School Sanitation and Hygiene Education - India

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Abstract

School Sanitation and Hygiene Education (SSHE), is globally recognised as a key intervention to promote children's right to health and clean environment and to influence a generational change in health promotion behaviour and attitudes. It is now known that not only the quality of teaching but also the environment, especially the availability of safe drinking water and sanitation together with good hygiene practices, influence learning.

To demonstrate this strategy SWASTHH, a joint initiative of the Government of India, IRC International Water and Sanitation Centre, the Netherlands, and UNICEF India has been implemented beginning in three states, Tamilnadu, Jharkhand and Karnataka. SWASTHH is an abbreviation of School Water and Sanitation towards Health and Hygiene and translates as health in Hindi. The project aims to promote sanitation and hygiene in and through primary schools to bring about behavioural change that will have a lasting impact. It also seeks to enable children (both girls and boys) to realise their right to basic education and the right to a healthy and safe learning environment. There has been, and will continue to be, a sharing of learning between SWASTHH and other SSHE projects underway in 64 districts of 20 states.

This book is meant for managers and trainers involved in SSHE programmes operating at different levels, such as state, district or block level. Although it was developed in the context of the School Water and Sanitation Towards Health and Hygiene (SWASTHH) programme in India, this book provides many useful guidelines and activities that apply to similar programmes elsewhere.

Key words: school sanitation, hygiene education, training, water supply

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School Sanitation and Hygiene Education - India

Resource Book

Mariëlle Snel, Sumita Ganguly and Kathleen Shordt

Technical Paper Series 39

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Table of Contents

List of activity sheets

Foreword

The Government of India and UNICEF have identified school sanitation as a key area of collaboration, recognising that improved hygiene practices and a clean school environment are contributory factors to ensuring that children can enjoy an acceptable standard of health. The need for this is highlighted by the deprivation in primary schools which lack safe drinking water and toilet facilities. Around 50 percent of schools still do not have safe drinking water on the school premises. Only about 15 percent have any kind of toilet or urinal. Separate facilities for girls are even less well provided. Where they do exist they are so poorly maintained or so few in number, that most children do not use them. Instead they find a place to relieve themselves in some corner of the school compound or behind the school in some vacant plot. Growing girls have to endure this hardship, and this often results in them dropping out of school or absenting themselves after recess when they go home and do not return to school.

The Government of India has made school sanitation one of the main components of the Restructured Central Rural Sanitation Program. Beginning with 58 pilot districts in 1999, the Government has since committed resources to support a Total Sanitation Campaign in 250 districts, with school sanitation as a central component. Mindful of the fact that resources need to be optimised, the potential of collaborating with the District Primary Education Program and the Sarva Shiksha Abhiyan (SSA) are immense.

The collaboration between UNICEF, Rajiv Gandhi National Drinking Water Mission (RGNDWM) and IRC commenced in early 2000 beginning in three states, Jharkhand (undivided Bihar), Karnataka and Tamilnadu. This focused initially on five districts, two each in Jharkhand and Karnataka and one in Tamilnadu. The collaboration extended to a natural partner – the Department of Primary Education in the Ministry of Human Resource Development which sets out policies for the 700, 000 primary and upper primary schools in the country. The purpose was to develop, test and demonstrate replicable models for improving school sanitation and hygiene education as well as water supply and the environment in rural primary schools and selected pre-schools. The intention was to build on past experiences in UNICEF-Government and NGO collaboration in this area. It was also envisaged that the project would heavily draw on the multiple experiences of IRC working in a number of countries across Asia, Africa and South America.

School Water and Sanitation Towards Health and Hygiene (SWASTHH) was thus born to spearhead School Sanitation and Hygiene Education (SSHE) in the country and to be a pacesetter. Nationally, this is the first initiative of its kind to compensate for the fact that India does not yet have a national school sanitation programme. In view of the reforms in the water and sanitation sector it is only fitting that SWASTHH aims to apply

the principles of demand responsive participatory planning, community management and use of local talent in executing both the construction aspects and the more complex issue of influencing behaviour change. This is done through activity based and 'joyful' learning, and a renewed teaching–learning environment involving teachers, parents, communities and children in a partnership that seeks to impart quality in learning to create lasting change. This is consistent with the spirit of the Focusing Resources on Effective School Health (FRESH) initiative, which seeks to respond to new needs, improve the efficacy of other investments in child development, ensure better educational outcomes, and achieve greater social equity while still being cost effective.

The SSHE Resource Book and the SSHE Handbook for Teachers are dedicated to all those in the Government, Non Governmental Organisations (NGOs) and Community Based Organisations (CBOs), the private sector and professional bodies and to interested individuals who wish to see children grow up with a better future.


পূরচেংমুখ প্রাথমিক বিদ্যালয়
গাও-চেংমুখ, ডাকঘর-পচুকিয়া
জিলা-কামরূপ (অসম)
স্থাপিত ১৯৫০ চন।

Preface

A focus on school sanitation stems from the fact that children have a right to basic facilities such as school toilets, safe drinking water, clean surroundings and information on hygiene. If these conditions are created, children come to school, enjoy learning, learn better and take back to their families, especially siblings, concepts and practices on sanitation and hygiene. In this way, investment in education is more productive. Such conditions have an even greater positive outcome for girls who often stay away from or drop out of schools which do not have toilet facilities.

The School Water and Sanitation Towards Health and Hygiene (SWASTHH) project started in March 2000. Building on the SWASTHH programme, the Rajiv Gandhi National Drinking Water Mission and the Department of Housing, which looks after rural sanitation, has a target of covering 150, 000 of the country's 600, 000 schools with toilet blocks in the ninth five-year plan, at a rate of 30, 000 schools per year. States must ensure that funds allocated for this programme are fully used.

Inter-sectoral co-ordination plays a critical role in the success of this project. Interdepartmental co-operation, especially between Education, Public Health Engineering, Rural Development, Department of Women and Child Development is essential in order to achieve the project outputs and the objectives for primary schools and anganwadi centres.

This book is meant for managers and trainers involved in school sanitation and hygiene education (SSHE) programmes operating at different levels, such as state, district or block level. Although it was developed in the context of the SWASTHH programme in India, it provides many useful guidelines and activities that apply to similar programmes elsewhere. The book is divided into two parts, with an extra volume that runs alongside it. The first part, comprising Chapter 1 to Chapter 5, examines the key features of SSHE programmes such as behavioural change, education and training. The second part (Chapter 6 to Chapter 12) examines implementation approaches linked to the project cycle. This includes strategic planning, district planning, local mobilisation, technologies and on-going school/community activities. Chapter 12 focuses on the provision for the young child, aged three to six years, in the anganwadi (health centres focused on young children).

This manual provides a number of activity sheets and overheads that can be used to assist managers and/or trainers of SSHE programmes. There is also a 'third part' - a handbook enclosed in this package that provides examples of hands-on learning activities. It is meant for teachers. This can be read in its entirety or it can be used in parts, with the reader "dipping into" various sections as desired.

The Resource Book grew out of real life experiences and practices from projects and initiatives from different parts of India and from other countries. We would therefore like to extend our thanks to the teachers, engineers, NGO representatives, educators, social scientists, development workers, Government officials and UNICEF colleagues who participated in the series of workshops, presented their experiences and findings and contributed to the substance of the Resource Book. We would like to especially thank Chetna Kohli from UNICEF, education section, for her help on the educational parts of the Resource Book.

Our special thanks also go to Dr. Venita Kaul from the World Bank, New Delhi and Dr. Daljeet Singh from NCERT for their comments and suggestions which helped to fine-tune the document.

Finally we are grateful for the full support and co-operation that we have received from the Government of India – through the Rajiv Gandhi National Drinking Water Mission, Ministry of Rural Development, Department of Education and Ministry of Human Resource Development.

The School Sanitation and Hygiene Education Resource Book is a joint effort of the Child's Environment and Education Sections of the UNICEF India Country Office and heralds "best practice" in convergence and inter-sectoral teamwork based on the collaboration in the three states where SWASTHH is being tried out. This is the beginning of an effort to scale up and contribute to lasting change in the school and home environment.

We hope that those who use this Resource Book will give feedback on how well it helps them to achieve their objectives. One of our aims is to identify ways and means of improving it, using feedback from the users.

Mariëlle Snel, Sumita Ganguly and Kathleen Shordt

Resource Book

1 Introduction and the SWASTHH concept

1.1 Using this Resource Book

Who is this Resource Book for?

This book is meant for managers and trainers involved in school sanitation and hygiene education (SSHE) programmes operating at different levels, such as state level, district level or block level. Although it was developed in the context of the School Water and Sanitation Towards Health and Hygiene (SWASTHH) programme in India, it provides many useful guidelines and activities that apply to similar programmes elsewhere.

This Resource Book can be used to plan, design, implement and monitor school sanitation, health and hygiene education programmes for implementation through a school based system. Parts of the Resource Book can also be used for training and orienting officials and trainers from education, engineering and health departments (and from the ICDS[1] and Panchayati Raj in India), as well as rural development officials and trainers.

How can this book be used?

This Resource Book has been organised for different uses:

- To learn about school sanitation and hygiene education. In this case, this Resource Book should be read from cover-to-cover like a book.
- To learn about specific topics. In this case, read and "dip into" specific sections; it is not necessary to read the entire book.

The Resource Book contains:

- information on different topics related to SSHE,
- a number of activity sheets that can assist managers and/or trainers of SSHE programmes,
- a number of overhead sheets that can be used in training or presentations.

Within School Sanitation and Hygiene Education (SSHE) programmes, this book can be used:

- for planning new programmes and setting strategies,
- for district training and planning workshops (select the topics and exercises that are most relevant for those who attend training),
- to train trainers from NGOs and other institutions such as the SCERTs, SIERTs, DIETs in India,

1 For an explanation of abbreviations and definitions, please refer to the List of Abbreviations and Glossary sections at the back of this book.

- for orientation of district and department officials, education officers and head teachers, public health engineering staff and contractors, leaders of other institutions such as NGOs, CBOs,
- to set up monitoring activities in the district, block, cluster and community,
- to train field workers to work with communities on group mobilisation, technology selection and design, and so on.

This book can also be used to prepare or adapt school teaching and learning materials. However it is not on its own sufficient for classroom activities.

1.2 The SWASTHH concept

School Water and Sanitation Towards Health and Hygiene (SWASTHH), which translates as Health in Hindi, is a combination of technical and human development components that are necessary to produce a healthy school environment and to develop or support health and hygiene behaviours. The technical components include drinking water, handwashing and toilet facilities in and around the school compound. The human development components are the activities that promote conditions within the school and the practices of children that help to prevent water and sanitation related diseases and worm infestation. School sanitation and hygiene education depends on a process of capacity enhancement of teachers, education administrators, community members, village/ward water and sanitation committees, public health engineering and rural development departments, NGOs and CBOs. It seeks to use water-sanitation-hygiene learning as a bridge linking children, their families and communities.

The primary education system in India is one of the largest in the world with over seven lakh (700, 000) primary and upper primary schools, over 30 lakh (3 million) teachers, and a student strength exceeding 100 million children (Rajiv Gandhi National Drinking Water Mission, 1992). This huge network of schools offers a ready-made infrastructure.

A National Workshop to outline the country strategy for school water and sanitation towards health and hygiene was held in Bangalore from 12 to 15 July 2000.
The workshop provided a platform for sharing experiences, understanding current developments and local innovations as well as developing recommendations for implementation of the SWASTHH project in selected states and districts (UNICEF, 2000). A number of state workshops have taken place focusing on their own SSHE projects. Some states have gone much further, implementing the SWASTHH programme in whole districts.

SWASTHH is far more than a construction programme. Its global objectives focus both on education and quality of life. SWASTHH seeks to develop, test and successfully demonstrate replicable models for hygiene education, water supply and environmental sanitation in rural primary schools and “anganwadis” for pre-school children.

The SWASTHH programme aims to make a visible impact on the health and hygiene of children through improvement in health and hygiene practices of children, their families and the communities. It also aims to improve the curriculum and teaching while promoting hygiene practices and community ownership of water and sanitation facilities within schools.

It is based on the belief that children are far more receptive to new ideas and are at an age when they can be influenced to cultivate the habits of good personal hygiene. The promotion of personal hygiene and environmental sanitation within schools can help the children to adopt good habits during the formative years of their childhood.

The SWASTHH programme works toward several related goals:

- **Effective learning** Children perform better if surrounded by a clean and hygienic environment.
- **Enrolment and retention of girls** Lack of private sanitary facilities for girls can discourage parents from sending girls to schools and contribute to the drop-out of girls, especially of adolescents. Growing girls find it difficult to attend schools that have no or few badly maintained facilities. They tend to go home during recess and not return.
- **Reduced diseases and worm infestation** If sanitation and hygiene facilities are absent or are badly maintained and used, schools and "anganwadis" become health hazards. Children urinate and defecate behind and around school buildings in whatever vacant space available. This is bad practice, a source of spread of infection, and sends strong negative signals to the children and teachers that this is an accepted norm.
- **Environmental cleanliness** Proper facilities will prevent pollution of the environment and limit health hazards for the community at large.
- **Implementing child rights** Children have the right to be as healthy and happy as possible in their given circumstances. Good sanitation and hygiene practices lead to less diseases, better health, and better nutrition. As many children in India fall in the "mildly malnourished" category, any measure to protect them from slipping further is a significant investment in human resource development and a happy childhood.

Box 1.1 **SWASTHH objectives**

The specific SWASTHH objectives are:

- to make visible the value and impact of school and anganwadi sanitation as perceived by the community and thereby raise the level of ownership,
- to promote importance of SSHE at the national, state and district levels,
- to improve hygiene practices among school children, their families and communities.

The principles guiding the programme are:

- Programme convergence through mapping related development programmes and resources, for optimal utilisation of available resources, better impact and outreach.
- Decentralised management with the community as a partner in implementation, operation and maintenance. This translates into a major emphasis on training and capacity building of local groups.
- Focus on reaching the difficult-to-reach and under-served groups including girls and marginalised communities.
- Potential for scaling up.

Box 1.2 **Desirable results of the SWASTHH programme**

The results that the SWASTHH programme seeks to achieve are:

- 80% of 500 primary schools in each district have improved water and sanitation facilities,
- 80% of the students and teachers use and know the benefits of the regular use of facilities,
- 50% of students and teachers have conveyed sanitation and hygiene concepts and messages to their families and communities,
- Participatory assessment of "learning projects" is carried out,
- Improved and systematic hygiene promotion activities have been undertaken in "anganwadi" centres.

The SWASTHH programme commenced in five districts spread over three states of India: Karnataka, Jharkhand and Tamil Nadu. Since then other districts in a number of states have come forward to adopt the SWASTHH model. At the national level, the programme is organised as a collaborative effort among the Ministry of Human Resource Development - Department of Elementary Education, Ministry of Rural Development – Rajiv Gandhi National Drinking Water Mission, State Governments and UNICEF.

The overhead on page 23 reflects the SWASTHH programme by showing the linkage between the village school and the community at large. The interventions of the SWASTHH programme are both physical (safe drinking water, school toilets, water for cleaning) and behavioural (handwashing, water handling, food hygiene, good use and maintenance of facilities). These interventions should take place through the assistance of three continuing activities shown by the arrows: communication, advocacy/social mobilisation and cross-sectoral planning and implementation. The diagram shows that the programme is meant to reach out to the community and families, involving all local institutions.

1.3 Status: Provision of safe water and sanitation

The provision of safe water and sanitation facilities is a first step towards a healthy physical learning environment. However, the mere provision of facilities does not make them sustainable or produce the desired impact. It is the use of the facilities – the related hygiene behaviour of people that provides health benefits. In schools, hygiene education aims to promote those practices that will help to prevent water and sanitation-related diseases as well as healthy behaviour in the future generation of adults (Burgers, 2000). The combination of facilities, correct behavioural practices and education are meant to have a positive impact on the health and hygiene conditions of the community as a whole, both now and in the future.

Box 1.3 **Indian Situation**

- 1 out of 5 rural households have access to sanitary toilets
- 4 out of 5 people drink water from improved water sources
- 400, 000 children (estimated) under 5 years of age die each year due to diarrhoea
- 700, 000 primary schools of which
  - Only half have safe drinking water
  - Only 1 in 10 have sanitary facilities

Note: This is the national average. Individual states / districts have progressed and have much better statistics.

Facts about primary education

- India has two hundred million (20 Crore) children aged 6-14 years
- About 7 out of 10 children aged 6-14 years attend primary school
- Only 55% of the girls and 62% of the boys reach class V

Source: SWASTHH workshop (2001)

Safe drinking water facilities in India

According to the Fifth and Sixth All India Educational Surveys, the percentage of schools that had safe drinking water facilities had in fact dropped slightly from 1986 to 1993 (from 46% to 44%). This means that fewer than half the schools had safe water facilities. In 1993, slightly more than one in ten schools all over India had a lavatory (Kohli, 2001).

Given this situation, the need to build school sanitation and water facilities, and ensure basic school infrastructure, is understandable. However, this is not sufficient. There are other vital tasks that schools must also undertake. A fundamental shift is required from the earlier emphasis on sanitation and water facilities alone toward combining this with behavioural change. Forming consistent behaviours and attitudes is one of the primary objectives of an effective school health programme. It is important that children know about risks to their health and how to avoid these risks. This means that the focus on sanitation and water infrastructure must be combined with a broader agenda that includes education and consistent behaviours (Kohli, 2001).

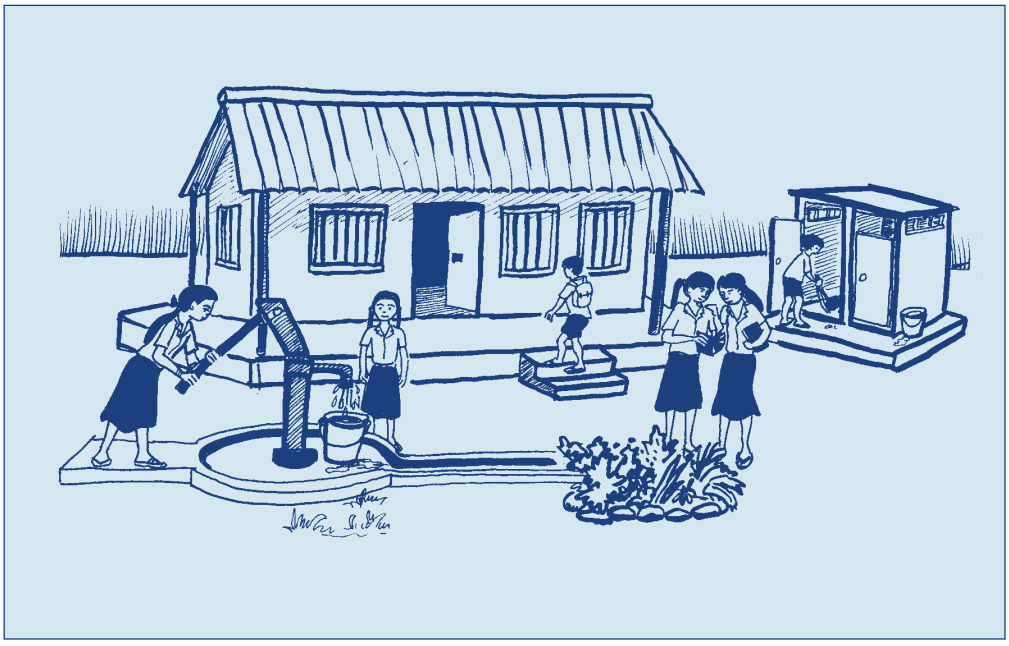
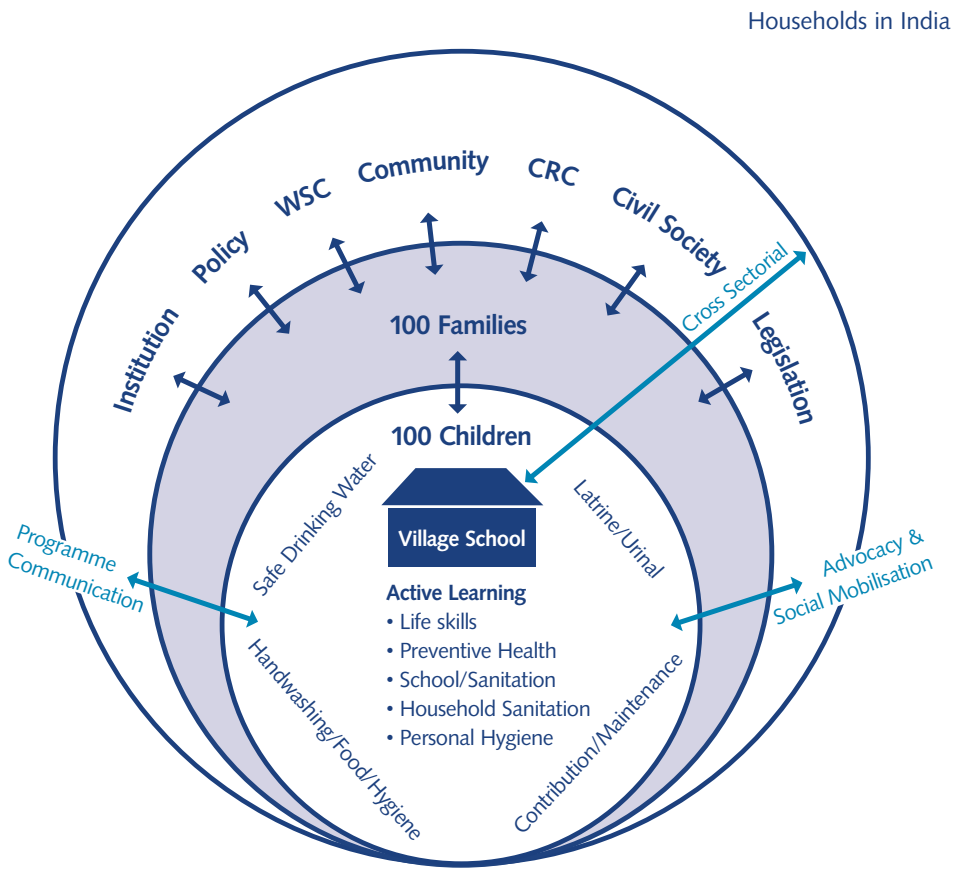


Figure 1.1 School and surrounding

Overhead 1 **The 'SWASTHH' Balloon**

School Sanitation and Hygiene Education - Our investment in the future



Source: SWASTHH workshop India (2000).

2 Training for SWASTHH

This chapter is intended for people who will use this Resource Book to organise training. It discusses methods used in training adults. It also provides examples of workshop training plans.

The chapter examines:
- training on different occasions
- training methodology
- organising and assessing the training

This chapter is based on the following principles:
The words *training, orientation* and *refresher* are used in this chapter. *Orientation training* is generally shorter than training, lasting for less than a day. The purpose is usually to help people understand the main lines of a programme and to win their commitment to it. *Refresher training* takes place several months or a year after an initial training. The refresher reinforces past learning and adds new topics. Refreshers are also useful for planning. For example, teachers can plan health club activities for the next year and compare their plans and past experiences.

2.1 Objectives and participants

Who is the training for? What is the purpose of the training?
Although apparently obvious, it should be emphasised that the specific purpose of the training should be carefully identified and kept in mind continuously. Thus, training is not about school sanitation and hygiene education in general. Rather, the purpose of a training workshop might be a limited number (one or two) of the following:
- For inter-disciplinary groups (district representatives from education, PHED, rural development, health, social welfare, NGOs); to improve co-ordination and to learn to work together;
- For inter-disciplinary groups; to make a workplan based on the district Plan of Action (PoA);
- For master trainers; to be good trainers of NGO community field workers who organise and train community groups;
- For master trainers; to be good trainers of teachers;
- For interdisciplinary groups; to agree on key indicators and plan how to monitor these;
- For orientation of different groups such as district and department officials, education officers and head teachers; public health engineering staff and contractors; rural development and Panchayati Raj officials, elected leaders, representatives of other institutions such as NGOs, CBOs and resource institutions;

- For teachers; to help organise children in using and maintaining facilities and to help them organise active learning in the classroom.

Box 2.1 **Training of trainers workshop in Ranchi, Jharkhand**

The following objectives (purposes) were developed for the Training of Trainers (ToT) workshop held in Ranchi (2000) which included:

- To develop an inter-sectoral team for building capacity in the SWASTHH project.
- To generate a common understanding about the project concept and objectives and plans of action (PoA).
- To jointly develop/refine PoA, and transform them into functional workplans with checks and balances.
- To work on microplanning exercise focusing on the school/community.

Source: SWASTHH workshop (2001).

Thus, a number of factors should be kept in mind at a SSHE/SWASTHH training:

- Who is being trained- what type of target group is it?
- At what stage of development is the group? How far advanced are they in terms of knowledge and practice in the area of SSHE?
- At what stage of development is the SSHE programme? Is it the design stage, implementation stage, evaluation stage?
- What is the nature of the system in which the SSHE is being implemented? Are there systemic roadblocks and is there a support infrastructure available to the programme?

Experience has shown that training based on the project cycle works effectively. For example, at the ToT workshop (see Box 2.1) the training plans were based on the project cycle of supervisors, WES officers and teachers.

Figure 2.1 Participatory teaching style among trainees

2.2 Training plans for different occasions

The following boxes give examples of training plans for different groups. Each plan has some suggested exercises which you will find in this book. For example, Activity 3.2 in Chapter 3 is about organising a field trip.

Box 2.2 Four examples of workshop programmes

Initial district training: interdisciplinary groups

Purpose	• To make an agreed workplan that will successfully lead to the SWASTHH goals. • To learn to work together.
Participants	Interdisciplinary groups such as: district and selected block/cluster representatives from Education, PHED, NGOs, Health, ICDS programme, some talented teachers.
Learning Outcomes	• Agreed definition of concepts and procedures • Integrated workplan prepared
Day 1	Concepts: Chapters 2 and 3. Exercise 2.1 or 3.1 Chapters 2 and 3. Exercise 2.1 or 3.2
Day 2	Programme: Chapter 4, 5, 6. Exercises 4.2 and 6.2
Day 3	Field trip: Exercise 3.2
Day 4	Management and technology: Chapters 7 and 9 Exercises 7.4, 9.1 or 9.2 or 9.6. Exercise 11.2
Day 5	Planning: Exercises 6.2 or 7.1 or 7.2
Day 6	Complete planning exercise from Day 5, review in plenary and agree on next steps

Training of trainers

Purpose	• To prepare for implementation and training. • To train the master trainers. • To learn to work together.
Participants	The participants are already familiar with the programme and have had some orientation or training. Training materials have been prepared. There is an agreed workplan with roles and work assigned according to a timeframe. District and selected block/cluster representatives from Education, teachers and NGO staff, representatives from PHED, local government.
Learning Outcomes	• Agreed definitions of concepts and procedures. • Developed capacity to train teachers (with some continuing support and supervision).

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Day 1	Chapters 2, 3, 4 Exercises 3.1 and 4.2
Day 2	Chapters 5 and 6, exercise 5.2 and 6.1
Day 3	Chapter 3: Exercise 3.2 Field trip and debriefing
Day 4	Chapters 9, 10. Exercise 9.1 or 9.2 or 10.3
Day 5	Chapter 11. Exercise 11.2 or 11.4

Orientation

Purpose	• To orient district officials.
Participants	• Key officials in education PHED, health, rural development departments and local government. Leaders of DIET, SCERT.
Learning	• Agreed definition of key concepts and procedures.
Outcomes	• Commitment to support the programme locally.
Day 1	Chapter 3. Exercise 3.1, Chapter 5, exercise 5.1
Day 2	Chapter 7. Exercise 7.3. Chapter 9 and 11. Exercise 11.2 (Optional: exercise 9.1 or 9.2)

Teacher Training

Purpose	• To train teachers who will be in charge of SWASTHH in their schools.
Participants	Classroom teachers
Learning	• Agreed definitions of concepts and procedures.
Outcomes	• Improved capacity to carry out hygiene education (both within and outside the school). • Capacity developed to ensure use and maintenance of facilities.
Day 1	Chapter 3, 4 and 6. Exercise 2.1 or 3.1 or 6.3
Day 2	Chapters 5 and 8. Exercise 5.2 or 8.1
Day 3	Chapter 9 and 11. Exercise 9.1 or 11.2 or 11.3 or 11.4

The ideal number of participants is no more than 25. This allows for intensive exchange of experiences and individual attention from the facilitator. For larger groups, it is very useful to have a team of at least two facilitators, since the training activities can be divided into small group work. Thus two trainers can use a blend of presentations, lectures as well as participatory exercises.

A challenge for these training exercises is to ensure that the intended group actually attends the training. The best training will lack effectiveness if the participants attending are unable or unwilling to take on needed responsibilities after the training. It is therefore worthwhile to take extra time to negotiate about this with the institutions that identify the participants for training.

2.3 Training methods and tools

It is said that people remember 20% of what they hear, 40% of what they hear and see, and 80% of what they discover by themselves. This clearly suggests a change in the method of teaching, away from the typical lecture to a more participatory approach. These statistics tell us that adults learn by drawing on their past experience and knowledge. They learn by doing, being involved (Brikké, 2000).

The overall approach of the workshop should be based on the way adults naturally learn. This means ensuring the active involvement of all the participants, building on their existing knowledge, facilitating exchange of experience and feeding in new insights and knowledge. It uses hands-on exercises and helps participants to translate acquired their new insights into action-oriented planning specific to their own function. Refer to overhead 2 on how adults learn on page 38.

The participatory approach to training is based on the concept that professionals learn more effectively when they are presented with activities which take into account their knowledge and experience and which meet their needs. By being involved in this process, both individuals and the group gain a new awareness of their potential, develop greater self-confidence, and see new possibilities. They also become more critically aware of the reasons that underlie their perceptions, attitudes and actions.

The teaching/learning methods used should create an environment in which all of the participants can express their interests and their own experiences in the programme. For this, participatory methods are needed. These methods also provide participants with experiences in learning activities that they can, in turn, use in giving training at the block and cluster levels.

Three common methods used to stimulate participation in learning among adults are group exercises, brainstorming and visualisation.

Group exercises

Exercises can be used to illustrate a concept, to stimulate thought and discussion, to train participants in certain skills or to help participants make their own plans for future activities.

It may be helpful to keep the following points in mind when undertaking small group exercises:

- *Select exercises that fit the group* and its goals, by being sure you know why you are using a particular exercise. *Be familiar with the exercise*, by previewing it before you use it; indeed, you should know what it accomplishes and how that happens. Don't

present participants with a battery of exercises all designed to make pretty much the same point.

- *Giving instructions* is a very important part of using exercises. The way you introduce an exercise can make a big difference in what the exercise means to people; it should include an explanation of the objectives, a description of what exactly the participants are supposed to do, and an estimate of how much time the exercise will take.
- *Group dynamics* are important. Remind participants to give every person in the group a chance to talk. Small groups should not be dominated by one or two people.

Role of the facilitator during small group activities

During the group work, the facilitator should remain available to answer questions and to quietly observe the group working.

Once the exercise has been completed, it is important to *reflect on the results* reached together with the participants, and how it relates to the participants own day-to-day realities. Too often the reporting back from small groups is boring and monotonous. Instead, ask people to summarise, or compare their answers with those of other groups. This can improve the group reports.

Brainstorming

Brainstorming produces ideas, explanations and interpretations. In an organised "storming of thoughts", a small group of participants puts forward as many suggestions as possible about a precisely formulated theme. This method stimulates an intuitive, spontaneous and creative search for associations between ideas or problems related to the theme.

Role of the facilitator

Hints on preparation: the topic must be formulated precisely. It must be clearly stated who is to participate and what is the time limit. For the actual brainstorming there are definite rules:

- little or no discussion is needed during brainstorming,
- ideas from each person should be accepted without criticism,
- combinations and associations of ideas are encouraged,
- the contributed suggestions are usually written on cards and put up on a poster or board.

At the end, the facilitator helps the group to sort, analyse and evaluate the brainstorming exercise. Classification comments such as "immediately feasible" and "needs to be more developed" are useful.

Visualisation

In the visualisation method, participants can use different types of written cards which are pasted or pinned on posters or on other surfaces. Appendix 2 of this book shows the standard rules that should be given to participants about making cards. Visualisation facilitates a clear structuring of meeting discussions, workshops and the recording of statements in a concise and visible way. Concentration and attention are improved considerably and even shy participants are able to take part more actively. The discussion becomes more objective and is enhanced with regard to the preceding steps. Evaluations and prioritising of options are much easier when using such a visible presentation.

Role of the facilitator

Facilitators should brief participants about how to prepare cards and should organise the feedback sessions to larger groups. In training sessions where many participants prepare cards, the facilitator usually needs to make sure that each card is read out to all participants and that cards are grouped by topic. In short, the facilitator has an important role in helping to organise the information.

Role playing

Role playing is a training technique in which participants assume an identity other than their own, to cope with real or hypothetical situations and problems. It can be employed in almost any training context.

In playing their roles, participants undertake to *act out behaviour patterns* they believe are characteristic of those roles in specific social situations. For example, role playing can be proposed between two actors, "a teacher" and "PTA member", in order to reflect the process of resistance to change. Role playing permits experimentation with different ways of behaving in a given situation.

Role of the facilitator

A role playing session should start by the trainer *briefing all participants*, by outlining the situation which is the basis of the role playing, and by giving a concise description of the characters involved in the situation. Usually one set of people does role playing while another set observes and takes notes. At the end of the scene, *the actors and the audience discuss* what has taken place during the scene.

In planning for a role playing session, you should keep clearly in mind the basic principle, the problem to be covered or the message to get across to the participants. This idea should always be kept in mind while *preparing for the role playing*.

2.4 Overview of tools that can be used by a facilitator

The following box identifies some of the tools that are frequently used by facilitators working with adults. The training should give participants practice in using several of these tools. Most of these tools appear in the training exercises that are described in this Resource Book.

Box 2.3 **Types of methods/tools**

Some teaching and learning tools

	Description	Remarks
Group discussion / conversation	A discussion is a free exchange of knowledge, ideas and opinions on a particular subject. A conversation will be more structured and prepared in advance.	**Optimal use:** For introducing subjects; a structured conversation helps to focus thinking. **Advantages:** Group involvement; starting up thinking process. **Disadvantages:** Risk of unfocused discussions, time shortage and no change in ideas; needs preparation.
Brainstorming	The facilitator or an assistant writes down all the contributions on a board. Quality and substance is evaluated by the group afterwards.	**Optimal use:** Common method used in groups to help members think of possible changes or give new orientations. **Advantages:** Stimulates creativity, expands imagination. **Disadvantages:** Provides answers which are not always implementable; effort can be greater than expected.
Feedback	Informing people what they have done on a certain exercise, role-play or other action in order to let them know how things can be improved.	**Optimal use:** For creating awareness on participant's skills and performance. **Advantages:** Participants become eager to learn. **Disadvantages:** Possible distrust if feedback is not good.
Lecture	An internally consistent, rationally clear presentation, adapted to a specific audience by using visual images, verbal illustrations and other tools.	**Optimal use:** For transfer of models, concepts or frameworks. **Advantages:** Within short amount of time opportunity to transfer knowledge. **Disadvantages:** Monologue; requires good preparation in order to keep attention; people may not listen or understand.

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	Description	Remarks
Demonstration	Letting participants go through an event that illustrates the theme of a session. Participants are asked to participate and at the same time observe what is happening.	**Optimal use:** Start of a session on a topic which needs sensitisation or awareness raising. **Advantages:** Effective way to raise awareness in a short period of time. **Disadvantages:** Easy failure if not adapted to the group.
Field visit	Participants are taken out into a real life situation and get the opportunity to observe some elements linked to the course.	**Optimal use:** To show real life situation. **Advantages:** Helps to clarify concepts, and get a common understanding; excellent for group dynamics. **Disadvantages:** Organisation can be much work; takes time.
Reading assignments	During the course participants are asked to read relevant information	**Optimal use:** Creating opportunity to digest written material; can be given for evening reading. **Advantages:** Easy way to have some material covered. **Disadvantages:** Slows down dynamics if done in class; check on understanding is needed.
Case study	A history or example, with relevant details is examined by the participants. They come up with problems and alternative solutions.	**Optimal use:** To practise analytical skills, and reflect on a situation as a group. **Advantages:** Good learning experience when successful; group reaches a common understanding. **Disadvantages:** Difficult choice or design of appropriate case study, needs preparation time and experience.
Games	Participants are presented with information and rules about a particular situation, and the group tries to go through a simulation of this situation.	**Optimal use:** To practise and simulate a given situation. **Advantages:** Fun, dynamic. **Disadvantages:** Careful preparation needed with good and clear instructions; unsure outcome; risk of having participants not taking it seriously.

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	Description	Remarks
Exercises	Participants are asked to undertake a particular task, following lines laid down by the trainer, in order to practise skills or test knowledge.	**Optimal use:** When complex skills or concepts are being taught. **Advantages:** Creates confidence; very practical. **Disadvantages:** Must be realistic, relevant and motivating.
Role play	Participants assume an identity other than their own, to cope with real or hypothetical problems and situations.	**Optimal use:** To demonstrate a situation or practice participants are likely to face. **Advantages:** Strong participation and surprising outcomes. **Disadvantages:** Hiding behind role description; needs "actors" focusing on subject required.
Small workshops	Participants come together in small groups and come to a conclusion by brainstorming, identifying problems and formulating recommendations.	**Optimal use:** Have the group take decisions or make plans and formulate recommendations, at the end of a major event. **Advantages:** Shared vision. **Disadvantages:** Experience needed in using tools and facilitating.
Individual assignment	Participants are asked to think through their own situation, and to apply what they learnt in an action plan.	**Optimal use:** Integrate learning into own situation. **Advantages:** Participants think through, and prepare for going back. **Disadvantages:** Takes time and requires coaching.

Source: Brikké (2000)

2.5 Organising the training

There are a number of methods that the facilitator can use to organise and assess the training. Some ideas for organising training include preparing lesson plans, guest lectures and working with other facilitators.

Workshop organisation

Preparing lesson plans

The lesson plan for a lecture only focuses on the content of the speech. For more participatory methods, the plans should include clear directions for each activity, plan how to debrief, and estimate the amount of time needed for each activity. Visual aids should be prepared in advance. Above all, enough time should be spent before a training session, to prepare for a 'good' lesson plan. This will improve the quality and effectiveness. Inadequate preparation could destroy the training.

Developing ground rules for the workshop

At the beginning of the workshop, some basic rules could be set to help the workshop run more smoothly. Usually the participants themselves will suggest useful guidelines such as:

- attending all the workshop sessions
- observing punctuality
- letting each one take her/his turn to speak
- avoiding domination by a few more vocal people
- listening carefully to everyone - letting people state their own ideas without immediately correcting them
- criticism (if at all needed) of ideas and not people
- stating points briefly – avoiding frequent interruptions
- helping to keep the training room neat and organised
- taking part in picking up papers and other training materials at the end of the day and preparing for the next day
- seeking clarification if there are doubts or something is not clear

These rules should be posted somewhere in the training room as a reminder to everyone.

Planning refreshers and energisers

It is extremely useful to have some short, relaxing activities at hand to use when participants are fatigued and need a break. These could be jokes, songs or short exercises. Taking five minutes for some enjoyable small activity can be very refreshing.

Inviting guest lecturers

There is a tendency for some workshops to have lots of guest lecturers who present their 'standard' speeches. This reduces the quality of the training and can be very frustrating for the participants. Guest facilitators (not just lecturers) should be few and carefully briefed. They should be told clearly about their timing, the participants and the objectives of their sessions. Guest facilitators/lecturers should be encouraged to plan activities, to make detailed lesson plans and to discuss these with the course facilitators before the session.

Working with other facilitators

If there is more than one facilitator for a workshop, then it is essential that they work effectively together. It is useful for the facilitators to meet at the beginning and the end of each day to plan or assess earlier activities. In this process, do not be afraid of changing the training programme to allow for activities that require longer than foreseen, or to spend more time on difficult issues. In some training programmes, it may be useful to change the curriculum slightly to reflect the skills of particular participants, some of whom may be highly skilled.

Providing cards for timekeeping

It is useful for the facilitator and a timekeeper, selected by the participants, to use time keeping cards. The facilitator can write "5 minutes" on a green card; "1 minute" on a yellow card; and "stop" on a red card. These can be shown, at the right time, to the speaker by the facilitator or timekeeper to help the people who are speaking stick to their time limits. Having time limits and using time cards can also help participants to prioritise the content in their presentations.

Assigning special roles for participants: spokesperson and timekeeper.

It is useful to assign a spokesperson for each group of participants. This person is responsible for keeping his/her fingers on the pulse of the participants, listening to their observations, reflections, comments or any issues that may be raised by the group and passing these on to the facilitator(s).

In addition to a spokesperson, it may be useful to assign a timekeeper. The timekeeper is responsible for helping participants stay within the time limits when for example making a presentation or sharing reflections. The timekeeper can also indicate to the facilitator when the session is coming to an end thus helping him/her to conclude the presentation without having to stop abruptly. Assigning the task of a spokesperson and timekeeper allows the participants to become more involved in the training.

Undertaking pre-assessment

A pre-assessment takes place before the actual training starts. In a pre-assessment the trainer asks the participants questions related to their past work and personal experiences related to SSHE. A pre-assessment allows both the trainer and the participants to have an indication of the various interesting experiences related to SSHE found in the group.

2.6 Assessing the training

Facilitators can assess or evaluate the training in a number of ways. Assessments let the participants express how they feel about what is going on, in order to improve the training. Furthermore, evaluations help to improve the sessions in the future (including the quality of the facilitation material distributed, exercises, and course content) as well as to identify possible points that need to be reinforced during the remainder of the course. Assessments can give a clear indication of how the participants feel and also help to build ownership and interest among the group. A daily evaluation can be carried out in different ways:

- daily assessment by "ears" - volunteers who will listen to what participants are saying or feeling about the workshops to help the facilitators improve
- an informal discussion
- a focused conversation
- a daily evaluation form

Daily assessment by "ears"

A few participants volunteer to act as "ears" for the group. This means they observe participants, listen to comments made by participants and informal chats during and outside the training room (responses which cannot be captured in the formal setting). Based on this, they debrief the facilitators at the end of the day on all aspects of the training, including the content, methodology used, the communication process, and the quality of participation. The "ears" can change every day, so that a new set of volunteers can provide feedback.

The focused conversation

A focused conversation could start with an exercise asking participants to write two "positive" comments and two "critical" comments about the day's (or several days) session(s). Each participant is given two cards for the "positive" comments, and two cards for the "critical" comments (cards should be of different colours, for example green for "positive" and red for "critical"; and only one comment should be allowed per card). All cards are then pinned or taped on a board, and grouped by categories as they appear. The result is discussed with the whole group, asking for clarifications and comments. This technique allows for everyone to express him or herself. This evaluation takes time however, and might be recommended to use only once or twice in the course.

A daily evaluation form

A daily evaluation form can be prepared, asking participants to assess the content, relevance and presentation of each session, using a scale of value such as, for example grading from 1 to 5 (**1** = Poor; **2** = Limited; **3** = Reasonable; **4** = Good; **5** = Excellent) or any other grading which might be found appropriate.

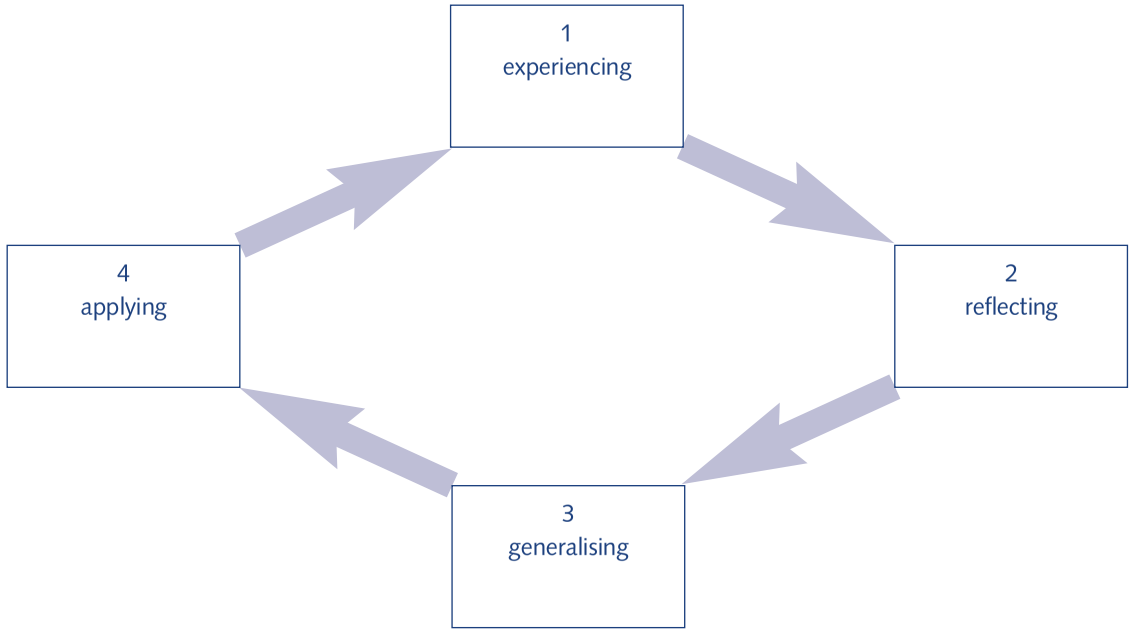
A final anonymous evaluation form

A final anonymous evaluation form can be administered in each training programme. These should be analysed and used to improve subsequent trainings. Keep the evaluation form short!

In a training course, activities 2.1 or 2.2 could be used to start the programme depending on the time available.

Overhead 2 **How adults learn**

THE EXPERIENTIAL LEARNING CYCLE



Activity Sheet 2.1 **Introduction to SSHE/SWASTHH**

Objective

- To focus on the participants' own perception on where they stand in their SSHE project.
- To get a clear overview of the issues faced by participants in SSHE.

Material: coloured cards for each of the participants

Time: one to two hours

Procedure: This can be done as the first activity in a shorter training course.

1. Start the exercise by examining the purpose of the training, objectives and perhaps look at some of the outputs expected during the course that help to achieve these objectives.
2. The facilitator provides an explanation of the exercise stating that it will focus on the short and long-term objectives and results of the SSHE projects so far. The words 'objective' and 'result' may need to be clarified for some of the participants.
3. The facilitator provides each participant with two cards of the same colour (e.g. two pink cards or two blue cards). On one card, each participant writes down one objective and on the other one result of the project *in the long-term*. Note, it may be useful to brief participants about how to write on cards (see appendix 2).
4. In a similar manner, each of the participants receives two cards of another colour. On one card each participant writes down one objective and on the other one result in of the SSHE project in *the short-term*.
5. Each of the participants reads his/her card out loud. The facilitator asks for an explanation where needed.
6. The facilitator and participants have a debriefing of the information collected looking at both long and short-term objectives and results in the programme.

Comments

SSHE is positioned with a long-term strategy towards health and health promoting behaviour. It includes looking at both long and short-term objectives and results in the programme. (For example, it is useful to see that construction of facilities is really a result, not the objective of a project.). This exercise allows participants to reflect on what their colleagues consider short and long-term points and can be a point of quality discussion towards understanding SSHE projects better.

Activity Sheet 2.2 **Poster presentations**

Objective:

- To focus on the participants' ideas about their SSHE project.
- To get a quick overview on the participants' specific projects, objectives, main activities, main outcomes, involved parties and linkages in the project.

Material: coloured posters, tape, glue, cards for each of the participants
Time: 1/2 to one day
Procedure: This can be done as a first activity in a longer training course of, for example, four days or more.

1. Participants are asked before the training course to think of developing a poster, which explains their SSHE activities or their SSHE project. The poster should contain their objective and targets; present and past SSHE activities; strengths and weaknesses of current SSHE activities. Usually such posters are made by small groups of people who work in the same area, region or project.
2. Posters are completed at the training workshop on the first (or second) day of the training.
3. Posters can include photographs, technical drawings, bills of quantities and itemised costs of construction in addition to important forms, checklists or examples of contracts used to implement their SSHE programme.
4. After the posters are completed, the facilitator and participants examine the posters. Note that not more than 10 minutes should be allowed for participants to give comments on their posters. Questions and comments should focus on points of clarification. Participants should not make critical comments at this early stage in the training course.

Comments

Poster presentations are an excellent ice-breaker to get participants talking about their own work more objectively. Posters are highly useful for sharing information. If possible, the posters should remain posted during the entire workshop period for reference.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3 Lessons learned from research and practice

This chapter examines

- lessons from research, evaluations and programme experience that can be helpful in structuring school programmes for water, sanitation and hygiene education
- some key issues for policy makers related to these lessons

This chapter is based on the principle that:

- There is a rich body of national and international experience on which to build in developing the SWASTHH or SSHE programme. If past experience remains unknown or unused, then we risk repeating past mistakes or using considerable effort to learn what is already known, that is to say, re-inventing the wheel. The wisdom of the present builds on lessons learned from the past.

Figure 3.1 Group of trainees looking at posters made by themselves

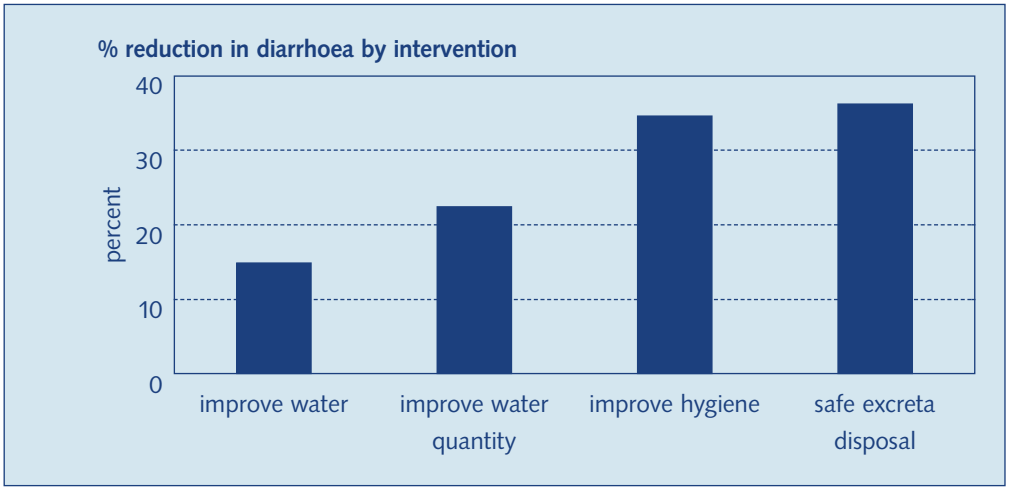
3.1 Lessons learned from research

Research has much to say about the priorities in water, sanitation and hygiene programmes. It is relevant to school activities as well.

Lesson 1: Important interventions about diarrhoea

Researchers have examined 144 studies (Esrey, 1994) and showed which interventions were related to the greatest reductions in diarrhoea. This research shows that the four most important issues, in the order of their possible impact, are:

- safe disposal of excreta
- household and personal hygiene, especially handwashing
- quantity of water used
- quality of water



Source: Esrey (1994).

Figure 3.2 Link between intervention and reduction in diarrhoea

The issues that give greatest health benefits, as shown in the figure above, are:

- **Safe excreta disposal**

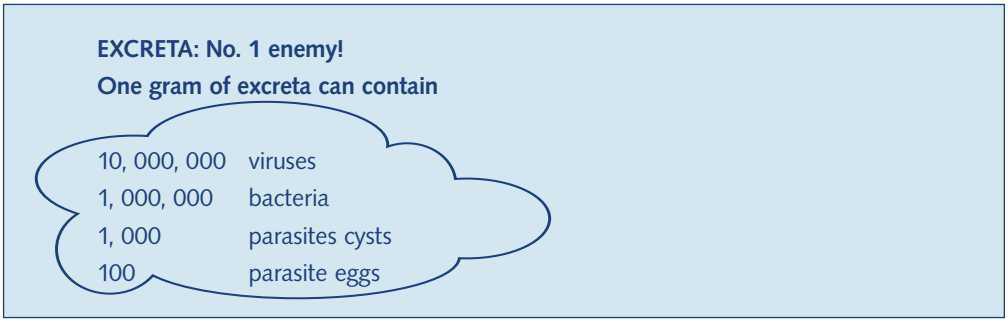
Infectious diarrhoea such as dysentery, cholera and typhoid, is caused by agents such as bacteria and parasites. These agents get into humans via the mouth. Parasitic infections such as intestinal worms or hookworms also get in through the mouth or skin and are passed out in excreta. (Curtis, 1998)

- **Improved hygiene**

This includes personal and household cleanliness, using water from safe sources, hygienic storage of water and safe cooking of food. Handwashing, in particular, is a major preventive measure against disease. Handwashing after defecation is very important! Handwashing facilities, which need not be expensive, are essential in schools.

- **Quantity of water used**

Hygiene also means using enough water. Many skin and eye diseases can be prevented simply by washing hands, face and bodies. The national drinking water programme has laid down some daily per capita water needs for planning purposes and to serve as guidelines for communities. This is 40 litres per capita daily to be available within 1, 600 metres. States have over the years made efforts to increase the per capita volume or reduce the distance of protected spot sources in order to benefit rural households and primarily women. However there is a constant tension between increasing demand for more and better quality of water and population growth combined with falling water tables due to unregulated extraction of water. To improve hygiene, the amount of water needed is usually said to be 20 litres or more per person each day. In India, many households use far less due to the lack of availability of water.



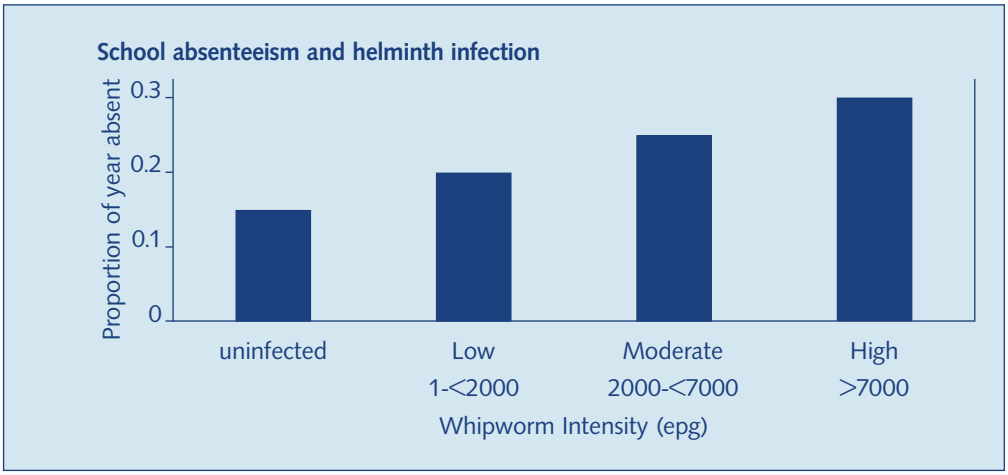
Curtis (1998)

Figure 3.3 Excreta as the number one health enemy

Lesson 2: Importance of eliminating worm infestation

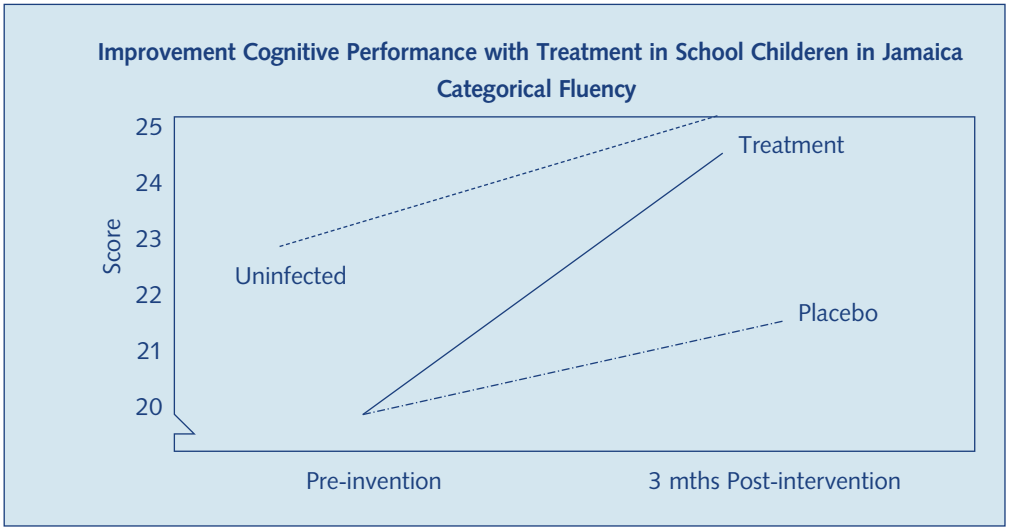
Children are at particular risk from worm infections. These can be controlled by practices such as: safe disposal of excreta, washing hands after defecation, wearing shoes or other foot wear, "chappals", and food hygiene. This includes avoiding eating food from roadside vendors who have poor hygiene practices, avoiding exposed food, cut fruits, milk based sweets and other foodstuff which invariably are exposed to flies and are sold in unsanitary environments.

The following figures from research in Jamaica within the Caribbean show how school performance attendance can be related to worm infestation. In particular, figure 3.4 shows that children in this study, who have worm infestation, tended to be more frequently absent from school. Figure 3.5 illustrates that, after de-worming, children show improvement in their growth and educational development. Both of these graphs illustrate the point that healthy children perform better in school and can attend more regularly.



Nokes et al (1993)

Figure 3.4 School absenteeism and helminth infection



Nokes et al (1993)

Figure 3.5 Improvement in cognitive performance with treatment in school children

Figure 3.6 How does diarrhoea spread?

Lesson 3: Research on programme management in communities

Relevant research does not only deal with hygiene issues, but also provides useful insights into programme design and management. The well-known **Methodology for Participatory Assessment (MPA)** study is one example of this. MPA is a groundbreaking research study undertaken by the Water and Sanitation Project and IRC with 88 communities in 15 countries beginning with India. It examined the issues of: effectiveness of services, management and institutional support, sustainability, gender, poverty, and demand-responsiveness.

Box 3.1 **Research on programme management (MPA)**

What have we learned about communities taking the lead in WES?

Some of the major findings of the MPA study, in relation to water supply are:

Decision-making: The most important factor for a better sustained service is the number and democratic nature of local planning decisions. The more men and women community members (rather than just agencies, local leaders, or men male community members) who participate in planning decisions and the greater the number of decisions thus taken, the better the performance of these water services. Choices are best made by men and women together including decisions on location of the facilities, maintenance, financing and local arrangements about management groups.

Quality of management: Second in importance is the quality of management. Quality of management means creating and supporting locally developed rules and functioning management committees that have recognised authority and that monitor the quality of construction and household contributions and account for (financial) management to the users/tariff payers.

Capacity building: Training should cover technical, social, managerial and environmental issues as well as health. It should be given to women and men and include training for user households on health and hygiene and user rights. Training should be continued with refresher courses or courses for newly emerging service functionaries.

Community contributions: Surprisingly, the study shows that contributions from community households in cash and/or kind to construction are not directly associated with better-sustained services, although well-managed facilities did have higher community payments.

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Gender: Agencies should change their interpretation of women-in-development and gender policies so that men and women community members do not only contribute to construction, but also participate equally in planning decisions, and service management and control.

Poverty aspects: Projects have not yet structurally considered poverty aspects. Key concerns are the composition of water management committees, using domestic water productively within households and adjustment of tariffs to differential use, benefits and capacity to pay.

Source: Dayal, R., van Wijk, C., and Mukherjee., N. (2000).

Lesson 4: Research about early childhood care

In rural households women spend substantial amounts of time processing, preparing and cooking meals for the family. Culturally, fingers are used for serving food, eating food, feeding children and babies. Similarly, collection of drinking water, carriage and storage of water and actual dispensing is fraught with the hazard of frequent contact with unwashed hands. This is exacerbated by the cultural practice of drinking water in cupped palms directly from a source such as the spout of a handpump.

The above are examples of practices which are essentially "caring practices". Frequently, the care-giver – mother, grandmother, an older sibling – uses fingers to mash food like rice with milk or "dal" to make it suitable for feeding the infant. Even when the baby gets a few teeth, mothers invariably mix the food with fingers to feed young children. Handwashing is done with water mostly and not soap and water, thus increasing the risk of infecting the child.

Two practices that increase the risk of food contamination are 1) preparation of food several hours before it is consumed with storage at temperatures that promote growth of pathogens and 2) insufficient cooking or reheating of food. Foods for babies should not be stored unless they can be kept cold below 10C or hot above 60C.

Fruits like banana, which can be peeled and eaten, are very safe unless again touched by improperly washed hands. Acidified and fermented foods may be lower in contamination as the acid helps prevent rapid growth of bacteria.

Washing dishes and cooking utensils with safe water and keeping the cooking area clean also reduce risk of contamination.

In Bangladesh mothers who used the sarees they wore to wipe a dirty child, blow their noses and also wipe dry cooking vessels and eating plates were more likely to have

children with diarrhoea than mothers who did not. The saree as a medium of transmitting infection was not recognised by many of the women. (Murphy, Stanton and Galbraith, 1997)

In Lesotho, the families who used only improved water supplies when their children were aged between 13 and 60 months had children who gained on average 235 g more in weight and 0.4 cm. more in height over a six-month period than families who used mixed quality water supplies. (Esrey et al., 1992)

Hygiene practices directly affect the cleanliness of the environment and the number of infectious agents children ingest, either through contaminated food or water or by placing contaminated objects in their mouths. (Engle et al., 1997)

World Bank (1994) has observed that studies in a variety of countries show that 70-80 percent of health care treatment is performed at home by women, particularly mothers. Taking various preventive measures, early detection, seeking of diagnosis, and subsequent home treatment, are done primarily by mothers. Knowledge and simple skills of prevention and home treatment have a direct bearing on frequency of illnesses and rapidness of recovery. A striking example is malaria which has a major impact on nutrition. Families that decide to buy and use bednets demonstrate an important early childhood care behaviour.

3.2 Lessons from evaluations and programme experience

School sanitation and hygiene education has a long history in India and other nations. Evaluations of past programmes and reflection on the past experience yield useful lessons that can be applied to the future. It is crucial to review and incorporate these lessons creatively and flexibly into future programming and policy.

However, not all of these past experiences are positive because, unfortunately, the promises of school health and hygiene programmes have not always been fulfilled. In many countries, including India, schools suffer from:

- Non-existent or insufficient water supply, sanitation and handwashing facilities
- Toilets that are not adapted to the needs of children, in particular girls
- Broken, dirty and unsafe facilities
- Non-existent or irrelevant health and hygiene education for children
- Unhealthy and dirty classrooms and school compounds

Under these conditions, schools become unsafe places where diseases are transmitted. Formal evaluations have been undertaken of school programmes in most nations. Lessons from a few of these (India, Bangladesh, Ghana, Vietnam) as well as from programming experience are described on the next page.

Box 3.2 **Lessons from programmes in schools**

Use and maintenance

- *Attendance of children, particularly girls, improves when they can use good sanitation facilities.* The benefits of school facilities, beyond health, are probably greater for girls than for boys.
- *Dirty facilities become unused facilities.* Children need to be taught to use, clean and maintain facilities. Teacher training should give a prominent role to learning how children can be organised for this in school. Maintenance and use of facilities are great challenges.
- *If the number of latrines is too few, then they tend not to be used.* The use of toilets and handwashing facilities, in particular, will increase over time if they are maintained in good order. If the latrines are too few (for example, 1 latrine for 200 students as planned in some programmes), then they may not be used. If teachers tend to lock one latrine for their own use or because they want (and need) a latrine for themselves, that is another reason why latrines are not used by the students!

Children and teachers

- Children are potential agents of change in their homes through their knowledge and use of sanitation and hygiene practices learned at school.
- *Teacher commitment is crucial.* Without teacher commitment to the programme, it will fail. Training teachers is a key issue. Refresher training should include organisation of children/staff for maintenance and use of school facilities, making workplans and activity plans for school health clubs. Giving *too many* responsibilities to teachers in a top-down way will not succeed. Teachers are often working in poor conditions. Planning should take account of this fact.
- *Learning and teaching materials are important.* Creative use of local materials for hygiene education is a subject to be incorporated into teacher training. These should be kept as simple and practical as possible. In SWASTHH, special attention may be needed not only for production but **also** for distribution of teaching/learning materials, which tends to be a bottleneck.

Programme planning and management

Lessons about programme strategies and management:

- *Sustainability* must be a major focus of the SSHE programme. A central SSHE objective is to achieve sustained behaviour and facilities that are consistently used

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- *Seemingly small improvements* are important: For example, research shows that behavioural changes among 10% to15% of the population mean great savings in days sick and therefore savings in financial terms. This implies that this programme requires time, patience and continuing commitment over many years to result in very large changes.

- *Integration or co-ordination of inputs.* The inputs and co-operation of different groups, at the right times, results in a qualitatively superior programme. This is particularly necessary:
  - among different departments in government (education, health, water and sanitation)
  - among different disciplines
  - among hardware inputs, educational software and community organisation

- *Subsidised but demand-based services is one important key to success.* Schools and communities should cover some of the costs and demonstrate their demand for the programme. Finance often comes from various sources but must not be too complicated or bureaucratic to activate.

- *Flexible models and standards work* better because they can be adapted or developed based on local conditions.

- The *non-governmental sector* – NGOs, CBOs, private providers – can play a significant role in the development of school water, sanitation and hygiene education if they are given the scope and training.

- *Competition and control* are needed in construction. Construction monopolies (such as Government PHEDs or large contractors) are not always the most efficient, least costly or most honest in the construction for school programmes.

- *Capacity building and monitoring* with appropriate learning methods is essential for school and anganwadi teachers and their supervisors. Relevant learning materials are needed. Most important, however, is the follow-up by supervisors and trainers at the school level. Lack of follow-up/monitoring after one short training event has seriously weakened programming in many places.

3.3 Key issues for policy makers

Policy makers – politicians and senior civil servants – have important roles in ensuring the success of the schools' water, sanitation and hygiene programme (Hooff, 1998). The programme itself can also be a popular programme among politicians because it shows concrete results in communities and, if well managed, is similarly popular with their constituents. The following box therefore focuses on some of the main SSHE issues for policy makers.

Box 3.3 **SSHE issues for policy makers**

Some of the special roles and issues for policy makers in SSHE are:

- **Political support and commitment**

SSHE requires local decision-making. Communities and school personnel must be able to make decisions about the facilities they want and can afford to maintain, not only contribute money and labour.

SSHE is more than construction and coverage. The impact of the programme comes through sustaining the facilities, using them as intended, developing healthy behaviours. Thus, SSHE is basically an education programme with construction. This point needs to be accepted – and supported – by state and local government, by WES and education personnel and by the public at large. The politician and policy maker has a crucial role in advocating for this.

- **Co-ordination and commitment**

Various stakeholders including policy makers can stimulate co-ordinated approaches and commitment among different departments and specialisations. Implementation must be co-ordinated. Both safe water and sanitation facilities are needed. Construction must be controlled so that it is timed correctly with training and community mobilisation. The policy maker can stimulate implementers to follow these guidelines.

- **Clearing blockages**

Numerous stakeholders including policy makers and managers can clear away blockages. This could be needed, for example, in the case where financing comes from different sources, which can be complex. For the RCRSP sanitation subsidy (which does not include water), the GOI/State share is 60% and 30% respectively with the balance 10% coming from the Panchayats/beneficiaries.

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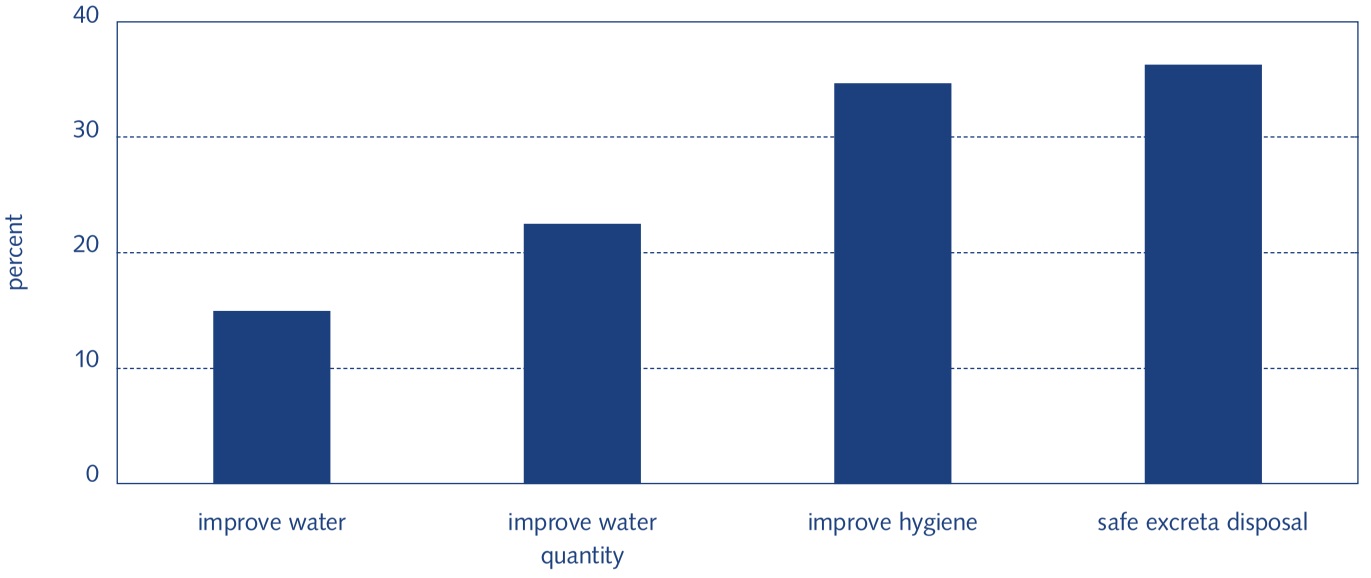
- **Setting up minimum objectives, coverage and standards**

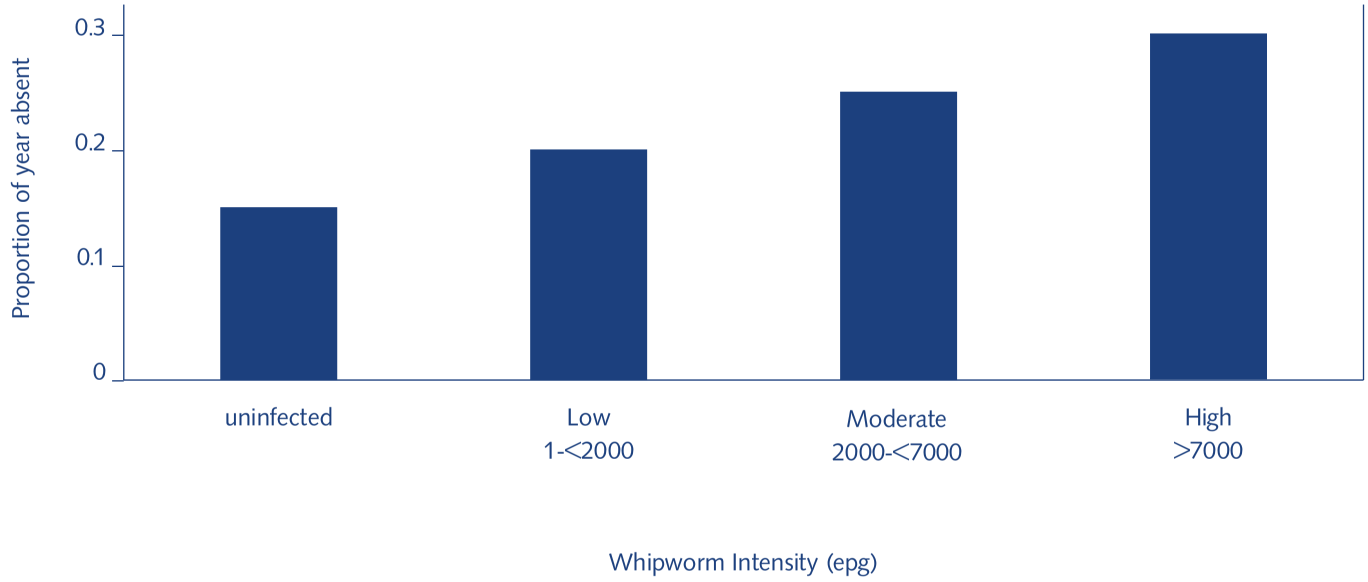
Several actors including policy makers help set the minimum objectives, coverage and standards. Flexibility is needed. Experience has shown that one uniform construction plan and model cannot be relevant in all situations. The design and the decisions about who constructs facilities depends on the situation. Small schools in active communities may wish to have all the construction done locally. Larger schools may want to have a role in identifying their own designs.

Overhead 3: **reduction in diarrhoea by intervention**



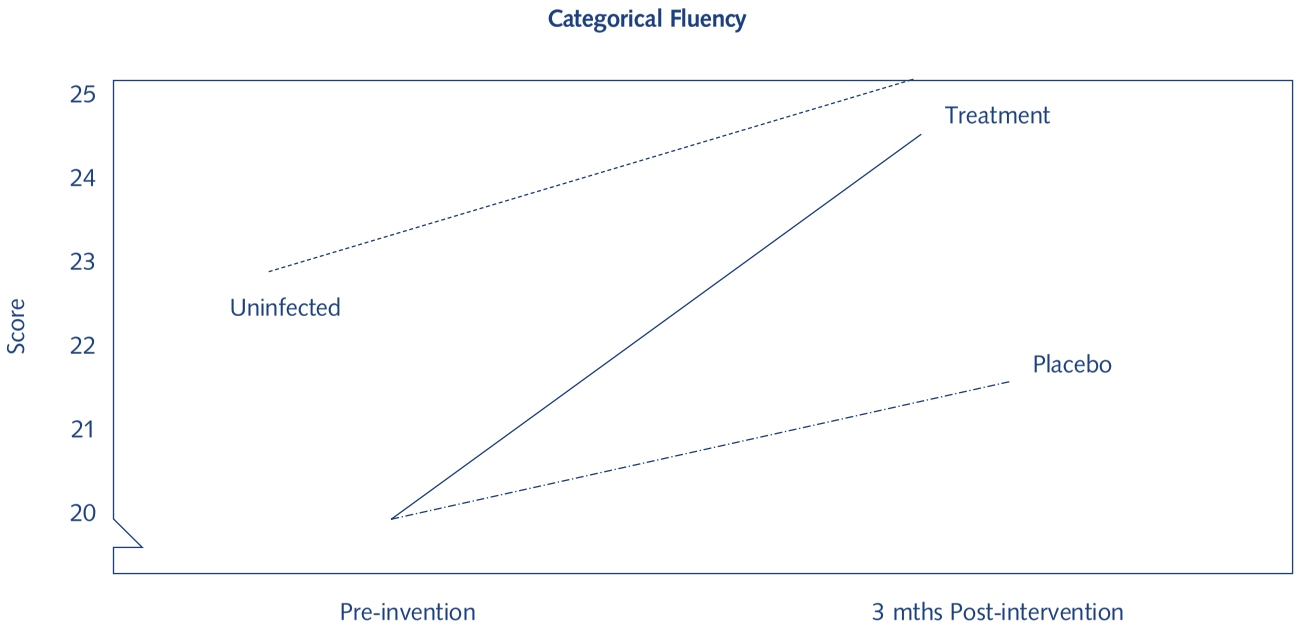
Source: Esrey (1992) - Results of research from 144 studies

Overhead 4: **School absenteeism and helminth infection**



Source: Nokes et al (1993).

Overhead 5: **Improvement in Cognitive Performance with treatment of School Children in Jamaica**



Source: Nokes et al (1992).

Activity Sheet 3.1: **Brainstorming with participants on lessons learned**

Objective:

- Participants share lessons learned from their own experiences in SSHE.

Material: flip chart and coloured cards

Time: one hour to two hours

Procedure:

1. Ask participants about their experience with hygiene education and school facilities for water and sanitation. The participants are asked to reflect on this and to write one lesson learned on a card. Directions may be needed about how to write cards (See appendix 2). The facilitator then groups the cards under headings. Participants can add more cards if important 'lessons' are missing. An example is shown in box 3.4
2. If this is the first activity in a workshop, it can be followed by a presentation on lessons learned from research and project assessments (see Sections 3.1 and 3.2). Participants can then compare their ideas (on the cards) with the lessons learned from international experience. They will see that there are several points in common. This means that there is a body of shared findings, lessons and concerns in SSHE.

Alternative method (3 to 4 hours):

3. Note: if the participants in the training course already have considerable experience with SSHE, then it is rewarding for them to share their experience in some depth. For this, a poster activity is useful. Groups of three to five people, who work together, can make and present a poster about their SSHE programmes. The poster should be attractive, including, for example pictures or drawings. After completing the poster, they may be presented. Presentations should be only five to ten minutes each. Also note that this poster presentation can be used as an icebreaker, as mutual training and as a way of identifying lessons learned from participants' own experience.

Box 3.4 **Example of lessons learned based on the ToT workshop in Ranchi**

Activity 1: Lessons learned from the participants' experience

Policy issues

- Need for a national/state policy on sanitation
- Lack of formal directives ensuring commitment of education / water and sanitation personnel

Community issues

- Need for people to take on responsibility
- Need to form new community groups only if similar groups do not already exist

Educational issues

- Need for learning activities for all children in hygiene education, not just a small group
- Behaviour takes time to change
- Curriculum must focus on sanitation, hygiene and life skills

Communication

- Need to orient parents on sanitation and need for mothers' participation in PTA
- Need to share ideas between teachers and communities
- Need to orient school management committees and village education committees.

Facilities

- Make sure toilets are accessible, not locked
- Boys and girls need separate toilets
- Need for maintaining water and sanitation facilities
- In water scarcity areas search for innovative designs, dry toilets, and alternative water sources such as rain water harvesting.

Comments

Participants can share lessons learned from their own experience. This builds interest, provides important information for the workshop and helps people to integrate new information with their current knowledge.

Activity Sheet 3.2: **Field trip and debriefing**

Objective:

- To put theory into practice of SSHE.
- To see the 'reality' of day-to-day situations faced by schools.

Material: flip chart

Time: half to a whole day (including field trip)

Procedure:

1. Participants visit one or a number of schools in the vicinity of the training course. As many of these schools as possible should have water and sanitation facilities.
2. Participants, working in groups of three or four people, can do two activities. First, they could assess the situation by administering a monitoring checklist related to hygiene education, hygiene practices, water and sanitation facilitates in the school. They could develop their own checklist before undertaking the field trip or use one that the facilitator provides (refer to Chapter 10, Section 10.4). The checklists should include observations as well as questions for teachers and for children. Secondly, the participants prepare, the evening before, some learning activities which they try out with children during the field trip.
3. The de-briefing, after the school visit, can be an excellent learning experience. Participants may tend to give purely descriptive reports, reading out the data they collected without comment. They will not usually comment on which findings might be most important or what might be done to improve some of the crucial challenges that were observed.
4. The facilitator and participants can select at least one major problem (such as the toilets being locked so that pupils could not use them). They can then reflect and think of possible solutions to these problems. Recognising and acting on problems is the centre of good management. The participants can then vote on which solution from the group seems to be the best and most practical solution to the problem they have identified.

Comment

Collecting information is only one part of monitoring. As important (or more important) is understanding the data, finding the most important features and deciding, if possible, what might be done next.

4 Hygiene and behavioural change

This chapter focuses on hygiene and behavioural change based on priority hygiene practices that give the greatest health benefits, as identified in the preceding chapter (Chapter 3, Section 3.1). These include: safe disposal of excreta; personal hygiene, particularly handwashing; quantity of water used for personal cleanliness; and quality of water.

This chapter describes:

- the difference between hygiene promotion and hygiene education
- how behaviours (practices) change

This chapter is based on the principle that:
The success of a school hygiene programme, is not determined only by the number of toilets constructed, the number of handpumps installed or water connections built. Nor is the success of a programme determined simply by what children know. Knowledge that is not applied to hygiene behaviours practice, leads to failure.

Figure 4.1 Boys washing themselves

4.1 What is hygiene promotion? Hygiene education?

The purpose of both hygiene education and promotion is through the widespread adoption of safe practices related to sanitation and water, to prevent diseases like diarrhoea, skin and eye infections and worms (parasites).

Hygiene promotion identifies and uses messages about what people know, do and want. Simple, positive and attractive messages are delivered through the most popular local ways of communication (Curtis, 1998). Hygiene promotion usually takes place in the community, particularly through IEC (information, education and communication) activities such as campaigns, wall writing, parades, but also through interpersonal communication such as home visits. In well-planned promotion activities, different messages are identified for men and women, children, young and old, for different ethnic and economic groups.

Hygiene education helps people learn about water and sanitation-related behaviours and the reasons why these lead to good health and bad health. It also examines the social context of hygiene practices. The idea is that when people understand and think together about their situations and practices, they can plan and act to prevent diseases. One important actual situation for hygiene education is working with children within the classroom (Wijk and Murre, 1996).

There is, of course, overlap between the concepts of education and promotion. Moreover, most programmes use both education and promotion approaches.

Box 4.1 **Hygiene behaviour in school**

behaviours = what people do

Hygiene behaviours in school include

- maintaining safe drinking water, clean toilets and handwashing facilities
- practising behaviour such as universal use of toilets, washing hands after defecation and before and after eating
- organising and training children to maintain and use facilities
- encouraging consistent personal hygiene behaviours including washing face, bathing and wearing clean clothes
- reaching out to mothers, fathers and community with hygiene and sanitation messages

4.2 What motivates people to improve hygiene?

Repeating general messages about hygiene practices does not usually change behaviour and information on disease transmission does not usually change practices. One well-known model that seeks to explain how adult behaviours change is described in box 4.2.

Box 4.2 **Model of behavioural change**

What is it that brings adults to change risky practices and conditions in their own environment? What leads an adult to adopt a new practice?

A well-known model of behavioural change by J. Hubley suggests that an adult will develop new health practices:

1. When he or she believes that the practice has net benefits, for health or other reasons, and considers these benefits as important.
2. When the significant people in his or her environment are positive about and support the new practice.
3. When the enabling factors for that behaviour are present. This means that the skills needed to do the practice, the time, materials and resources are sufficiently available. The costs, in terms of money and effort, should seem to be less than the benefits.

These determine if the practice is finally taken up and continued.

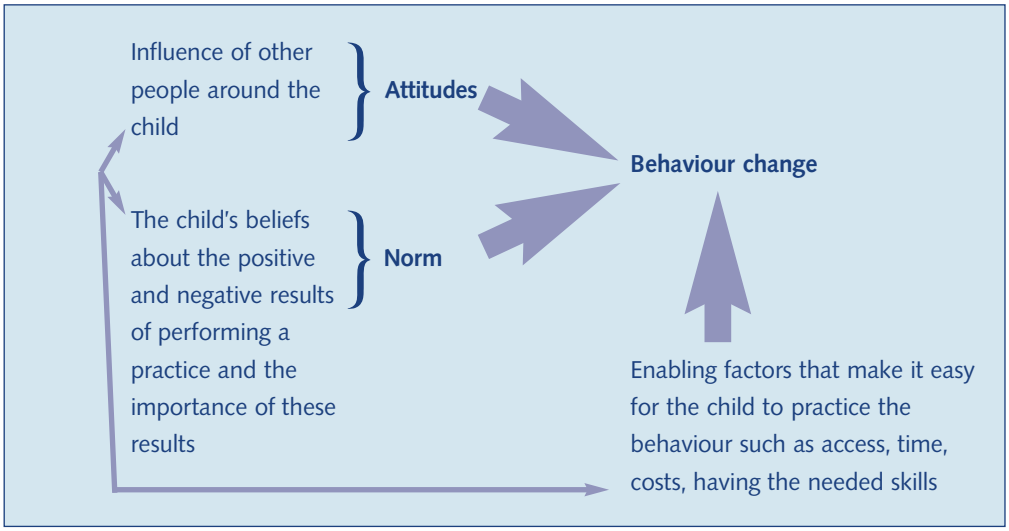
Source: Hubley (1993).

The following Hubley model was originally prepared for adults, but has been adapted to describe behavioural change for children as well. For them, the influence of significant people in the environment may initially be more important than their belief in the positive results of the practice. The enabling factors must also make the practice as simple as possible to perform. This adapted model for children might look something like figure 4.2.

What can hygiene education programmes do to support the development of new behaviours among children? The answer is related to a strong educational environment, access to safe, operational facilities and reinforcement from the home. In this whole process, the key adults around the child have crucial roles to play.

This implies that many behavioural changes cannot be achieved by individual changes alone, but require concerted action from larger groups and whole communities. Models of individual change have their limitations. Societal change is only possible when the community members themselves feel there is a problem and jointly undertake action

that will permanently improve the conditions and the behaviours. Making collective choices, assigning responsibilities and monitoring action also increase the commitment of the members to achieve the agreed changes. Group (community and teacher) motivation and mobilisation thus must be built into the school programming from the beginning (Ryanna, 1995).These mobilisation and awareness raising are very essential steps.



Adapted from J. Hubley (1993)

Figure 4.2: The Hubley model of behavioural change

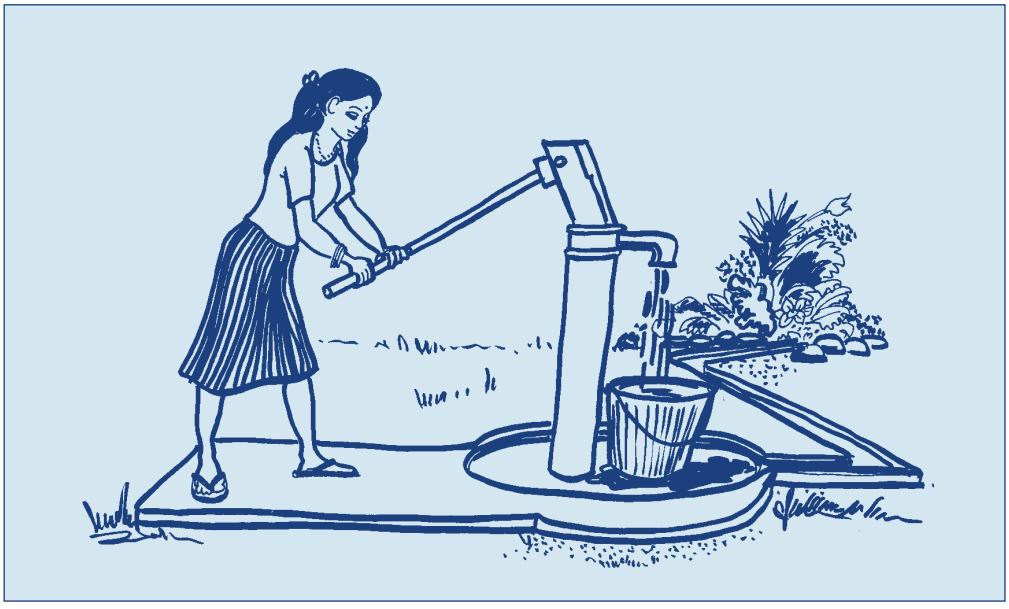
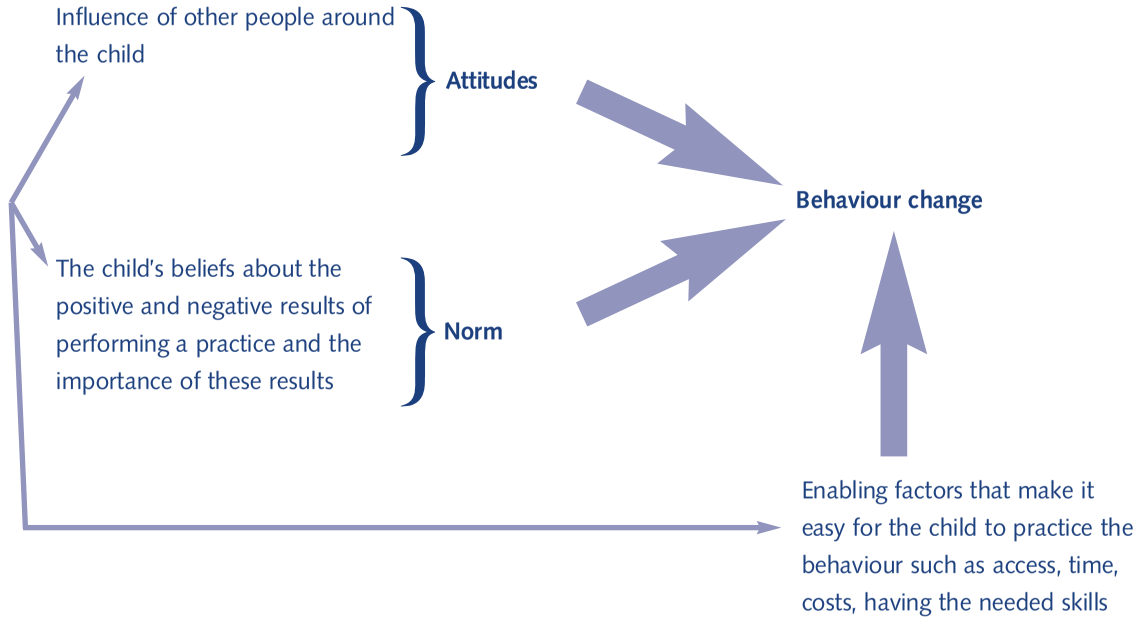


Figure 4.3 Girl pumping water

Overhead 6 **The 'Hubley' model of behavioural change**



Adapted from J. Hubley (1993)

Activity Sheet 4.1 **Behavioural changes**

Objective:

- To apply the 'Hubley' model of behaviour change (refer to Overhead 6).

Material: paper
Time: two hours
Procedure: This activity begins with a review of the model of behaviour change shown in the previous pages and in Overhead 6.

1. The facilitator asks the participants to imagine that the objective of a sanitation project is that: Two out of three households will own and use a toilet. Ask participants to think of a rural community that they are familiar with. Each participant should pretend to be a man or woman (not the richest) in that community. They put themselves in the place of a man or woman in the community and do the following exercise:
   - List at least 5 important people who can influence your decisions to own and use a toilet.
   - Give one reason for the individual man or woman to want a toilet? One reason for not wanting a toilet? (not only reasons related to health)
   - List the most important enabling factors that make it easy to perform the behaviour.
   - List at least one possible factor that makes it easy to build and use a toilet. And at least one possible factor that makes it difficult to build and use a toilet.
2. As part of the debriefing, the facilitator should ask participants to compare their answers.
   Question 1: Do the same important people influence the men and women?
   Question 2: Are the reasons of men and women to want a toilet often different?
   Question 3: What could be done to have the enabling factors in place? If the enabling factors are not present, should there be a sanitation project in that locality?
3. The facilitator should remind participants that it is important to make sure that the enabling factors are present. This means, to ensure that people can carry out the new practice (behaviour) easily.
   - Example: If there is not enough water, then you cannot tell people to wash hands with lots of water or bathe frequently.
   - Find out the reasons for taking on a new practice. What positive results can the person expect from this new practice? Try to help people solve the problems related to new practices and behaviours.
   - Convince significant people in the community and family about the new behaviour. Their support is important.

Activity Sheet 4.2 **Hygiene practices**

Objective:

- To identify the most relevant (and practical) hygiene behaviours in relation to their knowledge of a given situation.

Material: paper

Time: one hour

Procedure:

1. Ask the participants to go through the list of hygiene behaviours in Table 4.1 (refer to next page). State that the following list contains hygiene practices taken from programmes around the world.
2. Ask the participants to select only the most important practices (around five) for their school or for a particular community (or for an area they are familiar with) beginning with the easiest ones.
3. As part of the debriefing, ask the participants which behaviours they have chosen and why.

Table 4.1 **Example of universal hygiene practices**

Safe disposal of human excreta
- Where people defecate
- Where anal cleansing materials are thrown away
- Cleaning and maintenance of toilet
- Safe disposal of infants' and young children's excreta
- Handwashing
- Use of faeces as fertiliser and for fish production
- Animals such as chicken or pigs eating excreta
Hygiene practices
Personal hygiene
- Handwashing, face-washing, bathing: doing this frequently and using enough water
- Quantity of water for personal and household hygiene more than 20 litres per person per day
- Cleaning anus and washing hands
- Personal hygiene during natural events such as menstruation, birth, death, illness
Households
- Removing garbage
- Managing of animals and animal faeces
- Sweeping and cleaning of floors, compounds
Environment
- Good drainage to dispose of waste and storm water
- Removing garbage and solid waste
- Cleanliness of streets, paths and public places (markets, schools, community and health centres etc.)
Quality of water used
Use and protection of water sources
- Use of safe water source for drinking, cooking, washing baby
- Keeping water clean during collection and transport
- Drainage around the water source
- Protecting and maintaining the water source
- Dividing water use/rights between agricultural and household uses
Water quality at home
- Keeping water clean in handling and storage
- Water treatment: filtering, boiling and so on
- Disposal of waste water

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Food handling and storage

- Cleaning kitchen or food preparation area
- Washing raw food, vegetables and fruits
- Cooking well till food is properly cooked
- Avoiding stale food and repeatedly reheated food
- Covering food to protect from flies, insects
- Clean place for storing food
- Length/temperature for storage
- Use of clean eating utensils
- Washing and storage of utensils

Adapted from M. Boot and S. Cairncross (1993).

Activity Sheet 4.3 **Case study on water drinking practices of children (optional)**

Objective:
Participants focus on possible solutions to the case study on water drinking practices.

Material: paper
Time: half an hour
Procedure:

1. Form groups of participants with four to eight people per group.
2. Ask the participants to work on the case study below which is provided on an A4 paper to each group.
3. Ask one of the participants in each of the groups to read out the case study loudly. After the case study has been read, each group should be asked to focus on possible solutions to the problem.
4. After around 20 minutes all of the groups should come together in a plenary session and share their answers.

Note that this type of exercise is an effective way of getting the groups to discuss their own experiences in terms of their problems and possible solutions regarding water drinking practices in their area.

Short case study on water drinking and food practices of children
The water drinking practices in India are extremely varied. One traditional drinking practice is based on the use of a water dispenser which in north India is known as a "lota". This is usually made of brass and is scrubbed with ash to keep it shining bright. It has a narrow neck to facilitate holding and is like a small pitcher but without a handle. The capacity would be about 750 ml. Drinking water from a larger storage container is tipped to fill this “lota”. The shape is such that it facilitates pouring of water into the mouth without touching the rim to the lips. Adults in most rural areas use this even now. This removes the need for individual tumblers and the need to wash them. But children obviously cannot maneuver this somewhat heavy container so they have water either in their cupped palms most of the time or use glasses in more urbanized settings. This is again very hazardous as they do not wash their hands or the cup before drinking.
What can be done to solve this problem?

Activity Sheet 4.4 **Identifying messages for key hygiene practices**

Objective:

- To understand that we need to know what practices are common in the area, only then can we pick out the most risky practices (and the healthy practices).
- To comprehend that too many messages are confusing and not effective.

Material: paper

Time: one to two hours

Procedure:

1. In the training workshop, ask participants to think about all the messages and practices in hygiene education and WES activities.
2. In the large group, each participant should suggest one different hygiene or sanitation message used in communities. The facilitator can write these on a flip chart so that everyone can see how large the list becomes.
3. The facilitator explains to participants what happens if 20 or 30 messages are used in hygiene education and promotion. What is the effect of these on a community?
4. The facilitator tells participants that too many messages are confusing and not effective. Two to four messages are about the maximum for effective communication. The facilitator then lets the participants work in small groups that are familiar with the community or areas and negotiate with each other to identify the 2 to 4 key messages. When doing this activity, it is important for participants to keep in mind one community with which they are familiar.
5. For the debriefing, participants can return to the plenary and compare their selected messages. Their answers should refer to specific features of the community that are the basis for their chosen selected messages.

Activity Sheet 4.5 **Field trip: Identifying key hygiene practices and baseline information**

Objective:

- To identify the types of hygiene practices that are prevalent in the community through a 'transect walk'.

Material: paper

Time: The survey can take about half a day to one day with a team of two people who speak the local language.

Procedure:

1. Explain to the participants that the issues and messages for hygiene promotion can be identified by visiting the community and finding out what people do and think. The idea is to visit specific places and to ask and observe people's practices, stopping at different locations (called a transect walk).
2. Give a draft community survey to the participants (see the next page). Check with the participants if they would like to add additional issues, for example, other factors that might put children at risk of diarrhoea and other sicknesses.
3. Give the following directions to participants for the transect walk:
   - Take a walk within the community from one point to another
   - Make your own observation/question list. As you walk, observe and ask about things such as:
     - the presence of key facilities like water points, toilets
     - functionality and quality of water sources
     - maintenance of arrangements for toilets, water facilities
     - presence of community organisations
   - Visit a few households and check/observe presence and condition of facilities, water and food storage, animal control
   - Observe and talk with the children and women.
4. At the end of the survey, the major findings should be identified before leaving the community. You should have listed:
   - Key hygiene and sanitation issues for improvement.
   - What men and women see as benefits from having a toilet and hygiene education.
   - Any special problems.
5. In the debriefing, participants should discuss what the school programme might do in relation to the community. This could include activities of the school health club, the PTA or the Village Education Committee, among others. Explain that information could be used as a baseline. Keep these initial results and see if there are any changes over time. The baseline can show indicators about the desired health practices.

Table 4.2 **Example of a community survey**

Where to go, who to meet	What to do
Observe community	Are garbage and faecal matter scattered around? Animal control? Cleanliness of children (also skin infections, eye infections)?
Meet local leaders	Ask about: - Functioning, quality of water sources. - Diseases in the community. - Active organisations and groups (women's club, and so on) that could disseminate hygiene messages. - Availability of people to construct and repair buildings.
Observe and talk with children	- Are they dirty/clean? Obvious nutritional problems? - Do they appear to have worms? Lice? Skin problems? Eye infections? - Ask the girls if they go to school? Do they learn about hygiene in school?
Observe school children and talk to community	Ask about: - Their perception of hygiene, specifically personal and domestic hygiene.
Visiting at least three households (not the richest) of families that are known for being neat and clean	- Observe household sanitation. What benefits do women (and men) see in being neat and clean? - Ask about the special beliefs and customs in the community: What can the community do to improve health/hygiene?
Visit at least two households that have toilets, if possible	- See condition of toilets. Who uses the toilet? - Ask the reasons for men and women liking a toilet. Benefits they see. Ask men and women separately. - Who constructed the toilet and what costs were involved? - Ask what community people could do to improve health/hygiene.
Visit the water points	- Cleanliness, maintenance. - Last repairs done. Who paid? Costs of water to users?
Visit the school, health centre, anganwadi centre	- See water and sanitation facilities. Maintenance and cleanliness. - Ask what should be done to improve health/hygiene in the community.

5 Education

The topics in this chapter are:

- characteristics of the life skills education approach
- curricula for life skills education related to water, sanitation and hygiene behaviours
- some on-going education programmes

This chapter is based on the following principle:

- The educational foundation of the SWASTHH programme is based on the life skills approach. The programme is holistic in its approach and fits in the curriculum reforms now being finalised by NCERT.

5.1 The life skills approach

The life skills approach focuses on the knowledge, attitudes and behaviours that support people in taking greater responsibility for their own lives. It focuses on promotion, among children, of positive attitudes, and skills as well as habits for risk reduction. Life skills education recognises that it can be challenging for children to make healthy life choices, or resist negative pressures, or reduce risky behaviours.

Since hygiene education also aims at changing risky behaviours, the life skills approach is highly compatible with it.

Box 5.1 **Purpose of the life skills approach applied to hygiene**

The purpose of the life skills approach applied to hygiene, water and sanitation is two-fold:

- To enhance the already positive and healthy social characteristics of the majority of young people through reinforcing and building knowledge, and encouraging positive attitudes and values, and healthy and pro-social skills and behaviour.

- To prevent or reduce risks to health to support social and emotional development through reducing misinformation and preventing or reducing risky or harmful behaviour.

Life skills education tries to give girls and boys the knowledge, attitudes, and skills that they need to lead healthy lives, and encourage others to do so. Its focus is the individual girl, the boy and the school, eventually reaching out to homes and communities.

Life skills education uses teaching and learning methods that go beyond the transmission of information. They are interactive and participatory with room for both information-focused sessions and child-centred sessions. Through the use of participatory learning activities, such as games, exercises, and group assignments, the students acquire a wider range of life skills including those of health and hygiene. For example, as part of the lessons on health and hygiene, children may develop respect for the opposite sex, for older and younger people and people weaker or less fortunate than they themselves. They could practice activities that show openness to and respect for habits of other groups.

The life skills approach is highly compatible to the *National Curriculum Framework for School Education* (2000) that is being brought out by the NCERT. The following is an excerpt from the new National Curriculum Framework:

Box 5.2 **Excerpt from the NCERT**

NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION

For the all-round development of the learners, the interface between cognition, emotion and action is necessary.

Value education deserves a prominent place in the school curriculum for inculcation and sustenance of personal, social, national and spiritual values like cleanliness.

The new thrust areas include:

- elimination of evils like poverty, ignorance, ill health, corruption and violence, and ensuring equity, health and peace.

The characteristic features of the school curriculum would include:

- integration of environmental education with languages, mathematics and other activities in the first two years of the primary stage
- integration of health into the 'Art of health and productive living' (a new subject) at the primary stage

Source: NCERT (2000).

The life skills approach has three components which are shown in the box below.

Table 5.1 **Components of the life skills approach**

(1) LIFE SKILLS	(2) CONTENTS and CONTEXTS	(3) LEARNING METHODS
The (life) skills, such as interpersonal skills, values clarification, decision-making, coping with pressure and management skills.	The contents and context to which the skills-based approach is applied. In this case, hygiene, water and sanitation to improve health, behaviours and provide benefits such as increased school attendance or reaching out to the home and community.	The methods for teaching and learning within the skills-based approach, including a wide range of methods beyond routine learning.

Each of these three (life skills, contents and context, teaching and learning methods) is discussed on the following pages.

Life Skills

There is considerable variation in the types of life skills and categories into which these may be divided. The table below provides some examples for a general life skills approach that can be applied to hygiene or other content areas. Although the columns and categories in the following table appear to be distinct from each other, in practice, many of these skills are dealt with simultaneously. For example: decision-making is likely to involve creative and critical thinking components (what are my options?) and values clarification (what is important to me?).

Table 5.2 **Examples of Life Skills**

Inter-personal Skills	Skills for Building Self- Awareness	Values Clarification Skills	Decision-Making Skills	Coping & Stress Management Skills
Empathy building	Self-assessment	Skills for life	Critical and creative	Self control skills
Active listening	Identifying personal strengths and weaknesses	Understanding different norms, beliefs, culture, gender, tolerance, diversity, discrimination	Thinking and problem solving skills	Coping with (peer) pressure
Giving and receiving feedback	Positive thinking skills	Skills for acting on discrimination and stereotypes	Analytical skills for assessing (personal and other) risks	Time management skills
Assertion and refusal skills	Skills for building self image and body image	Identifying and acting on rights, responsibilities and social justice	Skills for generating alternatives	Skills for dealing with anxiety
Negotiation and conflict management			Info gathering skills	Dealing with difficult situations
Cooperation and teamwork			Skills for assessing consequences	Help seeking skills

Content and context of the life skills approach

The life skills approach can be used in many subjects. These include not only water and sanitation, but also issues such as environmental education, peace education, or education for development as well as livelihood skills such as various income generating activities and vocational programmes.

The question for life skills related specifically to hygiene, water and sanitation is: What knowledge, attitudes and skills should be addressed? The content reflecting this fundamental question should be selected in such a way that it fits with the existing curricula and is relevant for the children and their environment. At the same time, the content (knowledge, attitudes and skills) must be feasible. Feasibility means that the teacher is able to deal with the contents in her or his class. There are different ways to identify the knowledge, attitudes and skills that will be addressed. The following box shows one approach in three related steps.

Box 5.3 **Steps for identifying contents for life skills hygiene education**

Steps for identifying relevant and feasible contents for life skills hygiene education in schools

1. **Review** the content of the curriculum within the state or district. A presentation can be made at state, district and cluster workshops.
2. **Identify** the contents relevant to hygiene-related subjects, including the aspects related to construction, maintenance and correct use of new water and sanitation facilities in the school. (Presentations at state, district and cluster workshops should be adapted to the 'lessons learned' from past programmes and checked by field visits to schools. The lessons learned and field visits can be developed by specialists or by participants at training workshops).
3. **Review and list** the contents that are currently taught in reality. Have the teachers identify what they can and will change or add to the content (knowledge, attitudes and skills). This can be done through workshop planning activities at the block and district levels.

Educators should be helped to use and adapt the contents (knowledge, attitudes and skills) they want to apply within the context of the curriculum they have to follow, and use existing teaching aids. It is also important to help the educator balance these inputs with special needs or situations in their area. For example, in dry environments, one might expect that eye and face hygiene should be highlighted. In areas with schistosomiasis (common name bilharzia) or cholera, these topics deserve special emphasis (through safe urination and defecation practice, water hygiene, and so on).

Towards a curriculum framework for hygiene life skills

The life skills strategy means going further than the traditional 'personal hygiene' approach with children. The contents need to reflect this as described below.

Box 5.4 **Curriculum Framework: NCERT**

The document "The Primary Years" brought out by the NCERT has four curricular areas (subjects) for the primary school level. One of these is environmental education. It suggested that about one-third (35%) of the teaching/learning time be devoted to environmental education in the class. The curriculum framework for this is divided into three levels:

Level 1: includes grades 1 and 2 of the primary stage and is seen as a continuation of pre-school.

Level 2: corresponds to grades 3 and 4 of the primary stage.

Level 3: corresponds to grade 5 of the primary stage.

Source: NCERT (1998).

The NCERT publication titled *Towards a curriculum framework* (1998) gave suggestions for indicators, learnings and skills at these three levels. The NCERT contents specifically related to water, sanitation and hygiene in the 'carrier' subject environmental education, are shown on the next two pages. In addition, a rather different curriculum outline is attached after this for comparison and to show the range of approaches possible in life skills education.

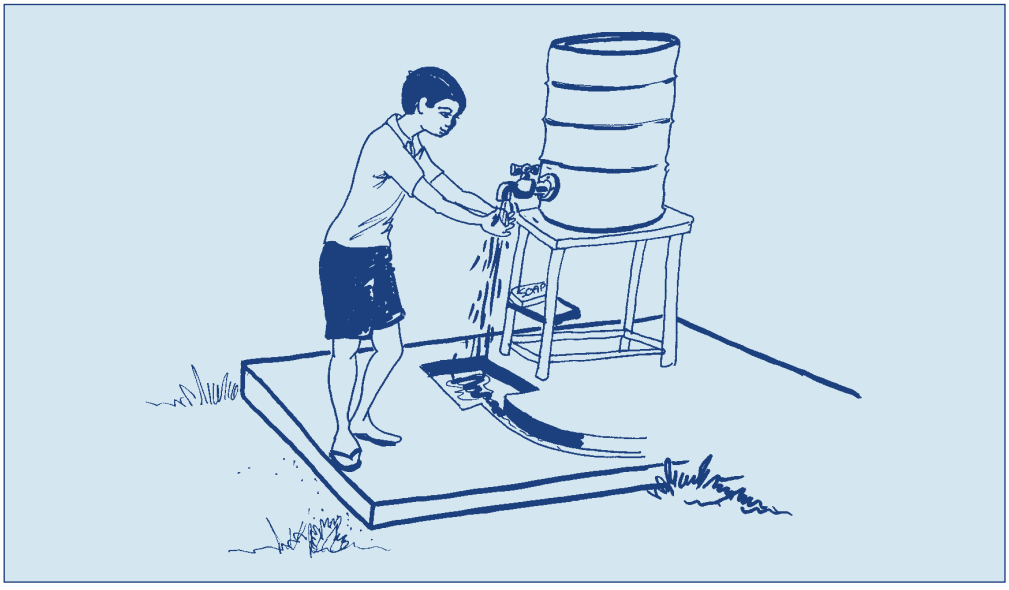

Figure 5.1 Boy washing hands

Table 5.3 **Water, sanitation and hygiene in the 'Primary Years' curriculum**

Excerpts from NCERT: Toward a curriculum framework

Objectives:

- develop awareness and understanding about her/his personal well being and ways to keep healthy
- demonstrate good health habits

Level 1	Level 2	Level 3
• relates the habits followed before and after taking food • develops habits of safe handling of food and drinking water • acquires and practises the habits of personal cleanliness including toilet habits • keeps personal belongings and the classroom clean and in order • observes and reports lack of order and cleanliness in immediate surrounds • takes simple steps to correct these situations • knows about the sources of drinking water and its significance for human life • knows about different ways of purifying water and demonstrates them through simple experiments • practises simple habits of standing in a queue when required and waits for her/his turn in different situations/group activities • practises simple habits such as covering mouth and nose during coughing, sneezing, yawning	• understands the need for and follows regular habits of taking food and cleanliness of hands and eating place • recognises the need for and ways of safe storing of food items and drinking water and shares them through role-plays, poems, songs, drawings, etc. • associates good health with personal cleanliness and displays them in drama, drawing, etc. • keeps a check on the habits of personal cleanliness of siblings and peers and encourages them to follow these habits • keeps immediate surroundings clean and participates in activities for cleanliness of school and neighbourhood • realises that each individual has a responsibility and role in keeping the surroundings clean • identifies the ways of collecting and disposing solid and liquid waste at home, school and the locality and the agencies responsible for it	• identifies relationship between unclean food and water and occurrence of diseases • identifies relationship between unclean habits/unclean surroundings and occurrence of communicable diseases • knows about the common diseases, early signs, simple preventive measures and who to contact in case of occurrence of certain diseases • has accurate information and is able to explain to peers and siblings why certain communicable diseases occur • participates in community, neighbourhood and school activities; is able to mobilise peers to take steps to prevent certain diseases • identifies local communicable diseases as air borne, water/food borne and insect borne and can offer ideas regarding their prevention.

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Objectives: The child should (1) demonstrate skills related to taking care of the immediate environment; and (2) demonstrate through appropriate action, sensitivity to the needs and feelings of fellow human beings and other living things

Level 1	Level 2	Level 3
	• surveys and reports about some common essential facilities in the locality such as drinking water and who manages them • imagines situations about what would happen if there had been no rules and reports them through stories, illustrations, drama, etc.	• knows about the rights and duties of every member in the community and respects them • finds out about the agencies/bodies and institutions that ensure the rights of every member in the community • cites examples how information available through mass media help her/him in different ways (studies, health habits, physical exercises, entertainment, values, etc.) • draws sketch maps, not to scale, showing routs from school to nearby place indicating landmarks and directions of movement

Objectives: The child should: (1) identify and know about the natural resources and understands the need for their proper utilisation, conservation and preservation, and (2) develop skills related to taking care of the environment

Level 1	Level 2	Level 3
• identifies simple uses of water for human beings, plants and animals	• finds out the natural sources of water and shares with peers in appropriate ways • observes and records the three states of water • demonstrates how the rainfall occurs through the story of a drop or in any other way • cites examples of activities that lead to water pollution and role of everybody to avoid it	• examines the local environment, e.g., the school ground for signs of weathering, rainfall occurrence, streams, ponds and their characteristics and suggests ways of overcoming the problem • defines and compares renewable and non-renewable resources • shows concern for limited resources and the need to use them carefully

Objective: The child should develop and demonstrate skills of life-long learning such as observing, comparing, and so on.

Level 1	Level 2	Level 3
	• accepts and respects differences between individuals • does not hurt the feelings of others • does not use strong language	• Is able to give examples about differences and similarities and equal rights. • Is able to define practices and habits to keep systems of the human body in proper form • respects the feelings of others; is tolerant to diverse ideas, beliefs and practices; distinguishes between harmless practices and those that hurt and harm others.

Source: NCERT (1998).

The following table provides another example of selected hygiene life skills contents from a different point of view. The themes of the table are diseases and infections that can be prevented or reduced by consistent water and sanitation hygiene. It would be useful to compare these contents with NCERT life skills education, as they overlap considerably, but also have somewhat different strengths. This comparison can provide an extra check to make certain that unimportant topics receive less emphasis while important topics (related to child survival and basic well-being) receive more emphasis when the NCERT suggestions are adapted for local use.

The table on the following three pages does not break down the content by age group. It lists curriculum contents for children aged 6 through 12. A breakdown by age group can best be done in the district or state on the basis of the current curriculum.

Table 5.4 **Examples of content for life skills approach in hygiene education**
Examples of curriculum contents for children (aged 6 through 12)

Theme/ subject	Required knowledge of child	Required attitude of child	Required skills of child
Incidence and transmission of diseases in the local environment	• able to describe what disease/illness is • knows which diseases are related to water and sanitation in the area • knows the transmission routes of the three most important water and sanitation related diseases • knows about relation between hygiene/water related diseases and gender, age and wealth differences	• accepts that there are behavioural reasons behind diseases • accepts that vulnerability towards diseases is not the same for all people and that risk levels can be influenced • is willing to undertake action to prevent transmission of diseases	• boys and girls equally capable of voicing their viewpoint and knowledge • able to critically analyse social, environmental and behaviour related risk factors
Diarrhoea	• understands what diarrhoea is (frequency of loose stool) and how it can be transmitted • grasps where one is at risk and what each actor - self, schoolmates, mothers, fathers, brothers and sisters, teachers - may do to prevent diarrhoea from spreading • understands that all stools are dangerous, also including those of babies and infants. • understands the seriousness of diarrhoea (dehydration) • learns to recognise signs of dehydration and what actions to take	• feels responsible for preventing diarrhoea • willing to take action to clean stools/toilet or train younger brothers/sisters irrespective of being boy or girl	• boys and girls demonstrate and explain safe handwashing methods according to different situations (with soap and ash) and when to wash hands • boys and girls use and clean toilets without discrimination by sex/age/class • all pupils (boys and girls) use school toilets • boys and girls wash hands properly after toilet use. Social pressure by teachers and pupils to wash hands after toilet use and before eating • able to map presence of risky areas in home and community and use it to plan and monitor

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Theme/ subject	Required knowledge of child	Required attitude of child	Required skills of child
Skin and eye diseases	• knows (can explain) why regular washing and bathing can prevent eye and skin problems • knows (can mention) consequences of eye and skin diseases	• boys and girls appreciate regular washing and bathing as a means of staying clean and healthy, among other benefits; have sense of self and take pride in being clean and tidy. Learn about scabies and how to prevent and treat it • does not judge or tease fellow children and parents for lack of hygiene but is ready to understand underlying reasons and help out peers	• boys and girls help with water collection; • boys and girls regularly wash and bath in safe sources. Has identified available washing and bathing facilities in community/homes (usable by girls and boys and by women and men) • has analysed problems and can initiate actions to reduce local washing and bathing problems
Worm and lice infestation	• learns how worms and lice are transmitted • understands that worms are harmful and that transmission can be stopped by prevention and treatment	• feels secure in discussing worm and lice infestation and seeks treatment without fear. • can draw or make models of different worms. • learns about symptoms	• (has same hygiene skills as for diarrhoeas) • shows help-seeking and help-providing skills (examples: de-licing, campaigns for using toilets or wearing sandals in hook-worm prone areas.)
Diseases common to the geographic area, such as Cholera, Typhoid, Hepatitis A, Hookworm, Round worm, Pin worm, Amoebiasis, Giardiasis schistosomiasis, Malaria, Dengue	Knows about • simple symptoms • transmission • prevention • what can be done about it at the personal behavioural and environmental level	• willing to go for treatment • willing to adapt behaviour • willing to help sick friends • accepts that other children can be sick and respects sick children • feels responsible for adopting hygienic behaviours • accepts social norms and conditions needed to prevent diseases	• does not exclude sick friends • shows analysing skills • shows decision-making skills/assessing consequences • shows help seeking and providing skills • shows self control skills

Theme/ subject	Required knowledge of child	Required attitude of child	Required skills of child
Nutrition: Food-related infections, food hygiene	• understands that diseases may be started or passed on by eating raw (uncooked) food, such as fruit, milk, meat, vegetables • understands that food prepared and/or eaten with dirty hands can start or pass on diseases • understands that storage of food may make it unsafe to eat • knows (can mention) the most risky practices • knows (can mention) which diseases are related to food hygiene • knows (can mention) what can be done to avoid eating contaminated food/ make food safe to eat • understands that raw vegetables and fruits if eaten without washing can transmit disease • understands the 5 Fs which focus on the five ways in which faeces can be spread which may be through fluids, fields, flies, fingers and food.	• is aware of (can identify) risky behaviour of self and others in food preparation • appreciates reasons, some of which are difficult to change, that may play a role in poor food hygiene • can come up with (identify) problem solving (positive) action when presented with a risky condition • is able to discuss local beliefs and perceptions about food hygiene and relate to scientific facts	• can demonstrate handwashing and clean food preparation/ consumption and explain when and why • can show safe handwashing (using soap/ash) • washes and stores utensils: can demonstrate when and how; can demonstrate construction of drying rack • can define different types of perishable food locally eaten – concept of fresh and stale and lengths of time each common food item can stay safe • food cooking and storage: can list types of food that should be cooked and define minimum cooking time and maximum storage times. • can prepare Oral Rehydration Therapy (ORT) solution and describe how to give this to whom and when

Source: Postma, van Wijk, Snel, and Shordt (2001).

1 This is a complex and culture specific issue, relating to what the food and drinking patterns of the students are at home and in school. The aim is to get an idea of how regular and safe students eat at home and in school and how this may affect their health and learning result. Many children come without breakfast, carry no snack or bottle with drinking water, buy snacks from unhygienic school vendors, etc.

5.2 Methods for teaching and learning

The life skills approach requires interaction among the participants student to student and student to teacher. Traditional teaching is characterised by a focus on reproducing facts, emphasis on lecturing, written text (notes on slates, on chalkboard, in exercise books). It tends to focus on learning by heart. The emphasis tends to be on standard knowledge that is not adjusted to local conditions with little attention to attitudes and skills development. Most activities are in plenary only, with children seated at desks or on the floor. In this, the teacher is central in the process, communication is from teacher to students and not between students themselves.

Life skills require different teaching and learning strategies. Children should be approached with teaching methods that arouse their curiosity, enhance their willingness to participate actively and promote self-learning. These are child friendly, practical, locally specific relevant, and creative.

For teaching and learning better there is a need for child-centred approaches that are:

- interactive and participatory; and that
- practise skills with others

Working with small groups in the classroom[2]

Participatory activities can be done with the whole class and with small groups. Working with small groups is more challenging to organise, particularly when class size is large. However, small group work helps every child to participate in an activity more intensively and over a longer time period. It tends to encourage the participation of every student and an exchange of opinions while at the same time developing co-operation and teamwork. For this, the optimum group size may be two to seven students. At the end of small group work at least a short time should be dedicated to the debriefing, reporting back and summarising. A spokesperson of each group can report back to the class about what the group has done and what conclusions or results they reached. Most of the students find it interesting to hear what the others have done and how it was done.

To make sure working in small groups is successful, there are a few guidelines for the students:

- All the children in the group work together. Co-operation is important, not competition.
- Each member of the group helps the other children to feel that they belong to the group.

2 Adapted from information provided by van Wijk, C., and Postma, L., 2001.

- All participants in the group are equal and have the same rights. This can be stressed for example by sitting in a circle.
- A group is doing well when *all* the children take part in the discussions or other activities and no one child or small group of children dominates the discussion. To help the groups do well, the teacher can observe the process of each group and note if the group is doing well. It is important that all children in the group trust each other.

There remains, of course, a significant place for teacher lectures and plenary work in the school class. There is a place for information-focused sessions and teacher-focused or teacher-led sessions. Methods should be selected to suit the children, the subject and the purpose of the teaching/learning activity.

Figure 5.2 Group of students undertaking group work

The following box provides examples of some methods which may be useful tools in the participatory life skills approach. There are, of course many more methods; these are meant to be illustrative.

Box 5.5 **Selected teaching and learning methods**

Organising the children

Calling numbers: Each child gets a number, say from 1 to 4. The children then split up into their groups of 1's, 2's, 3's, and 4's. Alternatively, for organising the groups, pictures which have been cut into pieces can also be used. After the pieces have been distributed, the students will have to try to find a group in which all children have the same symbol on their piece of paper. This method can be used to introduce knowledge and is a way to reshuffle children during the exercise. In these groups, they discuss – and learn – about an issue. After discussion they come back together in the original groups and give feed back to the others about what they have learned. In plenary session, the teacher may select the speaker by giving the 'magic microphone'. Only the person who has the mike is allowed to speak (for plenary sessions). This allows for a controlled but also joyful atmosphere to organise the exercise.

Problem solving

Role play. Role playing in this context refers to two or more persons acting out a certain situation. This activity allows people to act out different situations. Role plays can be, for example, on food vending and other eating practices, on taking care of the hygiene and/or excreta of small brothers and sisters, on discussing the installation of a toilet with father, mother, grandparents (and so on) in the family, in the way school toilets are used with regard to hygiene and gender. Always follow it up by discussion on what the group(s) showed. This exercise tests students' ability to take other perspectives and develop problem solving to conflict resolution skills.

Brainstorming. This method stimulates creative thinking. There are a number of alternative brainstorming exercises. For example, each child writes ideas on slates or cards such as on the topic: what can make water dirty. These are put on the ground, read aloud, and then grouped into an order. Another example is that each child may write his/her idea on the blackboard and then the entries are read out and grouped.

Contest/problem solving. The group can have a contest to see who could develop the best solution to a common problem. One example could be: what can be done when teachers lock toilets in schools? The contest can prove to be lively with a wide range of possible solutions!

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Story with a gap

The teacher tells a story which ends in the middle, and the children are asked to complete it. Example:

You and your older brother come home from school. You are both hungry and want to eat some food. You go to wash you hands, but your big brother starts eating right away. What do you say? How can you help big brother wash hands regularly?

Initially, the answers can be discussed in small groups, or written on small pieces of paper. In both cases the different answers should then be reported back to the whole class.

Skills and knowledge

Demonstrations. This method requires the students to practise the hygiene skills such as washing hands. Demonstrators can be silent, with the comments and explanations coming from the observers. Alternatively, the demonstrators themselves may be asked to explain how they wash, when, and why. They might also discuss such issues as what to do when there is no soap or soap is too expensive or how to ensure that others also wash hands properly.

Debates. This method requires students to clarify and articulate their points of view as well as to listen to other perspectives of the children in the group.

Continuum. This method requires that the teacher draws a line on the ground. One end of the line represents strong agreement with a position or a statement, the other end represents strong disagreement. The space in between the two ends of the line represents gradations of opinions. A statement on a controversial issue is read aloud. An example is: *Taking care of hygiene at home is for women and girls only.* Students are asked to stand on the line in the place that represents their position. The teacher then breaks up the line into two segments with equal number of students. The students in each group are asked to share their points of view with each other. Children then explain to the other group why they agree or disagree with the statement. By asking children to agree or disagree with a certain statement and making them explain to the other group why they agree or disagree, the children will learn to make decisions as well as to explain themselves.

Ranking. This method stimulates deeper discussion of an issue, and clarifies priorities. One example could be ranking of the local water sources from safest to most risky for drinking. This can be followed by discussing why one source is riskier than the other and what makes them so.

Voting. Voting may be done to learn about the different conditions or practices or to make decisions. An example is drawing all places where families in the community defecate: the fields, a bush, the beach, a hole in the ground, a toilet, the rubbish heap, etc. Give each child an item such as a bean, pebble or small piece of paper to represent one place of defecation. For privacy, the voting should be done secretly. It can also be done on papers without names that are collected and counted. The groups now place their token on the place where they usually go to defecate. The results are discussed: what is done most, what least? Do girls and boys use different places? What is best, what worst? Why? What can be done? What problems may exist? How can they be solved?

Others

Broken telephone or whispers. Children form a line or circle. The teacher whispers a health message to one child and the children pass it on by whispering in each other's ear. The last child says the message that he/she has heard. Then the first child gives the original message which is quite different! This exercise serves to analyse what happens when messages are communicated between people and how/why messages start to change. It is also fun!

Are interactive and child-centred methods feasible?

Professional educators agree about the desirability of interactive and participatory methods. However, some raise questions about their practicality or feasibility. Practical questions need to be addressed, such as ' Will a teacher use interactive methods when he/she has minimum training, works in a dilapidated school with a class of 60 children?'

This comment from an article on teachers as change agents, in 1983, may still be relevant to some schools today:

"Teachers are usually underpaid and inadequately trained for teaching in these conditions, let alone being trained for a wider role in the society. They find it difficult to follow the existing syllabus using a framework of textbooks and teachers' manuals but at least they have a degree of security. Remove this security and expect an innovative animator role and many teachers naturally feel frightened. Knowing that promotion prospects are usually dependent on infrequent school inspections, that parents and community leaders as well as inspectors will assess him on grade tests and examination results, the teacher's natural inclination is to pursue a restricted curriculum."

Source: Watson (1983).

Another question that should arise is 'what is the minimum (as compared to the optimum) that might be expected in terms of more child-centred, participatory learning and teaching methods?' It is suggested that teacher training emphasises (or starts with) the easiest methods that teachers can use even under difficult circumstances. These might include:

- Stories: telling stories with a gap.
- Demonstrations: child or teacher demonstrates how to wash hands correctly, how to explain about personal hygiene or telling a younger child about how to use a toilet.
- Posters: teacher shows a poster that illustrates many hygiene problems and asks children to identify these.
- Rosters: rosters of responsibilities of children for water, hygiene and sanitation related activities (cleaning, monitoring handwashing among young pupils, cleaning toilets at the end of the day, etc.).

Participatory and interactive approaches can be used even in large classes. However the methods must be simple and practical. Teacher training should provide teachers with the chance to demonstrate at least one or two of the most practical participatory/interactive strategies. Well-trained and well-supported teachers use a range of methods and resources to achieve quality learning outcomes.

5.3 Current programme experience: Janashala programme and others

The Janashala programme and the *Nali Kali* strategy developed in Karnataka provide an example of life skills hygiene and environmental education developed in an educational reform. The *Janashala* programme started in 1998. The programme aims to make primary education universal through a practical educational and community mobilisation. The *Nali Kali* method, on the other hand, began as an experiment designed to strengthen the formal system of education. It seeks to resolve the problem of retention and dropout of children in primary schools. *Nali Kali* was first tried out in Mysore district in Karnataka. The Kannada word '*Nali Kali*' translates into 'Joyful learning'. The main features of this method are:

- Reduced learning load
- Minimum levels of learning
- Mastery at the minimum level of learning

The *Nali Kali* classroom gives autonomy to the teacher and creates the 'non-threatening' atmosphere for the child to learn in a child-friendly and fun-filled way. In 1998, the *Nali Kali* pilot project was adopted in ten blocks in six districts, under the *Janashala* programme, a community-based primary education initiative supported by the Joint UN system. In the process, it has improved as a result of experience gathering and regular monitoring. Gradually, the school sanitation content was integrated with *Nali Kali* in the Janashala programme.

Box 5.6 **The Janashala programme**

Goal:

To create awareness about hygiene and environmental sanitation and bring about behavioural changes among children and through them, among parents and the community in selected districts.

General objectives:

- To make hygiene education and environmental sanitation a people's movement through mobilising the network of the Panchayat Raj institutions.
- To make school teachers catalysts in creating awareness, generating demand and inculcating personal hygiene practices among the children and through them, among their parents and in the community as a whole.

The strategy:

A three-pronged strategy is planned to ensure that a school sanitation package has an impact upon attitudes and practices rather than limiting itself to a mere provision of facilities. The strategy includes:

- community partnerships for planning and monitoring
- inclusion of health, sanitation and environmental protection in the school curriculum
- provision of basic facilities to inculcate sanitary habits and environmental protection in school

Source: SWASTHH workshop (2001).

How is the curriculum adapted to the Nali Kali method?

In schools that follow the *Nali Kali* methodology the emphasis is on child-centred, self-paced activities. The teaching/learning methodology in *Nali Kali* is especially suited to the implementation of a practical action-oriented sanitation and health curriculum.

More specifically, two interventions are planned to help schools move towards greater focus on sanitation[3]:

- introduction of health, hygiene and sanitation themes in the anganwadi and school curriculum
- introduction of special interventions that encourage children to focus on sanitation, monitor the use of facilities and track children's change in behaviour

3 It has been shown that mere provision of toilet and water facilities will not bring about change in attitude or practices. In areas where use of sanitary facilities is not an accepted norm, a concerted effort has to be made to inculcate sanitation habits in children. This has to be done both through awareness creation on healthy and sanitary practices as well as creating an environment where schools focus on and purposefully encourage good habits in children.

In terms of the introduction of health, hygiene, sanitation and protection in the school curriculum, the syllabus of environmental studies provides ample scope to introduce and develop healthy habits and environmental-friendly behaviour among children.

Table 5.5 **The Nali Kali environmental science curriculum**

Standard 1	Standard II	Standard III
Our Village Introducing the civic amenities present in the village and the need to protect them – water, road, post office, school and so on.	**Inculcating good habits** Keeping books and body clean, punctuality, bathing, brushing, and so on.	**Good practices** Developing habits, responsibility: personal cleanliness, good citizenship, environmental friendly behaviour
Recognising human organs Cleanliness: importance of keeping the organs clean	Rules for the house and school. Healthy food habits: preparing and eating clean food, washing before and after food.	Uses of water Need for and preservation of clean water
Cleanliness of toilets Use of water after using toilets, washing hands before and after food	Preservation of food and water, Cleaning of food	Understand organs and their protective function

Source: UNICEF- Karnakta (2000).

Some case studies focusing on the life skills approach

Box 5.7 Little Doctors in Indonesia

Banjar Sari Elementary School in Banjar Sari village (East Lombok) has been supported by UNICEF along with 34 other schools since 1998. The school started an activity "Dokter Kecil (little doctor)" with 30 volunteer students from grade 4 to 6, involving them in health promotion in the school and community through creative and innovative initiatives, such as the school/community theatre. Children in the Dokter Kecil programme have been performing role plays (about 15 minutes) on personal hygiene issues for the school and community: messages include boiling water; defecating in a toilet, not in the river; washing hands before eating; and proper garbage disposal. A teacher who supervises the Dokter Kecil activity said: *"People love drama, especially parents love seeing their children in the play. It is more effective than directly telling people to change the way they do things."*

Dokter Kecil volunteers are also the driving force of the weekly "Jum'at bersih" (Clean Friday Movement), drawing villagers' attention to the importance of environmental hygiene, gradually expanding its clean-up areas to a village mosque, drains, and the school herb garden!

Under Dokter Kecil life skills training is provided including skills in communication, creativity, problem-solving, negotiation and analytical thinking. All members of Dokter Kecil are very expressive and proud of their work. One student said, *"I can help the community and friends. I can change the community. I am very happy to make a healthy environment."*

When mothers were asked if they ever learned anything new from their children, they answered positively. One mother explained: *"We started to pay more attention to health."* Children also said they talk about health messages they learned at school with their families and friends.

The schools have established a very close working relationship with the Sub-District Health Centres. A doctor visits the school to organise weekly community health check-ups for villagers and school children; orientations for students, teachers and villagers on healthy and clean life; and distribution of free medicines at school. The Dokter Kecil volunteers are invited to the health clinic for monthly training on various health messages.

This case study shows how a school can become an integral part of community hygiene and sanitation promotion, and the significant role of children as partners in this promotion in the community.

Source: Izumi, N. (2000).

Box 5.8 **Health and hygiene education programme in Pakistan**

The Water and Sanitation Extension Programme (WASEP) is implemented through Aga Khan Planning and Building Service in the Northern Areas and Chitral, Pakistan in order to substantially reduce the risk of food- and water-borne diseases. The strategy is to provide water supply systems, sanitation facilities and health and hygiene education in three components: Community Health Intervention Programme (CHIP), School Health Intervention Programme (SHIP), and monitoring and evaluation.

The curriculum developed for SHIP consists of eight topics: clean hands, safe disposal of faeces/toilet usage, diarrhoea, worms, clean and safe water, safe food, personal hygiene, and water usage and management issues related to water supply systems. The direct target groups are the children in class III-V. The indirect target groups are children in other classes, younger siblings and parents, and other non-school going children in the communities. The hygiene education sessions in the schools are facilitated by female health and hygiene promoters (HHPs), using active methods like group discussions, posters, stories, role plays, surveys, demonstration, painting, and poems. Also the Child-to-Child Approach is adopted in six steps:

- choosing the right idea and understanding it well
- finding out more
- discussing what we are finding and planning for action to be taken
- taking action
- evaluating the results
- doing it better next time

These six steps are incorporated in lesson plans prepared for each topic mentioned above, taking three days (one hour per day) per topic and carried out both in school, in the home and in the village, until a new topic is introduced during the next round of visit by the HHPs. Preliminary analysis shows that the Child-to-Child Approach has been very effective in facilitating children to take and plan actions in their schools, homes and villages.

Source: Ahmad, T. and Alibhai, K. (2000).

What is the Child-to-Child Approach?

The Child-to-Child Approach is a way of teaching about health, which encourages children to participate actively in the process of learning and to put into practice what they learn. This is based on the principle that children enjoy being involved and it helps them to learn better. This makes teaching both more fun and effective.

The child-to-child activities have proved that children can improve their own health and that of others through:

- caring for younger brothers and sisters and other young children in the community (child-to-child)
- influencing other children in their community, especially those with less opportunities and education than themselves (child-to-children)
- sharing information with their families (child-with-family)
- spreading health ideas and messages within their own communities (children-and community)

What is the school health club?

A school health club can be established in every school. Basically it is like any other club that a school may have, but it focuses on health education. A school health club can be selected in a number of ways. For example:

- Teachers may select a group of students from a certain class based on their own set of criteria.
- Teachers can visit the homes of each of the students in the group to verify whether they have a sanitary toilet, a waste pit and other sanitary facilities.

Those who qualify can then officially be declared as the founding members of the school health club. Each one of these students can then be given a school bag, a T-shirt or any other incentive that will raise the other children's interest to join the club. The founding members can then elect the chairperson, a secretary and a treasurer with the science and health education teachers as the patrons. The group can then establish specific and detailed criteria for joining the club.

They can take over the role of inspecting other students' personal hygiene and homes for qualification to join the club.

Overhead 7 **Life skills approach with its three components**

(1) LIFE SKILLS	(2) CONTENTS and CONTEXTS	(3) LEARNING METHODS
The (life) skills, such as interpersonal skills, values clarification, decision-making, coping with pressure and management skills.	The contents and context to which the skills-based approach is applied. In this case, hygiene, water and sanitation to improve health, behaviours and provide benefits such as increased school attendance or reaching out to the home and community.	The methods for teaching and learning within the skills-based approach, including a wide range of methods beyond routine learning.

Overhead 8 **Examples of life skills**

Inter-personal Skills	**Skills for Building Self- Awareness**	**Values Clarification Skills**	**Decision-Making Skills**	**Coping and Stress Management Skills**
Empathy building	Self-assessment	Skills for life	Critical and creative	Self control skills
Active listening	Identifying personal strengths and weaknesses	Understanding different norms, beliefs, culture, gender, tolerance, diversity, discrimination	Thinking and problem solving skills	Coping with (peer) pressure
Giving and receiving feedback	Positive thinking skills	Skills for acting on discrimination and stereotypes	Analytical skills for assessing (personal and other) risks	Time management skills
Assertion and refusal skills	Skills for building self image and body image	Identifying and acting on rights, responsibilities and social justice	Skills for generating alternatives	Skills for dealing with anxiety
Negotiation and conflict management			Info gathering skills	Dealing with difficult situations
Cooperation and teamwork			Skills for assessing consequences	Help seeking skills

Activity Sheet 5.1 **Planning for education and social mobilisation**

Objective:

Participants develop an indicative (draft) plan for social mobilisation/education activities[4].

Material: paper

Time: one to two hours

Procedure:

1. Divide the participants into groups with four to eight people per group.
2. Ask the participants to work together and develop a list of activities that could be used to promote hygiene education and social mobilisation in schools.
3. Ask participants to compare their answer list with one of the other groups.
4. Ask one participant from each group to report back to everyone on their results and the reasons behind their choices.

Learning and doing: plans for education and social mobilisation in a school (results of small group work)			
Group 1	**Group 2**	**Group 3**	**Group 4**
• Show handwashing by demonstrating • Ask to demonstrate to another child • Make posters of right and wrong behaviour • Keep handwashing materials (water, soap, mug) • Some older children can show good practice and help to monitor community behaviour **In community:** • Call PTA meeting and let the children show parents how they can do it • Let children take away materials like flash cards to show at home	• Use of posters • Demonstrate washing (how dirty is the water?) • Songs/games • Keep all materials near HP/water source	• Show/demonstrate in groups • Some children wash, others observe **a)** with/without soap **b)** washing both hands • Discuss each method. Also discuss washing with ash • Observe what happens at home. Come to school and discuss • Discuss output at the home/community observing habits • Encourage family and community to dispose of waste correctly • Examine the impact/ observe change in habits on a weekly basis	• Do a survey in the school. How many wash hands correctly? • Demonstrate to younger children • Do a survey in families and communities and report observations on hygiene practices • Link handwashing with timing before eating and after defecation

Source: SWASTHH workshop (2001).

4 This activity is most appropriate for teachers and teacher trainers.

For the following activity, participants may also refer to the attached Handbook for Teachers.

Activity Sheet 5.2 **School health clubs**

Objective:
To understand the importance of school health clubs in the context of their own work.

Material: posters/transparencies
Time: half an hour
Procedure:

1. Ask participants to divide into groups of four.
2. Ask the participants to think of the various types of school health clubs that could exist. Request them to focus on how to create incentives that will draw children to want to join health clubs. If time permits, ask the participants to also think of the types of incentives, which could attract near-by communities to want to join the health club. These should be listed on a flipchart (one flipchart sheet per group). The following table could be used.

Table 5.6 **Incentives**

Incentives for children	Incentive for adults, communities
1.	
2.	
3.	
4.	
5.	

3. As part of the debriefing, ask the participants to report back to the larger group using their one flipchart.
4. *(optional)*. All of the flipcharts will be placed on the wall. If time permits the teacher will ask the group of participants to prioritise the list of incentives (maximum 5) for children and community and give a brief explanation why. This could lead to some interesting discussion!
5. *(optional)*. A number of other issues could also be discussed such as: which materials should be developed, what types of activities could be developed for the children at the school, etc.

6 Programme strategy in school and community

This chapter examines the things we need to know in order to plan a district SSHE (or SWASTHH) programme. The idea is to know the current situation well in the school and community. From this we can develop an indicative plan for future strategies for the local school. The workplan and activities needed for SSHE programmes at the district level will naturally follow from this. Thus, district level planning is dealt with in Chapter 7.

This chapter examines

- the baseline survey for SSHE programmes,
- the key actors and their possible roles in the school programmes,
- gender and poverty aspects in SSHE programmes. How are women and men, girls and boys, rich and poor, different castes groups involved?
- strategies and micro planning for the school programme

The chapter is based on three principles:

- We need to have a good understanding of the current situation and strategies that will be followed locally in order to make detailed district workplans and budgets.
- Gender and poverty-sensitive approaches can help school water and sanitation projects succeed in achieving their objectives for all: girls and boys, men and women, rich and poor members of the community.
- The strategy that is selected for the programme should build on existing groups who are locally active, before trying to set up new groups and committees.

A review of Chapter 3 (Lessons learned) is useful for the reader before starting this chapter. Many of these 'lessons learned' deal with how different actors need to carry out their roles in a school water, sanitation and hygiene education programme. If the key groups are not motivated – or cannot, for various reasons, make their own decisions and carry out their roles – then the programme will fail.

6.1 Baseline studies

Baseline studies of schools are useful for planning at the beginning of the programme and monitoring at later stages. The purpose of a baseline study is to build on current strengths and get information to make plans that will prevent or solve problems. In school programmes similar challenges appear again and again. Therefore such a small survey will usually give sufficient information for planning. A sample of 10 to 20 schools in different parts of a district is usually sufficient.

An example of a baseline study is shown in appendix 2. It deals with the topics mentioned in box 6.1.

Box 6.1 **Topics for a baseline study: suggested topics for investigation**

School

School yard, compound and classroom clean?

Water

Functioning water point within the school area? Or within about 150 steps from school?
Functioning during whole school year?
When school water point is not functioning how do children drink water?
Drinking quality at the water point? Safe water storage?
How will children know if water quality is good or not?
Are ladles or cups with handles used to take drinking water?
How does the school ensure that the water container is clean?
Who is responsible for cleaning the container and maintaining the facilities?

Toilets, lavatories

Toilets within the school compound?
How many girls use one toilet? How many boys use one toilet or urinal?
Are the toilets and urinals clean?
Are they well lighted and ventilated?
Are there puddles of water around the toilet pan or just outside?
Are the toilets and urinals smelly?
Is there a jug for lifting water to flush and wash hands?
Water for cleansing inside or beside the toilets?
Is there soap or ash?
Do teachers have separate toilets from children?
Are toilets being used?
Do children wash their hands correctly after using the toilet?
Do children help clean the school, including the toilets?
Do the children take turns (rotate) in cleaning the toilets?

Teachers

Are teachers trained in School Sanitation and Hygiene Education?
When and for how many days were teachers trained?
Do teachers have a guide book for hygiene and sanitation?
Does that cover all relevant topics?

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What is teacher's opinion about hygiene teaching?
Have teachers taught anything about hygiene?
Any teaching materials, books or learning materials in school about SSHE?
Can teacher explain correctly what sanitation and hygiene means to him/her?

Community

Are parents, PTA or other community groups involved in the school? In supporting the school?
Is the PTA active? Do they keep minutes? Have they met in the last few months?
Do the parents know about the sanitation and water facilities provided by the school?
Do the parents provide a financial contribution towards the sanitation and water facilities at the school?
Are there household toilets (more than one out of ten households) in the community?

Using baseline information

In the districts of Ranchi and East Singbhum, baseline studies were made in ten to twelve schools in each district that had water and sanitation facilities. The baseline formats were adapted from simple indicative survey forms (observations-questions) developed by UNICEF (See appendix 3).

The baseline reports were analysed and reported by the Directors of DIET and co-ordinators of the SWASTHH programme in Ranchi and East Singbhum. The more significant findings are reflected below:

Box 6.2 **Baseline reports: Directors of DIET in East Singbhum and Ranchi**

Growth points/successes

- Most schools have some elements of hygiene education.
- Most parents have knowledge of the facilities.
- Teachers are aware of the issues and incorporate some hygiene/health education in their lessons.

Challenges/problems

- Poor working condition of water facilities within 100 metres of school.
- Poor maintenance, repair of toilets.
- Lack of access to and use of facilities (for toileting and handwashing) by children.
- Non-involvement of VECs and PTAs.
- Focus was on block meetings and on administration rather than substance.
- Regular attendance by less than half the targeted schools.

> **Conclusions and recommendations** of the Directors of the DIETs were:

- Construction does not ensure use of facilities.
- Involvement of parents is crucial.
- Teachers must be motivated through good training and supervision.
- Clear operation and maintenance plans are critical to success.
- Material is needed in addition to current text books; good resource material, lesson plans and classroom activities are required.
- Block meetings need to be organised well to attract people to participate actively, and become good platforms for training in SSHE.

Information such as the above, should be fed into the district/block workplans and the training modules. It should take these lessons into account and prevent the problems/challenges (shown above) from recurring.

6.2 Gender and poverty-sensitive approach

When assessing the possible actors and roles in developing SSHE programmes, it is important to take gender and poverty issues into account. Without this, we will lose sight of the needs and interests, and the special skills and insights, of women and poorer families. We will also need to have an understanding of gender dynamics specific to the culture and social norms. How do boys and girls perceive each other's roles and responsibilities? What is their concept of sharing both the burdens and the benefits generated through the improved water and sanitation situation? We must take account of issues such as:

- Who decides on technology?
- Who collects water?
- Who is on committees?
- Who decides on payments and collects money?
- Who provides free labour?
- Who participates in O&M?
- Who teaches children how to use facilities?
- Who decides on programme strategy in the district? In the village?
- Whose children benefit most? Benefit least?
- Who pays? How much? and Who does not pay?
- Who serves the tea in meetings?
- Who washes the dishes?
- Who speaks the most?

Gender and poverty-sensitive approaches can help school water and sanitation projects succeed in achieving their objectives for all: girls and boys, men and women, rich and poor members of the community. Agencies and project staff should know that a gender-sensitive approach is not difficult. But before agency and project staff can implement a gender and poverty-sensitive approach in policy making, the design of technologies, project planning and implementation, they should understand some basic aspects of gender, which are explained in box 6.3.

Figure 6.1: Women active at a community meeting

Box 6.3 **Gender and poverty-sensitive approaches: some principles**

1. Gender relates to girls and boys, men and women
"The gender and development approach focuses on men and women and on the relationships between them." (Wakeman, 1995)

2. Gender is a social concept
Gender relations are shaped in the homes, schools, and in the labour market. It refers to social differences between girls and boys, men and women. What are these social differences?

3. Men and women have different roles, tasks, responsibilities
In the water supply and sanitation sector, these differences in roles, tasks and responsibilities appear quite clearly. Women are the managers of water in the household. They collect water, transport, store, distribute for the various uses: cooking,

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washing, for hygiene of the family, for cleaning the environment, giving water to the cattle and other domestic animals around the house.
Men are more occupied with construction and management. They may favour more complex technologies than women. Men are less likely to fetch water for the household. However, they often fetch water for irrigation and the cattle. They prefer to use diesel run electric pumps for irrigation purposes if they can afford to pay the price.

4. Gender needs: practical needs (access) and strategy (control, sustainability)
It can be important for the health and convenience of children to have (and use) clean drinking water, handwashing facilities and latrines within or nearby the school. These are practical needs.
Girls and women tend to use sanitation facilities more than boys or men. Design differences can also relate to gender. For example, boys tend to urinate outside more often than girls. Therefore it might be useful to construct urinals that are easy to use for boys. For girls, sometimes it is more important that facilities are private but have enough light. Such differences should be discussed and taken into account in designing facilities.
While practical needs refer more to the short term, meeting strategic needs will improve the position of women, making them more independent over the longer term.

5. Class and caste differences: not all women and men are the same
The results of differences in wealth, class and caste in water supply and sanitation can mean that benefits and responsibilities are not always properly distributed among different people. Furthermore, wealth, class and caste differences are more important in some parts of India than others, and these differences change over time. Those who design programmes and those who are involved in them, such as head-teachers and teachers, need to be sensitive to these differences, and act to avoid or stop problems which can arise because of differences in wealth, class and caste.
Some schools assign roles to children on the basis of class, caste or gender. Examples of this are: only girls fetch water or only low-caste children are told to clean latrines. Will these problems come up in your area? If so, what should be done about these problems? How?

The following activity should be done in every training workshop to sensitise participants to gender and poverty issues.

Activity Sheet 6.1 **Gender analysis and awareness quiz**

The 'gender quiz' is a simplified gender awareness and analysis tool. It can be adapted to the project, district or community level. This is also an interesting example of a participatory activity.

Objectives:

The activity is powerful because it can serve several purposes, it can be used as:

- an awareness creating technique for programme leaders and educators and other stakeholders
- a tool for participants to start identifying their own indicators
- a means to monitor these indicators. The monitoring activity leads almost seamlessly to motivating leaders and stakeholders to act or plan actions that will improve the situation

Material: For each participant, provide four cards: one pink, one blue card and two cards of another colour such as white and grey.

Time: more than one hour with discussion

Procedure:

1. The facilitator states that there is a wide agreement that gender and poverty issues are important in the sector. Yet many people in the sector still see these as abstract concepts or think that gender only has to do with women. This quiz helps to build understanding of how gender and wealth or caste issues can affect a school sanitation and hygiene programme. It stimulates the use of gender and poverty analysis in your work in general and in monitoring activities in particular.
2. The facilitator will read the following paragraphs and questions (see next page) or shows them on overheads. While the questions are being read, the participants are asked to imagine a project or programme that they know from personal experience.
3. The facilitator tells the participants the following:
   - When you think the answer to the question is women or girls, you raise the PINK card.
   - When you think the answer is men or boys, you raise the BLUE card.
   - When you think the answer is higher caste (or use "richer people" if it is inappropriate to refer to caste) raise the white card.
   - When you think the answer is lower caste (or use "poorer people" if it is inappropriate to refer to caste) raise the grey card.

   (Note: the facilitator can point at examples written as legend cards: pink=women or girls, blue=men or boys, white=higher caste, grey=lower caste).
4. Tell the participants to not think long, just to raise the card which they think is the best answer.

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Understanding the need for facilities

It is important for parents to support the school water, sanitation and hygiene programme. If they support the programme then they may, for example, assist with construction, provide money for small recurrent expenses such as soap, and make repairs. In order to support the programme, they first need to appreciate or understand the need for it.

- Who in the community usually understands the need for water points in the school, men or women?
- Who in the community usually understands the need for toilets in the school, men or women (or neither)?
- Who has the greater need and demand for toilets in the school, boys or girls?
- Who in the family makes the decision about giving money to the school for recurrent costs of water, sanitation, handwashing facilities, the fathers or mothers?

For discussion during debriefing at the end of the quiz: The people (men and women) who make decisions about supporting the school programme need to understand the need for school facilities. This may mean that different IEC activities are needed to reach both men and women.

Involvement in repairs and construction

Who participates in construction of water, sanitation or handwashing facilities in the school, men or women?

In construction, who has paid jobs, men or women?

In construction, who does voluntary (unpaid) work, men or women?

Who do you think would make repairs, men or women?

For discussion during debriefing at the end of the quiz: Do women tend to have the unpaid jobs in water and sanitation?

Advocacy of health messages

In many school programmes, children are asked to give messages about hygiene and sanitation at home. Who usually hears these messages, women or men?

Who is most likely NOT to know about the hygiene education their children receive in the classroom, fathers or mothers?

For discussion during debriefing at the end of the quiz: Are special education or awareness activities needed to reach fathers? If so, how?

Use of facilities

Who can most easily use the water point, higher caste or lower caste children or both?

Who uses the toilet mostly, boys or girls?

For discussion during debriefing at the end of the quiz: What are the implications of the participants' answers to these questions for the design and organisation of the school programme?

Use and maintenance of facilities

If water must be carried to the school, who usually fetches it, boys or girls? Lower caste or higher caste?

Who keeps the area around water points clean? Or if the water is stored in the school, who cleans the containers and cups? Boys or girls or neither?

Who cleans the toilets, girls or boys? Higher caste or lower caste?

For discussion during debriefing at the end of the quiz: Do the participants' answers to these questions point out any problems that require special responses in a school programme?

Adult roles

Who shows younger children how to use a toilet, male teachers or female teachers (or neither because other people do it)?

Should a leading SSHE teacher be male or female?

In a community, men and women choose a male chairman and a female treasurer for the PTA or water supply/sanitation committee. Both were chosen for capacity and trust. Both were trained. Who controls the money and decision-making, the man or the woman?

For discussion during debriefing at the end of the quiz: Do the participants' answers to these questions point out any problems that require special responses in a school programme?

Children's roles

Who benefits most from the programme, boys or girls? Higher castes or lower castes?

For discussion during debriefing at the end of the quiz: What are the implications of the participants' answers to these questions for the design and organisation of the school programme?

Comments

There are no "right" and "wrong" answers to these questions. However, participants should see how they vote as a group. This will start spontaneous discussion and reflection on the key issues. As part of the summary and debriefing the facilitator can add:

With your answers you have shown that gender deals with both men and women and that gender is an important aspect of programming. You have also seen that class and caste issues may need to be seriously considered in organising the school programme. A real gender and poverty analysis is more thorough, but in summary, it will help you look at:

- Who does the physical work: men, women or both?
- Who makes decisions: men, women or both?
- Who gets benefits, training, jobs: men women or both?
- Who controls the benefits: services, income, training: men women or both?
- What are the implications of this for school programmes?

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The debriefing can continue with participants, using the questions in the quiz, listing issues that should be taken into account when planning a school hygiene and health education programme at the community and district level.

6.3 The actors and their roles

When working with local groups in communities, it is easiest, of course, to begin with those who are already involved and are strongest. This means that in different communities somewhat different groups may be involved in the programme. A way of stimulating this selection locally is an important point to include in the district programme plan. Consciously addressing this issue means that all groups will be included: the poor, all castes and women. Micro-plans must take this into account and stimulate their participation, not only in making contributions but also in decision-making.

The Vision: Main actors involved and their roles
A school sanitation, water and hygiene education programme

Child	→	a key resource
School	→	knowledge centre
Teacher	→	sensitive leader
Community	→	an equal partner
Government	→	committed facilitator

Before detailed district planning it is important to identify the local actors and groups who should be involved. It is usually more effective to build the SSHE programmes with existing active groups, if these are representative of the community. Many people and institutions can participate in a school water, sanitation and hygiene programme. These can include:

Community members

- children
- parents
- anganwadi workers
- teachers and head teachers
- masons

Community groups and institutions

- parent teacher associations (PTAs)
- village education committees (VECs)

- water and sanitation committees (WATSAN)
- village/panchayat development committees
- gram sabha (India)
- panchayat members (India)
- women's groups and self-help groups
- youth groups
- contractors
- small entrepreneurs

Block and district institutions

- district officials: collector, chief executive officer
- PHED (public health engineering department)
- DIET (education department)
- District Education officers, Block Education Officers Teachers, Cluster Coordinators
- ICDS (Integrated Child Development Services), child development project officers, supervisors
- health departments including district health officers
- rural development department
- various NGOs (non-governmental organisations) and their field workers

In India, suggestions about the key local actors and institutional organisations under sector reforms have been provided by the *Guidelines* of the Restructured Centrally-sponsored Rural Sanitation Programme (RGNDWMRCRSP, 1998) and the *Guidelines for implementation of rural water supply programme* (RGNDWM, 2000a) from the Rajiv Gandhi Drinking Water Supply Mission. These are outlined below.

Box 6.4 **Institutional guidelines for schools in sector reform districts**

Sanitation (from the RCRSP Guidelines)

Schools are part of every TSC (Total Sanitation Campaign) in each district. With respect to the school programme, the district-level mission is responsible for activating and mobilising VECs for school construction, disseminating IEC and training materials, monitoring, co-ordination. Implementation is done under the Executive Committee through NGO(s) or, if these are not available, through CBOs involving the Panchayati Raj institutions (PRIs), youth organisations, and so on. Thus, there is considerable freedom to select and work with the locally strongest institutions.

School authorities and PTAs (Parent Teacher Associations) shall be responsible for collecting 5% of the latrine costs before construction. The panchayat/beneficiaries must provide 10%. (GOI provides 60% and the State 30%).

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Water (from the RGNDWM Guidelines)

The Village Water and Sanitation Committee (VWSC) is to be set up in each Gram Panchayat for implementation of the water supply schemes of their own choice. It may consist of about 6 to 12 people. Women, members of SC/STs and poor sections of the village must have representation on the VWSC. The composition and functions of the VWSCs can be regulated by a set of by-laws under the State Panchayati Raj Acts or, before that, by Government Orders.

Water supply, sanitation and the hygiene component for rural schools form an integral part of the programme, although the role of the VWSC in this is not clearly noted. The States are required to fix a yearly target for coverage of rural schools and to report each month. This programme is to be carried out in co-ordination with many departments (SSA, DPEP, PHED, RD&PRD, Social Welfare, Education). All rural schools and anganwadis are to be provided with drinking water facilities. Expenditure for this is shared by the central Government and the State Government from the funds allocated for the ARWSP.

Among districts there is considerable variation in the strength and activity levels of their various institutions. For example, in some areas women or panchayats may be stronger or weaker. The point is to have a structure in the detailed local planning which allows freedom to build on groups that are locally strong, and are also good representatives of the population.

Examples of adapting the roles of actors and institutions to suit the local setting are shown below. The first example of such adaptation is shown for a district in Orissa where the Panchayat Raj system is still new and developing while women's self-help groups and NGOs tend to be strong and popular. Here, NGOs and women's groups have taken the lead in both water and sanitation.

Box 6.5 **Examples of adapting the roles of actors and institutions to local setting**

In **Ganjam District**, Orissa

Ganjam is a sector reform district for both water and sanitation. Women's self-help groups in many villages have been active and, in general, successful. In about 200 villages the women's groups have formed the basis of water and sanitation (WATSAN) committees. These committees typically have about 15 members, with 10 to 12 women and 3 to 5 men. The women are drawn from the membership of the different local self-help groups. The WATSANs have 3 to 5 members, each responsible for one subject. Thus in a village there may be subcommittees for operation and maintenance, finance, anganwadis and schools, public sanitation, household latrines and so on.

The NGOs and CBOs are a motivated group in Ganjam district. One experienced and strong the NGO serves as an umbrella organisation to help train, support and supervise other NGOs.

In **Chitradurga District,** Karnataka
Village management resource committee has 2 members from community-based organisations (CBOs), a representative of each 25 houses, frontline workers (headmaster, anganwadi worker, gram panchayat secretary, village accountant)

In **Kamrup District**, Assam
School committee is composed of the headmaster, one other trained teacher and three or more other community leaders (2 of whom are women)
Block implementation committee has 2 representatives from Education and PHE from each of 5 blocks plus a project co-ordinator)

Source: SWASTHH Plans of Action (2000).

The examples from Orissa and Karnataka involve NGOs and CBOs. Indeed, NGOs, the civil society organisations, and community-based organisations are involved insofar as they are capable. These institutions can play an important role in ensuring the quality and sustainability of a programme.

6.4 Making a micro-plan

As noted in the earlier sections of this chapter, to make a local plan (known as a micro-plan) it is first necessary to have identified the key actors and to have information about the schools from a baseline, no matter how small. It is also important to keep in mind the need to take account of gender and poverty issues (see section 6.2). The purpose of preparing a micro-plan at an early stage is to have a basis for the preparation of the district and block plans, and an idea of how human and financial resources should be allocated. This indicative micro-plan will form the basis for the district workplan. Thus, beginning with the survey (section 6.1) and analysis of the actors (section 6.3), the preparation of a draft micro-plan (section 6.4) leads to the formulation of a better quality and realistic district plan that is based on the real situation in the communities.

Because these local situations differ considerably, the micro-plans may also differ. Below are examples of school programme outlines in three different districts. The different community strategies are shown below, as described at the national SWASTHH workshop in Bangalore (SWASTHH, 2000). These plans were carried out in Mumbai, Mysore and Erode districts. It is interesting to see the difference in the strategies and the roles of the people involved.

Note: in a training session it would be useful to ask participants to study these examples and to identify the main differences between them, as an example of local variation in community strategies.

Figure 6.2: Group of trainees making a micro plan for the district level

Table 6.1 **Strategy Mysore district, Karnataka**

Start-up activities	Survey: done by health department; showed lack of facilities, uneven knowledge and a low level of hygiene practices among children. School selection: 20 schools were selected to start the programme. It took two years to cover about 200 schools in one block as this was a pilot and success was obtained through the determination of a few district officials with cooperation from the school teachers and DIET. School curriculum was changed to make it more relevant. Teacher training. Training included motivating teachers to maintain school campuses. Awareness creation: Health and education officers and NGOs showed videos, wall writings, public activities
Facilities and construction	Facilities (PHED): All schools were given water supply in the school premises. Later, toilets were provided to schools.

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On-going activities	**School children from a 'school cabinet', involved in all sanitation and hygiene activities:** • Different 'ministers' in the cabinet come from different grades. Each minister is attached to one teacher. • Head teacher holds meetings with all teachers and school cabinet. • All cabinet members are given orientation. **Daily school themes focus on one aspect of sanitation:** Monday: handling drinking water Tuesday: disposal of waste water Wednesday: disposal of garbage Thursday: personal hygiene Friday: importance of toilet Saturday: home sanitation NGOs organise communication activities: street plays, public activities, health camps, competitions. Sanitation thrives in communities involving school children. In some cases local people help plan and implement water and sanitation inputs.
Groups most involved	Health department, education officer, block education officer, taluk officers, panchayat, Village Education Committee, PHED, NGOs.
Incentives	• One-time contribution to schools of gardening implements (sprinkler, mug/bucket, etc). Recurrent expenditure for repairs, soap etc., is responsibility of school authorities through contributions from children. • Badges are given to cabinet members. • Water and sanitation facilities in each school. UNICEF provided handpumps, 45% of the payments of protection of water/sanitation facilitates, 50% of the payments of the construction of toilets, all IEC for health and hygiene and support to NGOs. • This programme becomes very popular with the Panchayat Raj institutions if it is carried out well.

Table 6.2 **Strategy Erode District, Tamil Nadu**

	Objectives: • To ensure easy access to facilities in schools. • Inculcate hygiene practices. • Establish child to child/parent/community linkages for disseminating information.
Start-up activities	Survey: done by Education Officers of almost 500 schools. Awareness creation activities include rallies, exhibitions, programmes, wall paintings/booklets. Training and communication materials are provided. **Training:** youth groups, village task force, anganwadi workers, health workers. Also: Phase 1: training teachers, PTAs Phase 2: training students and teachers
Facilities and construction	Piped water is provided through extensions from existing schemes. School toilets are constructed from funds from rural development department/education/UNICEF/local government. Baby friendly toilets are provided for anganwadis.
On-going activities	Not indicated.
Groups most involved	Education Officers, PTAs, teachers, anganwadi workers, rural development department.
Problems	Co-ordination at State level, monitoring/supervision and lack of good NGOs.

Table 6.3 **Strategy Aurangabad District: Maharashtra**

	Objectives: • Promoting life skills with participatory learning. • Child learns hygiene practices. • Child is agent of change, motivating parents and community members. • Promoting interaction between parents and teachers. Two elements in strategy: • Sensitising government functionaries (health, waterman, anganwadi). • Creating awareness on hygiene practices among teachers and children.

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Start-up activities	Training: five-day module for village workers (health, teachers, dais, waterman, sarpanch, gram sevak). This workshop is for people from the same village doing different jobs and helps the personnel to work together. Topics: health, hygiene, waste disposal, low-cost options, field visit to see current status of sanitation. Training: headmasters: one-day orientation, focus on needs of child and PTA activities Teacher training: three days focus on hygiene practices and community survey to learn about current hygiene practices Learning materials: messages, stickers, posts, wall paintings
Construction	No construction of water/sanitation facilities
On-going activities	Children's camp: five days to help children understand the need for sanitation and how it affects their lives. Survey is done. Children learn about kitchen gardens, water quality, water purification with sunlight, soak pits etc.
Groups most involved	Stakeholders: children, teachers, parents, community members health officials, district officials Partnerships: chief executive officer, education officer, district health officer, UNICEF at district level.

It is highly useful to have an indicative timeline for the local level. This indicative timeline is transformed into a more detailed plan, through consultations and planning sessions with stakeholders in the school, cluster and community. **The plans in various communities should differ somewhat, depending on local resources, interests, demands and needs. Thus a minimum micro-plan should only describe the minimum essentials and should allow for flexibility.**

Activity Sheet 6.2 **Preparing indicative micro-plans (Alternative 1)**

Objectives:

- To prepare an indicative plan for SSHE at the community level, for one school.
- To practise limiting plans and making them flexible.

Material: cards of two or more colours, poster paper and markers for displaying the work in the plenary

Time: one hour plus time for reporting back and reflection

Procedure:

1. The facilitator asks the participants to form small groups of not more than four or five persons who work together and are familiar with the same area.
2. The participants select one stage of their SSHE programme, depending on how their programme is currently operating. The stages can be either: programme start-up including social mobilisation, technology selection and construction, or ongoing activities (hygiene education in the school, health/sanitation clubs, use and maintenance of water and sanitation facilities).
3. Participants prepare a plan showing the main actors, the various activities and possible time frames. Do not forget to include preparatory actions such as training and orientation (including who will facilitate these). After the plan is prepared, the small group should review it and simplify it by discussing: What can be omitted? What can be planned locally? What activities will involve poorer families/children? Women and girls?
4. The small groups report back to the plenary session. In this reporting the groups should describe:
   - What can be planned locally?
   - In what ways might the plans be different from one community or school to another?
   - What activities will involve poorer families, women and girls in decision-making?
5. In the debriefing, the facilitator and participants can reflect on issues such as:
   - Taking gender and poverty aspects into account.
   - Attempting to build on the strongest local institutions.
   - Clear co-ordination between school committees and panchayat or other local committees such as the village development committee.
   - Management of contributions, funds and resources.
   - Understanding and accepting the meaning and importance of the programme for children.

Activity Sheet 6.3 **Identifying actors and their roles in the school programme (Alternative 2)**

Objective:

The participants who do have a block Plan of Action and a workplan will reflect on assigning responsibilities and estimated dates for accomplishments. This means:

- checking the roles of the key actors and their co-ordination among them
- helping participants solve common planning and implementation problems in SSHE programmes

Material: poster paper

Time: two to four hours

Procedure:

1. Those who have already written an SSHE/SWASTHH strategy/plan can form themselves into groups of people working in the same block or district. Groups may focus on what roles they hope the key actors will carry out.
2. Note that completing table 6.4 is a way for participants of checking their workplans and strategies. They should:
   - Change the activities to reflect their current workplan.
   - Identify the key actors, that is, people who have final responsibility for the activity. Note that it is more effective to assign responsibility to only one actor or group. (Too much sharing of responsibility can mean that no one is really responsible.)
   - Identify the people or groups who are to be involved, and without whom the activity will fail.

Comments

In preparing the said table, participants tend to write the same names for many activities. The facilitator should select two to four of the people or groups that have the most responsibilities and ask: Is their workload realistic? Do they want to do all this? Who else might want to be responsible? What can be done if the person responsible for these activities is not motivated?

Table 6.4 **Identifying actors and their roles**

Activities	People responsible	People involved
Start-up		
Make a plan		
Baseline survey		
Form a VEC or activate a PTA and management group		

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Activities	People responsible	People involved
Raise awareness among community members		
Organise community contribution		
Transfer money for the programme		
Train teachers and head teachers		
Train other community people (VEC, PTA, water committees, health workers, and so on)		
Develop hygiene/sanitation education materials		
Keep school compound and classrooms clean		
Adapt and test training materials and teaching aids		
Facilities and construction		
Discuss and agree on design options preferably in consultation with children and teachers		
Select technology, keeping in mind availability of water for flushing		
Calculate bill of quantities and select contractor / supplier		
Agree on specifications and quality checks and who will certify		
Organise construction of the facilities: community inputs		
Help with construction		
Construction quality and timeliness		
Ongoing activities		
Organise children to fetch water, filling tanks and receptacles so that enough water is always available at all times		
Organise children to maintain and clean toilets, water points, school grounds.		
Teach children proper use of toilets and handwashing		
Monitor use of the toilets		
Supervise and monitor SSHE		
Have or (make) educational materials		
Do repairs and replacements in schools		
Solve problems when the school facilities are not maintained or break down		
Organise learning activities in classroom		
Lead and plan activities for the groups/groups		

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Activities	People responsible	People involved
Organise learning and communication activities outside the classroom: camps, campaigns, etc.		
Form groups or clubs of pupils in their school		
Organise various activities periodically to collect funds for activities and repairs		
Cover recurrent expenditures for soap, repairs, etc.		
Organise refresher training each year		

Activity Sheet 6.4 **Defining and checking the roles of actors (Alternative 3)**

Objective:

- To focus on the role of the various actors involved directly in SSHE.

Material: copy of the filled in table noted below.

Time: two hours

Procedure:

1. The facilitator asks the participants to examine table 6.5 of those stakeholders who are directly involved at the school level with SSHE. They are asked to critically assess the main roles and responsibility that are defined for teachers, school management committee, district level steering committee.
2. As part of the debriefing, ask what they agree and do not agree with, why and possible changes and/or additions.

Table 6.5 Some roles of actors involved in SSHE

Actor	Main role and responsibility
Teachers	- To become role models by giving high priority to hygiene and sanitation in the school and community. - To use and make educational materials within the class. - To encourage the activities carried out in accordance with the action plan through follow up and evaluation activities. - To check whether or not students have been equipped with skill-oriented education and have translated the skills into their lives. - To lay emphasis on constructing properly and maintaining facilities like toilets, waste pits, vegetable gardens, flower gardens, water tap platforms and drainage. - To assist groups/clubs in making annual work plan. - To assist groups/clubs to conduct innovative activities for promoting sanitation.
School club/group	- Club/group members must be role models for sanitation practices, use and maintenance of toilets and urinals, waste pits, etc. - Prepare an annual plan of action for the programme implementation. - Use and properly store tools, equipment and materials when necessary. - Develop educational materials for use in the school and the community. - Conduct additional/extra curricular activities with the help of headmaster and teachers.

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Actor	Main role and responsibility
School managing committee	- Be role models in the school and communities in giving high priority to hygiene and sanitation. - Take a lead in co-ordinating and preparing action plan of school sanitation package. - Involve other actors in mobilising local resources and support special activities like fund raising, construction, maintenance and repair. - Organise various activities periodically to collect funds for various programmes.
District level steering committee	- Design policy, instruction and module. - Take responsibility to support schools that may lack drinking water facilities, urinals and toilets or need certain repairs, which are provided by the district level steering committee, donor agency or any other organisation. - Produce and distribute educational materials. - Prepare and conduct training workshops. - Assist in realising programme budget and providing other financial support - Support the operation of the programme with the co-ordination, support of various central and district level governmental and non-governmental organisations as well as other relevant bodies. - Monitor, supervise and evaluate the programme activities through participatory methods.

Figure 6.3: Group of trainees listening to the trainer

NAME OF THE ORGNISATION :- ANCHALIKA VIKASH SANSTHA

BLOCK :- K.S. NAGAR

NO OF MODEL VILLAGE :- 811

TOTAL HOUSE HOLD :- 1590

B.P.L :- 943 A.P.L :- 647

POPULATION :- 9599

STATUS AS OF 30th DEC-2009

	ACTIVITIES	PLANNED	DONE	BALANCE
	SOFTWARE			
1	PLA	9	8	1
2	WATSAN Com. Formation	9	8	1
3	I.E.C	9	8	1
4	HEALTH CAMP	9	1	8
	HARDWARE			
1	Indv. House Hold Latrine.	1452	69	1304
2	Devp. of Sanitary Well	14	12	2
3	Comunity Garbage Pits.	28	21	7
4	Indv. Bathing Plotform.	1590	1202	388
5	Hand Pump Plot. Repair.	21	18	3
6	Village Drain.	3450'	3170'	280
7	Soak Pits.	23	16	7
8	Indv. Utensil Dry. Rack	1590	1437	153
9	Inst. Latrine.	37	37	NIL
10	Parent Teacher Com. For	37	37	NIL

7 District planning and management

Chapter 6 dealt with strategy, roles and micro-planning to provide basic input into the district plan. This chapter is about designing and managing the programme at the district (or block) level.

The sections of this chapter deal with:
- district planning and Plans of Action
- district management and organisation
- selecting the schools

This chapter is based on the principle that
- If past experience remains unknown or unused, then we risk repeating past mistakes or expending considerable effort to learn what is already known, that is to say, re-inventing the wheel.

7.1 District planning and Plans of Action

The district Plan of Action is an official document required to launch a SWASTHH programme in India. The Plan of Action (PoA) defines the rationale for the programme, the overall strategy, main actors and the financial allocations. It is an important document, but it is not sufficient to guide implementation. **A plan is needed that details exactly how the programme will be carried out and who is responsible at each point**. Thus, the PoA needs to be transformed into an interdisciplinary district workplan, showing activities, responsibilities, inputs and dates.
The district workplans should be prepared with sufficient knowledge of the local context, the local institutions and status of the schools. Chapter 6 dealt with these issues. It is also important to prepare the district (or block) plan in consultation with the groups that will be responsible. This ensures action and ownership. In a workshop setting, it might require two days to prepare and finalise such a plan. If the district plan is prepared in a workshop, it is important that it be reviewed and officially approved, rapidly. The question which then arises is: who should review and approve the workplan?

Policies and regulations

In addition to agreed workplans, it is necessary that the key policies and regulations be formulated and shared with the stakeholders from district to community level. Without this transfer of information, it will not be possible to carry out any plan, as intended, for SSHE programmes. Examples of these policies and regulations are:
- policy promoting the use of schools as a platform to strengthen the Restructured Rural Sanitation Programme
- policy to universalise safe water, sanitation and hygiene education in all schools

- government order about providing incentives to trainers
- regulation or order allowing released time for training teachers and trainers
- agreed regulations and procedures to speed the flow of funds as the resources for SSHE programmes can come from several different sources

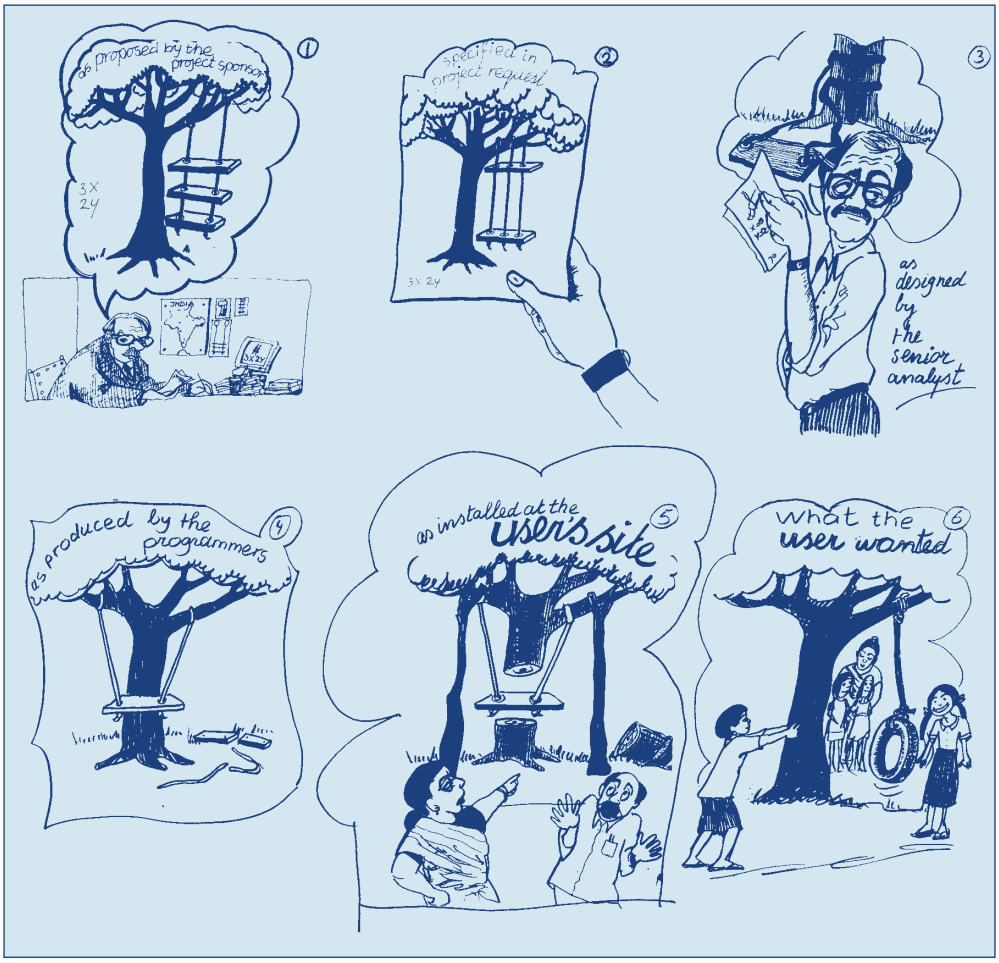

Figure 7.1 Different perspectives in looking at a district plan

Activity Sheet 7.1 **Preparing a district or block workplan (Alternative 1)**

Objective:

- To transform the PoA into a detailed inter-sectoral workplan that is subsequently used to guide the SSHE or SWASTHH programme.

Material: coloured cards, markers, tape and paper so that all members of the working group can visualise the workplan as it is being prepared

Time: one to two days

Procedure:

1. The facilitator should state that this is a major activity. Preparing the workplan can be a central part of the district-level training workshop. This will require at least one day of preparation and a half-day of reporting back and revision. The workplan should not be forgotten after the workshop. It needs to be formally approved and distributed to all stakeholder institutions involved in the programme. Because the workplan shows the activities that each agency and group agree to carry out, an approved plan can later be used to monitor the progress of the SSHE programme and to resolve problem.
2. Groups of participants should be formed of people who work together in the district or block.
3. The group might begin by listening to the major stakeholders and actors in their SSHE programme. Thus, the following types of groups could be involved in some districts: DIET officials, officers responsible for the SSHE programme in the district, education officers, health staff, NGOs, ICDS project officers, teachers/head teachers (or other staff) who will become trainers, executive engineers and AEE (who will be involved in the actual implementation), and/or representatives from local government (including Panchayati Raj).
4. The group then prepares its joint workplan. The following types of information should be included:
   - activities at district, block, cluster, community levels
   - approximate time (in weeks/months) with an end date for completion of most activities
   - identification of the groups or individuals who are responsible for the success of that activity
   - inputs needed, including time by which finance should be released
   - expected outputs in numbers (number of school, teachers, trainings, and so on)
   - review and approval of the workplan before it will be used to implement the programme
   - reporting systems and responsibilities
   - indicators for monitoring
   - points of quality check and how to go about it

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5. The facilitator should help those preparing the workplans to balance their work between too much and too little detail. The participants should also be reminded only to prepare plans that are feasible and realistic.
6. After the plan is prepared and agreed by all participants in the group, they should reflect and answer the following:
   - Which policies, regulations, permissions have been approved and disseminated in your district?
   - Which important ones are still missing?
   - Who should be approached, and how, to issue and disseminate these missing policies, regulations or permissions?
7. A formal presentation of the completed workplan and policy is very useful for the entire group. This presentation can serve to check the feasibility of the plan and how gaps in policies or regulations can be filled in.

Comments

Experience shows that it is possible to make detailed workplans for the short-term, for example, over four to six months. Beyond this period, the workplans will be less detailed, but should still identify the main activities and approximate time of completion.

Activity Sheet 7.2 **Developing a district or block workplan (Alternative 2)**

Objective: For participants who do not have a detailed block or district workplan:

- To draft a workplan.
- To refine ideas on what should be in a district strategy.

Material: poster paper

Time: two to four hours

Procedure:

1. The facilitator asks which participants have made their own district strategic plan and which have not. For those who have not developed their own plan, they will be asked to go into a small group. In the small group, they are asked to prepare their own district or block plan using a time line like the one shown below. They should write:
   - When the activity will take place (in weeks / or months) or write "ongoing after June" if the activity is meant to take place continuously, after the month of June.
   - The key actors, that is, people who have final responsibility for the activity, Note that it is more effective to assign responsibility to only one actor or group. (Too much sharing of responsibility can mean that no one is really responsible.)
   - People or groups who will be involved, and without whom the activity will fail.

Table 7.1 **Example of a time line**

Activities	Time (weeks/ months)	People responsible	People involved
Start-up 1) 2) 3) and so on			
Facilities and construction 1. 2. 3. and so on			
Ongoing activities 1. 2. 3. and so on			

7.2 Selecting the schools

Selection of schools comes earlier in the process of developing the programme, usually soon after the completion of the district plan. Three issues which can have a strong impact on school selection are: readiness of the community, quality of existing school infrastructure and political interference. The following describes each of these issues in more detail.

Readiness of the community: As a principle, it is useful to start with communities that are prepared and want to participate. This means, among other things, that there should be sufficient community cohesion and adequate linkages between school and community. It is important that the head teacher can relate to the community and that the panchayat is operational, and does not have major conflict. In projects that operate on a demand basis, it is easier to determine if the school and community are ready for the programme. The communities, the VEC (village education committee) and parent teacher association (PTA), are asked to submit simple plans and prepare contributions. If this is not done then they can not enter the programme. If the school programme operates effectively, in general, then one almost always sees that the communities will start to show more interest and will even compete to enter the programme. The challenge, when this happens, is not in selecting the communities, but in making every effort to serve them, without the long delays that are all too frequent in community-based programmes with government inputs.

Existing school infrastructure: In many schools, the quality of basic infrastructure is very poor. For example, roofs are not intact, walls are cracked or falling apart and the classrooms lack furniture (blackboards, chairs, desks). In such situations, it would be highly advisable to create water and sanitation facilities at the same time basic improvements are made in the total school infrastructure. This will probably make more sense to the parents and provide better motivation for the teachers. If this strategy can be followed, then school selection (and budgeting and fieldwork) need to take account of this additional work.

Political interference: In many cases, of course, elected officials have a good overview of their constituencies and the demands/needs of different communities. In other cases, political interference is not in the best interest of the programme and will not improve the programme's credibility.

7.3 District management and organisation

Good co-ordination is essential for school water and sanitation programmes, as indeed, it is for all community development efforts. For SSHE, the challenge is to ensure that education, engineering, health, non-governmental and local government institutions really work together. This applies to the state, district, block and community level; and, theoretically, programmes should begin by organising a strong co-ordination mechanism at each level.

Co-ordination serves at least two purposes. The first is to ensure that the programme is given priority. This means that the key agencies (education, health, PHED, rural development, local government, NGOs) want the programme, release funds for it and demonstrate commitment by working well and on time. Assigning priority to SSHE also involves providing, motivating and supervising the staff. Secondly, co-ordination should serve to ensure that both the software and hardware programme are integrated as intended.

The pivotal point for achieving this is usually a district co-ordinating committee (or similar committees with other names). These include representatives of all key stakeholders such as the Panchayati Raj, education, health, PHED, rural development and any other related departments. Representatives of locally active non-governmental organisations should also be included. Capable development NGOs, the civil society organisations and CBOs require places in the co-ordinating committee insofar as they can play effective roles in, for example, organising communities, monitoring and reaching out to schools.

At least some members of the co-ordinating committee, or its local equivalent, need training or orientation. This can also provide the occasion for the co-ordinating committee to experience how to work together effectively. The training/orientation can take many forms, for example:

- a half day programme for two weeks
- a five-day workshop
- a planning session with training in which workplans are produced and approved
- exchange visits to other districts to observe how the programme works

This senior capacity building, if overlooked, can severely limit the quality of the school health programme. And for this, capable facilitators are needed from the state level, organisations such as UNICEF and professional agencies, resource institutions, administrative training centres and NGOs.

Co-ordination, in itself, is an abstract word that can cover many things. It needs to be made concrete. Furthermore, setting up a committee is, as we know, not sufficient to ensure that it is effective. The key challenge is to develop clear, agreed roles with one person or group having oversight and overall responsibility. In other words, co-ordination needs to be defined to answer the question: *What are the specific actions which different groups take together or one-after-another, without which the programme may fail?*

Box 7.1 **Examples of tasks for district co-ordinating committees**

Examples of specific tasks for co-ordinating committees are:

- Preparation of *agreed inter-agency* workplans
- Sharing necessary *directives, guidelines and regulations* with all relevant departments. Examples are: release days for teachers and providing incentives.
- Timely *release of funds* and transparency of finance including the role of ensuring that construction is of good quality and that costs are kept under control.
- In general this all refers to *quality* control of the programme with a view to ensuring sustainability of the educational inputs and use of the new facilities. This also includes stopping programmes in some schools or an area if funds are not raised or misused or basic agreements are not carried out.
- Ensuring the correct *timing of programme inputs*, including:
  - timely tapping of CRSP, ARWSP, DPEP, SSA, and others for release of funds,
  - starting construction soon after community contributions have been made and training of community members and teachers has taken place,
  - acquisition of materials and their distribution on time.
- Planning the *training* of trainers, other training and orientation and retraining.
- Deciding about *incentives* and payment for trainers, NGOs and supervisors.
- Joint *supervision* across sectors, for example, ensuring that teachers make the facilities accessible to children or that construction is of good quality. Supervision includes monitoring and actions to be taken in response to monitoring information.
- Deciding which NGOs will be involved and organising their training.
- Planning refresher training and ways of bringing people on board after key people leave or are transferred.
- Sharing *transportation* among departments and cooperating in the distribution of educational and construction (e.g., engineers on supervisory visits take books for the schools).
- Establishing *agreed indicators* for monitoring.

Activity Sheet 7.3 **Work tasks of SSHE/SWASTHH co-ordinating committees (Alternative 1)**

Objective:

- To define the work programme of a co-ordinating committee clearly.
- To identify specific tasks that the committee can undertake.

Material: paper and pencil

Time: about one hour

Procedure:

1. This activity can be done in plenary or in small groups who report back.
2. The task is to make a concrete list showing:
    - Who the members are of the district or co-ordinating committee for the SSHE programme. If this is not known, then the names of the institutions represented on the committee could be listed.
    - Specific tasks that they may need to undertake to ensure that the programme develops well.

The facilitator could use the preceding list in Box 7.1 as an example. Participants should be reminded to be as specific as possible, avoiding general phrases.

3. Note that the participants can review their list and improve it based on Box 7.1. If possible, they may plan how to secure the missing elements.

Activity Sheet 7.4 **Adapting the strategy and workplan to solve problems (Alternative 2)**

Objective:

For participants who do have a block Plan of Action AND a workplan that assigns responsibilities and estimates dates for accomplishments, this activity is meant to:

- Help them address common or typical planning and implementation problems in SSHE programmes.
- Give experience in changing workplans and strategies in order to solve frequently occurring problems.

Material: poster paper

Time: two to four hours

Procedure:

1. The facilitator explains that there are many similar problems which occur in school water and sanitation programmes. From the list below the facilitator asks the participants to pick two problems that might occur in their district, block or panchayat.
2. In a small group, the participants should decide how these problems should be solved, reporting on how they might be solved and how the strategy, the workplan or budget for SSHE in their area would need to be changed.

   Select two problems from this list

   1. Lack of continuous co-ordination.
   2. Teachers and head teachers are not very motivated to carry out their work in this programme.
   3. Quality of training is not good.
   4. Some school facilities are dirty, not maintained and not well used.
   5. Girls do not use the school toilets.
   6. Key officials are frequently transferred.
   7. Funds are not released on time or in the correct amount. It is difficult to access funds.
   8. It is difficult to ensure support for recurrent costs (such as soap, repairs) from the community.
   9. Teachers complain that they do not have teaching/learning materials for hygiene and health education.

3. As part of the debriefing, the facilitator asks the participants to report their solutions in five minutes or less, to a large workshop group for comments and feedback. In addition, if time permits, the facilitator asks the plenary workshop group to assess whether the solutions suggested seem realistic and workable.

8 Starting-up and social mobilisation

Once schools have been selected, a large number of activities take place long before any construction. These activities focus on minds and hearts, that is: capacity building, social mobilisation and planning for facilities in schools.

The social mobilisation objectives at the beginning of the programme usually relate to:

- mobilising, group formation and training
- awareness raising and promotion in the community, including IEC (information, education, communication) activities.
- building commitment to and understanding of SSHE

These three inter-related elements are discussed in the following sections.

8.1 Mobilisation, training and orientation

Social mobilisation is 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, 1992)

Social mobilisation is the glue that binds the activities and the activities the programme. It seeks to provide wide-scale participation and ownership.

The methods of social mobilisation include

- stimulating demand through household visits and public meetings about the need for and benefits of water and sanitation facilities in schools
- assisting with planning exercises with local government officials and local leaders,
- assisting with training NGOs and government officials about social mobilization and management aspects of the programme
- assisting in block coordinating committee meetings

Mobilisation in a community usually begins with a set of community meetings, leading to identifying partners, selecting or nominating members for committees, orientation and training. It includes some preparatory IEC activities, planning, discussing on various aspects of a suitable design and technology and materials, as well as assembling materials and funds for construction.

Committees[5]

The process of local organisation should be based on the groups that are strongest locally, most respected and representative of the whole school catchment including the rich and poor, all castes and religions, women and men, girls and boys.

Setting up education committees

A working committee is usually needed to be the motor for decision-making, finance and implementation. This committee and school staff are seen as a bridge between the school, outside organisations and the community. The committee can be organised in many ways. It can, for example:

- be formed from an already existing village education committee (VEC) or school management committee,
- be developed from an existing community based organisation (CBO) such as the WATSAN committee or women's groups,
- be set up as a new committee that includes the head teacher, members of the panchayat and parents or representatives from locally-active groups.

Box 8.1 **Examples of responsibilities of a school education committee**

Examples of responsibilities of school education committee in consultation with parents and panchayat

- Inform families and parents about the programme. Win their support.
- Together with teachers, select the technologies and designs for water and sanitation facilities.
- Organise community contributions for construction.
- Monitor the construction.
- Organise activities to collect funds for construction and on-going activities.
- Monitor the use and maintenance of facilities.
- Help to inform the parents (men and women, parents and grandparents, aunties and uncles) about the hygiene education which their children receive in school.
- Help to organise repairs.
- Assist teachers with hygiene education activities.

Through advocacy, mobilise parents of children to construct household toilet facilities and adopt home hygiene practices for better health.

Source: WaterAid India (1998).

5 This section is adapted from Bolt and Fonseca (2001).

NGOs, in particular, have an important role to play in mobilising and supporting local groups. If an SSHE programme is to work, the local committees will need assistance. They will need to develop some skills and an understanding of the major tasks at hand. Although committees may be able to take on a very substantial share of the management and implementation, the involvement of support organisations such as NGOs, CBOs and civil society organisations will usually be required. Committees and school staff can turn to them in case of problems they can not solve themselves. The communities (and their local government and committees) often need some support for establishing management arrangements and building capacities.

About selecting committee members

The committees (VECs or PTAs) with the teachers are meant to manage the planning, implementation and sustained maintenance and use of school facilities. However these committees often function poorly or not at all. This is often to do with the fact that the members are not selected based on clear criteria, resulting in the selection of people who do not necessarily have the right qualities for the job at hand. The establishment of a committee is often done too quickly so that the most outspoken or most powerful community people become members. However, they might not have the skills to do the job. For this reason it is useful, if a new committee is being formed, to make special efforts to set up a careful selection process. External facilitation is useful to help guide a stepwise process to help the selection of committee members and, later, to provide support such as training.

A VEC or school management committee is often a voluntary body. If it is going to work smoothly and meet the needs of the school and families, it should represent all the major local institutions and all segments of the community including the better off and the poor, men and women and groups living in different areas.

Setting up the committee too quickly (in some cases a committee is set up at a single meeting) does not always result in the best or most informed selection of members. Another pitfall is dealing only with the most prominent and talkative people in the community. We should be careful not to leave out women or poor people as their participation will ensure that their perspectives are included in management decisions. Sometimes the obstacles to the involvement of women and poor people in committees have to be confronted and solutions found – frequently this requires the facilitation by NGOs and CBOs. Examples are meetings being held at times when women are not available, or when poor people working for richer families are asked to attend during their hours of paid work. Meetings a long way from the community or where it is unsafe for women to travel, may result in exclusion of women.

The time to establish the committee can be flexible. Sometimes this can be done near the start of a programme, sometimes it can come after the initial survey or community training.

The committee may find that its tasks change over time or that some committee members cannot continue so that new ones have to be selected. There should be a well publicised set of rules and regulations that are known about the representatives of committees, covering how to drop or add members, and stating under what conditions the entire committee can be dissolved and by whom.

Transparency of finance

Financial management and transparency are among the more difficult aspects of community management. Some of the more common problems are:

- influential individuals are placed in positions of financial responsibility and run things without accounting for their actions to the school or parents,
- committee members do not receive adequate training on how to perform their job,
- committee members who are trained in finance or bookkeeping leave the committee,
- lack of clarity about how allocated resources have to be spent and accounted for; lack of understanding that public resources are subject to audit and that any irregularity will damage the committee's image and the programme.

8.2 Training

Training and orientation are important elements in social mobilisation. An unusually wide range of people require training (more than one day) or orientation (less than one day). These include: education department staff, teachers, village education committees, PTAs, block and district personnel from various departments, trainers, NGO staff, CBO members, masons, and so on. Often training events are organised about technical or theoretical issues for education, such as bookkeeping or repairs. However, training is also needed on many more issues related to good management. These tasks include preparing plans, how to hold consultations with the community, how to do hygiene education and IEC for behaviour change, community decision-making, making tenders and contracts for services and supplies, mobilising and handling contributions for the operation and maintenance of school facilities and education.

Figure 8.1. Trainees undertaking group work

Box 8.2 **Two examples of local SSHE capacity building plans**

Tumkur district of Karnataka

- 3-day training of block panchayat and project implementation team.
- 3-day training of 'frontline workers': headteachers, anganwadi worker, ANM, gram panchayat secretary and village accountant with a refresher after 6 months.
- Cluster representatives trained for 3 days in the village with a further one day every 2 months for 10 months.

Aurangabad District: Mumbai

Two elements of the strategy are:

- Sensitise field functionaries (health workers, waterman, dais, anganwadi).
- Create awareness on hygiene practices among teachers and children.

Training:

- 5-day module for village workers (health workers, teachers, dais, anganwadi worker, waterman, sarpanch, gram sevak). This workshop for people from the same village helps the personnel to work together. Topics: health, hygiene, waste disposal,
  low-cost options, field visit to see current status of sanitation
- Training: for headteachers: one-day orientation, focused on needs of child and PTA activities.
- Teacher training: 3 days focused on hygiene practices and community survey to learn about current hygiene practices.

In both cases, training and orientation focused on a range of groups. In both cases, the head teacher and education officers received training.

There are several methodologies for training, but in general training methods that invite participants to reflect on their own work and capacities are most fruitful. (See chapter 2, section 2.3 on training methods.) Role-playing, problem-solving activities and building on existing knowledge are helpful approaches. It is also essential that the participants understand the objectives of training and that training should be complemented by other capacity building measures such as on-the-job learning and, especially, exchange visits. Exchange visits can be very useful. Teachers and VEC members can, for example, visit a community that has successfully implemented its SWASTHH programme to find out what they have done, what problems may arise and how these can be solved.

Community and committee meetings

Social mobilisation is meant to involve large sections of the school community and their families in making decisions and managing their facilities in support of the school. Many times the social mobilisation is incomplete. For example, only a few people are involved in a few meetings. This gives them little sense of ownership or commitment. The result can be facilities not used as intended and hygiene education that does not result in new changed behaviour. Many formal and informal meetings usually take place during this preparation stage, eventually leading to the construction and education inputs. The example below is adapted from an official SSHE publication in Bangladesh. In this programme, communities are meant to plan and provide about 25% of the resources needed for water and sanitation facilities. This is, of course, only an indicative list which would probably work out somewhat differently in reality, depending on the situation.

Box 8.3 **Example of meetings in the community for SSHE (Bangladesh) construction and community contribution**

Many of these meetings were facilitated by NGO field workers.

1. Introduction to parents, committees, teachers (organised by school management committee: SMC)
   Contents:
   - Specific problems with existing sanitation and water supply facilities/situation in school.
   - Behaviour and health benefits.
   - The programme: how it works, inputs from outside and responsibilities of community.

>

2. Steps to improve the situation in the school (SMC)
   Also: Behaviour and health benefits and how the programme works.

3. What is the present situation? What is wanted? (SMC)
   Visit school to collect detailed and specific information on the condition of the present toilets and water supply, and information on the type of soil etc.
   Specific needs for construction and rehabilitation of sanitation facilities and water supply facilities.

4. Design and technology? Who is on committee? (meeting organised by SMC)
   Purpose:
   - To jointly formulate the specific goals, and the expected results and outputs.
   - To select the school sanitation implementation committee (SSIC).

5. Technology selection and costs: sanitation
   Purpose:
   - Decide on the type of toilets.
   - Calculate the costs of construction.

   This meeting should be organised by the SSIC to decide on technology selection and costs for water supply (or storage) and handwashing facilities.

6. Decide on type of water facilities for construction or rehabilitation and agree on the costs. SSIC organises a community discussion of proposals. Decide together with all the stakeholders on type of facilities and the amount of labour, local materials and cash money the school/community can make available. This meeting should be organised by the SSIC.

7. Final proposal preparation
   Purpose:
   - To prepare a proposal for implementation of improvements and identification of resources. This activity should be carried out by the SSIC and the SMC together.

Communication strategies

The school programme is about more than construction of toilets and water points. It has a strong focus on hygiene education (or hygiene and life skills education). Children learn new behaviours and information, and are encouraged to share this with their parents, sisters and brothers. The parents should be prepared for this and aware of the issues. Thus, community education about hygiene behaviours also has a place in school programmes. The aim is to create support and understanding among parents. (See

chapter 4 on hygiene and behaviours). For the facilitator, exercises about identifying key hygiene issues and transect walks through the community are particularly helpful (Refer to chapter 4, activity 4.3).

Unfortunately most IEC activities are not planned with particular audiences, or even specific messages in mind. Some of the most common IEC activities used for SSHE are:

Box 8.4 **Variety of IEC activities**

A variety of IEC activities at the village level for social mobilisation

- campaigns
- competitions
- exchange visits
- wall painting/writing
- rallies
- street plays
- folk media such as puppet shows/drama
- interpersonal communication (house-to-house)
- newspaper (depending on literacy status)
- announcement by drum beating
- weekly market stalls displaying products/posters
- poster/flip charts
- songs /slogans
- folk dance
- cultural programs

It is not known what the real impact of these media and activities are for different audiences (men/women, rich/poor, different caste groups and religions, old/young) in India. This is complicated by the fact that these media and activities could have different effects in different parts of India. For example, where literacy is high, the newspaper will probably reach more people. Research is needed to investigate the effect of these media and IEC activities. In the absence of this research, it is suggested that more careful thought (and discussion with members of different audiences) takes place before selecting the specific IEC activities. In other words, the selection of messages and media/activities must be done with knowledge of (and preferably discussion with) some of the target audiences (men/women, rich/poor, young/old).

Often materials such as posters and booklets are prepared rapidly before their use and channels of distribution have been worked out properly and before people, including teachers, have the skills to use them properly. Such materials may give visibility to a

programme, but often waste resources that are not carefully timed with other aspects of a programme. (McKee, 1992).

Interpersonal communication

Experience in India indicates that mass activities should be combined with face-to-face contact, that is, interpersonal communication such as for example, through home visits[6]. The interpersonal communication usually goes beyond awareness raising and includes advocacy and educational contents as people can begin to learn about the reasons for the SWASTHH programme and the basic issues of hygiene behaviour. Interpersonal communication is usually undertaken by committee members from the school, by local professionals and members of active CBOs.

8.3 Programme communication

The purpose of programme communication is:

1) to help the community understand and support the school hygiene programme.
2) to promote the safe hygiene behaviours integral to the programme and central to achieving a life style change.

It can begin with simple, understandable products/messages such as:

- *Support your schools with toilets*
- *Clean and safe water and health education helps your children to grow up healthy.*

Box 8.5 **Programme communication**

Programme communication is the process of:

1. identifying specific groups and audiences;
2. targeting them with particular strategies, messages or training programmes; and
3. working through various media and interpersonal channels, traditional and non-traditional.

Communication strategies should promote understanding of issues by the people. Messages must go beyond slogans to address the "whys". Nonetheless, messages should be simple and actionable" (McKee, 1992).

The idea behind programme communication is to identify the audiences such as the parents and people in the household who support or hinder a behaviour or programme. These opinion leaders should be identified and separated into different groups such as: mothers and grandmothers; fathers, uncles, teachers, PTA, panchayat, women's groups, religious leaders and social leaders.

6 This is, for example, one finding from the currently on-going study on sustaining hygiene behaviours in Kerala (SEU-Foundation).

Finding out what the community and children perceive and understand about the new programme of water, sanitation and hygiene can become part of the communication package to reach the community and children. (Curtis, 1998)

Finding out the reasons of different groups of people for wanting this change can assist in developing the messages for the different groups. Example:

- For fathers a reason could be that the family contribution for toilets and hygiene in schools will improve the education and comfort of their children. It is not expensive.
- For mothers, a reason could be that their children will develop good habits and their girls will have privacy of toilets in the school. This will bring a sense of relief.
- For children, they will have ready access to water and toilets. For girls especially the hardship will be reduced in terms of privacy availability.

These reasons can be discovered through focus group discussions or through interviews. In conversations and interviews, listen to the themes that come up again and again. For example, research in the African country of Burkina Faso has found the following responses among mothers of young children to the question: 'Why teach a young child to use a toilet at home?' (Curtis, 1998).

Box 8.6 **Why teach a young child to use a toilet at home?**

Short-term advantages	Long-term goals
• Household compound looks nice	• Live in an attractive environment
• Gets rid of bad smells	• Behave with dignity
• Feels comfortable with visitors	• Respect from the neighbours
• People don't walk on the stools	• Family harmony
• Husband likes it	

Source: Curtis (1998).

These advantages can be transformed into simple, positive messages, for example:

- Using a toilet makes the household look nice.
- When children use toilets, families enjoy good health, respect and dignity.

There are many possible messages for different target groups. Make sure that the price implied by the message is reasonable, in terms of both money and effort for the schools and parents.

These ideas need to be delivered to the target group in the most efficient ways. For this, we need to think about the *communication channels*. This means communicating the messages through channels that reach the intended audiences. For example, fathers may be more likely to attend school meetings. Mothers might be easier to reach through house-to-house contacts or during community festivals.

For communication, note that each audience has its own characteristics. There are different target audiences and it may be useful to think:

- Where can they be found? How many are there in all?
- Who can read?
- What organisations do they belong to?
- Who do they listen to and trust?

Putting all the information together, a decision needs to be made on how to reach the various groups. It is crucial to be creative. The use of communication supports such as theatre or teaching aids is also important. They can involve stories or home visits, or dramas performed by children and so on. (Curtis, 1998)

It is also important to think about who should be the actor(s) or promoter(s). Activities undertaken by children always attract attention. The PTA can also be useful in promoting health awareness among parents, children and the community at large. This paves the way for effective two-way communication.

Box 8.7 **Steps for programme communication**

Some well-known steps for programme communication borrowed from the concept of social marketing are summarised below:
Decide on:

- the principle message
- the target audience
- the motivation (immediate advantage and long-term goal)
- the promoter (child, teacher, health agent, NGO worker)
- the tone of the communication (e.g.: fun or serious)?

8.4 What is 'social marketing'?

Social marketing uses a marketing approach to match available resources with social needs. Social marketing may be applied to service provision and utilisation, the development and acceptance of products, or the adoption of new behaviour. It can be product or behaviour-focused. Consumer-orientation is fundamental to social marketing and demands that social programmes respond to people's perceptions and aspirations. Finally social marketing is not based on individual financial motivation alone but is concerned with achieving a social objective.

Defining social marketing

Social marketing is a systematic strategy in which acceptable concepts, behaviours, or products, and how to promote, distribute and price them for the market, are defined. More specifically it applies commercial marketing techniques to social programmes in order to improve their effectiveness.

Social marketing:

- Is greatly influenced by modern advertising and sales techniques.
- Emphasises the transfer of information believed to be needed by the people.

Social marketing's 'Four Ps'

Social marketing consists of the 'Four Ps' which form the basis of commercial marketing: Product, Price, Place and Promotion, which can also be used in social marketing campaigns.

* **Product** in social marketing may be a physical product, such as a home toilet or school toilet, or a change in behaviour, such as handwashing after defecation.

* **Price** in social marketing may be physical exchange of value, such as a commercial transaction, but it can also refer to the price involved in changing behaviour. For example, there is a price in terms of time, if time is needed to carry additional water for handwashing rather than for other activities.

* **Place** in social marketing means the distribution channels used to make the product, service, or concept available to the target group. If a physical product or service is being marketed, the place may mean the actual point of purchase or access. The place could also refer to the media through which the target group learns about the concept.

* **Promotion** covers the broad range of channels through which the campaign messages are directed to the target group. Channels for promotion include mass media (television, radio, magazines and newspapers), and traditional methods such as plays, folk singers, and interpersonal communication.

Table 8.1 **Applying the 'Four Ps' in your own SSHE programme**

'Four Ps' of social marketing	Examples for sanitation
PRODUCT Decide on what the product is, its form, format, presentation, in terms of packaging and characteristics	**Product** (tangible outputs): Home toilets. **Practice or behaviour:** Using and cleaning toilets, washing hands after using the toilet. **Idea:** Clean environment, good sanitation for health/hygienic excreta management.
PRICE Decide on what the consumer would be willing to pay, both regarding direct and indirect costs and what perception of benefits that make the product worth getting	**Monetary:** Cost of products (with or without subsidies). **Opportunity cost:** Time lost from other activities, missed opportunities, transport, loss in production or income. **Psychological or physical:** Stress in changing behaviour, effort involved in regularly using toilet instead of open fields, in maintaining toilet or in obtaining additional water.
PLACE Where will the product be available for the consumers, including where it will be displayed or demonstrated	**Delivery of product:** Health centres, pharmacies, households, clubs, panchayats, schools, sanitary markets, extension counters, women's group meeting place.
PROMOTION How will the consumers know the product exists, its benefits, costs, and where and how to get it	**Delivery of message:** Television, radio, newspapers, posters, billboards, banners, folk singers or actors, public rallies, interpersonal/group counselling.

Activity Sheet 8.1 **Activity plan for community mobilisation**

Objective:
Participants get a better understanding of community mobilisation by developing their own basic social marketing plan.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator explains that the participants will put together a draft social marketing plan. This will encourage the participants to start thinking about how to 'market' a product within the context of their project on SSHE.
2. The facilitator asks the participants to form small groups. The facilitator gives each group a specific theme to make into a social marketing plan e.g. using and cleaning toilets, etc. Each group also receives the following table, which they are asked to fill in (refer to the table on the next page).
3. As part of the debriefing, each group reports back in the plenary session. Questions such as: why should the community be involved in mobilisation could be discussed. In addition, the participants can give their own experience in which programme communication/social marketing did not seem to work. Discussion on where the problem(s)/bottlenecks existed could also lead to some interesting insights.

Table 8.2 **Applying the 'Four Ps' in your own water or sanitation programme**

'Four Ps' of social marketing	Examples for sanitation	For your programme or project
PRODUCT **Decide on what the product is, its form, format, presentation, in terms of packaging and characteristics**	**Product** (tangible outputs): Toilets **Practice or behaviour:** Using and cleaning toilets, washing hands after using the toilet **Idea:** Clean environment, good sanitation for health/hygienic excreta management	**Product:** **Practice or behaviour:** **Idea:**
PRICE **Decide on what the consumer would be willing to pay, both regarding direct and indirect costs and the perception of benefits that make the product worth getting**	**Monetary:** Cost of products (with or without subsidies) **Opportunity cost:** Time lost from other activities, missed opportunities, transport, loss in production or income **Psychological or physical:** Stress in changing behaviour, effort involved in maintaining toilet or obtaining additional water	**Monetary:** **Opportunity cost:** **Psychological or physical:**
PLACE **Where will the product be available for the consumers, including where it will be displayed or demonstrated**	**Delivery of product:** Health centres, pharmacies, households, clubs, sanitary marts, schools, Panchayat	**Delivery of product:**
PROMOTION **How will the consumers know the product exists, its benefits, costs, and where and how to get it**	**Delivery of message:** Television, radio, newspapers, posters, billboards, banners, folk singers or actors, public rallies, interpersonal/group counselling	**Delivery of message:**


ପ୍ରସ୍ରାବ ହିଁ ସାର୍
ପରିସ୍ରାଗାର
ବାଳକ
ଚପଲ ପିନ୍ଧି ପାଇଖୋଲାକୁ
ଯାଆନ୍ତୁ ଯାଇସାରିବା ପରେ
ନିଜ ହାତ ଓ ଗୋଡ
ସାବୁନ୍ ବା ପାଉଁଶରେ
ଧୋଇବା ।

9 Sanitation Facilities

The previous chapters have focused on dealing with key activities in the SSHE project cycle. This chapter on sanitation facilities and chapter 10 on water supply facilities look at the hardware aspects of SSHE namely the construction side. At the end of chapter 10 you will find a section on financing and paying for facilities, which is applicable to both water and sanitation facilities.

This chapter will focus on:

- The best **sanitation facilities** that schools and parents of students can afford. Topics will include: technology and environmental issues, consumer preferences, design and number of latrines needed, installation and maintenance considerations.

Chapter 10 will focus on:

- The best **water supply facilities** that schools and parents of students can afford. Topics will include: technology and environmental issues, design, estimated cost of the required water supply system and handwashing facilities.

This chapter could be used in training and may also be used by engineers who are called on to explain technical issues to the public in simple and transparent ways.

This chapter is based on the principle that:
Special emphasis should be placed on involving the families of children (men and women, rich and poor) and the teachers in making decisions about the technology and construction of their water, sanitation and handwashing facilities. This builds a strong sense of ownership. It helps to ensure good use and maintenance of facilities, including the community continuing contributions.

9.1 Selecting design and technology for sanitation facilities

Both the school and parents should carefully consider the 'best' school toilet which can be afforded based on funding and possibly community contributions.

Box 9.1 **Who should decide?**

Who should decide on the technology and design, particularly of the superstructure?

This should be a *group decision*. The parents and teachers must be involved, if they are to support the construction and contribute to maintain it afterwards. This is essential to create ownership and to ensure use and maintenance. If the PHED wants to have a standard design, then it should at least offer three or more standard alternatives to choose from. For each alternative design, the teachers and parents should also be able to make some modifications to fit the local situation. For the long-term sustainability it is important for the community members to consider not only the construction and installation cost but also the operation and maintenance cost that they will have to pay every year.

The following section describes the decision-making process of construction which takes several steps and some time. However, this process will help to ensure use and maintenance by the school and community after construction.

Design and technology for school latrines

There are many types of latrines (refer to the information and overheads on the following pages for more details) including:

- **VIP (ventilated improved pit)** latrines and twin VIP latrines (two alternating pits) These are particularly suitable for areas of water scarcity. Building the twin pit latrine is more practical in areas where the latrines can not be rebuilt in another location when they fill up or where it is not planned to empty the filled latrine pits.
- **The pour-flush and double-pit pour-flush** latrine is common throughout India. It is most suitable for areas where there is sufficient water. The pits are usually less deep than for VIP latrines and therefore this model is also more suitable where digging is difficult. The so-called 'rural pan' can be used to reduce the amount of water needed. This pan (the squatting area) is more narrow and steeper than the conventional pan sold in most markets. For this model, teachers need to ensure that children do not block the trap, for example, by putting rubbish in it. For the double-pit model, the teachers need to know about and change the 'Y-junction' when one pit fills up, say about once a year or once in two years.

- **Ecological sanitation: composting and dehydration**
  Environmental sanitation means keeping our surroundings (the environment) clean and safe and preventing pollution. It includes wastewater treatment and disposal, vector control and other disease-prevention activities. Ecological sanitation, on the other hand, is structured on recycling principles. It means keeping the eco-cycle in the sanitation process closed. It is also a low-energy approach that uses natural processes. This new model is designed so that the excreta and urine are separated, become safe and can be used as fertiliser. The model is more difficult to maintain but is ecologically sound.
- **Septic tank**
  The septic tank is a more expensive model and requires pumping to empty the tank periodically. Nonetheless it is found in some schools, particularly in and around towns.
- **Urinals**
  These are less expensive than latrines and are built in many schools. The social acceptability of the urinal for older girls needs to be checked locally before construction.

In India, the Ministry of Rural Development has published an indicative design for a school latrine. This is a two pour-flush latrine model with urinals. This model is considered to be indicative, meaning that the design can be altered, or other technologies selected to suit the local situation.

On the following pages information is included which focuses on a brief description of the technology, operation and maintenance (O&M) activities and requirements, actors involved in the O&M, recurrent costs and finally problems and limitations[1].

Ventilated Improved Pit Latrine

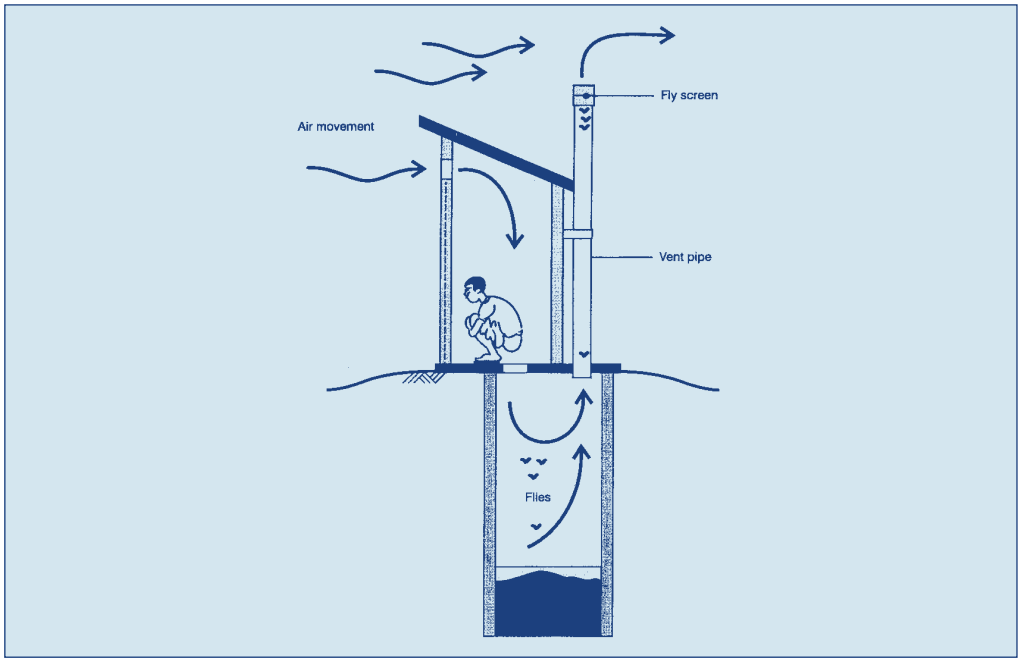
a. Brief description of technology

The Ventilated Improved Pit (VIP) latrines are designed to reduce two of the problems frequently encountered by traditional latrine systems, namely their smell and their insect production. A VIP latrine differs from a traditional latrine by a vent pipe covered with a fly screen. Wind blowing across the top of the vent pipe creates a flow of air which sucks out the foul smelling gases from the pit. As a result fresh air is drawn into the pit through the drop hole and the superstructure is kept free from smells. The vent pipe also has an important role to play in fly control. Flies are attracted to light and if the latrine is suitably dark inside they will fly up the vent pipe to the light. They cannot escape because of the fly screen, so they are trapped at the top of the pipe until they dehydrate and die. Female flies, searching for an egg-laying site, are attracted by the

6 Please note that this information has been cited with only minor adaptations from Operation and maintenance of rural water supply and sanitation system by François Brikké, published in 2000 by WHO.

odours from the vent pipe but are prevented from flying down the pipe by the fly screen at its top.

VIP latrines can also be constructed with a double pit. The latrine has two shallow pits, each with their own vent pipe but only one superstructure. The cover slab has two-drop holes, one over each pit. Only one pit is used at a time. When this one is full, its drop hole is covered and the second pit is used. After a period of at least one-year, the contents of the first pit can be removed safely and used as soil conditioner. The pit can be used again when the second pit has filled up. This alternating cycle can be repeated indefinitely.



Source: WEDC

Figure 9.1 Ventilated Improved Pit Latrine

Area of use: Rural or peri-urban areas, household and public use.

b. Description of O&M activities

Operation

Operation of pit latrines is quite simple and consists of regularly cleaning the slab with water (and a little disinfectant if available) to remove any excreta and urine. The door must always be closed so the superstructure remains dark inside. The drop hole should never be covered as this would impede airflow. Appropriate anal cleaning materials should be available in or near the latrine. Non-biodegradable material like stones, glass, plastic, rags etc. should not be thrown in the pit as they reduce the effective volume of the pit and hinder mechanical emptying.

Maintenance

Every month the floor slab has to be checked for cracks and the vent pipe and fly screen must be inspected to ensure they are not corroded or damaged. Rainwater should drain away from the latrine. Any damage should be repaired. Repair of the superstructure (especially light leaks) may be necessary too. When the contents of the pit reach the level of 0.5 m below the slab, a new pit has to be dug and the old pit covered with soil. Another possibility is to empty the pit mechanically.

In case of a twin pit system, one should switch over to the other pit when a pit is full. The full pit can be emptied safely by hand after it has been standing for a year or more.

Organisational aspects

Where latrines are used by a single household, O&M tasks are implemented by the household itself or by hired labour. If more households use the latrine, arrangements on rotation of cleaning tasks have to be made and agreed upon to avoid social conflicts. Pits can only be emptied manually if their contents have been left to decompose for at least a year. In all other cases either new pits have to be dug when a pit is full or the pit has to be emptied mechanically.

If double pit latrines are used, the users need to understand the concept of the system fully in order to be able to operate it properly. User education has to cover aspects such as reasons for switching, using one pit at the time, use of excreta as manure and the need to leave the full pit at least a year before emptying. The users also need to know how to switch the pit and how to empty it, even when they do not do these tasks themselves. Where these tasks are carried out by the private (informal) sector, the labourers also have to be educated in the concept of the system and its operational requirements.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Clean drop hole, seat and superstructure	Daily	Household	Water, soap	Brush, bucket
Inspect floor slab, vent pipe and fly screen	Monthly	Household		
Clean fly screen and vent inside	Every one to six months	Household	Water	Twig or long bendable brush

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Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Repair slab, seat, vent pipe, fly screen or superstructure	Occasionally	Household or local	Cement, sand, water, nails, local building materials	Bucket or bowl, trowel, saw, hammer, knife
Dig new pit and transfer latrine slab and superstructure (if applicable)	Depending on size and number of users	Household or local labour	Sand, possibly cement, bricks, nails and other local building materials	Shovels, picks, buckets, hammer, saw, etc.
Switch to other pit when pit is full	Depending on size and number of users	Household or local labour		Shovels, buckets, wheelbarrow, etc.
Empty pit (if applicable)	Depending on size and number of users	By hand: household or local labour (not recommended), or by mechanical means: specialised service	By hand: water By mechanical means: water, spare parts for machinery	By hand: shovel, bucket By mechanical means: pit emptying equipment

d. Actors implied and skills required in O&M

Actor	Role	Skills
User	Use latrine, keep clean, inspect and perform small repairs, empty full pit and switch over, dig new pit and replace latrine	Understanding of hygiene
Local unskilled labour (sweepers/scavengers)	Dig pits, transfer structures, empty full pits of double pit systems, small repairs, solving small problems	Knowledge about the concept of a double pit system (when working with such systems), knowing how to solve simple problems.
Local mason	Build and repair or transfer latrines	Basic masonry, latrine building
Health department	Monitor latrines and hygienic behaviour of users, train users	Training skills and knowledge on sanitation

e. Recurrent costs

These costs are usually very low, maximum about US$1 to 2 per capita per year, as normally maintenance activities are few (mainly cleaning) and can be done by the households themselves. Even if local labour has to be hired for digging a new pit, the recurrent costs per time unit and user are low although paying in full at once may pose a problem. The same applies for the cost of mechanically emptying of the pit. Emptying a double VIP pit can be done by hand, either by the household itself or by hired labour. Sometimes the humus can be sent to farmers.

f. Problems, limitations and remarks

Frequent problems

Bad quality of the floor slab due to inappropriate materials or improper curing of concrete may cause problems. Inferior quality fly screens get damaged easily by the effects of solar radiation and foul gases. Improperly sited latrines can get flooded or undermined. Children may be afraid to use the latrine because of the dark or because of fear of falling into the pit. If the superstructure allows too much light to come in, flies will be attracted by the light coming through the squat hole and may fly out into the superstructure; this may jeopardise the whole VIP concept. Odour problems may occur during the night and early morning hours in latrines relying more on solar radiation for the air flow in the vent pipe than on wind speed. Leakages between pits can occur because the dividing wall is not impermeable or the soil is too permeable.

Limitations

In hard soils it may be impossible to dig a proper pit. Pits should preferably not reach groundwater level and latrines must be 15 to 30 metres away from ground and surface water sources. VIP latrines cannot prevent mosquitoes breeding in the pits. People may not be able to bear the much higher costs for construction of a VIP latrine in comparison to a simple pit latrine.

Remarks

Cultural resistance against handling human waste may prevent households from emptying their double-pit themselves. Usually local labour can be hired to do the job.

Ecological sanitation: Double Vault Compost Latrine

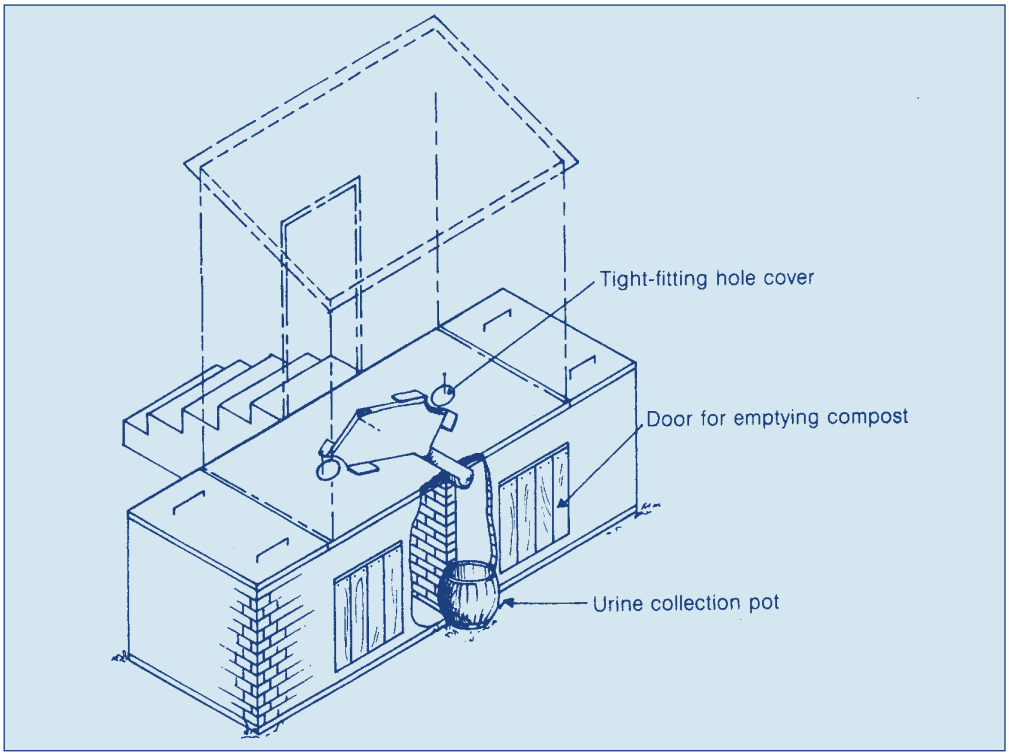
a. Brief description of technology

The double-vault compost latrine consists of two watertight chambers (vaults) to collect faeces. Urine is collected separately as the contents of the vault have to be kept relatively dry. Initially, a layer of absorbent organic material is put in the vault and after each use, the faeces is covered with ash (or sawdust, shredded leaves or vegetable matter) to deodorize the faeces, soak-up excessive moisture and improve Carbon/Nitrogen ratio, which ensures that sufficient nitrogen is retained to make a good

fertiliser. When the first vault is three quarters full, it is completely filled with dry powered earth and sealed so the contents can decompose anaerobically.

The second vault is used until it is three quarters full and the first vault is emptied by hand, the contents are used as fertiliser. The vaults have to be large enough to keep faeces for at least a year in order to become pathogen free. The superstructure is built over both vaults with a squat hole over each vault which can be sealed off. The latrine can be built everywhere as there is no pollution coming from the watertight chambers to pollute the surroundings. Where there is rock or a high watertable, the vaults can be placed above ground.

Area of use: Areas where water is scarce and pour flushing implies water to be carried from source to home primarily by girls and women.
Areas where water table is high such as flood plains or coastal areas – above ground chambers will ensure protection from rising water in pits and ground water pollution.
Densely populated habitations where risks of ground water pollution from pits to drinking water sources is assessed to be high



Source: WEDC

Figure 9.2: Compost Latrine

b. Description of O&M activities

Operation

Initially some absorbent organic material is put in the empty vault. After each use and whenever available, wood ash and organic material are to be added. When urine is collected separately it is often diluted with 3-6 parts of water and utilised as fertiliser. This may cause a health hazard and should be avoided. Adding lime or ash may help, but there is no guarantee that the urine will then be safe. Water used for cleaning should not be allowed to go into the latrine as it will make the contents too wet.

Maintenance

When the vault is three-quarters full, the contents are levelled with a stick, after which dry powdered earth is added till the vault is full. The squat hole is then sealed and the other vault emptied with a spade and bucket, after which it can be taken into use. The removed contents can be used safely as a fertiliser. Households may grow insect repelling plants like citronella around the latrine.

Organisational aspects

Extensive investigation among potential users is needed to find out if the system is culturally acceptable and if they are motivated and capable to operate and maintain the system properly. Prolonged support by the agency is needed to ensure that users understand the system and execute operation properly.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Clean toilet and superstructure, empty urine collection pot	Daily	Household	Water, lime, ashes	Brush, water container
Add ashes or other organic material	After each defecation and whenever available	Household	Wood ashes and organic material	Pot to contain the material, small shovel
Inspect floor, superstructure and vaults	Monthly	Household		
Repair floor, superstructure or vaults	When necessary	Household or local	Cement, sand, water, nails, local building materials	Bucket or bowl, trowel, saw, knife, hammer,

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Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Close full vault after levelling and adding soil, empty other vault, open its squat hole and add 100 mm of absorbent organic material before taking into use, store humus (or use directly)	Depending on size and number of users	Household or local pit emptier	Water, absorbent organic material	Shovel and bucket
Use humus as fertiliser	When needed	Household or other users	Humus	Shovel, bucket, wheelbarrow

d. Actors implied and skills required in O&M

Actor	Role	Skills
User/household	Use latrine, remove urine, keep clean, inspect and perform small repairs, empty pit and switch	Understanding of hygiene, understanding of system and its O&M
Local mason	Build and repair latrines	Basic masonry, latrine building skills
Local pit emptier	Empty pit and switch, check system and perform small repairs	Understanding of hygiene, understanding of system and its O&M
External support organisation	Investigate applicability, monitor users' O&M and hygienic behaviour and provide feedback, train users and local artisans	Research/surveying skills, training skills, knowledge of system, organisational skills, communicative skills

e. Recurrent costs

When the system is well designed and constructed and O&M is done properly the recurrent costs will remain limited to the costs made for small repairs and emptying of a vault when full. Sometimes the humus can be sold to farmers.

f. Problems, limitations and remarks

Frequent problems

Proper operation needs full understanding of the concept. This is often lacking and as a result for instance contents are left too wet, making the vault difficult to empty and malodorous. Where people are eager to use the contents as fertiliser, they may not allow sufficient time for the contents to become pathogen free.

Limitations

Only to be used where people are motivated to use human excreta as a fertiliser. The system is not appropriate where water is used for anal cleansing.

Remarks

Double-vault latrines have been successfully used in Vietnam and Central America (Guatemala, Honduras, Nicaragua, El Salvador). When tried elsewhere they have usually been unsatisfactory.

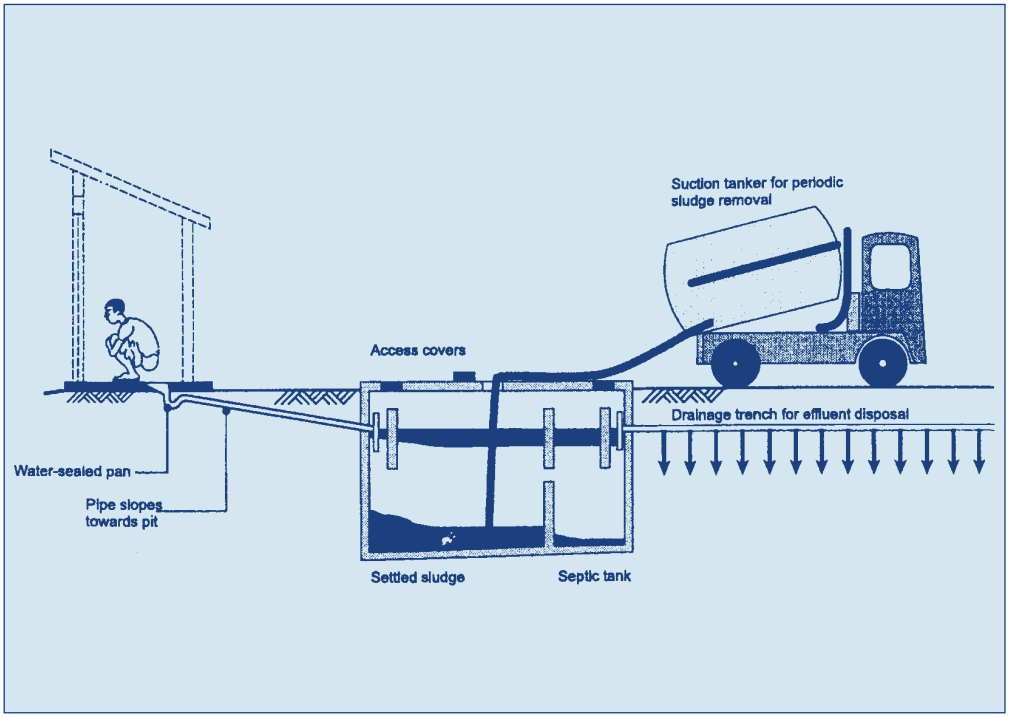
Septic Tank

a. Brief description of technology

Septic tanks and aqua privies have a watertight settling tank of one or two compartments, to which waste is carried by water flushing down a pipe connected to the toilet. If there is a tank immediately under the latrine, excreta drop directly into the tank through a pipe submerged in the liquid layer (aqua privy). If the tank is located away from the latrine (septic tank) the toilet usually has a U-trap. The systems do not dispose of wastes: they only help to separate the solid matter from the liquid. Some of the solids float on the surface, where they are known as scum, while others sink to the bottom where they are broken down by bacteria to form a deposit called sludge. The liquid effluent flowing out of the tank is, from a health point of view, as dangerous as raw sewage and remains to be disposed of, normally by soaking into the ground through a soakaway or with a connection to small bore sewers. The sludge accumulating in the tank must be removed regularly, usually once every one to five years, depending on size, number of users and kind of use. When sullage is also disposed in the tank, a larger capacity is required for both the tank and the liquid effluent disposal system. Connection to small-bore sewers may then be needed. Where high groundwater tables or rocky or impermeable undergrounds occur, this may also be the case. Every tank must have a ventilation system to allow escape of explosive methane and malodorous gases (generated when bacteria decompose some of the sewage constituents) from the tank. Septic tanks are more expensive than other onsite sanitation systems and require sufficient piped water. Aqua privies are slightly less expensive and need less water for flushing.

Area of use: Rural or peri-urban areas where water is available.

Amount of water needed per toilet flushing: about two to five litres if a pour-flush pan or agua privy system is used.



Source: WEDC

Figure 9.3 Sceptic tank

b. Description of O&M activities

Operation

Regular cleaning of the toilet with soap in normal amounts is unlikely to be harmful, the use of large amounts of detergents or chemicals may disturb the bio-chemical process in a tank. In aqua privies the amount of liquid in the tank should be kept high enough to keep the bottom of the drop pipe at least 75 mm below the liquid level. A bucket of water should be poured down the drop pipe daily in order to clear scum (in which flies may breed) from the bottom of the drop pipe and to maintain the water seal. When starting with a new tank, adding some sludge from another tank will ensure the presence of micro-organisms so that the anaerobic digestion process can start directly and more completely.

Maintenance

Routine inspection is necessary to check whether desludging is needed and to ensure that there are no blockages at the inlet or outlet. The tank should be emptied when solids occupy between one-half and two-thirds of the total depth between the water level and the bottom of the tank.

Organisational aspects

Organisational aspects revolve around reliability of emptying services, availability of skilled contractors for construction and repair and control of disposal of the sludge.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Clean squatting pan or seat and shelter	Daily	Household	Water	Brush, water container
Unblock U-trap when blocked	Occasionally	Household	Water	Flexible brush or other flexible material
Inspect if entry pipe is still submerged (for aqua privies)	Regularly	Household	Water	Stick
Inspect floor, squatting pan or seat and U-trap	Monthly	Household		
Repair squatting pan or seat, U-trap or shelter	Occasionally	Household or local artisan	Cement, sand, water, nails, local building materials	Bucket or bowl, trowel, saw, hammer, knife
Control vents	Annually	Household	Rope or wire, screen material, pipe parts	Scissors or wire cutting tool, pliers, saw
Empty tank	Every one to five years	Service crew	Water, fuel, lubricants, etc.	Vacuum tanker (large or mini) or (possibly) MAPET equipment.

d. Actors implied and skills required in O&M

Actor	Role	Skills
User	Flush, keep clean, inspect vents, keep record of emptying dates, control contents in tank and contact municipality or other organisation for emptying when necessary	Understanding of hygiene, basic bookkeeping, measuring skills
Sanitation service	Empty tank, control tank and vents, repair if needed	Skills to work with vacuum tanker or MAPET, basic masonry
Agency	Monitor tank performance, and tank emptying by emptying teams, train emptying teams	Training skills, monitoring skills, organisational skills and technical knowledge

e. Recurrent costs

The main cost involved is the emptying of the tank. The frequency of emptying depends on the amount of solids and liquids entering into the tank.

f. Problems, limitations and remarks

Frequent problems

Many problems are due to inadequate consideration being given to liquid effluent disposal. Large surges of flow entering the tank may cause a temporarily high concentration of suspended solids in the effluent owing to disturbance of the solids which have already settled out. Leaking tanks may cause insect and odour problems in aqua privies because the water seal is not maintained.

Limitations

Unsuitable for areas where water is scarce, where financial resources are insufficient for construction of the system, or where safe tank emptying cannot be done or afforded. Where not enough space is valuable for soakaways or drainage fields small bore sewers will have to be installed. Aqua privies only function properly when they are very well designed and constructed and operated.

Remarks

Septic tank additives - such as yeast, bacteria, and enzymes - which are often sold for "digesting scum and sludge" and "avoiding expensive pumping" have not been proven effective.

Overhead 9 **VIP (Ventilated improved pit latrine)**

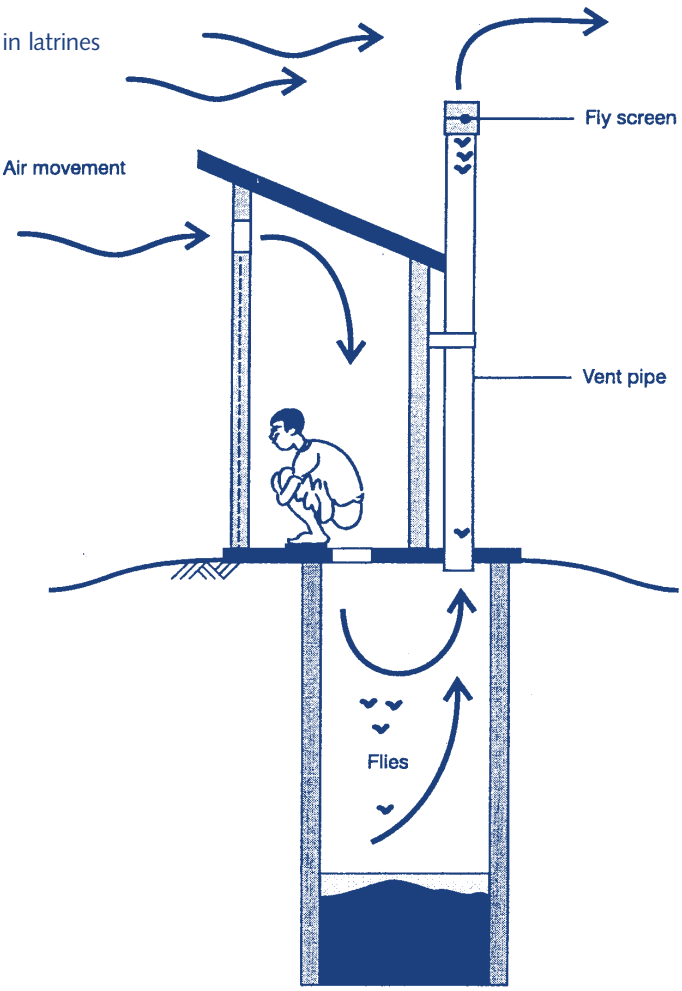
Fly and odour nuisance may be substantially reduced if the pit is ventilated by a pipe extending above the latrine roof, with fly-proof netting across the top. The inside of the superstructure is kept dark. Such latrines are known as ventilated improved pit (VIP latrines).

Advantages

Low cost
Can be built by householders
Needs no water for operation
Easily understood
Control of flies
Absence of smell in latrines

Disadvantages

Extra cost of providing vent pipe
Need to keep interior dark



Source: WEDC

Overhead 10 **Pour-flush latrine**

A latrine may be fitted with a trap providing a water seal, which is cleared of faeces by pouring in sufficient quantities of water to wash the solids into the pit and replenish the water seal.

Advantages

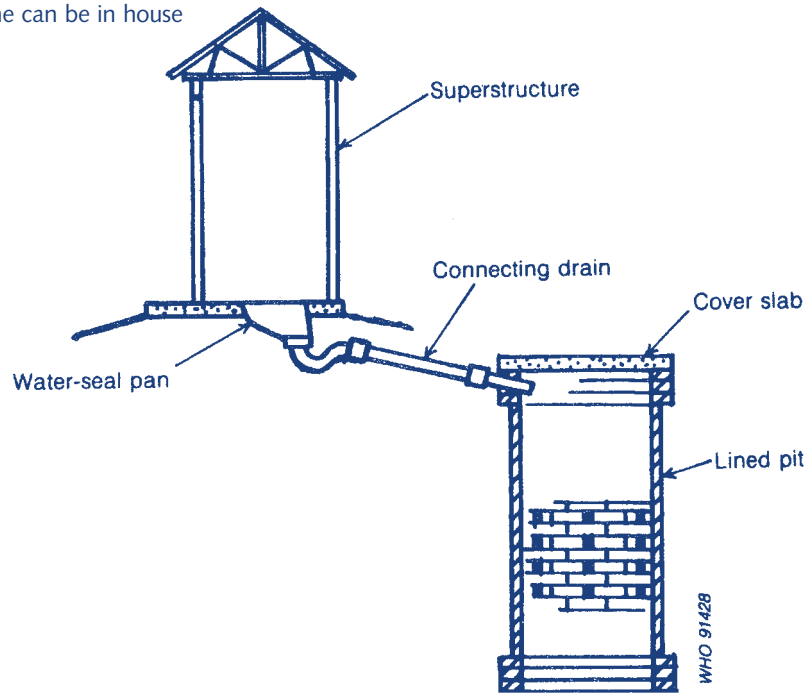
Low cost
Control of flies and mosquitoes
Absence of smell in latrine
Contents of pit not visible
Gives users the convenience of a WC
Can be upgraded by connection to sewer when sewerage becomes available

Disadvantages

A reliable (even if limited) water supply must be available
Unsuitable where solid anal cleaning material is used

Various types

Pan supported by ground
Latrine can be in house



Source: WEDC

Selecting the latrine design: Environmental factors

There are a number of issues to consider in the selecting of latrine designs. There are some aspects which also influence the design and these are dictated by nature. These include the level of the ground water, which means that water poured in a hole in the ground either disappears quickly or stays for some time without being absorbed. The type of soil is another consideration as in some places the pits collapse when the soil is not stable while in other places it is very difficult to dig, for example, through laterite. In areas where the water table is very high or where there are annual floods, the latrines must be built high enough so that the floods do not make the latrine content flow out of the pits, creating very serious risks for the spread of diseases such as cholera. Thus, the school latrine should be designed and located taking into account these factors: the texture, stability and permeability of the soil, groundwater level, proneness to floods, environmental pollution, disposal of decomposed human excreta, availability of water (for handwashing) at what distance and what quality/quantity. The following table can be useful in examining the environmental factors to decide on latrine technology.

Table 9.1 **Environmental factors in deciding on the type of latrine technology**

Specific topic on which information/data is needed	Considerations
Type of soil- stability	
Loose, sides of walls collapse	Line the pits. In very sandy soils, sink cement rings that are preformatted or set on top of each other without cement.
Hard to dig	Use the pour-flush design rather than VIP as the pits are less deep.
Permeability (how water is absorbed by soil)	
Clay soil	Test by pouring water into a hole and measuring how long it takes to be absorbed. Pits in dense clay may need back filling about 1.2 metres with more sandy soil.
Coarse sand	Back fill around the rings with denser soil and/or locate the latrine pipes far (for example, 40 metres or more) from a well used for drinking.
Hard laterite	If there might be cracks in the laterite, the latrine pits can pollute nearby drinking water sources. Place the latrine far from these sources.

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Specific topic on which information/data is needed	Considerations
Ground water level in wet season (deepest level)	
Water rises higher than one meter from the bottom of the latrine pit, but never completely floods the latrine pits	Locate the latrine pit far from any well used for drinking, for example, 40 metres or more.
Water rises to or above the ground level and sludge comes out of latrines	Raise the latrines above the ground level so that the top third of the pit is always above the water level. Place latrines far from drinking water source.
Distance to water source	
Distance from latrine pit to drinking water source	At least 15 metres.
Children or teachers must spend extra time, for example more than 15 minutes going one-way to collect water	VIP latrine is preferred as it uses less water.

Source: Smet, Jahan and Postma (2001).

Selecting the design: Consumer preferences and local situation

In addition to the environmental factors, several issues are to be discussed with teachers and parents in selecting the design. Privacy, safety and dignity issues need to be starting points for design. Because many students and teachers will use the latrine on the same day, one latrine will not be enough for all. And when so many students are using the same latrine, the building must be physically strong and easy to clean. Issues to be considered include:

- where the latrines should be located
- whether a latrine with an open drop hole (the least expensive) is acceptable
- the number of latrines
- whether the superstructure is such that all students, boys and girls of all ages feel safe and comfortable using them
- operation and maintenance cost of the different options

Location

The latrines should be located in such a way that they do not pollute a well used for drinking but at the same time are near enough to a water source to encourage the students to wash their hands after they have used the latrines. The latrines should be located on the school premises in such a way that especially the girl students feel safe using the latrines.

Technology differences

The main differences in technology are whether there is an open drop hole or an offset pit with pour-flush and if the latrines have one pit or two pits. Both types of latrines have a system to stop smells; in the direct pit latrine this is done by ventilation and for the offset latrine this is done by the water seal. It should be noted that for the use of offset pour-flush latrines more water is needed.

If cost considerations are important, then the direct pit latrine would be preferred as it is less expensive and requires less water. However, the teachers and parents should be asked if this option is acceptable. If not, then offset pit latrines should be constructed, on the condition that there is sufficient water for flushing, cleansing, cleaning and adequate soil infiltration capacity.

Pour-flush latrines require more water. However, there is some confusion about this. Some people think that a whole bucket of water (15 to 20 litres) needs to be poured into the latrine pan after it is used. In fact, it is far less. Assuming that a cup holds 1 litre of water, then this is recommended:

- before using the latrine, pour up to 1 cup of water in to make the pan wet so that excreta does not adhere to the sides
- children clean themselves using about 1 cup of water
- pour 1 or 2 cups in the latrine to wash the faecal matter away.

Total amount of water used: 2 up to 4 litres of water

Double pit latrines do not have to be emptied while the sludge is damp. If pit emptying will present problems, or if it will reinforce caste biases, then the double pit latrine, with a junction box to switch pits may be preferred by community members and school teachers. However, it is more expensive.

There are also cost factors to consider in design. The nicer the latrine is, the more expensive but not necessarily safer or more convenient. Because the parents and the school (or local government) have to contribute towards the construction, it is important to know what they are willing to pay and can afford to contribute before deciding on the design.

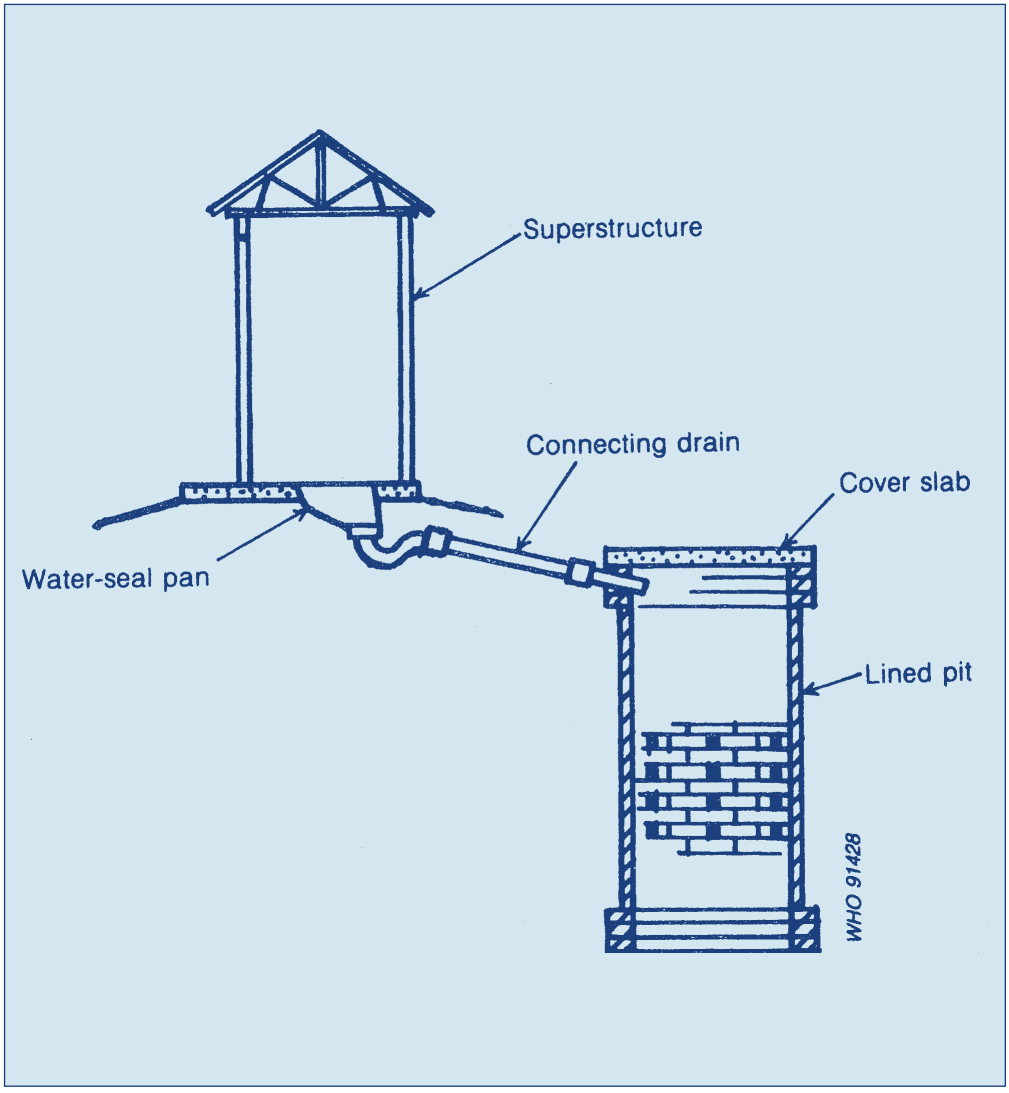
For the initial selection of the suitable school latrine technology, the following table may be useful. This is followed by a flow diagram which can help with decision-making. The next step before final selection of design will be determining the costs and willingness to pay. This is dealt with in the next section. In the following table, you can find which type of latrine is suitable or not suitable in certain situations.

Table 9.2 **Different latrine types**

Latrine type	Suitable for high ground water table	Suitable for areas prone to floods, tidal floods or flushes	Suitable for loose soils	Suitable for soils of low perme-ability	Water require-ment	Ease of construc-tion	Ease of mainte-ance	Remarks
Direct single pit latrine without pour-flush	Yes, if raised	Yes, if raised	Yes, if fully lined	Not for clay soils	No	Easy	Easy	Sludge unsafe
Direct double pit latrine without pour-flush	Yes, if raised	Yes, if raised	Yes, if fully lined	Not for clay soils	No	Easy	Easy	Safe sludge
Offset single pit latrine with pour-flush	Yes, if raised and with soak away	Yes, if raised	Yes, if fully lined	Yes, with soak away	Yes	Easy	Easy	Sludge unsafe
Offset double pit latrine with pour-flush	Yes, if raised and with soak away	Yes, if raised	Yes, if fully lined	Yes, with soak away	Yes	Fairly easy	Easy	Safe sludge
Solar heated single-vault ecological latrine with urine separation	Yes	Yes	Yes	Yes	No	Easy	Difficult	Safe dehydrated material
Double-vault ecological latrine with urine separation	Yes	Yes	Yes	Yes	No	Easy	Difficult	Safe dehydrated material
Urinal	Yes	Yes, if raised	Yes	Yes	Yes, a bit	Easy	Easy	

Source: RGNDWM (1996)

If more than one latrine is needed, then the walls of the substructure and pits, and the soakaways can be shared. In this way some 10% can be saved on the cost of the substructure and some 15-20% on the cost of the superstructure.



Source: Brikké (2000)

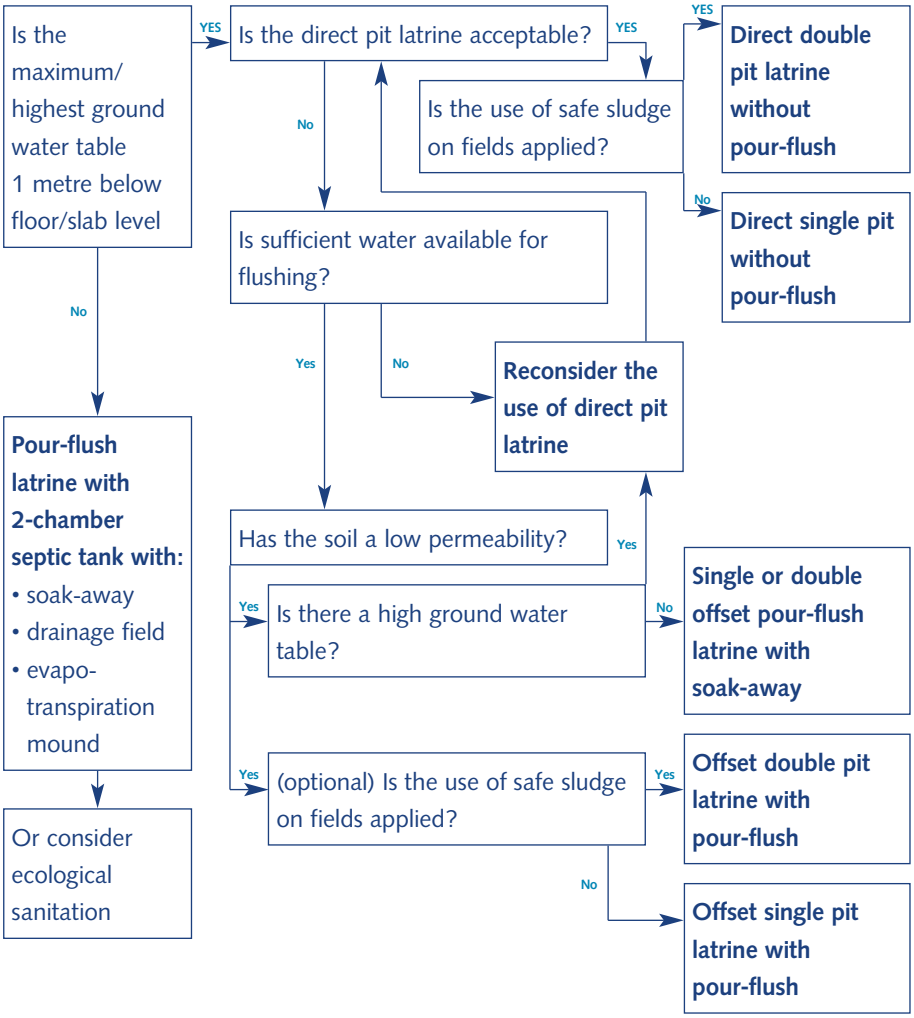
Figure 9.4: Type of latrine to use

Norms: The number of latrines

There is a tendency to build two latrines with urinals in schools, irrespective of the number of children and teachers in the school. This means that there may be one latrine for 150 to 300 girls or boys. This can have several unexpected or unwanted results. First, through over-use, the latrines may be difficult to maintain, become dirty or broken and therefore will stop being used. A second result apparent in some schools in India is that the latrines are locked. Teachers often state that there are so many children that it will not be possible to maintain the latrines. A third possible effect is that the teacher sets aside one latrine for themselves, keeping it locked from use by the children. The issue of teachers locking latrines is very difficult to control.

To examine the need for norms in selecting the number of toilet facilities, imagine the following:

The children have a 40-minute break for lunch during the school day. They are not allowed to use the latrine when classes are in session. There are 200 girls and 200 boys in the school and 10% of girls or 20 of them would like to use the latrine during the day. Imagine 20 girls would use it during the lunch break. On an average each girl will spend at least 3 minutes using the latrine. This means that, if there is only one latrine for the girls, a minimum of 60 minutes are required while the lunch break is only 40 minutes long!



Source: Brikké (2000)

Figure 9.5 Type of latrine to use

Activity Sheet 9.1 **The number of latrines**

Objective:

- To focus on the participants' own ideas regarding the construction of latrines.

Material: flip chart
Time: one hour
Procedure:

1. The facilitator asks the participants to focus their attention on the need for latrines for both girls and boys.
2. The facilitator then asks the participants to form two groups. The participants should answer the questions found in the text box below and put their answers on a flipchart. Each group then reports back to the others in the plenary session.

Comments

At the end of the exercise, the facilitator could mention that it is unfortunate that state or national norms have not yet been developed or used in the calculation of the subsidies for schools (if that is the case, such as in India).

Box 9.2 Decide on the number of latrines

- Decide if separate latrines are needed for boys and girls.
- Make an assumption about the use of latrines. For example, in a school with day-long sessions, up to 1 in 10 boys (10%) and 1 in 10 girls (10%) will require the facilities for defecation.
- Decide how much time each girl needs and then decide whether there is enough time during the breaks at school, if there is only one latrine, for the girls (and the boys) to use the latrine.
- Make an assumption about the urinals, for example: all students and teachers need facilities for urination.
- Decide on the number of boys, girls and teachers per latrine. Here are examples of current norms from Bangladesh (Unicef), South Africa and the Netherlands:
  For girls: one latrine per 30 girls (South Africa); one latrine per 60 girls (Bangladesh); one latrine per 10 girls (Netherlands)
  For boys: one latrine per 40 boys (South Africa); one latrine per 120 boys (Bangladesh); one latrine per 10 boys (Netherlands)
  For teachers: one latrine per 40 teachers (Bangladesh), one latrine per 5 teachers (Netherlands)
- Decide if there will be a separate latrine for teachers. If not, then prepare some strategies to help ensure that the teachers do not lock one of the children's latrines for their own use.

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- Handwashing: one handwashing facility per two latrines (suggested norm in Bangladesh)

Estimate the cost, and the available subsidies, to determine if it is affordable.
It is unfortunate that state or national norms have not yet been developed or used in the calculation of the subsidies for school facilities in India.

Activity Sheet 9.2 **What will our school latrines look like? An example**

Objective:

- To focus on the participants' own ideas regarding the construction and number of latrines at schools.

Material: none
Time: one hour
Procedure:

1. The facilitator asks the participants what type of school latrines their 'ideal' school should have available. This should be discussed in small groups. In the plenary session, the groups should explain their answers. To make the exercise interesting the facilitator provides the following information.

Box 9.3 Example of planning school latrines

The following example of planning school latrines is taken from the book titled: Guidelines for the improvement of school sanitation, (Smet, Jahan and Postma, 2001)
"We know how many latrines we need and we know what latrine types are suitable. As we probably need several new latrines for the students, we will consider building them next to each other. Then we save building materials and so save costs.
In this paragraph we will go step by step through the process of deciding the number of latrines needed, the optimal/best lay-out for the latrines and the calculation of the estimated cost. After each step we can focus the table on our own situation.
Example
"The school has now two pour-flush latrines built next to each other. One is for the teachers and one for the students (for both girls and boys).
We have 160 girls and 200 boys and 10 teachers; there is only one shift of teaching. The norms are one latrine for 40 teachers, for 40 girls, for 80 boys. One urinal for 50 boys.

School group	Number in each group in any shift	Number of latrines or urinals required	Number of existing latrines and urinals	Number of new required latrines and urinals
Teachers	10	(10/40) gives 1 latrine	1	0
Girl students	160	(160/40) gives 4 latrines	-	4
Boy students	200	(200/80) gives 3 latrines	1	2
Boy students	200	(200/50) gives 4 urinals	-	4

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"We will build four new toilets for the girl students, and two new for the boys, plus four urinals. We will also use the present latrines. The girls' latrines will be located at a distance from those for the boys and the teachers. The urinals will be next to the boys' latrines.

"We chose for the Single offset pour-flush latrine"

2. At the end of the exercise, the facilitator should state that the participants may want to ask for some assistance from the block assistant engineer or the NGO. He/she could help to come up with the most efficient layout and to find the cost of the total improvements for school latrines.

9.2 Costs: Sanitation facilities

Variations in materials for latrine construction

For the hygienic condition of the latrine the pits, the slab and pan are the most important. The latrine superstructure (building) is also important as it gives privacy and protection to the users. However, many different materials can be used, some perhaps more attractive but also more expensive. Using local materials available in the community will save money. It will also reduce the community's monetary contribution, although more frequent repairs may be needed to the superstructure if the materials are less durable.

Of course, anybody using the latrine must leave it as clean as it was when he/she entered. That means that the inside of the latrine must be easy to clean. The latrine must also give the students and teachers privacy and protection against the rain and sun. All this has to be considered when choosing the latrines to build for a school.

Prices for construction materials vary a great deal in India, and even within one district. For example, in some places sand might not be available; in others bricks are very inexpensive. It should be noted that cement varies in cost by region and by manufacturer.

Installation and maintenance considerations for technical options

When the technical options are being considered with parents and teachers in a community, it is useful to compare the installation and the maintenance. This may include comparing the cost, the availability of skilled labour to construct the latrines, and the cost for the operation and maintenance, and determining the exact community contribution. The following questions might help to do so with community members:

1. Can we easily get the materials needed for the construction of the latrines?
2. Can we assist with construction or construct the latrines ourselves?
3. Can we provide or hire local labour to dig pits and construct the latrines?
4. What are the construction costs of the different options? Can we afford all the options?
5. Do the latrines need a lot of operational care?
6. Can we carry out the operation and maintenance of the latrines ourselves or do we need to hire labour for it?
7. What are the operation and maintenance costs?

Activity Sheet 9.3 **Estimating construction cost of latrines**

Objective:

- To focus on the participants' own ideas regarding the construction costs of latrines.

Material: none

Time: one hour

Procedure:

1. The facilitator explains to the participants that they will be focusing on the following table (based on hypothetical figures) which contains information about a number of toilets being built for boys and girls.
2. The facilitator divides the group into sub-groups and asks each group to critically look at the table below making their comments about the choice of latrine, and the costs.
3. In the plenary session, the participants are asked to report back with their comments.

Table 9.3 **Example of cost estimate**

We will build four new toilets for the girl students, and two new for the boys, plus four urinals. We will also rehabilitate the two present latrines. We have chosen for the construction of off-set single-pit pour-flush latrines.

Group	Number required	Unit cost sub-structure	Saving for adjacent units	Total for substr.	Unit cost latrine building	Saving for 2 blocks	Total cost latrine building	Total Cost
Rehabili-tation	2	-		0	1, 000	---	2, 000	2, 000
Teachers /boys	2	3200	10%	5, 700	2500	15%	4250	9, 950
Girls	4	3200	10%	11, 520	2500	15%	8500	20, 020
Urinals	4	--		----	1, 500	10%	5400	5, 400
						Grand total		36, 370

This estimate does not include walls around the facilities which could be made by the community using locally available materials.

4. In the plenary session, the facilitator asks each group to answer the questions giving a clear indication of their reasoning. In addition the facilitator could fill in the following box for each group based on the school they have in mind. Included here is an empty table which needs to be filled out and one which has been filled out as an example.

Table 9.4 **Example of table to be filled in**

Infrastructure	Specific problems	Needs for improvement	Specific tasks for improvement
Sanitation facility			
Water supply facility			

Table 9.5 **Example of possible answers**

Infrastructure	Specific problems	Needs for improvement	Specific Tasks for improvement
Sanitation facility	There is no separate latrine for girl students.	New latrines need to be constructed for girl students.	Proposal should be written for constructing new latrines for girl students.
	The doors can not be locked from inside.	Catch hooks need to be replaced.	Catch hooks of the two existing latrines should be immediately replaced from the contingency fund of the school.
Water supply facility	The handle of the existing No.6 handpump is broken down.	The handle needs to be replaced.	The handle of the handpump should be replaced and the required fund will be raised for this.
	There is no platform around the pump. Therefore there is mud and dirty water runs back into the well.	Platform needs to be constructed.	Two bags of cement, fine sand, rubble (for the bed of the platform) need to be purchased. The platform can be constructed by a local mason who needs to be paid.

10 Water Supply Facilities

The previous chapter focused on sanitation facilities. This chapter will focus on water supply facilities. At the end of this chapter you will find a section on financing and paying for the facilities, which is applicable to both water supply and sanitation facilities.

10.1 What is the best water supply that we can afford?

It is essential that schools have sufficient water. Only with sufficient water can children benefit from new sanitation facilities. To ensure the full health benefits from the improved facilities, the students and the teachers must be able to practise appropriate hygiene behaviour. Water in the school is used for:

- **Drinking:** For this, the water storage facilities, if they are needed, must be kept extremely clean.
- **Handwashing** before eating and after defecation: Without this, the health benefits of the new latrines will be undermined. Handwashing is an exceptionally important habit for children to form. Soap is also necessary and funds for this need to be provided.
- **Cleansing after toileting.** For this, mugs are needed and a bucket or drum of water in the latrine or nearby.
- **Pour-flushing and cleaning the latrines.** For this mugs and buckets are also needed, as well as brushes or brooms.
- Other: cleaning the chalkboards and classes, settling dust.

For drinking and handwashing, the water must be of very high quality. However, for cleansing, pour-flushing and cleaning of the latrines, the water does not need to be of the same quality. If there is a shortage of clean water, then water from any tube well or from a nearby pond will do for these practices.

Please note that the following sections have been cited with only minor changes from Operation and maintenance of rural water supply and sanitation system by François Brikké published in 2000 by WHO.

10.2 Repair of existing facilities

Many schools already have access to improved water sources. However, these may need to be repaired or followed up with regular preventive maintenance.

The goal is to decide, in consultation with parents and teachers, which improvements are needed to the existing water supply facilities. Then the costs of these should be calculated and, in addition, information should be provided to teachers and parents about recurrent expenses for operation and maintenance, for cups, buckets, brushes and soap.

Selecting the technology and design

The most usual water technologies found in schools are:

- Shallow covered wells (rope and bucket)
- Direct-action hand pumps (India Mark II)
- Water standposts (on extensions of piped water schemes)
- Rainwater harvesting

In the following pages an overview of these water technologies are discussed. Included is a brief description of technology, operation and maintenance (O&M) activities, O&M requirements, actors implied and skills required in O&M, recurrent costs and finally problems and limitations.

Shallow covered well- rope and bucket, loose, through a pulley or on a windlass

a. Brief description of technology

Mostly used with handdug wells. A bucket on a rope is lowered into the water. When hitting the water, the bucket dips and fills itself and is pulled up with the rope. The rope might be held only with the hands, run through a pulley or be wound on a windlass. Sometimes animal traction is used in combination with a pulley. Improved systems use a rope through a pulley and two buckets, one on each end of the rope. For water depths of less than 10 metres, one can use a windlass with a hose running from the bottom of the bucket to a spout at the side of the well. Even with this system and a protected well, hygiene is poorer than with a bucket pump.

Range of depth: 0-15 m (greater depths are possible).
Yield: 0.25 l/s at 10 m.
Area of use: All over the world, mainly in rural areas.
Construction: Buckets, ropes, pulleys and windlasses are manufactured locally; buckets and ropes also by larger industries.

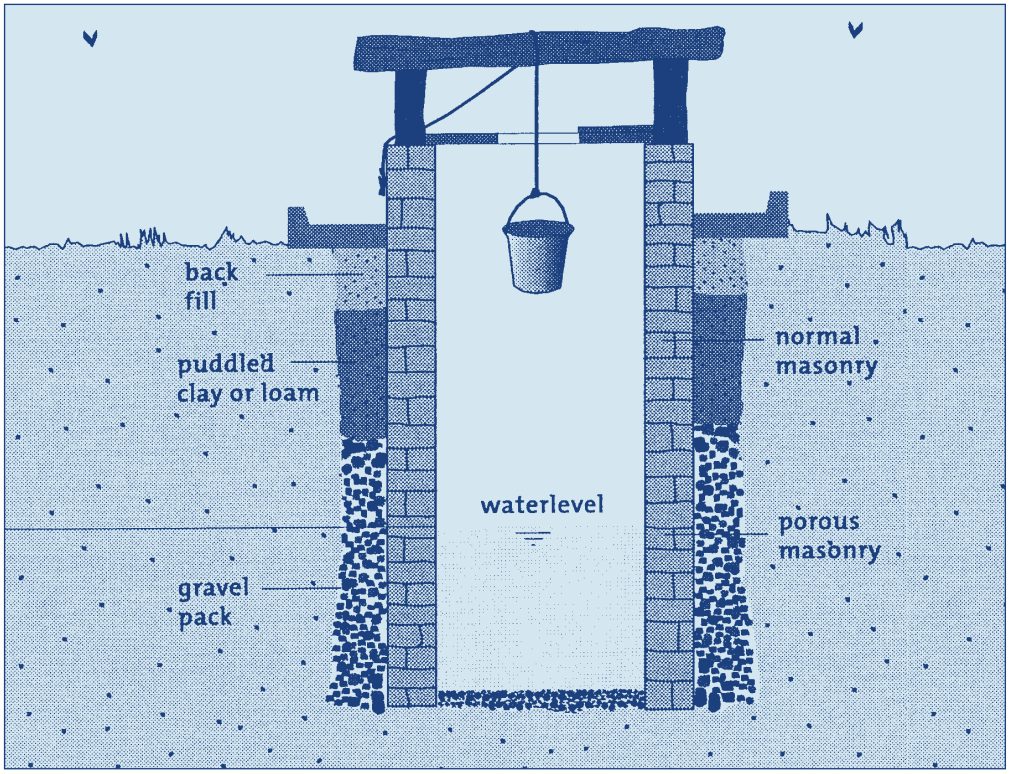

Figure 10.1: Shallow covered well

b. Description of O&M activities

Operation

Lower and raise the bucket by paying out and pulling in the rope or rotating the windlass. One must be careful not to dirty the rope or bucket.

Maintenance

Preventive maintenance consists of greasing the bearings of the windlass or pulley. Small repairs are limited to patching of holes in bucket and hose, reconnecting hinge of bucket and fixing windlass bearings or handle. All repairs can be done by local people and with tools and materials available in the community or area. More major repairs and replacements mainly consist of replacing a bucket, hose, rope or part or the entire windlass. Woven nylon ropes may last two years, twined nylon or sisal ropes only last a couple of months. A good quality hose may last over two years and buckets, depending on material and quality, may last a year.

Organisational aspects

When people use their own rope and bucket, no extra organisation is required. For community wells, usually a community committee organises the maintenance and cleaning of the well, maintenance of the windlass, etc. Most repairs can be paid with ad hoc fund raising.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Grease axles of windlass or pulley	Every two weeks	Local	Grease or oil	Lubricator
Replace bucket	Each year	Local	Bucket, wire	Knife
Replace rope	Every two years	Local	Rope, wire	Knife
Replace hose	Every two years	Local	Hose, wire, rubber straps from tyres	Knife, tongs

d. Actors implied and skills required in O&M

Actor	Role	Skills
User	Lower and lift the bucket Keep site clean Warn in case of malfunctioning	No special skills
Caretaker	Keep site clean, do small repairs	Basic maintenance
Water committee	Organise well cleaning, collect fees	Organising skills
Local artisan	Repair of bucket, windlass, well cover, etc.	Tinnery, carpentry
Shopkeeper/trader	Sale of rope, bucket, etc.	No special skills
External support	Check water quality, stimulate and guide local organisation	Water analysis, extension work

e. Recurrent costs

Consist of occasional purchases of rope, bucket, hose, wire etc.; occasional repair costs of windlass are low.

f. Problems, limitations and remarks

Frequent problems

Fast deterioration of bad quality rope. Sisal rope only lasts for a few months. Bucket falls into well. To prevent this, communities can keep a spare bucket available and fit the bucket in a protective cage. In windlass with hose systems the hose breaks frequently.

Limitations

Very poor hygiene, especially when rope and bucket touch hands or ground. Communal wells often tend to get more contaminated than family-owned wells. Therefore the

latter should be aimed for where possible.
Only suitable for limited depths, although examples are known of rope and bucket systems exceeding 50 metres.

Handpump - India Mark II

a. Brief description of technology

Handpumps can provide a permanent source of unpolluted water which is vital for a healthy developing community. For many low-income communities, the installation of a handpump is the cheapest and most effective means of providing an improved water supply. There are many hundreds of different types of handpumps and manufacturers. In India the one often found at schools is the India Mark II handpump.
Every handpump, including the India Mark II handpump, must have a concrete surround to prevent polluted water seeping down the side of the casing and polluting the borehole water. This is also needed so that people drawing water do not have to walk through mud or stagnant water where they may pick up disease.

Ranges of depth: 15 to 45 metres (greater depths are possible).
Yield: 12 litres per minute
Area of use: Mainly in rural areas and sometimes in peri-urban areas.

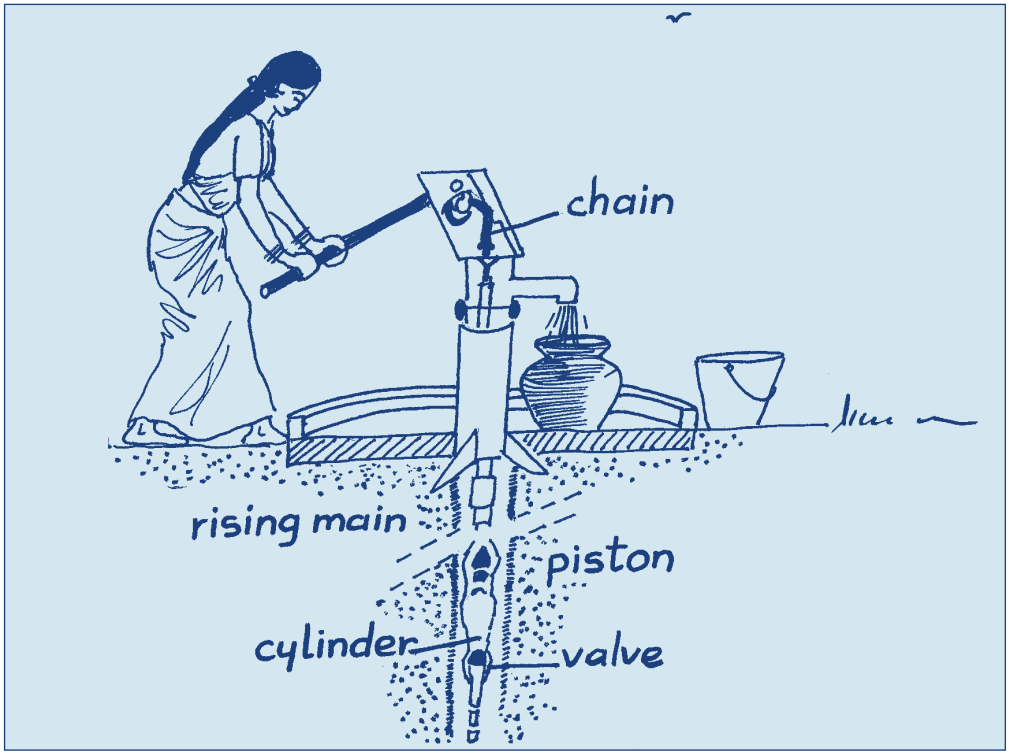

Figure 10.2: India Mark II handpump

b. Description of O&M activities

Operation

To operate the India Mark II the pump handle is lifted and lowered (in a pumping action). This produces a vertical displacement of the pump rod. The discharge valve (plunger) attached to the lower end of the pump rod closes as it moves up, thereby lifting water and allowing the foot valve to open and refill the cylinder. The foot valve then closes as the discharge valve opens on the down stroke, moving through the water without pumping.

Maintenance

Periodic inspection of a handpump, replacing parts that are worn or show other signs of deterioration, is critical. The aim is to prolong the life of the pump and to avoid unexpected breakdowns.

Organisational aspects

Preventative maintenance is an organised system of inspections on a daily, weekly, monthly and yearly basis which should maximise the time for which a pump can deliver good supplies of drinking water.

Daily checks must be made of the pump operation, pump and base cleanliness and wastewater drainage. The comments of users need to be collected and acted on. A weekly inspection is critical to look at lubricating moving parts, to check the tightness of nuts and bolts and to check that the pump is secure on its base. A monthly check should be made on the condition of the concrete base. Finally, an annual inspection, which may include the replacement of parts, is required. In this model of maintenance, proper schedules and organisation are just as important as the physical working of the handpump.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Clean site	Daily	Local		Broom or brush
Inspect and clean drain	Daily	Local		Hoe, spade
Repair or replace valve	Occasionally	Local	Rubber or leather asher, gland seal, Teflon, flax, spare valve	Spanners, screwdriver, pipe wrench
Repair valve stand, apron or drain	Occasionally	Local	Wood, nails, cement, sand, water, etc.	Hammer, saw, trowel, bucket, etc.
Repair piping	Occasionally	Local	Pipe nipples, connectors, elbows etc., oil, Teflon, flax or plumbing putty	Pipe wrench, pipe cutter, saw, file, pipe threader

d. Actors and skills required in O&M

Actor	Role	Skills
User	Tap water, keep site clean	No special skills
Caretaker or tap committee (at the school)	Clean site, perform small repairs, collect fees	Basic skills

e. Recurrent costs:

Recurrent costs for the India Mark II comprises of minor repairs specifically the piston seals and values. It should be noted that the employment of the pump mechanic is useful to carry out the repairs. If this handpump is located on acid groundwater it can cause major rusting and deterioration of the pipes.

f. Problems, limitations and remarks

Frequent problems

Valves can wear and can cause leaking. Rubber/leather values may deteriorate from overuse.

Limitations

There are potential delays in obtaining spare parts, which can increase the time before a malfunctioning handpump is fixed.

Water Standpost

a. Brief description of technology

At a public standpost or tapstand people from various households can get water from one or more taps. Because they are used by many people and often not so well taken care of, the design and construction have to be sturdier than with domestic connections. The standpost includes a service connection to the supplying water conduit, and a supporting column. The taps can be a globe or a self-closing type.

The column or wall may be of wood, brickwork, dry stone masonry, concrete, etc. Some standposts have a regulating valve in the connection to the mains that can be set and locked to limit maximum flow. A water meter may also be included. A solid stone or concrete slab or apron under the tap and a drainage system must lead spilled water away and prevent the formation of muddy pools. A fence may be needed to keep cattle away. The residual pressure head of the water at the tapstand should preferably be between 10 and 30 metres and should never be under 7 or over 56 metres. The location and design of a public standpost have to be determined in close co-operation with the people who are going to use it.

Number of taps: 1 to 3 and more.
users per tap: Maximum 200 people.
Yield: 0.2 to 0.4 l/s per tap.
Area of use: Piped public water systems.

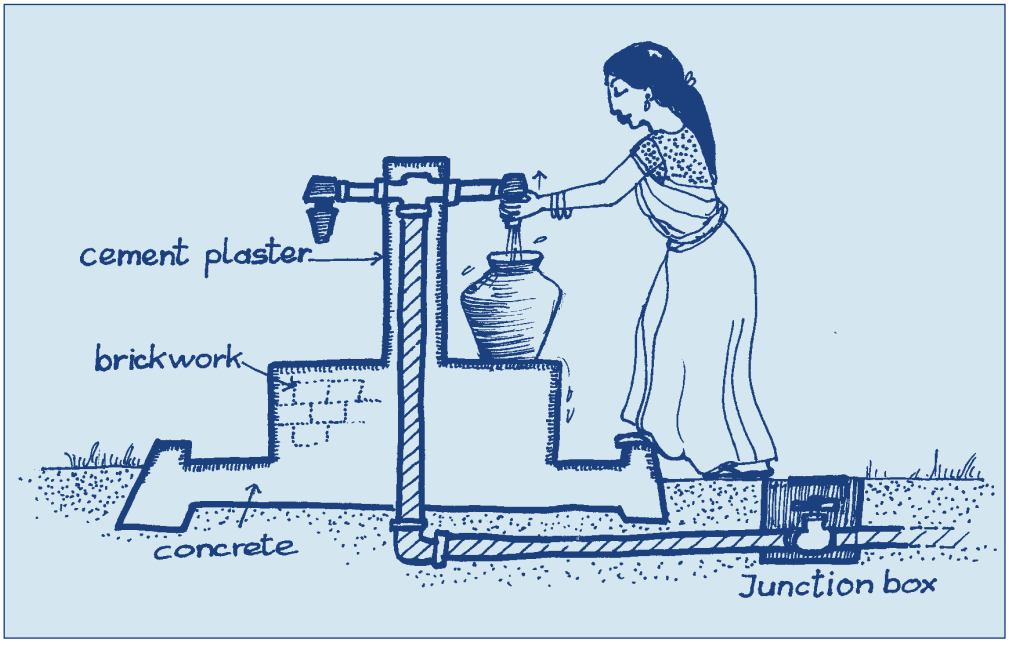

Figure 10.3: Woman using a water standpost

b. Description of O&M activities

Operation

Water users clean and fill their containers at the tap. Bathing and washing of clothes is usually not permitted at the standpost itself. The tap site has to be cleaned daily and the drain inspected.

Maintenance

The drain must be cleaned at least once a month. The formation of pools must be prevented at all times. Once in a while a rubber washer or other part of a tap may have to be replaced. The fence may also need repair. If the structure develops serious cracks they must be repaired, and when wood rots it must be treated or replaced. Occasionally the tubing may leak or need replacement

Organisational aspects

A caretaker or tap committee may be appointed in order to keep the tap functioning and the surroundings clean and to regulate the amounts of water used. These people may also collect the fees for water use. Sometimes water vendors fill their tanks at public tap stands at special rates for resale to people living farther away.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Tap water	Daily	Local		Jar, bucket, can etc.
Clean site	Daily	Local		Broom or brush
Inspect and clean drain	Daily	Local		Hoe, spade
Repair or replace valve	Occasionally	Local	Rubber or leather asher, gland seal, Teflon, flax, spare valve	Spanners, screwdriver, pipe wrench
Repair fence	Occasionally	Local	Wood, steel wire, nails	Machete, pliers, hammer
Repair valve stand, apron or drain	Occasionally	Local	Wood, nails, cement, sand, water, etc.	Hammer, saw, trowel, bucket, etc.
Repair piping	Occasionally	Local	Pipe nipples, connectors, elbows etc., oil, Teflon, flax or plumbing putty	Pipe wrench, pipe cutter, saw, file, pipe threader

d. Actors implied and skills required in O&M

Actor	Role	Skills
User	Tap water, keep site clean	No special skills
Caretaker or tap committee	Clean site, perform small repairs, collect fees	Basic skills
Communal water committee	Organise more major repairs, collect fees	Organising and bookkeeping skills
Mason	Repair tapstand and apron	Masonry
Plumber	Repair piping and taps	Basic plumbing
External support	Monitor hygiene, train committee members	Training skills and microbial testing

e. Recurrent costs

Recurrent costs for a tapstand comprise a few minor repairs of taps per year and occasional repair of the pipes, column, wall, apron or drain.

f. Problems, limitations and remarks

Frequent problems

A standpost can become damaged through tampering or insufficient maintenance, or suffer from poor drainage. Its use may be affected by conflicts due to poor location or unsolved social problems. Taps may be left open by mistake or even left open on purpose to irrigate a nearby plot. Tapstands at the tail end of a piped system often have insufficient water pressure.

Limitations

If people are willing to organise communal use and maintenance the only limitation is the cost.

Remarks

Attention should be given to how the water is handled after collection at the tapstand, in order to prevent subsequent contamination.

Rainwater Harvesting

a. Brief description of technology

Rooftop catchment systems gather rainwater caught on the roof of a house, school etc., using gutters and downpipes (made of local wood, bamboo, galvanized iron or PVC) and leading it to one or more storage containers ranging from simple pots to large ferrocement tanks. If properly designed, a foul flush device or detachable downpipe is fitted for exclusion of the first 20 litres of runoff during a rainstorm, which is generally

most contaminated with dust, leaves, insects and bird droppings. Sometimes runoff water is led through a small filter consisting of gravel, sand and charcoal before entering the storage tank. Water may be abstracted from the tank by a tap, handpump or bucket and rope system.

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Yield: Potentially almost 1 litre per horizontal square meter per mm rainfall. The quantities usually are only sufficient for drinking purposes.

Area of use: Most developing countries with one or two rainy seasons (especially in arid and semi-arid zones with average annual rainfall figures ranging from 250-750 mm) and where other improved water supply systems are difficult to realise.

Construction: Systems are usually produced locally.

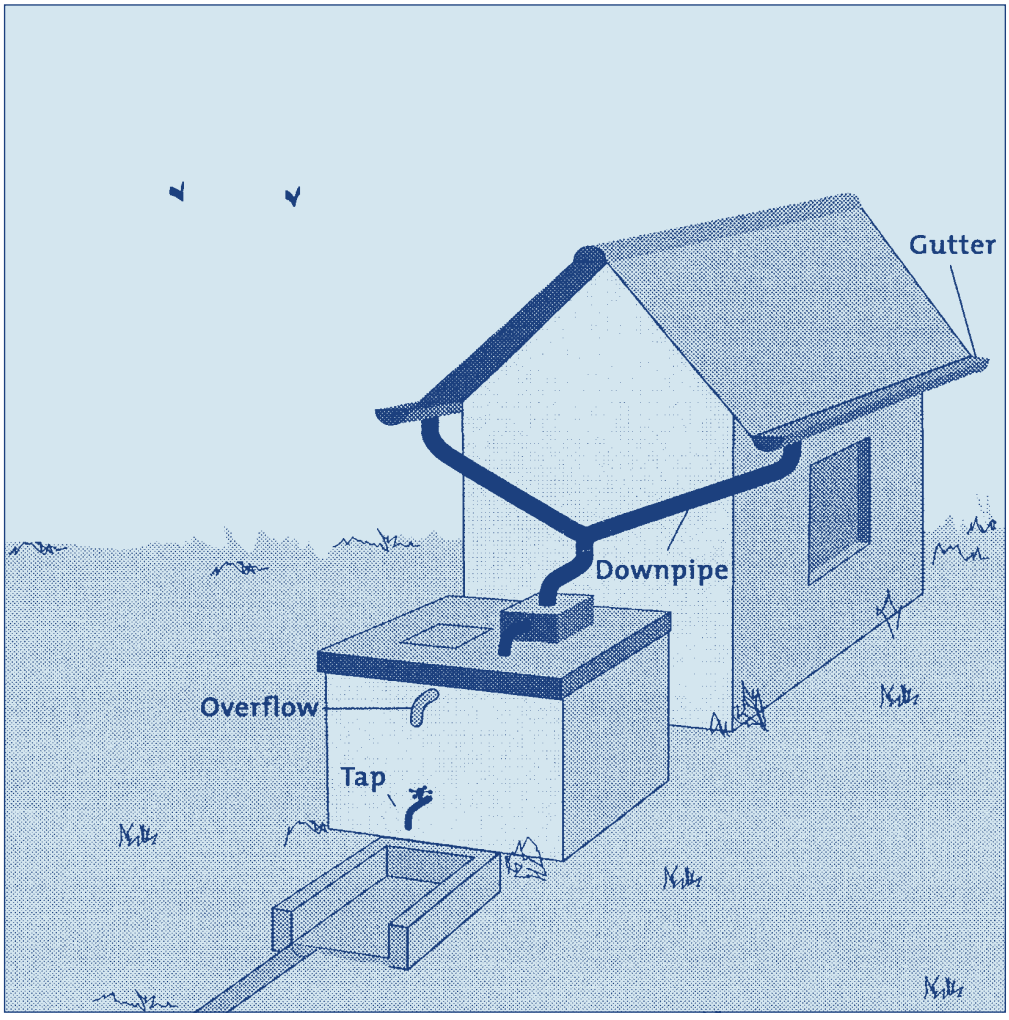

Figure 10.4 Rainwater harvesting

b. Description of O&M activities

In case there is no foul flush device, the user or caretaker has to divert away the first 20 litres or so of every rainstorm. Fully automatic foul flush devices often are not very reliable. Water is taken from the storage tank by tapping, pumping or using a bucket and rope. For reasons of hygiene, the first two methods are preferred. Just before the start of the rainy season, the complete system has to be checked for holes and broken or affected parts and repaired if necessary. Taps or handpumps have to be serviced. During the rainy season the system is checked regularly, cleaned when dirty and after every dry period of more than a month. Filters should be cleaned every few months, filter sand washed at least every six months and painting of the outside of metal tanks may be needed about once a year. Leaks have to be repaired throughout the year, especially leaking tanks and taps, as they present health risks. Chlorination of the water may be necessary. All operation and maintenance activities can normally be executed by the users of the system. Major repairs such as that of a broken roof or tank, can usually be executed by a local craftsman, using locally available tools and materials. Maintenance is simple but should be given ample attention.

Organisational aspects

The organisation of O&M of communally shared roof or ground tank supplies is considerably more difficult than for privately owned systems. Rooftop harvesting systems at schools, for instance, may suffer water losses from a tap left dripping, and padlocks are often needed to ensure careful control over the supply. Ideally, one person should be responsible for overseeing the regular cleaning and occasional repair of the system, control of water use etc. Selling the water is an option to ensure income for O&M and restrict water use. Where several households have installed a communal system, for instance several roofs connected to one tank, the users may want to establish a water committee to manage O&M activities, which may include collection of fees, control of the caretaker's work and of the water use by each family. External agents can play an important role in monitoring the condition of the systems and the water quality, providing access to credit facilities in order to buy or replace a system, training of users/caretakers for management and execution of O&M, and training of local craftsmen for larger repairs.

c. O&M requirements

Activity	Frequency	Human resources	Materials and spare parts	Tools and equipment
Clean system	1 - 3 times per year	Local	Chlorine	Broom, brush, bucket
Divert foul flush	Every storm	Local		
Clean filters	Twice a year	Local	Sand, charcoal, plastic mesh	
Disinfect reservoir	Occasionally	Local	Chlorine	Bucket
Repair roof, gutters and piping	Occasionally	Local	Tiles, metal sheet, asbestos cement sheet etc., bamboo or PVC pipes, nails, wire	Hammer, saw, pliers, tin cutter
Repair tap or pump	Occasionally	Local or area	Washers, cupseals etc.	Spanner, screwdriver
Paint outside of metal reservoir	Annually	Local	Anticorrosive paint	Steelbrush, paintbrush
Repair ferrocement reservoir	Occasionally	Local	Cement, sand, gravel, metal mesh, wire	Trowel, bucket, pliers

d. Actors implied and skills required in O&M

Actor	Role	Skills
User	Close taps after taking water, keep system clean	No special skills
Caretaker	Check functioning, divert first flush, clean filters and rest of system, perform small repairs	Basic skills
Water committee	Supervise caretaker, collect fees	Organisational skills
Local craftsman	Repair roof, piping and tank	Basic plumbing and masonry
External support	Check water quality, stimulate and guide local organisation, train users	Water analysis, extension work

e. Recurring costs

Recurrent costs for materials and spare parts are very low. In most literature these costs are even considered negligible. The recurrent personnel costs, in cash or kind (for caretakers, committee members and craftsmen) will need to be added.

f. Problems, limitations and remarks

Frequent problems

Corrosion of metal roofs, gutters etc. Failure of functioning of the foul flush diverter due to neglect of maintenance. Leaking taps at the reservoir and problems with handpumps. Contamination of uncovered tanks especially where water is abstracted with a rope and bucket. Tanks may provide a breeding place for mosquitoes which may increase the danger of diseases such as malaria.

Limitations

The water may be insufficient to fulfil drinking water needs during certain periods in the year, making it necessary to also develop other sources or go back to traditional sources to overcome these periods. The investment needed for the construction of a tank and suitable roofing is often beyond the financial capacity of households or communities.

Remarks

Thatched roofs produce less and more contaminated water. Tiled or metal roofs give the cleanest water. The acceptance of rainwater harvesting as a suitable system may depend on the users' perception regarding the taste of the water.

10.3 Handwashing facilities

If the water point is less than 25 metres from the latrines, it will easily be used as the facility for handwashing after latrine use. If the water point is far, and not near the path to the classrooms, then a separate handwashing facility will need to be provided.

There are many different designs, the simplest of which may be a drum for the water, a stand for cup and soap and a soakaway. A soakaway is a pit into which the liquid effluents from a septic tank are disposed to infiltrate into the ground. This can consist of a small water tank with a tap. The tank has to be filled with water by the responsible students' group in the morning and if needed once more during the day. A plastic water tank of 200 litres costs some money but an old oil drum (with cover) that has been properly cleaned will also do. A small tap can easily be attached. For both options it is important to build a soakaway to drain the waste water to prevent that spilled water forms muddy pools.

Figure 10.5 Boy washing hands outside the latrine

To make handwashing more effective it is better that the students and the teachers have access to soap. Therefore the School Management Committee should discuss the provision of sufficient soap at the school.

10.4 Financing and paying for the facilities

"Lack of money" is often claimed to be a principal constraint to providing water and satiation services at schools. But in many cases, it's not the lack of money that is the constraint, it is often the mismanagement of resources or the poor willingness to pay for a service.

Efficiency, effectiveness, equity and sustainability are the four major aims in developing a financial system. Financial management has to be efficient in the way that the ratio between inputs and outputs is satisfactory. Effectiveness measures the contribution of a project towards its objectives, and the financial system put in place should lead to this. Equity measures how the costs and benefits are distributed among beneficiaries; these benefits should be sustained over a prolonged period of time.

The present trend to decentralise operational, managerial and financial responsibilities at local level in communities including schools, has dramatically increased the need to design and plan for water supply and sanitation facilities which the schools can sustain financially. These finance options can range from fully self-financed schools to cost-shared arrangement between the school, government and possibly other partners.

Financial arrangements

Who is responsible?

There is a tendency today to ask communities which include schools to contribute to the initial investment costs, as a way to materialise their financial responsibility, and future willingness to pay. This contribution can represent 5-20% of total investment costs, and comprises not only financial contributions, but also labour and availability of local material. Cost-sharing arrangements can be organised between the school and local/ national government agencies in order to reach full cost coverage. This will have to be materialised in a formal agreement or contract in which all parties have obligations. Financial responsibilities are very often linked with operational responsibilities, and can be organised as in table 10.1.

Table 10.1 **Operation and maintenance of water facilities**

O&M of handpumps: who is responsible? (adapted from Fry, 1993)

O&M tasks	Operational responsibility	Financial responsibility
Monitor handpump use and encourage proper use	School	School
Check all nuts and bolts, and tighten if necessary	School	School
Check and adjust pump handle and stuffing box	School	School
Grease or oil all hinge pins, bearings, or sliding parts	School	School
Clean the pump, well head, concrete apron, and drainage area	School	School
Check well head, concrete apron, drainage area, repair cracks	School	School
Measure output per stroke and compare with expected output	School	School
Disassemble pump, check drop pipe, cylinder, leathers, and foot valve. Check corrosion and wear. Repair or replace if necessary.	School and local mechanic	School
Conduct other well, handpump or apron repairs if necessary	School and local mechanic	School
Repaint handpump periodically, as necessary	School	School
Conduct water test for micro-biological contamination	Government	Government
In case of contamination, locate and correct source of contamination, and disinfect	Mechanic or government agency	School and government

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O&M tasks	Operational responsibility	Financial responsibility
Conduct water level check and well yield test. Adjust cylinder setting if necessary	School	School
Record all operations and maintenance activities in notebook	School	School
Manage a stock of spare parts, tools and supplies on site	School, local mechanic, private sector and government	
Replace entire handpump when fully worn	Local mechanic, private sector or government agency	Community and school

O&M of water system: who is responsible? (adapted from Fry, 1993)

O&M tasks	Operational responsibility	Financial responsibility
Ensure protection of spring	School	School
Check spring box for leaks and cracks, and repair if necessary	School	School
Check all pipelines and valves for leaks or breaks, and repair	School and private contractor	School
Monitor standpost use to encourage proper use	School	School
Check all standposts for leaks, wear and tear, and make repairs	School and private contractor	School
Flush all pipelines periodically	School	School
Clean standpost concrete apron(s) and drainage area(s)	School	School
Check standpost concrete and drainage area, and repair if needed	School	School
Conduct repairs on spring box, lines, and standpost if necessary	School and private contractor	School or government
Conduct water test for micro-biological contamination	Government	Government
In case of contamination, locate and correct the problem and disinfect lines	Private contractor or government	School and government
Measure water output periodically, both at spring, standpost and assess leakage	School and private contractor or government	School and government
In case of high leakage, initiate leak detection and repair	School and private contractor or government	School and government

O&M tasks	Operational responsibility	Financial responsibility
Record all operations and maintenance activities in log book	School	School
Manage a stock of parts, tools, and supplies	School, local mechanic, private sector and government	
Rehabilitate spring box/ pipelines/ standposts	Local mechanic, private sector, government	School and government

O&M of borehole, diesel pump, storage and standpost system: who is responsible? (adapted from Fry, 1993)

O&M tasks	Operational Responsibility	Financial responsibility
Operate engine daily safely and efficiently	School	School
Perform regular checks and adjustments (fuel, oil, filters, belts, etc.)	School	School
Regularly replace engine oil, filters and pump oil if applicable	School	School
Perform regular checks and adjustments on alternator, starter, radiator, valves and injectors	School, private contractor, government agency	School or government
Periodically conduct complete overhauls on engine, pumps and associated equipment	School, private contractor, government agency	School or government
Check all pipelines, tanks, valves for leaks and breaks, and repair	School	School
Monitor standpost use to encourage proper use	School	School
Check all standposts for leaks, wear, tear, and repair if needed	School	School
Flush all pipes periodically	School	School
Clean standpost concrete aprons and drainage area, and repair	School	School
Conduct water test for micro-biological contamination. Locate and correct source of contamination. Disinfect	Government	Government
Measure water output periodically, at well head and standpost. Assess leakage and initiate leak detection needed and repairs	School and contractor	School and government
Conduct well engine/pump rehabilitation	Contractor and government	School and government

O&M tasks	Operational responsibility	Financial responsibility
Record all operation and maintenance activities in log book	School	School
Manage a stock of fuel and oil, ensuring proper storage and security. Maintain special fuel log.	School	School
Manage stock of parts, tools, and supplies	School, local mechanic, private sector and government	
Establish historical records of all engines, and pumps.	Government	Government
Develop schedules for preventive maintenance and monitoring	School and government	School and government
Conduct effective vehicle maintenance	Government	Government

O&M administrative and support activities for most water supply systems: who is responsible? (adapted from Wash Technical report N.93)

Administrative and support tasks	Operational responsibility	Financial responsibility
Conduct technical and socio-economic participatory studies	Government with the school	Government
Analyse O&M tasks for use in planning and budgeting	Government with the school	Government
Prepare annual budgets and long-term financial estimates	School with the government	School and the government
Select and appoint operators/ contractors for O&M	School with technical advisors	School
Develop and evaluate technical and management training for water system operators	Government with school	Government and school
Provide ongoing technical training for operators	Government with school	Government and school
Delegate task responsibilities supervise and pay salaries	School	School
Keep archives, inventories and logbooks	School	School
Develop and evaluate financial and management training for community managers	Government with school	Government and school
Provide ongoing financial and management training for community managers	Government with school	Government and school
Collect water fees and manage revenues	School	School
Make payments for purchases, loans and other obligations	School	School

Administrative and support tasks	Operational responsibility	Financial responsibility
Respond to users' complaints	School	School
Organise and conduct general meetings for discussions, elections, etc.	School	School
Develop information and materials on hygiene education	Government with the school	Government
Organise community contributions for upgrading or extending the system	School	School
Report urgent problems to government agency	School	School
Provide technical and management support to community managers	Private sector or government	Private sector or government
Collect, analyse, monitor results, and conduct follow-up support or training if necessary	School and government	School and government

Source: Adapted from Brikké (2000).

How to organise financial arrangements with the school?

Management options can directly influence the way cost recovery will be organised. For instance, water supply systems can be managed by a school, village water and sanitation committee, by the panchayat, by a private person or firm operating under contractual arrangements, by the municipality directly or indirectly operating through its own staff or through community committees or a private body. Each will have its own interest and capacity in fixing rules and managing finances, and therefore proposing different ways to organise cost recovery.

Minimising costs

Costs need to be identified, estimated and analysed, and schools need to be informed about them in order to be fully aware of the implications of choosing a particular technology.

Box 10.1 **What are the costs?**

Investment costs

- pre-feasibility study, project design, social work
- equipment, materials, parts and tools
- construction costs
- human resource development, training
- institutional capacity building

Recurrent costs *

- material (consumable, chemicals, energy, tools, spare parts and equipment)
- works personnel (operation, maintenance, routine preventive maintenance, routine repairs, unanticipated repairs, construction for minor rehabilitation)
- management personnel (planning, supervision, financial management, administration, monitoring)
- follow-up (training support, technical assistance, institutional strengthening, monitoring and evaluation)
- financial costs (interest, amortisation, depreciation, exchange rate variations, inflation)
- environmental costs (water source protection and conservation, waste water treatment)
- other costs (transport, services paid to a private contractor, unaccounted-for water due to leakage in system and bad administration, and vandalism; they become a cost for the community if not prevented)

Future investment costs

- construction for major rehabilitation, replacement, extension

** Recurrent expenditures comprise fixed costs such as annualised financing costs or water source protection fees, and variable recurrent costs according to output and other factors such as physical conditions.*

How to estimate O&M costs?

Contrary to estimating investment costs, estimating recurrent costs can often pose difficulties. Using experiences in other similar projects although useful can be misleading, as recurrent costs vary widely from one project to another, in terms of what has been included in their calculation. Basic recurrent costs can be measured in the following way:

Box 10.2 **Basic recurrent cost estimation**

1. List all O&M activities needed, and their frequency.
2. According to each activity, list all human resources, material, spare parts, energy, tools and equipment required.
3. Estimate quantity and volume needed for each requirement.
4. Define activity cost.
5. Sum up all costs of all activities.

This basic recurrent costs estimation does not include such elements as depreciation, replacement costs, initial capital reimbursement, training costs, environmental protection costs, etc. Depending on the strategy and policy of projects, these additional costs might have to be added.

An important aspect of costs analysis is how to optimise or reduce O&M costs. Costs can be significantly reduced in the following way:

- choosing a technology which is not expensive and does not require high operation expenditures
- reducing the transport costs to go and buy spare parts and chemicals (making spare parts more accessible and available)
- reducing dependence on chemical use (using alternative water treatment technology for instance, such as a multi-stage filtration system)
- reducing dependence on fuel or electric consumption (solar, gravity)
- installing a maintenance culture within the community and professional staff
- organising preventive maintenance activities where users are also involved
- systematically performing leakage control
- applying economies of scale for larger systems (reduces costs for the consumer)
- by applying a control for unaccounted-for water (because of leakage and of bad management)
- installing proper administrative and financial control mechanisms

Activity Sheet 10.1 **Choosing water and sanitation facilities**

Objective:

- To focus on the participants' own ideas regarding the type of sanitation facilities that should be available in their school.

Material: none

Time: one hour

Procedure:

1. The facilitator explains that the next exercise is based on visualising a school which they are working with or which they know about. It could be possible that a number of the participants are thinking of the same school. The facilitator should then divide the groups into small groups based on the schools they have in mind.
2. The facilitator should then read out the following paragraph:
   "In India, approximately one in ten schools has facilities. In some cases these need to be repaired or improved. For example, the number of existing latrines may not be sufficient for the number of students and teachers. In this case, new latrines need to be constructed. If the pits are not properly functioning, maintenance work needs to be organised. If the latrines are dirty and smelly then regular cleaning must be organised on a continuing basis. Hand pumps are heavily used in schools. Worn out handpumps require maintenance work such as the replacement of nuts, bolts, and handle."
3. The facilitator then gives each of the groups a sheet that contains a number of questions as cited below.

   Does the school focus on:
   - maintenance/rehabilitation of existing latrines?
   - construction of new latrines?
   - construction of urinals?
   - construction of new separate latrines for girl students?
   - construction of new separate latrines for female and male teachers?
   - handwashing facilities, and water for cleansing, cleaning and flushing?
   - rehabilitation and maintenance of the existing handpump?
   - construction of a new water point in or very near the school?

Each group discusses the questions and answers them according to the school they have in mind.

Activity Sheet 10.2 **Role play: the most suitable type of facilities**

Objective:

- To focus on the type of facilities that is the most suitable.
- To discuss issues related to the amount of labour, local materials and cash money the school can make available for the latrines and water supply improvements.

Material: flip chart
Time: one hour
Procedure:

1. The facilitator explains the story noted below and asks the participants to do a role play.

Box 10.3 Role play of the village head at a Village Committee meeting

During this meeting we need to focus on our sanitation and water supply facilities at the school. We know the type of latrines that would be possible in our situation and we know an estimate of the total cost involved in building these. We also know the amount of money that is needed to improve the water supply facilities. These latrines and water supply facilities will be ours; they will fully belong to the school.
We have to decide whether we can afford to pay the construction costs and all the operation and maintenance costs. If some of us do not have the finances to contribute, we can also contribute our labour during the construction or maintenance work and collect local materials. During the meeting we have to discuss what contributions we can make as a school, i.e. through committee members, teachers, students, and their parents. This could involve doing some physical work such as digging pits, collecting local materials such as sand and assisting the local mason in building the latrines.

2. The facilitator divides the participants into two groups. Each person in the group is asked to play a specific role. For example, one participant should be the community manager of the school, another should be the teacher, another accountant (person who keeps a record of the money available at the school), etc.
3. The facilitator also gives table 10.2 to each of the groups to fill out. Of course there will be some friction between the different stakeholders in terms of what they are willing to pay and in what form. This makes for an interesting and educational activity.

Table 10.2 **Expected contributions from the various stakeholders**

Expected contributions from the various stakeholders	Expected contributions in Rupee
• School funds • Financial contribution from SMC • Private financial contribution from members of SMC • Private financial contribution from parents • Raised funds through activities of the students • Labour contribution from parents • Materials contribution from parents • Extra donations or money from fund raising activities	
Total expected amount available	

Activity Sheet 10.3 **Making a plan for implementing resources**

Objective:

- To make a list of the tasks identified for improvement of the existing sanitation and water supply facilities for non-drinking purposes.
- To make an overall plan including time schedule, manpower, materials, resources and budget for the improvements.
- To comprehend how to finalise the calculation of the contributions of the school and parents and the financial support which will be requested from the organisation that will assist in the implementation process.

Material: flip chart

Time: one hour

Procedure:

1. The facilitator gives the participants a comprehensive list of the tasks which includes identifying improvements of the existing facilities and for which financial support will be asked in addition to non-financial contributions.
2. The following table can be distributed to the participants. This table shown below can be used as an example for this exercise

Table 10.3 **Example of identifying items and tasks for construction**

Infrastructure	Type of task	Option chosen	Existing option	Requirements / tasks for improvements
Sanitation facility	New construction	Single offset pour-flush latrine	N/A	4 latrines for girl students 3 latrines for boy students 1 latrine for teachers
	New construction	Urinals	N/A	2 urinals for boy students
Water supply facility	Maintenance	N/A	No.6 Handpump	Replacement of handle

3. The facilitator explains that for this exercise they will use a blank table as shown on the next page.

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Table 10.4 **Identifying items and tasks for construction**

Infrastructure	Type of task	Option chosen	Existing option	Requirements / tasks for improvements
Sanitation facility				
Water supply facility				

4. The facilitator explains to the group that they will be making an overall plan including time schedule, manpower, materials, resources and budget for the improved water and sanitation facilities. For this the tables below can be used, in which a brief overview on time required for tasks, manpower required during this period, resources available in terms of financial capabilities, etc is given. The task is to fill out the second table using the detailed information on resources and costs provided.

Table 10.5 **Indicative resources required for the planned improvements** (example only)

Tasks	Time required	Man-power required	Special skills required	Man-power available	Materials required	Materials available	Remarks
Sanitation facilities:							
Rehabilitation of 2 existing latrines	2 weeks	1 mason week	--	Unskilled labour and/or free labour; Village mason	Cement, sand, bricks, PVC vent pipe, concrete ring and slab		The village is far away from the district and market. So, higher transportation cost will occur.
Construction of 6 new latrines (single pit pour-flush, offset)	2 months	4 person weeks for digging; 8 person weeks for mason	1 sub-assistant engineer to supervise from time to time	Unskilled labour and/or free labour; Village mason	Cement, sand, brick, slab with pan, Rings, PVC pipe, GI sheet and other accessories.		See previous remark.
Construction of 4 urinals	2 weeks	1 person week for mason	None	Same as above	Same as above		See previous remark.
Maintenance of No. 6 hand tubewell	2 days	1 pump-mechanic	None	1 pump-mechanic	Handle, headcover, nuts, bolts and pins.		
Repair of concrete platform	1 day	1 day for village mason	None	Village mason	Cement, khoa and sand		

Table 10.6 **Indicative resources required for our own planned improvements**

Tasks	Time required	Man-power required	Special skills required	Man-power available	Materials required	Materials available	Remarks
Sanitation facilities:							
Rehabilitation of 2 existing latrines							
Construction of 6 new latrines (single pit pour-flush, offset)							
Construction of 4 urinals							
Water Supply facilities:							
Maintenance of No. 6 hand tubewell							
Repair of concrete platform							

5. The facilitator should explain that in the second part of the exercise they have to make a detailed overview on the labour and materials needed for the rehabilitation of the existing facilities and the construction of the new latrines and urinals. To finalise the proposal they will have to find out the cost for the different materials and prices for labour. They will also use this information to calculate the contributions in kind and in cash which will need to be made by the school and parents. The information on the materials and the labour needed for the construction of new latrines can be put in the tables below with the required labour and materials. For the information on the prices for the materials the participants may go to the market and find out the price. For the labour local masons will have to be asked. (Alternatively, if it is not possible to go into the field, a sheet with prices for materials and of local masons should be provided to the participants).

Table 10.7a **Calculation of the total cost of the rehabilitation and construction works**

Activity -- Resource	Units	Quantities for the rehabilitation of latrines	Quantities for construction of new latrines	Quantities for construction of new urinals	Total units	Unit cost	Total cost
Labour needed							
Masons (days)							
Unskilled labourers (days)							
Materials needed							
Cement	bags						
Khoa	M^3						
Sand	M^3						
Bricks	Nr						
Steel bars	Kg						
Latrine slab	Nr						
Latrine pan	Nr						
Hinges, catch hooks etc.	Nr						
Drain pipe 100mm	M						
Vent pipe 40/50 mm	M						
Water seal (U- shaped)	Nr						
Cast iron manhole cover 450mm. Dia.	Nr						
Perforated concrete rings, 3 ft	Nr						
Non-perforated concrete rings, 3 ft	Nr						
Concrete ring slabs	Nr						
						Total estimated cost	

Table 10.7b **Calculations of contributions in kind of the school and the parents**[2]

Resources and materials needed for construction of xx latrines and xx urinals	Total units needed	Cost per unit	Number of units school and parents will contribute in kind	Contribution in kind per unit expressed into cash
Labour				
Masons (days)				
Unskilled labour (days)				
Materials				
Cement				
Sand				
Bricks				
Steel bars				
Latrine slab				
Latrine pan				
Hinges, catch hooks etc.				
Drain pipe 100mm				
Vent pipe 40/50 mm				
Water seal (U- shaped)				
Cast iron manhole cover 450mm. Dia.				
Perforated concrete rings, 3 ft				
Non-perforated concrete rings, 3 ft				
Concrete ring slabs				
			Total contributions in kind expressed in cash	

2 Calculations of contribution in kind refers to planned contributions other than in cash. The participants are asked to use the next table for calculating the total amount to contribute to the improvement of the school sanitation facilities by the various actors.

Table 10.7c **Calculation of the total contributions of the school and the parents**

Total school contributions (in kind and cash)	
Total parents' contributions (in kind and cash)	
Extra donations or from fund raising activities	
Total expected amount available	

This can be made available for this project on school latrines and water supply.

Table 10.7d **Estimated total costs, local contributions and requested funds** (an example)

Total estimated cost		**100 %**
Contribution from school etc.		(25%) of total cost
Fund to be requested		(75%) of total cost

Comments

This exercise helps the participants to understand the major issues which need to be considered in the planning and implementation of resources. Even if the whole exercise is not completed it allows for some interesting discussion.

11 Ongoing activities

SSHE programmes do not end when the water and sanitation facilities have been constructed. In fact, construction marks a new beginning as children participate in water/sanitation related education activities and start to use the facilities. The period following construction usually receives too little attention from programme planners and implementers.

This chapter deals with three continuing SSHE activities:
- use and maintenance of water and sanitation facilities in the school
- special activities with children: school health clubs and child-to-child activities
- monitoring the programme in schools

This chapter is based on the principle that:
- continuing programme inputs are needed to ensure use, maintenance and relevant education activities.

11.1 Using and taking care of facilities: Enabling factors

One main purpose of SSHE programmes is for children to use the facilities and through this, develop consistent hygiene behaviours. Thus, all children should be able to:
- drink clean water in the school
- use latrines for urination and defecation
- wash hands with soap and water after using the latrine and before eating

In order for children to use the facilities as intended, there must, of course, be enabling factors and materials. It is, for example, counterproductive to tell children to wash their hands with water and soap if there is no soap available. Enabling factors are the materials and actions that help people (children) perform particular behaviours. Some enabling factors to help children use the facilities as intended are:
- Allow sufficient time for the children to use the latrine.
- Fill water storage containers in the morning and refill them at mid-day or when needed.
- Provide each latrine with a bucket, mug and a cleaning brush.
- Provide each handwashing facility with a bucket, mug and soap.
- Allow drinking water to be stored in containers with covers and have at least one ladle and two tumblers. It is useful to have a platform to raise the containers off the ground and to have soap for washing the vessels and tumblers. (In some schools the cups, buckets and soap are taken to a safe storage place at the end of the school day).

Using and cleaning the facilities

It cannot be assumed that all children know how to use a latrine or water point in a sanitary way. Children need to be trained about how to use drinking water facilities and latrines. This needs to be planned and supervised by the teacher. Older children can help monitor and remind the younger children. Examples of school rules to help children use the facilities correctly are shown below. This should be done with periodic reminders and re-training especially after vacation. Of course, these need to be adjusted locally and may differ for each age group or school.

Box 11.1 **Example of rules for using facilities**

Latrines

1 Put your feet on the footrests. (Teacher should make sure the footrests are near enough so that little children can do this).
2. Use water correctly. Example (for water seal toilets):
    - Pour about a mug into pan to make sure it is wet before using the toilet. 'Mug' refers to the one-litre plastic mugs with handles.
    - After using the toilet, clean yourself by pouring and splashing the water. Usually this requires up to 1 mug of water.
    - Pour water into the pan of the latrine to clean away all urine and excreta. Usually this requires about 1 to 2 mugs of water.
      Total amount of water needed: about 2 to 4 mugs (each mug is about 1 litre). Of course, if you urinate, less water is needed.
3. Boys should hit the hole, not "spray" around.
4. Leave the latrine as clean (or cleaner) as you found it.

Handwashing

1. Pour a bit of water on both hands.
2. Put soap on hands. You can usually do this just by picking it up.
3. Rub hands well, at least 3 times all over.
4. Rinse well. Rinse off all the soap. This will need more than $^1/_2$ mug of water.

Drinking safe water

1. Take cover off pot and use dipper to draw the water.
2. Pour the dipper water into a cup or glass and then hang the dipper back up.
3. Cover the pot of water.
4. Drink the water from the cup or glass without putting your mouth on the cup or glass. (For little children this is difficult – after drinking someone helps them wash the cup or glass). Put the cup back in the right place.

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To fetch water from a handpump

1. Check if your bucket or container is clean. Has it been washed out with soap and/or sand today?
2. At the handpump, pump slowly. Do not jiggle or slam the handle.
3. Do not put your hands or fingers in the water you are fetching for drinking as other people will use it.
4. Check that the drain is clear so that spilled water will not collect in puddles.

Solid waste

1. Have a waste bin or waste box in each class. Children should put all solid waste in this.
2. Once a day, the solid waste from the class should be deposited in the school's waste pit.
3. Once a day, the solid waste from the school compound should be deposited in the school pit.
4. Once in a few days or once a week, the waste should be burned.

Eating hygiene

1. All children wash hands before eating in the school.
2. Children should not throw around food.

If there are not enough latrines or urinals for the school children, then there is a tendency for the teacher to take the class, as a group, to use the facilities at certain times of the day. This is not recommended because it is difficult for the little children to wait for the 'right' time. Children therefore need to be able to use latrines and water points easily.

Organising the children

Children need to be organised in easy ways to use and maintain the facilities. For maintenance and cleaning, this means assigning tasks and ensuring rotation of responsibilities among different children so that all children take turns. Children's water and sanitation responsibilities in the school must never be based on economic or caste background. School health and hygiene clubs are also usually involved in helping organise children for these tasks. Some schools plan to use janitors/sweepers or to pay people for cleaning. This can be expensive. In any case, the children should help to maintain their own school environment and facilities.

Managing facilities: Operation and maintenance

Too often school latrines and water points become dirty and run down. As a result, they are not used and create a health hazard. Lack of maintenance can in part come from

lack of good teacher training and motivation. Teacher training and supervision too often overlook the specific details of how to use the facilities and how to organise the children (and parents) to clean and maintain them. Cleaning and maintenance are therefore very important!

There are three kinds of maintenance:
Upkeep: cleaning and maintenance activities to be done by teachers, children and other users on a regular basis.
Minor repairs and preventive maintenance such as greasing, bolts, fixing taps, cracks, and broken doors, once a week at least by the assistant caretaker.
Major repairs such as the repairs that cannot be done by children, teachers or their parents. They can be referred to the village or panchayat mechanic, a block mechanic or engineering divisions.

Upkeep and maintenance

The cleaning and maintenance activities are to be done by teachers, children and other users on a regular basis. Examples are:

- *latrines:* sweeping floors (daily), washing floors and pans (every few days at least), cleaning walls (once a week),
- *water point:* cleaning drains and removing visible garbage around water point (once a day), checking for preventive maintenance,
- *water storage:* cleaning inside of water storage containers (at least once a week), cleaning dippers and cups (once a day),
- *handwashing facilities:* removing visible garbage and draining puddles of water, cleaning drains, ensuring that soap and water are present (once a day),
- *garbage pit:* burning refuse (once a week).

The table below shows common problems and repairs found at schools. Teachers and parents or a local mason can do all these repairs, and materials are usually available in the panchayat or block.

Table 11.1 **Repairs: sanitation facilities**

Example of common repairs for sanitation facilities	
Problem	**Repairs needed**
Door broken or does not give privacy; hinges loose	Repair panels of door; put new hinges and grease them.
Door cannot be locked from inside or outside	(inside) Make simple lock mechanisms using a hook and eye. (outside) Attach 2 eyes (one door and wall) and buy padlock.
Cement plaster comes off the walls	Remove loose parts and re-plaster with good cement mortar.

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Problem	Repairs needed
Roof is leaking	Clean and re-plaster the roof with strong cement mortar (3 cm) or put iron sheets on existing roof.
Slab is broken or has holes	Put new cement mortar or replace the entire slab.
Latrine pan is broken	Replace latrine pan.
For double-pit pour-flush latrine: Y-junction does not work	Construct Y-junction properly and put brick (or other such as plastic) stopper to block flow to one pit.
For VIP latrine: Ventilation pipe is broken or does not work	Install new 50mm (2") PVC vent pipe (length 50 cm).
For latrine pits: Cover slabs are broken or missing	Put new RCC cover slabs of good quality.
Concrete rings of pit are broken	Put new concrete rings of good quality.
For direct pit latrines: Pits are full	Empty pits by using bucket or scoop, and apply sludge to field if sludge is safe.
For double-pit pour-flush latrines: Pits are full	Switch to other pit. Leave full pit for more than a year and the sludge will decompose anaerobically (without air) and then can be safely dug out.

Training

Teacher training is very important to promote the use and maintenance of facilities. Investment in refresher training is also effective in improving the operation and use of facilities. Such training and refreshers should focus on:

- organising the students
- using and maintaining facilities
- monitoring the facilities
- making repairs
- collecting funds for recurrent expenditures and accounting for the funds to parents

11.2 Special activities with children: school health and hygiene clubs

School health clubs (or similar groups with other names) can be very useful for:

- stimulating safe hygiene behaviour among children
- helping to organise the children for neat use of the facilities
- maintaining facilities
- reaching out into the community

However, the school health club should only be set up when the idea is supported by the teachers and when students are willing to join the club. The formation of an extra club with no responsibilities or unenthusiastic members will not be effective and can even demotivate the teachers and the students in implementing improvements.

The club can oversee a number of activities which include organising regular supervision of sanitation of the school by the group of students in roster. The club could organise games and competitions on sanitation related issues. The senior members of the club could be responsible for teaching and demonstrating hygiene behaviour to the junior pupils. The club may do other things such as establishing some linkage with the health clinic, so that the doctor/health worker may come to offer routine check-ups and give advice to the members of the school health club.

Box 11.2 **Examples of school health club activities**

In the school

- water: maintenance and use and water storage
- hygiene education: teaching and monitoring children
- sanitation: maintenance, waste water, clean school surroundings and classrooms
- monitoring facilities and their use by pupils
- teaching pupils about personal hygiene and how to use the facilities

Out of school

- public awareness campaigns, contests
- support and action in areas that have particular sanitation problems, such as market places
- motivation for hygiene and sanitation in the home
- teaching and helping younger brothers and sisters

School health clubs can be organised in many ways. Here are examples from different states in India:

- all pupils of a class are club members, for example, all class 5 and/or class 4 pupils
- five boys and five girls volunteer for the club from each class
- students are selected by the teachers

While the last approach may be more common, it is probably preferred to have a large group (such as all children in a class each year) or for membership to be voluntary. The first two approaches may lead to a better motivated and more representative school health club.

The wide range of approaches and ideas for school health clubs is illustrated by the following examples.

Box 11.3 Integrated hygiene promotion in schools: Tamil Nadu, India

Student committees can consist of senior students in middle schools and students from classes 4 and 5 in primary school. Five students from each class can be included. These students are assigned specific responsibilities and are given orientation to perform their roles, and build up leadership qualities. One of the teachers of the school serves as chairperson of the committee. The Students Committee can take responsibility for:

- upkeep and monitoring of school sanitation including classrooms
- maintaining water points
- distributing drinking water to smaller children
- cleaning and ensuring availability of water in the sanitation blocks
- managing the disposal of waste from school premises
- peer education and monitoring of hygiene behaviour among younger children
- planning and participating in common activities
- monitoring the collection and use of money in a fund
- reporting problems that need action to the appropriate teacher
- encouraging participation by all students

Source: WaterAid India (1998)

Box 11.4 Roles of School Club/Group in Nepal

Group/Club members:

1. must be role models for sanitation practices, construction of latrines, garbage pits and so on
2. will carry out "baseline survey questionnaire" and practise compiling data with the support of the teacher (only senior students)
3. prepare an annual plan of action for the programme
4. conduct a quarterly Sanitation Campaign with the support of the headmaster, teachers, village education committee and others
5. support actions to collect funds to build and maintain latrines at the school
6. use and properly store tools, equipment and materials as and when necessary
7. conduct door to door sanitation and hygiene activities for out of school children
8. develop educational materials for use in the school and the community
9. conduct additional and extra-curricular activities with the help of the headmaster and the teachers

Source: UNICEF-Nepal (2000)

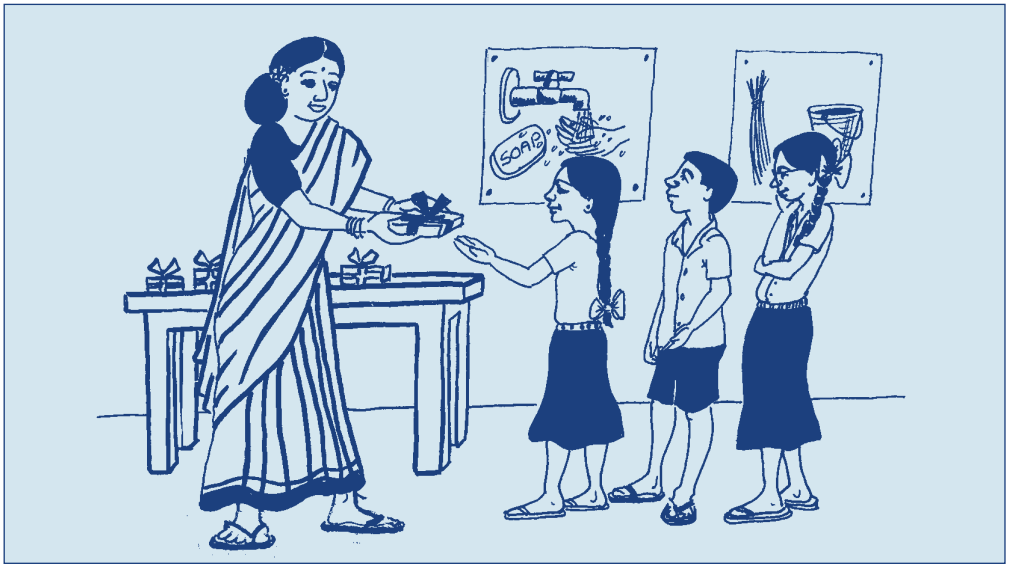

Figure 11.1 School health club in action

Box 11.5 **Experience in the school health clubs in Kerala, India**

A school health club has 30 to about 50 members. Five girls and five boys can volunteer from each class. The clubs have activities on hygiene related to water, the environment, food, home and personal cleanliness. School health club teachers and headmasters are trained to prepare their own action plan for school hygiene. The school authorities and the PTA together contribute 25% to 50% of the cost of the latrines and urinals in the schools. For every 60 students, one unit with a latrine and a urinal is built.

As of March 1995 there were 274 school health clubs in the SEU-F programme in Kerala. Co-ordinating committees were formed consisting of headmasters, health club promoters, and water committee secretaries. After an initial training and planning exercise, the co-ordinating committees have taken up many activities, such as rallies with school children, exhibitions and competitions, including for the best activities among the health clubs. At the beginning the club activities were based on school-like teaching. Now this has been replaced by more participatory methods and activities that are enjoyable for the children. School health club activities receive good support from the parents in every region.

Some experiences of children in the clubs

Aysha, a 9-year old girl from Kannur district in Kerala is the "teacher" at home. After becoming a school health club volunteer, she makes sure that no one at home eats

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without first washing their hands. She also insists on clean clothes, clean nails and clean hair for her sisters and brothers. Even her grandmother is not spared! The schools in the panchayats where school health clubs are functioning have high regard for the activities of Aysha and her friends.

During the sanitation week held in the first week of October, Razak and Arjun led a team of boys to clean a big heap of garbage from the nearby market. This was part of the action plan they had prepared for the year. They also visited the nearby commune where poor families live and dug a garbage pit for them. They dug a similar one for their school also. They were proud of themselves and felt recognised.

Sindhu and Sooraj were partners in a quiz competition held by the school health club. Both are studying in 5th standard. They won the competition against children from 15 other schools, and then at the scheme level with all panchayat-level winners. What an incredible achievement! They had beaten all the 6th and 7th standard students and won the quiz which was conducted by a professor. They became famous in the school and among the teachers. They have started preparing for other quizzes as the first experience was so rewarding.

Source: Kurup (1996).

11.3 The Child-to-Child Approach

The Child-to-Child Approach which was developed in 1978 has spread all over the world. It is useful for school health club work as well as for activities with children in classrooms. It is based on these principles:

- The Child to-Child Approach gives children new knowledge and skills and a better understanding of what they are doing. It also makes learning more interesting and more fun.
- The approach gives a new look to health education in the school. Instead of teaching children health facts about their own health, Child-to-Child encourages them to take health actions for themselves and others. This links school learning with home and community needs.
- Because the approach encourages children to work together for the good of others, Child-to-Child helps children develop their self-respect and sense of worth. This also encourages adults to value children's participation and provide support to them to express their views and contribute to social actions.

How can children spread health ideas and practices?

Children can help younger ones

They can: care for them
teach them
show them a good example

Children can help others of the same age

- Children learn from each other by doing things together.
- Children who have been to school can help others who do not have the chance to do so.

Children can pass on hygiene and health messages and take hygiene and health actions in their families and communities

- They can spread knowledge they have learned in schools.
- They can teach by being a good example.
- They can work together to spread ideas and take action in the community.

Figure 11.2: Girl students looking at a book together

More on the Child-to-Child Approach

Child-to-Child in school fits in well with health clubs that can plan and organise activities. In the Child-to-Child programme, the children in the club are usually paired, with an older child responsible for a young child.

The Child-to-Child way of teaching about hygiene encourages children to participate actively in their own learning and to put into practice what they learn (UNICEF, 2001). The way the Child-to-Child approach works is to select topics that are:

- important for the health of children and communities
- well understood and are interesting for children
- easy to act on by children

When children are involved they learn better. By spreading and sharing ideas children also improve their own health and hygiene. Those familiar with the approach suggest that Child-to-Child activities are best introduced in the following sequence.

1. **Understanding.** Examples:
   - The main causes of diarrhoea and dehydration.
   - Why dehydration kills.
   - How to recognise dehydration.

   Possible methods:
   - Imaginative stories such as "My life as a fly".
   - Making a poster about washing hands.
2. **Finding out.** Examples:
   - Find out the number of children who have had diarrhoea.
   - How do people treat it?
   - Find out from own family and the neighbours how many children have had diarrhoea in the past month.
   - Find out where flies breed.
3. **Planning Action.** Examples:
   - What can we do to prevent diarrhoea?
   - What can we do if another child is affected?

   Possible methods:
   - Make a plan of action.
   - Find out who can help with the plan.
4. **Doing.** Examples:
   - Mixing the ORS special drink (Oral Rehydration Solution).
   - Giving the special drink to others.
   - Helping younger brothers and sisters to wash hand and use latrines.

   Possible methods:
   - Activities at home and in the community. Being a good example for others.

5. **Discussing results.** Examples:
   - How many of us can make the special drink?
   - How many of us have helped younger children to wash hands correctly at the right times?
   - How many of us have passed on the ideas to others in our families and community?

The Child-to-Child programme has prepared many activity sheets that give detailed information about how activities can be planned and carried out. A few of these sheets are included in the Handbook that comes with this manual.

Box 11.6 **The influences children can have on people in their surrounding**

Child	delivers messages to provides examples for teaches skills to work on hygiene activities with	young children a young child
		same age child same age children
Children		family community

Source: Bonati and Hawes (1992).

11.4 Monitoring and evaluation

Monitoring should be an ongoing activity in school sanitation and hygiene programmes. Monitoring is far more than collecting information to "see how things are going". It is meant to improve programmes and activities over the short term. Monitoring involves checking, analysing and acting to improve a situation. The action should, of course, be taken at the lowest possible level, with cross checks to make sure that the situation has, in fact improved[1].

Most programmes that are serious about monitoring, try to develop a small set of indicators that describe the minimum necessary conditions for programme success. It is very useful for those involved in projects or those working in a particular place to develop such mutually-agreed lists of basic indicators. An indicator shows a standard that you want to reach. It can be written as a sentence or a question, or in any way as long as people understand its meaning in the same way.

1 For more information refer to the book 'Action Monitoring for Effectiveness written by Kathleen Shordt (2000).

Here is an example of a checklist used by teachers. In any particular school this can be adapted to the local situation.

Table 11.2 **Issues teachers must know about**

1. Are the latrines functioning?	Yes or No	Answers
2. Total number of existing latrines	Number	
3. Are there separate latrines for girls?	Yes or No	
4. Are there separate latrines for female teachers?	Yes or No	
5. Is there easy access to the latrines for the boys and girls?	Yes or No (in bad condition, locked so that there are not enough latrines for the children)	
6. Number of girls who use one latrine.	Good (less than 60 to 1 latrine); fair (60 to 130 to 1 latrine); poor (more than 130 girls for 1 latrine)	
7. Number of boys who use one latrine.	Good (less than 60 to 1 latrine); fair (60 to 130 to 1 latrine); poor (more than 130 boys to 1 latrine)	
8. Condition of doors (also hinges and frame) for privacy	Good; fair (needs repair); bad (needs replacement)	
9. Condition of roofs for protection	Good; fair (needs repair); bad (needs replacement)	
10. Condition of slabs and pans	Good; fair (needs repair); bad (needs replacement)	
11. Condition of vent pipes	Good; fair (needs repair); bad (needs replacement)	
12. Condition of Y-junctions	Good; fair (needs repair); bad (needs replacement)	
13. Condition of concrete covers	Good; fair (needs repair); bad (needs replacement)	
14. Is there a bucket of water and a mug inside each latrine?	Yes or No (no cup, no bucket, or bucket is not 1/3 full)	
15. Cleanliness: no visible garbage, no excreta on floors. No visible excreta or dirt in pan.	Good; fair (should be cleaned better or more often); bad (children don't like to use the latrine)	
16. Are there handwashing facilities near the latrine?	Yes or No	

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17. Can these facilities be easily used by children? (has water, easy to reach etc.) Does it smell? Are there puddles or pools of water /urine?	Yes or No	
18. Is there soap by the handwashing facility?	Yes or No	
19. Do children use the handwashing facilities? When?	Yes or No	
20. How far is the water supply facility from the latrines?	Near (50 metres away) or far (beyond 50 metres away)	
21. Is there a concrete apron and drain in good repair?	Good; fair (cracks, parts fallen off, needs repair); bad (needs replacement)	
22. Is the area around the water point clean, free from visible garbage and puddles?	Good; fair (some garbage or puddles); bad (standing water and garbage make it difficult to walk)	
23. Is the water from the facility safe for drinking purposes?	Yes or No	

Below is an example of using information to monitor school programmes in Orissa, India. Nine issues were checked before the programme began and then five months later among 125, 000 children in Balasore District of Orissa. There has been particular improvement in six of the nine issues.

Table 11.3 **Monitoring school programmes in Orissa, India**

	Issues	% of total (June 2000)	% change from March to June 2000
1	Use safe drinking water	100%*	+6
2	Storage of water	69	+8
3	Nail cutting	96	+3
4	Washing hands	63	+14
5	Use of toilets	32	+16
6	Use of garbage pits	50	+16
7	Kitchen garden	60	+17
8	Food from vendors	40	-27
9	Absenteeism	14	-16

** Note: the baseline is the number of children using safe water in June 2000.*

Monitoring is also necessary at the programme level. Below is an example of a monitoring checklist that can also be useful for management. It was developed at the Training of Trainers' Workshop held in Ranchi, India (March 2000).

Table 11.4 **Monitoring checklist**

Before construction INDICATORS	YES	NO
1. Microplan exists. The project at the village level is carried out following the planned steps, with construction implemented within 4 months after social mobilisation and training are completed.		
2. Timeline has been prepared.		
3. Memorandum of understanding between school and VEC exists. VEC commits itself to develop a way of providing funds and materials for recurring expenditures for O&M. The O&M costs may include: brushes, soap, grease, buckets, brooms, bolts, handles, cement, and repair of doors, etc.		
4. Facilitating NGO has visited village/school and plan for social mobilisation has been developed.		
5. Mobilisation completed. Mobilisation activities are completed as planned, as shown in a reporting wall chart and confirmed through spot visits. Mothers and fathers (PTA) of the pupils in the school know about the programme and can state some of its objectives accurately.		
6. Training completed, with agreed content and methods.		
7. School plans are complete and followed. School has activity plan of action on selected hygiene and sanitation components for classroom. School has rules for children using facilities. School has plan for organising children to maintain water and sanitation facilities and to raise money and contact mechanics/masons to make larger repairs.		
Construction INDICATORS	YES	NO
8. Funds release instruction done as agreed.		
9. Funds released for construction at agreed time, within 4 months after mobilisation and training is done.		
10. Construction completed as planned. Construction follows agreed specifications as checked by the PHED and VEC, and problems which appear in the monitoring before and during construction are acted on.		

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Post-construction INDICATORS	YES	NO
11. Boys and girls use the safe water and sanitation facilities. Both boys and girls say that they use the latrines and water sources. This can also be cross-checked by observation.		
12. Boys and girls wash hands after using the latrine and before eating in school. Both boys and girls say that they wash both hands after using the latrine and before eating.		
13. Functioning drinking water facilities are available within 50 metres of the school. Drinking water is available for both boys and girls within 50 metres of the school.		
14. Boys and girls take turns (roster system) checking and cleaning the facilities.		
15. School has activities and organisational plan for classroom and for maintenance and use of facilities. Within the classroom there are one or two ongoing activities related to some key aspects of hygiene such as self-monitoring by children. This can be described by children and teacher.		

Activity Sheet 11.1 **Materials and supporting actions**

Objective:
For participants to get a better understanding of the types of actions which should take place around the schools.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator divides the group into smaller groups of three/four persons. The facilitator then explains that the participants will make their own list of materials and supporting actions that help children use and maintain drinking water, handwashing and latrine facilities. For example, a supporting action could be a list of agreed rules which will be posted in each class and monitored by the children.
2. If time permits the group could focus on how often the materials can be replaced. In addition, the group could determine how much it will cost. This gives an idea about operational costs.

Activity Sheet 11.2 **Enabling factors in using and taking care of facilities**

Objective:
For participants to get a better understanding of enabling factors in using and taking care of facilities.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator should ask the participants to think about using and cleaning facilities. The facilitator should then divide the group into smaller groups.
2. The facilitator asks each of the groups to list a number of cleaning and maintenance tasks which are undertaken by (a) teacher and (b) children.
3. If time permits the groups should also focus on issues such as when children can drink, use toilets and wash hands. In addition the key question on how to organise the children for caretaking of the facilities can be discussed.

Activity Sheet 11.3 **Activities for the Child-to-Child Approach**

Objective:
For participants to get a better understanding of the types of activities which could be undertaken in the Child-to-Child Approach including the possible role of health clubs.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator should ask the group of participants to think about the types of activities which could be used in the child-to-child approach. This exercise can be undertaken in the form of smaller groups developing their own lists and discussing this in a plenary session. However it is also possible to simply have a group discussion on this topic.
2. If time permits the groups should also think about the types of activities which could be used in the health clubs to promote children to undertake positive health and hygiene behaviour, such as cleaning hands before eating and after defecation.

Activity Sheet 11.4 **Developing monitoring lists**

Objective:
For participants to get more in-depth knowledge about monitoring activities.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator divides the group into smaller groups of three/four people. The facilitator then explains that the participants will be making their own monitoring checklist for water and sanitation facilities at the school. The monitoring checklist for water and sanitation facilities should be in the form of a short list of indicator questions.
2. The facilitator can also give the following table as an example of developing a list of monitoring indicators at the school level. (Optional)

Table 11.5 **Example of a list of monitoring indictors**

Group 1: Latrine monitoring • Is there any problem with the latrine? • Is cleaning done every day by the children? • Who solves the O&M problems: masons/teachers? • Who arranges for the bucket and mug? • Who arranges for the water tank? • Is there water in the tank? • Is there soap in the toilet? • Is there repair of damaged parts in the latrines? • How are bad smells prevented?	Group 2: Latrine monitoring • Is there a brush and water available? • Is the cleaning of the latrines facilities done every day? • Is there any problem in the flushing of latrines? • Is there a bucket or mug outside the toilet? • Is there water in the tank outside the latrine? • Is there soap or ash outside? • Are any parts damaged? • Is there a bad smell at the latrines? • Is there water in the water seal?
Group 3: Latrine monitoring • Does the door open and close? • Is the environment outside clean? • Is there any provision for soap, brushes, etc.? • Is the inside clean? • Is enough water provided? • Does the latrine flush properly when there is water? • Do children and teacher use the latrines?	**Group 4: Handpump monitoring** • Is the handpump working? • Does the handpump have all its necessary parts? • Is the platform in good condition? • Does spilled water drain away properly? • Is the handpump platform misused? • Is the contamination of the surrounding area about 10 metres radius away from handpumps (e.g. excreta or polluted liquids) • Is the quality of water acceptable? • Is the water properly disposed of? • Is water wasted because it is handled unnecessarily? • Are the funds collected for O&M properly used?
Group 5: Handwashing • Do the children wash their hands after going to the latrine? • Do the children wash their hands before and after eating?	**Group 6: Food hygiene** • Is the food prepared in a clean environment? • Is the food protected from flies, etc before being eaten?

12 Anganwadi and pre-school

The vast Integrated Child Development Services (ICDS) in India provides both a great opportunity and an equal challenge for the development of health hygiene behaviours among young children, their caregivers and their families. This chapter focuses on the child up to six years of age.

This chapter is based on the following principles:

- Early childhood counts and can have a great influence on the physical and mental development of the child.
- A good start to life together with nurture, care and a safe environment enables infants and young children to survive, and stay physically healthy, mentally alert, emotionally secure, socially competent and able to learn.

Figure 12.1: Children drawing a picture together

12.1 Early childhood counts

A child's development cannot be compartmentalised into health, nutrition, education, social, emotional and spiritual factors. All are interwoven. Early childhood care and development is a combination of all these offered to children by mothers, anganwadi workers and others. The interaction between the mother or caregiver while feeding the child provides an emotional message and an opportunity for enhancing the child's development as well as the child's nutrition. The time spent in child care along with other activities like feeding, bathing, cuddling, touching, holding, and playing with the child may not be visible, but all these add up and are linked to each other. (Engle et al, 1999). Progress in one area affects progress in others. The positive impact of children's early and consistent access to adequate food, health care, protection, shelter and psycho-social care is the key to better life chances – greater readiness for school, greater success in school, greater learning efficiency and better social competency. The environment and "responsiveness" of a caregiver affects not only the number of brain cells and the number of connections, but the ways in which they are 'wired'. The brain uses its experience with the world to refine the way it functions. Early experiences are important in shaping the way the brain works (Evans, Myers and Ilfeld, 2000).

Keeping in mind the integrated nature of child growth and development, the following box describes some of the typical objectives and strategies for early childhood care and education services.

Table 12.1 **Early childhood care: Objectives and strategies**

The young child from three through six years
Goal: to enhance children's ability to learn and develop optimally

OBJECTIVES	STRATEGIES/ACTIVITIES
Fewer children with protein-energy malnutrition or micronutrient deficiencies.	Provide appropriate freshly cooked local food from family pot
	Create ways for women to increase their income
	Monitor the child's growth
Few children have diseases	Complete immunisation
	Improve food and water hygiene and sanitation
Improve children's understanding and use of language	Provide parents and caregivers with knowledge/skills about children's development and need for stimulation

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OBJECTIVES	STRATEGIES/ACTIVITIES
Improve the quality of child care	Create demand for quality care
	Work with government and employers to get their support
Improve access to high quality pre-school programme	Work with public and private sector to fund high quality programmes
	Improve the quality of supervision
Make the community and the child centre safe	Develop water and sanitation projects for construction and use and maintenance maintain facilities
Improve the skills of caregivers to meet children's needs	Provide more opportunities for caregivers to learn and practice new behaviours
Improve children's social skills	Increase the number and use of learning and play materials that children have
Identify disabilities that might harm children's potential to learn (hearing, sight)	Provide early screening and detection of disabilities

Adapted from Evans, Myers and Ilfeld (2000).

Mothers and women at home provide most of the child's health care (70% to 80%). Unhealthy children often have poor appetites and are difficult to feed. Poor women do not always have the luxury of spending much time with their young children and responding to their special needs. This highlights the need to manage factors that reduce children's appetite and nutrition levels. This may happen due to illnesses such as diarrhoea, malaria, measles, intestinal parasites, chronic malnutrition, sores in the mouth or monotonous diet and lack of essential micronutrients. Thus a major challenge for the hygiene and sanitation sector is to move beyond the mere construction and use of facilities to the understanding of hygiene and development of healthy behaviours among children, their caregivers and families.

12.2 Integrated Child Development Services (ICDS)

There are close to 400,000 ICDS centres in India offering a package of health, nutrition and non-formal pre-school to more than 18 million under-five children. When ICDS was conceived in 1974 there was a clear understanding of the importance of delivering comprehensive services to meet the multiple needs of young children. Structurally the programme has always included a focus on the health, nutrition and education of the young child and the mother. While the programme has certainly demonstrated positive benefits for both women and children, they are not of the magnitude that one would hope for. This is due primarily to the difficulty of assuring quality because of the scale on which the programme has been

implemented. It may also be due to having such a comprehensive mandate. (Evans, Myers and Ilfeld, 2000)

Although the ICDS programme faces many challenges it has nonetheless had important effects on the under-five population. For example, a review of almost 30 studies of the nutritional impact reveals positive outcomes. Some studies also found that the primary school dropout rate is significantly less for ICDS than for non-ICDS children from lower and middle caste groups. (Evans, Myers and Ilfeld, 2000)

The ICDS programme has grown to such an extent that efforts to co-ordinate it are difficult. Organisational infrastructure and co-ordination activities on a routine basis are often missing. There are more than 300 anganwadi training centres in India. In practice, the teaching programme tends to be didactic. A challenge for the SWASTHH programme in India is to support that effort to limit the gap between the content of training and the situation in the field. Flexible and practice-oriented training for sanitation, hygiene and behavioural change is essential. (Mankodi, 1994)

12.3 Hygiene in the anganwadi and pre-school

By the nature of the early childhood programme, hygiene and sanitation activities should play a greater role in the daily routine than in the primary school. For little children this relates, among other things, to learning toilet practices, safe water for drinking, having food that is hygienically prepared and eaten in a clean environment, and hand and bottom washing.

In Erode district of Tamilnadu, a school sanitation programme is being implemented from the late nineties. As Erode had also adopted a strategy for convergence of water-sanitation-nutrition and child development through the set-up of the Integrated Child Development Services (ICDS) programme, this was the first district to explore designs of toilets that are “baby-friendly”. The special features were: baby ceramic pans, sqatting plates with foot rests that are suited to a 3-5 year old, interiors that are brightly painted with familiar characters from folk tales, animals, birds, grills or openings at eye level in child’s sitting position to allow child to look out while she is in the toilet and avoid feeling of claustrophobia and a opening that allows a caretaker to open the door from outside should a child lock herself by mistake. WaterAid, an international NGO working in Tamilnadu, has also developed some very good designs for “Child-Friendly” toilets in other districts of the State.

12.4 Hygiene and stimulation

Hygiene and health goes with stimulation, meaning playing and talking with children. In hygiene behaviours, as in other aspects of their lives, it is important for children to have opportunities to explore, interact with materials and imitate role models. This is the way young children learn, by 'making' their own knowledge.
The following example is from Gujarat, India and provides guidelines, which also incorporate an element of play in the activities with young children.

Box 12.2 **Parent education for children up to three years**

Health and nutrition
If your centre has provision for supplementary nutrition, ensure that children get the correct amount. Growth monitoring should be done regularly. Organise parents' camps in order to discuss the importance of a balanced diet (example: rice, milk, vegetables and fruits) according to the children's age. In your centre also provide the children with information related to nutrition through songs, poems and slogans. Slogans of the following kind can be chanted: *"A carrot a day keeps eye diseases away"* or *"Drink a glass of milk every day and become as strong as a king!"* or *"Green vegetables at mealtimes give you good health for all times."*

Cleanliness, hygiene and safety
A clean, healthy body is essential for physical development. Therefore the worker should regularly emphasise cleanliness to the children (and their parents and caregivers). Bathing everyday, wearing clean clothes, keeping hair combed and the nose, ears and nails clean, eating simple but nutritious food, taking care of these or giving children information about these is necessary.
Each morning, observe the children. If possible, make arrangements for tidying up children who may not have come to the centre clean.
Among young children, role-play is very useful. For instance, ask: How do we brush our teeth? and act it out. In this way, combing of hair, bathing, changing clothes… all can be acted out.
A clean environment is as important for physical development as a clean body. Ensure that the centre is cleaned everyday. Provide clean drinking water from safe water sources. Food served to the children should be prepared under hygienic conditions. The environment should be free from hazardous material and equipment such as glass, breakable toys, equipment with sharp edges, and rusty and extremely old things. If it is necessary to keep bottles or other potentially harmful things in the centre, then keep them out of the children's reach and out of their sight.

Source: CHETNA (1995).

These guidelines imply that a certain minimum set of standards should be maintained in the anganwadi. These minimum standards could include:

- having a regular routine
- cleanliness of the area
- cleanliness of the children
- balanced and sufficient diet
- food hygiene
- clean toilet facilities
- space for children indoors and outdoors

Child-to-Child

Health workers and educators in India have long been receptive to the ideas inherent in the Child-to-Child Approach. One reason why Child-to-Child has found such fertile ground in India is that the twin concerns of the programme - to promote preventive health care for children and to encourage activity-based approaches to learning - support the goal to design more effective health and educational services throughout India.

Within the anganwadi centre, older children (aged 5 to 6) can become the older brother or older sister for younger children. In pre-school settings, attached to schools, it is the primary school children, for example from the school health club, who can "adopt a child". Refer to chapter 5, section 5.3.3 and section 5.3.4 that provide a brief description of the Child-to-Child programme and the school health clubs.

12.5 Parent and caregiver education

The anganwadi setting in India provides excellent opportunities for parent education. This is usually in the form of non-formal or formal education.

Non-formal parent education

Each day the mothers or other members of the family are in contact with the anganwadi worker, when the children are brought to the centre or collected by the anganwadi staff.

Centres are meeting places for mothers and fathers and provide a peer group for children. The children's centre thus provides parent support as a by-product of its childcare and educational role. Staff members can expand this function by arranging for parents to meet regularly with one another or to inform them about their child's development or give them hygiene 'hints' (Evans, Myers and Ilfeld, 2000). For example, anganwadi workers report that they have spoken to parents about bathing their children more regularly, or changing their clothes more often or about what their children have done that day to help other children eat and wash up. These discussions must sometimes be handled with some delicacy. However the information that is

conveyed is opportunity information in that it has a very high chance of being acted upon. There may be an opportunity here to organise this non-formal education a bit more to remind parents, for example, about the four or five most important things that relate to the health and hygiene of their children.

Formal mother education

One of the written tasks of the much over-worked anganwadi staff is to hold formal education sessions with mothers. In a project in Kerala (carried out by SEU-Foundation), the anganwadi workers complained that it was difficult to carry out these sessions. They had no materials and felt insecure about "how to talk" to the mothers, some of whom are older than the anganwadi staff. SEU-Foundation developed a small set of one-page discussion guides and provided short training session where the anganwadi personnel could practise their formal education session. The information combined mothers sharing their own experience with hints about hygiene and playing (stimulating) the young children. The anganwadi workers seemed to appreciate this support for what can be a difficult task.

These formal education sessions can also provide an entry point to support parents with their younger children, below the age of five. Below is an example from the Centre for Learning Resources in Pune. It deals with hygiene, bathing and stimulating children in an enjoyable way.

Box 12.1 **Excerpt from Getting Ready for School**

Parent education topic: The very young child
Combining hygiene with stimulation: Example for the child up to 3 years of age

GIVING A BATH

- Teach her to dip the mug into the bucket and to pour water on herself
- Give her some water in a wide-mouthed utensil or a bucket. Put some plastic bottles, plastic boxes, spoons, to play with. Talk to her; let her splash water as she plays.
- Teach her to soap herself (if soap is used).
- Teach her the names of the various body parts. Encourage her to point these out and then name the parts.
- Teach her the names of the objects you use while bathing her. If soap is used, let her smell it.
- Encourage her to bend and pick up soap, mug and so on, and put it in its place.
- Talk to her while bathing. Example *Is this water hot? Where does the water come from? What are you going to do after bathing?*

Adapted from Kurrien and Gokhale, (1995)

The anganwadi worker as an educator in other community roles

With some justification, it has been noted that the anganwadi worker is assigned many tasks. Being an active man or woman in the community, the anganwadi worker and assistant are often asked to be on village committees and to take on visible (but usually unpaid) roles when women are 'required' to participate in various programmes. This can verge on being abusive, resulting in too many roles for too little salary. Nonetheless, the anganwadi worker or helper are, for example, often seen as members of the village water and sanitation committee. In such a position they can, theoretically, provide hygiene and health information inputs that will reach audiences beyond the anganwadi centre.

Activity Sheet 12.1 **Developing norms for children at the anganwadi level**

Objective:
Participants give their own impression based on their past experience about a minimum set of standards that are required to be maintained at the anganwadi level.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator divides the group into smaller groups of three/four persons. The facilitator then explains that the participants will be focusing on developing a set of norms for the children.
2. The facilitator asks the participants to think about their past experience on a minimum set of standards that are required to be maintained at the anganwadi level. Once a list has been developed by each group, a focus should be placed on what practical things can be done and by whom? The following table could be useful.

Norms	Practical steps to undertake if these norms are to be complied with	Who should ensure that the norms are upheld?

Activity Sheet 12.2 **Educating both mothers and fathers**

Objective:
Participants focus on their own past experience about how to tactfully focus on educating not only mothers but fathers in communities.

Material: poster paper
Time: one hour
Procedure:

1. The facilitator asks the following question to the participants:
   - Are little boys and girls like grass or like flowers and why?

Some parents think that children are like grass. Once they take root, they just grow. Other parents think and act as if children are flowers. This means that even after they take root and begin to grow, they need special care so that they will thrive. Parents who think that children are more like flowers will probably pay more attention to health and hygiene messages and suggestions. They will tend to be more receptive to new information and ways of improving behaviours concerning the care of their children.

2. The facilitator divides the group into smaller groups of three/four persons. The facilitator then asks the participants to think about the following questions:
   - Have you seen different parents who have one or another of these attitudes about young children? Why do parents think one thing or the other? What causes this? How can the anganwadi worker help bring about a change in this thinking? Who else in the community could help change these attitudes toward childhood?

In the second part of the exercise, the groups focus on what mothers can do. The participants should discuss the following based on their own experience.

   - Is there any similarity between the example from Thailand (see below) and your own experience? If you do see any similarities, suggest some things that mothers can do with their little children, in context of using water and toileting.

3. In the plenary session, the groups explain the reasons they have listed and how the anganwadi worker can help bring about a change in the thinking of parents.

Example from Thailand.
From research on child rearing done in Thailand in 1979: Unlike middle-class parents in towns and cities the research showed that mothers in rural areas were not aware of their own capacity to make a difference in the children's development. Mothers had little understanding of how they could use the existing resources to create a safer and more nurturing environment for the child. They did not understand how important it was for them to interact with the child.

Source: Evans, Myers and Ilfeld (2000).

Activity Sheet 12.3 **Case study on water drinking and food practices of toddlers** (optional)

Objective:

- Participants focus on possible solutions to the case study on water drinking practices in India, specifically for toddlers.

Material: paper
Time: half an hour
Procedure:

1. Divide the participants into groups with 4 to 8 people per group.
2. Ask the participants to work on the case study below which is provided on an A4 paper to each group.
3. Ask one of the participants in each of the groups to read the case study out loud. After the case study has been read, each group is asked to focus on possible solutions to the problem.
4. After around 20 minutes all of the groups come together in a plenary session and give their answers. Note that this type of exercise is an effective way of getting the groups to discuss their own experiences in terms of their problems and possible solutions regarding water drinking and food practices of toddlers in their area.

Short case study on water drinking and food practices of toddlers

Problems with water drinking practices begin with babies and toddlers. It is common even now to feed infants milk or other fluids by making them lie on the mother's lap and then pushing the fluid into her mouth with a boat shaped spoon (an indigenous contraption) without a handle in which the mother's thumb inevitably dips because of the way the spoon is held. If the mother has not washed her hands properly then you can predict the consequences. Under-fives are therefore particularly vulnerable for two reasons:

- Mothers handle food with their fingers most of the time whether it is mashing rice or feeding milk. The status of most mothers' hands, including nails is critical. With urbanisation, media and other images of glamour, long nails are getting more and more popular!
- If the baby handles food there is no attention to handwashing. Even worse, a child below the age of three will sit, scatter food on the floor and then enjoy picking up the pieces and shoving them into the mouth, while mother is working on something else. A child development person may say this is a great exercise for small muscles and coordination. But how does one bring hygiene into this? Clean floors? Clean hands?

What can be done about this problem?


ବୃପଲ୍ ପିଛି ପାଇଖାନାକୁ ହୀଡ଼ାପିବା ହୀଡାପିବା ପରେ
ନିଜ ଦାତ ଓ ଗୋତ ସାବୁନ୍‌ରେ ବା ପାର୍ଥଣରେ ପୋଇବା ।।

Concluding reflections

School Sanitation and Hygiene Education suffers from the unsettling habit of 'reinventing the wheel' in determining strategies and institutional options. Today there is a growing body of literature on SSHE from specific projects, which deserves to be reviewed. This provides, for example, useful information about 'lessons learned' regarding institutional/organisational as well as technical issues. It deals with issues such as the construction of latrines without providing adequate health education (and visa-versa). It provides a key to finding a balance between the 'hardware' and 'software' aspects of SSHE.

In conclusion, this Resource Book and the teacher's Handbook have tried to deal with a number of challenges in School Sanitation and Hygiene Education. It should be noted that the problems are generic but the solutions are not. It is therefore not necessarily a question of applying the same approach in different areas. We must continue to learn from past and present experiences, to reflect on this experience and to use it to improve programmes now and in the future. That in itself may be one of our greatest challenges. All children have a basic right to use good water and sanitation facilities and to learn behaviour which will lead them into a healthier future.

List of abbreviations

AEE	Assistant Executive Engineer
ARWSP	Accelerated Rural Water Supply Programme
CBO	Community Based Organisation
CI	Corrugated iron
C/N	Carbon/Nitrogen
CRSP	Central Rural Sanitation Programme
CSO	Civil Society Organisation
DIET	District Institute for Education and Training
DPEP	District Primary Education Project
EO	Education Officer
EE	Executive Engineer
FRESH	Focusing Resources on Effective School Health
ICDS	Integrated Child Development Services
IEC	Information, Education and Communication
IMR	Infant Mortality Rate
IRC	IRC International Water and Sanitation Centre
NCERT	National Council of Educational Research and Training
NGO	Non-Governmental Organisation
PoA	Plan of Action
PHED	Public Health Engineering Department
PTA	Parent Teacher Association
PVC	Poly Vinyl Chloride
RCC	Reinforced Concrete
RCRSP	Restructured Centrally Sponsored Rural Sanitation Program
RGNDWM	Rajiv Gandhi National Drinking Water Mission
SC/ST	Scheduled Caste/Scheduled Tribe
SCERT	State Centre for Educational Research and Training
SIERT	State Institute for Education, Research and Training
SIRD	State Institute of Rural Development
SMC	School Management Committee
SSHE	School Sanitation and Hygiene Education
SSIC	School Sanitation Implementation Committee
SWASTHH	School Water and Sanitation Towards Health and Hygiene
UNICEF	United Nations Children's Fund
VEC	Village Education Committee
WATSAN	Water and Sanitation
WES	Water, Environment and Sanitation

Glossary of terms

Anganwadi:	Nursery centre.
Block:	A number of panchayats. This may vary from state to state.
Cluster:	A certain number of schools linked together for educational purposes, particularly for training.
Crore:	The equivalent of ten million Rupees (100 lakhs).
Gender:	Gender relates to the social and economic difference between men and women. Gender does not relate only to women, but to both women and men. The gender approach optimises the roles and responsibilities of both men and women.
Gram Sabha:	Traditional village councils.
Gram Sevak:	Custodian of the village.
Helminth infection:	Worm infections.
Lakh:	The equivalent to one hundred thousand Rupees (100, 000 Rupees).
MAPET:	Refers to the Manual Pit Toilet Emptying Technology. This technology uses a piston pump with a flywheel and a 200-litre vacuum tank which are mounted on a handcart. The equipment provides a low-cost solution in area where toilets are inaccessible to roads.
Panchayat:	Local government with an elected president and elected representatives from each ward. This also refers to the local government area and its population.
Project cycle:	The different stages or steps from the beginning to the completion of a project. These stages can vary in the project.
Panchayati Raj:	The political and administrative unit below the district such as a cluster of households at the neighborhood level.
Rupee:	Currency used in India.
Sarpanch:	Head of the village panchayat.
Sanitary mart:	A shop where one can buy the parts required to make a toilet as well as other hygiene commodities such as soap, toothpaste and so on.
Superstructure:	Provides shelter and privacy for the user of the toilet. The super structure can range from a simple shelter of sacks or sticks to a building of bricks.
Ward:	Sub-unit of the panchayat.

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Appendix 1 Directions for participants about making cards

The use of cards encourages all participants to participate in a session.

Rules for involving participants:

- Every participant is a resource
- Everyone helps everyone
- Every facilitator is a participant
- Every idea counts
- Deal with uncomfortable feelings quickly

Rules for card writing

Do's	Don'ts
write one idea per card	don't write various ideas on one card
write only 3 lines per card	don't write more than 3 lines as it becomes hard to read
use key words, not sentences	Sentences can get very long and lose their meaning....
write clearly	*write clearly and not like this....*
write large enough for others to read	writing like this can not be read from a distance

Appendix 2 Baseline survey for schools

Primary school ☐
Primary and upper primary ☐
Primary and middle/high school ☐

Number of shifts in schools _____
Give timings from.....to.....
from.....to.....

Name of administrator: _____Date: _____

Name of school or anganwadi being surveyed: _____

Number of students. Number of boys. Number of girls:_____

_____

Number of teachers: _____

Address and number of school: _____

_____

Name of village: _____

Name of block/panchayat: _____

Name of district: _____

Note: 'N.A.' means **not applicable**. It means that the question cannot be answered in this school or community.

		YES good	NO not good	N.A.
	OBSERVE THE FOLLOWING			
1.1	School yard, compound and classroom clean? (free from visible garbage on grounds and in classroom, classrooms with waste containers, solid waste disposed away from school)	☐	☐	☐
	WATER			
1.2	Is there a functioning water point within the school area?	☐	☐	☐
1.3	Is there a public water point or water point that teachers use within 100 metres of the school? (about 150 steps)	☐	☐	☐
1.4	Is water point functioning at time of visit and in dry season? (Ask teachers if water point works in May. Check to see if one standard container can be filled in 2 minutes or less)	☐	☐	☐
1.5	Is the water apparently of drinking quality at the water point?	☐	☐	☐
1.6	Is there water storage that appears to be clean? (Water storage should be at least 1 water container per classroom or 20 litres per class. Containers look clean inside. Teacher states that it has been cleaned within past 7 days.)	☐	☐	☐
1.7	Are there ladles or cups with handles used by children and teachers for taking the drinking water?	☐	☐	☐
	LATRINES, LAVATORIES, TOILETS			
2.1	Do toilets or latrines or a lavatory exist within the school compound?	☐	☐	☐
2.2	How many girls use one toilet?	_____		

Note: for schools with 2 sessions, write the number of girls in one session only.
Note: one hole latrine = one toilet = one lavatory

		YES good	NO not good	N.A.
2.3	How many toilets or urinals for boys?	_____toilets _____urinals		
	Number of boy students?	_____		
	How many boys for one toilet or urinal	_____		
	Note: for schools with 2 sessions, write the number of boys in one session only.			
2.4	Are the toilet and urinals clean? (free from visible garbage, faecal matter on floor, smell not too bad enough to stop use, no puddles, not too many flies)	☐	☐	☐
2.5	Is there water storage facility and ladle/cup inside or beside the toilets?	☐	☐	☐
2.6	Do teachers have separate latrines for children?	☐	☐	☐
2.7	On what day(s) is the toilet cleaned?	_____		
	OBSERVE THE FOLLOWING			
3.1	Are latrines being used? Can children use the toilets during the school day? Are they easy to open or unlock? Observe if a pupil voluntarily uses a latrine during your visit. Ask a group of girls separately, outside the classroom about when they use it. Look into the latrine. Does it smell? Do you see faecal matter?	☐	☐	☐
3.2	Do children wash their hands correctly after using the toilet? Observe if a child voluntarily washes hands during your visit. Ask children when they wash hands in a small group, outside of the class. Ask a child to demonstrate how to wash hands in the place where this is usually done. Note: Is it easy and fast for the child to get the water and a cup? Does the child rub both hands a lot, at least 3 times? Is the water disposed of so that it will not breed mosquitoes? Is the area clean, free from visible garbage?	☐	☐	☐

		YES good	NO not good	N.A.
3.3	Do the children in the school help clean, including the latrines? Do the children take turns (rotate) in doing this? Ask teachers. Ask children in a separate small group, outside the class.	☐	☐	☐
	TEACHERS			
4.0	Have the teachers of this school been trained in School Sanitation and Hygiene Education?	☐	☐	☐
4.1	Have the teachers taught anything about hygiene (safe water, household sanitation, personal hygiene)? Ask the teachers. Ask some students.	☐	☐	☐
4.2	Can teacher or headteacher show any teaching material, book or learning materials or a chapter in a book about this subject? *Note: materials must appear to have been used.*	☐	☐	☐
4.3	Can teacher explain correctly what sanitation means to him or her? (Sanitation refers to the safe disposal of excreta which takes place on or near the plot).	☐	☐	☐
4.4	Write here anything interesting the teacher says or any interesting hygiene/health activities teacher or school has carried out with children. _____ _____ _____			
4.5	Your general assessment Do the teachers and headteacher seem motivated and interested in the hygiene education programme? Do you think they will work with students to use and maintain the facilitates? Do they seem to get along with the community? What is your assessment of this?			

COMMUNITY (Clarify who should ask these questions)

5.1	Are parents, PTA or other community groups involved in the school? In supporting the school?	☐	☐	☐
5.2	Is the PTA active? Do they keep minutes? Have they met in the last three months?	☐	☐	☐
5.3	Do the parents know about the sanitation and water facilities provided at the school?	☐	☐	☐
5.4	Do the parents provide a financial contribution towards the sanitation and water facilities at the school?	☐	☐	☐
5.5	Are there household latrines (more than 1 out of 10 households) in this community?	☐	☐	☐
5.6	Has the school planned events/conducted events to promote School Sanitation and Hygiene Education in the community?	☐	☐	☐

SUPERVISOR OR CLUSTER

6.1	Has there been a cluster meeting in the past three months to discuss health/hygiene and sanitation?	☐	☐	☐
6.2	Has a school supervisor who will be involved in SSHE visited this school during the past three months?	☐	☐	☐
6.3	Do the block (district) education officers express interest in this programme?	☐	☐	☐
6.4	Does the (district/block/cluster) supervisor have information or records about the visits of his/her supervisors? Can we tell successes or failures in the school?	☐	☐	☐
6.5	Is there a district/block School Sanitation and Hygiene Education implementation plan with a budget?	☐	☐	☐

NGO

7.1	Is there an NGO member of staff assigned to the project who has been trained?	☐	☐	☐

Space here to write problems that need to be solved as stated by Education authorities or NGO staff.

_____

_____

_____