagers access to low-interest or interest-free loans so that they can buy jars and build latrines.

Even for these limited activities, budgets are low due to the emphasis on the 'hardware' of water and sanitation. The achievement of targets, however, has not seen a corresponding drop in water and sanitation-related diseases.

Data on diarrhoeal disease in relation to water and sanitation in

villages in Surin and Srisaket provinces indicated there was more diarrhoeal disease reported in households where women use latrines than in those where defecation took place in the field. Studies on weaning

education and the control of diarrhoeal disease in Hakhon Ratchasima province and incidence and risk factors of diarrhoeal disease in Khon Kaen province both found a positive relationship between latrine ownership and diarrhoeal disease incidence. Statistics from the Department of Epidemiology, MOPH, show that national morbidity rates elsewhere increased from 6.71 per 1,000 population in 1982 to 10.27 per 1,000 population in 1986. If health education means a translation of what is known about health into desirable individual, family and community behaviour patterns by means of a learning process, then it is obvious that the methods of health education which are currently used by the MOPH are not effectively doing the job. Too much reliance is placed upon passive mass media and school curricula to bring about changes in behaviour, but there is no system of reporting or evaluation to measure behavioural change in the villages.

The only way out of this seeming impasse is to give more emphasis to the 'software', to get down to the basics of household and personal activity, so as to maximize the health benefits from the facilities. Effective strategies for health education require



Village loudspeakers provide a good passive mass-media approach but this must be reinforced with active person-to-person activities.



Use of latrines by schoolchildren demands clean and working latrines, an adequate water supply and teacher co-operation in explaining the importance of hygiene and sanitation.

an understanding of behaviour and 'cleanliness culture' of the target groups.

Building on success

The Thai government has long been aware of the need for a health and hygiene education approach to improving health. For example, the *Master Plan for Rural Water Supply and Sanitation* asserted that 'no improvement in public health is likely to take place without the proper utilization of ... services', and that hygiene education was an imperative'.⁴ Relatively little, however, has been achieved to date. Why is this so?

First, an emphasis on 'hardware' matches a rigid budget process, where money is allocated for facilities (for example, tubewells, jars, ponds, etc.) and 'success, is measured by enumerating facilities: it is much easier to count wells than to measure a behaviour change'.¹ Second, there is a tendency for implementing agencies to be dominated by technical specialists who have little understanding of social processes. Third, the people who work for the government are different from villagers — in terms of class, education, speech, wealth and urban

orientation; thus villagers tend to be viewed as ignorant and even 'dirty', and the provision of a facility can be an easy way to 'do something' without actually having to 'deal with' villagers. Fourth, there is very little understanding of behaviour practices which can have an impact on health (for example, hand washing, waste disposal, etc.) Finally, there is practically no understanding of what villagers consider 'clean' or 'healthy' to mean, and how these concepts vary geographically and ethnically.

Nonetheless, a beginning has been made in a move towards a software-based programme in Thailand. For water, it is known that rural people obtain drinking-water from a variety of sources depending on the availability and characteristics of water. Their preference is based on good taste, lack of odour and visible clarity. Technical reports show that sources such as shallow (or dug) wells — often a preferred source — tend to be bacteriologically contaminated. From the villager's perspective, however, the water is 'good' because it looks clean and they do not perceive any sickness after drinking it. They also believe that their usual drinking-water cannot cause illness, rather, one can get sick from drinking-water from

unfamiliar sources.

Therefore, most people do not treat water. Boiling water is only for the sick, women after childbirth and infants. Likewise, communal dippers are used for getting the drinking-water from jars, and germ-theory is not understood.

When using latrines, water is the most common anal-cleansing material, though some people use wood, paper or coconut husks. These cleansing materials are sometimes collected and burnt, or may be left around the latrine, without proper disposal. For households without latrines, adults usually go to the fields or defecate in canals or rivers, while children tend to defecate around the house (children's faeces are not considered dirty).

Social programmes

Social considerations are obviously crucial to any effective health education programme, and after years of urging, the government is moving towards such a programme. It is only a beginning, but it appears likely that the recently drafted *Sanitation Action Plan* will be approved. It includes a major health education component, based on explicit social considerations which include the following:

- The need for an understanding of the attitudes, beliefs, and sanitation behaviour of rural people in all regions, with special needs groups, for example, Muslims in the South, Khmer and Sney in the North-east, and non-state people in the North); underprivileged groups; and river, canal and coastal dwellers.
- Leadership issues must also be stressed. Strong leadership is needed at all levels: village, government workers, and at the policy level.
- Communication (extension) skills for staff, both for promoting the village programmes and for negotiating 'hardware' development with the private sector.

Health education is seen as important for effective use of the hardware, and ultimately in improving the overall health of the community. It will support hardware activities, and therefore, will include a shift in emphasis from 'hardware' to a combination of hardware and support programmes. The shift will not involve any reduction in the former programme but will support and strengthen it, to bring about the behavioural changes necessary for



Health-care professionals working from clinics are effective extension workers.

successful implementation. These changes are:

- Greater promotion of the effective use of hardware and the promotion of facility construction.
- A shift from 'top-down' and passive mass-media approaches (printed materials, village loudspeakers) to a 'bottom-up' and more active person-to-person approach with reinforcement by effective mass-media programmes (television and radio) when necessary.
- A greater emphasis on health education in schools along with the provision of necessary basic facilities.
- A greater involvement of all groups in the community, such as religious leaders, women, village health volunteers and craftsmen, youths and schoolteachers in active hygiene education.

The future challenge

In completing these programmes, emphasis should be placed on public health training institutions, with the aim of strengthening the curriculum on sanitation, education and communication skills. Special emphasis is to be given to schools and the village community.

For schools, a long-term goal of improving sanitation and personal hygiene practices has been set. The effective use of latrines by

schoolchildren demands clean and working latrines, an adequate water supply, and the co-operation of teachers in explaining practical sanitation and hygiene knowledge. At the community level, the extension skills of MOPH staff will be targeted so they will be better able to communicate with villagers, understand local practices, and



Larger-capacity water jars can prevent villagers reverting to unsafe water sources if they run out during the dry season.

develop programmes which are meaningful and necessary for villagers.

Thailand's water supply and latrine development projects have been successful in extending the hardware, but the remaining challenge is to incorporate these facilities into the daily lives and behaviour of villagers. The MOPH is well aware of this challenge, but an adequate programme in this area remains elusive. It is hoped that the *Sanitation Action Plan* will be one step in the right direction. ■

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