



# Are changes in hygiene behaviour sustained?

Eveline Bolt

**We know that hygiene promotion activities can reduce the incidence of diarrhoeal diseases. But do people forget the hygiene lessons they have learned and drop back to old habits? This article describes how researchers set about finding out the answers to these questions.**

Diarrhoeal diseases still kill an estimated 2.2 million people each year, most of them children under the age of five.<sup>1</sup> We all know that the mere provision of water supply and sanitation facilities is not enough to bring down morbidity and mortality rates: health-promoting hygienic behaviour is also needed. Research has shown that hygiene behaviours do change as a result of hygiene promotion. As far back as 1984, Feachem concluded that hygiene promotion can reduce morbidity by 14–48 per cent. What is still largely unknown is whether these changes in hygiene behaviour are sustained over time or whether people slide back into 'old behaviour' once they are no longer in contact with or supported by programme staff. Little is also known about factors influencing the sustainability of changes in hygiene behaviour.

In a combined effort to help fill these knowledge gaps, six organizations from Asia and Africa (NEWAH, Nepal; COSI, Sri Lanka; SEUF, India; NETWAS, Kenya; VRCWSA, Ghana; WaterAid/USEP, Uganda) undertook a three-year research programme. Some of the organizations directly implement water, sanitation and hygiene projects. One of them does not itself implement programmes, but supports community-based organizations to do so. Two of them provide training and advisory services to other organizations. Since direct access to hands-on field experience was a requirement for participation in the study, these two organizations developed links with implementing organizations for the purpose of the study. The IRC International Water and Sanitation Centre and the London School of

Hygiene and Tropical Medicine provided technical support and programme management.

This article outlines how the research was developed and implemented. Implementation details (see Jayaweera et al. article) and research findings (see Shordt and Cairncross article) can be found elsewhere in this issue of *Waterlines*.

## Funding

How sustainable are changes in hygiene behaviour and what are the factors influencing sustainability? These were our overall research questions and a proposal on how to address these questions was submitted to the European Commission and the Dutch Directorate General for

Development Cooperation. Both were willing to fund the research, which took place from September 2000 to date. A total of €535 000 was made available.

The objectives were:

- to assess the level of sustainability of behavioural change one to two years after a hygiene promotion intervention has ended
- to develop a methodology for simple, cost-effective longitudinal monitoring of behavioural changes
- to find causal relationships between project approaches and external conditions on the one hand, and the sustainability of changes in hygiene behaviour on the other
- to develop an active network in the field of hygiene promotion

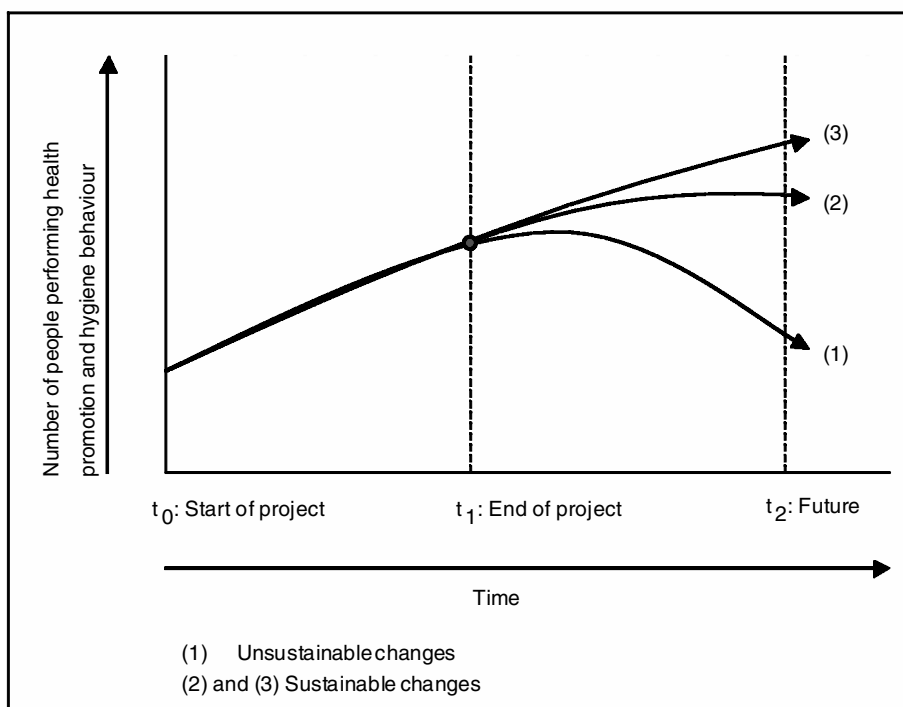


Figure 1 What can happen with levels of behaviour over time



Hygiene education at school can improve habits in the rest of the community

- to determine policy and programming implications and influence policy to increase the effectiveness of water and sanitation programmes.

## Research development

*What we wanted to find out.* At the start of the research period two researchers from each of the Asian and African participating organizations from Asia and Africa met to develop the research plan. The European organizations provided technical and research management support. We focused our research on three key behaviours:

- handwashing after defecation
- the use and maintenance of latrines
- keeping drinking water free from faecal contamination.

These are the behaviours indicated by the World Health Organization as having the largest impact on people's health and these are generally promoted in water, sanitation and hygiene programmes.

Our workshop had aimed to produce a meaningful and feasible overall research plan and country-specific research plans and appropriate tools. Therefore, a workshop approach was adopted whereby:

- The specific elements of the behaviours to be studied were connected to the hygiene promotion activities as they had been implemented in the

various countries. We had to make sure that we were going to measure behaviour that had indeed been promoted. If for example 'rubbing in three different directions' was not part of the message to promote hand washing, this was not to be measured.

- The hypotheses to be tested were to be country specific and useful to the situation of the study teams. For example, there is no point in measuring whether the level of education of women has an impact on the sustainability of certain hygiene behaviours if you are in an area where women do not go to school.
- All research teams developed and adopted data-collection methods that provide reliable, valid and useful information.
- All research teams used sample sizes that are on the one hand big enough to show significance and on the other hand manageable with the resources available.

Since most of the researchers are field practitioners, they were in an excellent position to ensure that the research was meaningful and feasible. The study was meant to find out cooperatively the validity of certain hypotheses about what makes hygiene behaviour sustainable, and not to compare competitively the hygiene promotion performance of the organizations involved.

*Country-specific hypotheses.* Examples of hypotheses included are: if water is available close to the homes, then householders' hand-washing behaviour tends to be sustained; if latrines are well maintained, then their use tends to be sustained. Each of the country research teams developed some ten hypotheses.

*Developing research tools.* A distinction was made between participatory tools, such as pocket voting,<sup>2</sup> and non-participatory tools, such as observation and interviewing. Whom should we ask? What should we ask? What should we observe? These were questions to be kept in mind when drawing up the questions and the observation checklists (see Awunyo-Akaba et al. article in this issue).

*Sampling.* It was agreed that each year in each country at least 100 house-

holds would be sampled from a maximum of five communities, including some in which the hygiene promotion intervention ended in 1998, and some in which the hygiene promotion intervention ended in 2000. A total of 2100 households were sampled.

*The research plan.* Having all the elements (hypotheses, tools and sample design), each of the research teams developed its research plan. Back home they trained enumerators, and carried out two rounds of surveys, in 2001 and 2002. Between the first and the second round of data collection, all organizations involved met to discuss experiences, to analyse the data and to see where the research plan required adaptation. After the second round of the survey, we met again to make a full analysis of the two rounds of data and to look at the implications of the findings in terms of hygiene promotion programming.

## Beating the drum

Activities to disseminate research information started right from the beginning of the project. This allowed us to keep others informed and to solicit their comments, which would help us do a better job. At the international level the production of newsletters, articles and a website took place, as well as a presentation of the study at an international forum. Booklets are also being produced. At the national level the country teams organized workshops and seminars, and articles were written for publication in newsletters and newspapers.

## About the author

Eveline Bolt is head of the Resource Centre Development Section of the IRC International Water and Sanitation Centre, the Netherlands, and was coordinator of the research described here. She can be contacted at [bolt@irc.nl](mailto:bolt@irc.nl)

## References

- 1 World Health Organisation (2000) *The World Health Report: making a difference*, WHO, Geneva.
- 2 Srinivasan, L (1990) *Tools for community participation. A manual for training trainers in participatory techniques*, PROWESS/UNDP Technical Series.