

Marieke
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A TRAINING PACKAGE FOR

**WATER, SANITATION
AND
HYGIENE EDUCATION**



FACILITATORS MANUAL



202.5-937R-
11867

LIST OF SESSIONS

Module 1: Intra- and Inter-Sectoral Linkages

- Session 1: How to Integrate Water, Sanitation and Hygiene Education
- Session 2: Making the Case for Improved Programme Linkages
- Session 3: The Health Impact of Water Supply and Sanitation Programmes: Separating Myth from Reality
- Session 4: Water and Sanitation as an Integral Component of the CDD Programme
- Session 5: Field Trip: Resource Mapping

Module 2: Cross-Cutting Concerns

- Session 6: Gender Issues in Water and Sanitation
- Session 7: The Sector and the Environment

Module 3: Low-Cost Options

- Session 8: What are the Technical Options for Water Supply?
- Session 9: Maintenance of Water Supply Systems

Module 4: Community Management

- Session 10: Assessing Level of Community Involvement
- Session 11: How to Improve Community Involvement
- Session 12: From Community Involvement to Management. Can the Gap be Bridged?
- Session 13: Training for Improved Local Management

Module 5: Hygiene Education

- Session 14: Changing Hygiene Behaviour
- Session 15: Communication Strategies
- Session 16: Research to Support Effective Hygiene Education
- Session 17: Selecting Messages and Media for Health and Hygiene Education
- Session 18: Hygiene Education in the Education Systems
- Session 19: The Organisational Requirements for Hygiene Education

Module 6: Sanitation

- Session 20: Barriers to Successful Programmes
- Session 21: Excreta Disposal
- Session 22: Strategies for Successful Programmes
- Session 23: Urban Marginal Areas

Module 7: Mobilising Support

- Session 24: Mobilising Support for Water, Sanitation and Hygiene Education
- Session 25: Planning for Health Education and Mobilisation Strategies

Module 8: Capacity Building

- Session 26: Improved Planning at the Country Level
- Session 27: Monitoring as a Management Tool
- Session 28: Economic and Financial Aspects

INTRODUCTION TO FACILITATOR'S MANUAL

Outline:

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| 1. What Is the Role of the Facilitator? | 1 |
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Annex

Using Videotapes and Films for Background information excerpted from *Faultless Facilitation* by Lois B. Hart.

FIGURE 2.

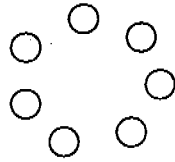
FIVE WAYS TO ARRANGE A ROOM

Water and Sanitation

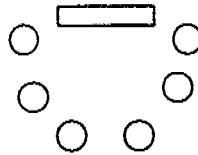
Facilitator's Manual

Assuming that your team consists of no more than eight people, there are several choices for setting up the room for optimal communications.

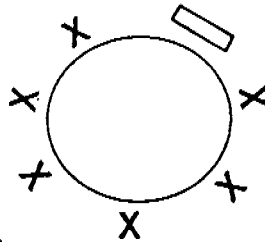
Circle: For an informal atmosphere, arrange the chairs in a circle with no tables.



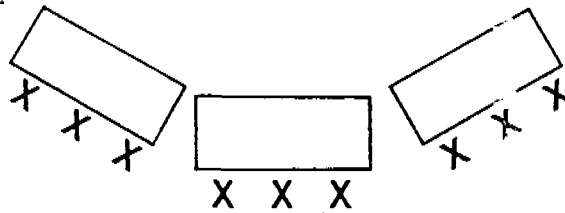
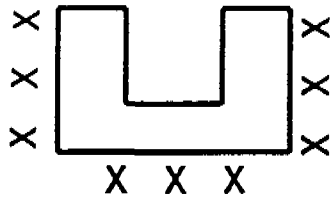
Semicircle: Place a flipchart on an easel in the open end of the semicircle.



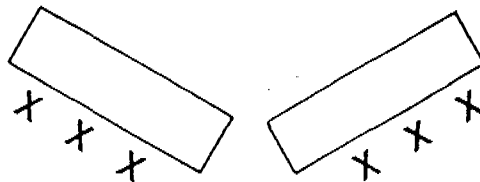
Round Table: If there will be a lot of writing, use a large round table. It is more difficult to use either a whiteboard or flipchart unless a space is left open at the table for you and this equipment.



U-Shape: Form tables in a U-shape with chairs only on the outside. The open part of the U is for a flipchart. This formation allows for writing, but people will have to crane their necks to see the others in their own row of chairs.



Herringbone: Arrange two sets of tables in a herringbone shape with chairs on the outside only. The facilitator and any equipment can face these two tables. This shape allows good eye contact among everyone.



7. WORKSHOP EVALUATION AND CLOSING CEREMONIES:

It is important to view each workshop as a form of on-going pre-test in order to constantly make improvements. It is hoped that you and each participant will take time to record your thoughts about course materials and what was experienced.

Introduction:

Perhaps you are serving as a facilitator for UNICEF's Water, Sanitation and Hygiene Education Course based on your expertise as a trainer. More likely, your selection has to do with your technical or programmatic experience and skills. While most materials found in this Manual are directly related to each participant training session, it was felt that many facilitators would welcome a review of adult education principals and methods, as well as a few practical tips gleaned from various educators and facilitators, including those assisted in pre-testing this course.

1. WHAT IS THE ROLE OF THE FACILITATOR?

In contrast to trainers, who are responsible for imparting information and skills, facilitators seek to help others in achieving their goals by making learning easier. Table A. offers a series of behaviours used by successful facilitators:

Table A: Desirable Behaviour of Facilitators

REMAIN NEUTRAL - Remain neutral during the meeting because your role is to facilitate the group's process. If you have valuable ideas or opinions that are essential to what is being discussed - and this happens frequently during the process - put your facilitator role aside and ask someone else to act as the facilitator while you give your input.

KEEP THE FOCUS - Keep the members' focus on the group's common tasks, problem or issues while at the same time observing how the group works together.

BE POSITIVE - serve as a positive force in the group, setting the tone so that the very best solutions can be found. You must resolve any doubts you have about any issue the group will be discussing so you can leave your own negativity behind.

ENCOURAGE PARTICIPATION - Encourage participation by all group members by monitoring any excessive talkers and prompting the quieter members. Confront other problem behaviors that interfere with the group's process.

PROTECT IDEAS - Always protect individuals and their ideas from attack by other members of the group. This is a basic ground rule that everyone is asked to follow.

DO NOT EVALUATE - Do not evaluate the ideas that are suggested. Instead encourage the contributors to explain the background behind their ideas.

SUGGEST METHODS - Suggest alternative methods and procedures that will help the group to make a decision. Therefore, you need to know how to use some essential methods such as brainstorming, nominal group technique, consensus, negotiating and force field analysis. The goal is to use whatever methods are necessary so that the group comes up with a satisfactory solution.

PREPARE A RECORDER - Since you will be busy facilitating, find (and train if necessary) someone who'll be your recorder so that a group record can be kept and distributed later to the group members.

EDUCATE THE MEMBERS - Observe the roles various group members play and the effectiveness of the methods they are using to resolve problems and make decisions. Share your observations with them. This helps to educate them as to how they could better work together and to get their tasks accomplished successfully.

*One key to promoting a positive learning environment is for facilitators to show that they are paying attention to group concerns. This can be done both verbally and non-verbally. Hart offers the following list of "Do's" and "Don't's":

Do:

- Position your body so you face all group members;
- Smile at individuals;
- Listen carefully while they talk;
- Keep eye contact;
- Nod affirmatively;
- Talk with all group members;
- Continually scan the group with your eyes.

Don't:

- Turn your back to part of the group;
- Frown or look judgmental;
- Shuffle papers or look at your watch while group members are talking;
- Avoid eye contact or stare at individuals;
- Remain impassive or neutral to other's points of view;
- Talk to only a few people;
- Scan too rapidly.

*Source: Lois B. Hart, "Faultless Facilitation", HRD Inc. Press, 22 Amherst St., Massachusetts 01002, USA, 1992.

James A. McCaffery (1) identifies the following key facilitator skills*:

- Asking close-ended questions, i.e., "Do you think that recommendation will work?"...yes, no...perhaps...
- Asking open-ended question, i.e., "What do you like about the recommendations? Why?"
- Summarizing to pull important ideas or data together, establish a basis for further discussion, review progress and check for agreement;
- Paraphrasing...based on careful listening and restating, often beginning with, "I hear you saying that....", "In other words...", "If I understand what you are saying..."
- Various verbal and non-verbal techniques, examples being nodding one's head, repeating a sentence or selected words, maintaining eye contact, etc.

A variety of other responsibilities are often accepted by facilitators, including keeping track of time, focusing group attention, handling challenges to authority, involving silent members, moderating disrupting practices of some participants, attending to physical needs, travel schedules, supplies, financial issues, and so forth.

2. WHAT EDUCATIONAL ASSUMPTIONS APPLY?

Given the fact that educational systems were initially created to prepare youth in becoming adults, it is to be expected that educational traditional techniques thought to be appropriate for children are often applied in adult education. Table B. contrasts differences between children and adults which need to be considered in developing training strategies.

* Source: McCaffery, James A., "Facilitation Skills for Trainers and Group facilitators", Training Resources group, 1021 Prince, St., Alexandria, Virginia 22314, 1988.

Table B: Comparisons of Children and Adult Learners*

| CHILDREN | ADULTS |
|--|--|
| Have little or no experience upon which to draw - are relatively "clean slates" | Have much past experience upon which to draw- may have fixed viewpoints |
| Have little ability to serve as a knowledgeable resource to other classmates | Have significant ability to serve as a knowledgeable resource to the facilitator and group members |
| Focus on content | Focus on problems |
| Less actively involved | Expect high participation |
| Rely on others to decide what is important to be learned and done | Decide for themselves what is important to be covered in the group |
| Accept the information being presented at face value | Need to validate the information based on their beliefs and experiences |
| Expect what they are doing will be useful in the long-run | Expect what they are doing to be immediately useful |
| Work in an authority-oriented environment | Function best in a collaborative environment |
| Assume that planning is the facilitator's responsibility | Share planning with the group members and facilitator |

In fact, many assumptions about children have proved to be wrong, and are being replaced with more dynamic and innovative teaching strategies. It is important for those responsible for adult education and training courses also be clear about their own assumptions and training strategies on which they are based.

* Source: Hart, Lois, B.

Lynton and Pareek contrast four sets of assumptions concerning how participants respond to training:

Table C. Assumptions Underlying Two Concepts of Training*

| | |
|---|---|
| 1. Participants' acquisition of knowledge of the subject leads to action. | 1. Motivations and skills lead to action. Skills are acquired through practice. |
| 2. Participants learn what trainers teach. Learning is a simple function of the capacity of participants to learn and the ability of trainers to teach. | 2. Learning is a complex function of the motivation and capacity of individual participants, the norms of the training group, the training methods and the behaviour of the trainers, and the general climate of the institution. Participants' motivation and use of training is influenced by the climate and support in the work organisation. |
| 3. Individual action leads to improvement on the job. | 3. Improvement of the job is a complex function of individual learning, the norms of the working group, and the general climate of the organisation. Individual learning unused, leads to frustration. |
| 4. Training is the responsibility of the training establishment. It begins and ends with the specific program. | 4. Training is the responsibility of three partners: the participant's organisation, the participants, and the training establishment. It encompasses a preparatory, pre-training phase and a subsequent, post-training phase. All phases are of paramount importance to the success of training. |

* Source: Lynton, R. P. & Pareek, U., Training for Development, Second Edition, Kumarian Press, 630 Oakwood Ave., Suite 119, W. Hartford, Connecticut 06110-1529, USA, 1990.

Mitchell cites 10 adult education concepts and suggests how each can be applied in lesson planning:

1. People learn only what they are ready to learn:

Build in opportunities from the beginning for participants to share their objectives or needs. Let the group agree on its goals and establish group norms. Recognize that resistance to the goals of facilitators, trainers and other participants is to be expected and should be addressed. Allow participants to express their reservations or concerns, and help them to see "what's in it for them". Help them to build trust in you by being open, a good listener, keeping promises, and showing desirable characteristics presented in Table A. Select training strategies which are likely to engage participants early.

Resistance to learning may be based on a low tolerance to change or a fear of losing face. Go slowly, allowing participants to gain in self-confidence and in trust. Take time to make sure that definitions, goals, plans, schedules are clear to all.

2. People learn best what they actually perform:

Minimize passive learning experiences such as lectures, use of audio-visuals or demonstrations. Maximize active learning, drawing on existing knowledge and skills within the group. Use dynamic problem-solving structures.

3. People learn from their mistakes:

People are motivated by a desire to succeed, and often learn more from errors which they correct. Create a safe climate for errors to occur, and build evaluation into each experience.

4. People learn easiest what is familiar to them:

Provide opportunities for participants to share their knowledge, thereby promoting common definitions and values, as well as increased self-confidence. Strive for participant-centered learning rather than trainer-centered imparting of wisdom. Use needs assessments as a basis for determining course content. Build in repetition and practice sessions to provide a basis for evaluation.

5. People favor different senses for learning:

Make creative use of the fact that people learn by seeing, hearing touching, smelling and tasting. Facilitate such learning by making available charts, graphs, photos, videos, case histories, materials for physical projects. Emphasize the appearance and taste of community water supplies, and latrine odors. Use role-playing as a form of physical involvement.

6. People learn methodically and systematically:

Avoid the trap of overloading learners with new material. Don't assume that information which is simple to you will be easily understood by everyone else. Use questions and careful observation to constantly assess participants' progress. If the course contains more materials than can be effectively covered, have the group decide its priorities, or encourage individuals to emphasize that which is most important to them.

7. People cannot learn what they cannot understand:

Think through in advance what levels of understanding are really essential. Help participants gain a broad view or overall picture so that details fit and make sense. Set clearly defined, specific training objectives. Introduce materials in a logical sequence, and use repetition to reinforce learning. Draw on group resources and shared characteristics for helping each other to learn.

8. People learn through practice:

Set action-oriented, trainee-centered objectives. Provide hands-on practice, simulations, games, role-plays, repetition, review and summarization.

9. People learn better when they see their own progress:

Create frequent opportunities for feedback, using questioning, explanations of corrections, group critiques, and learning maps.

10. People respond best when what they are to learn is presented uniquely for them:

Use questions to bring out individual differences in the group. Encourage verbalization of different points of view, approaches, beliefs. Use special assignments, individual and small group presentations and opportunities for creativity, art, drama, etc.

3. SELECTING APPROPRIATE TRAINING STRATEGIES:

Thorough assessments of learning needs should provide information about three aspects of participant needs:

- a) Needs for knowledge...what options exist?, what are their strengths and weaknesses? what have been experiences of others in improving water and sanitation? what time factors are reasonable? what costs are entailed? who needs to be involved? what can one obtain further information?

- b) Attitudinal changes...can local people really be expected to manage water and sanitation systems? is it likely that traditional hygiene practices can be changed? can the desire for official power or control be loosened? can age-old community relationships or prejudices be altered? can workers be induced to be more respectful of villagers and appreciative of their abilities?
- c) New skills...establishing new policies, following new procedures, building new relationships, constructing new systems, applying changed monitoring and evaluation criteria, communicating more effectively.

Lynton and Pareek assess each of their orientations according to nine training objectives, as shown in Table E.

Table E. Comparison of Training Methods and Training Objectives

| Training Objectives | | Training Methods | | | | | | |
|---------------------|--|------------------|-------------------|-------------------|--------------------|-------------------|----------------|----------------|
| | | (1) Field | (2) Simulation | (3) Laboratory | (4) Cases, etc. | (5) Individual | (6) Seminar | (7) Lecture |
| 1. | Realistic and manageable part of job | High | Very high | High | High | High | Low | Low |
| 2. | Help with internalising learning | High | High | Very high | High | Very high | Low | Very low |
| 3. | Protection for participant and organisation against mistakes | | Very high | high | Very high | Very high | Very high | Very high |
| 4. | Learning to learn | High | High | Very high | High | High | High | Very low |
| 5. | Exposure to new ideas and methods | High | Low | Very high | High | High | High | High |
| 6. | Experiments with behaviour | High | High | Very high | High | High | Low | Low |
| 7. | Membership of new reference groups | Low | High | High | High | Low | High | Low |
| 8. | Step back to think about job as a whole | High | Very high | | Very High | Low | High | High |
| 9. | Very intensive learning | High | high | Very high | High | High | Low | Low |

For a more comprehensive and highly useful tool for water and sanitation course facilitators and trainers, readers are encouraged to obtain a copy of the excellent publication, "A Workshop Design for the Training of Trainers" from WASH.*

* Technical Report No. 73, Water and sanitation Project for Health (WASH), 1611 N. Kent St., Room 1001, Arlington, Virginia 22209-2111, USA, June 1991.

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| 5. | Exposure to new ideas and methods | High | Low | Very high | High | High | High | High |
| 6. | Experiments with behaviour | High | High | Very high | High | High | Low | Low |
| 7. | Membership of new reference groups | Low | High | High | High | Low | High | Low |
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TABLE F.

ROLES PEOPLE PLAY IN A GROUP

3-12

| HELPING ROLES: THOSE WHICH INCREASE GROUP PRODUCTIVITY TASKROLES: | MAINTENANCE ROLES: | HINDERING ROLES: THOSE WHICH IMPEDE GROUP PROGRESS |
|---|---|--|
| <ol style="list-style-type: none"> 1. INITIATING: Proposing task or goals; defining a group problem; suggesting procedure or ideas for getting the task accomplished. 2. INFORMATION OR OPINION SEEKING: Requesting facts; seeking relevant information about a group concern; asking for suggestions, ideas or opinions. 3. INFORMATION OR OPINION GIVING: Offering facts; providing relevant information about group concerns; stating a belief; giving suggestions, ideas or opinions. 4. CLARIFYING: Interpreting or reflecting ideas and suggestions; clearing up conclusions; indicating alternatives and issues before the group; giving examples, defining terms. 5. SUMMARIZING: Pulling together related ideas; restating suggestions after group has discussed them; offering a decision or conclusion for the group to accept or reject. 6. CONSENSUS TESTING: Checking with the group to see how much agreement has been reached and how ready the group members are to consider a decision. | <ol style="list-style-type: none"> 1. ENCOURAGING: Being friendly, warm, and responsive to others; accepting others and their contributions; regarding others by giving them an opportunity to contribute or be recognized. 2. HARMONIZING: Attempting to reconcile disagreements; reducing tension, getting people to explore their differences. 3. EXPRESSING GROUP FEELINGS: Sensing feelings, mood, relationships within the group; sharing one's own feelings with other members. 4. GATE KEEPING: Helping to keep communication channels open; facilitating the participation of others; suggesting procedures that permit sharing remarks. 5. COMPROMISING: When own ideas or status is involved in a conflict, offering a compromise which yields status; admitting error; modifying ideas in interest of group cohesion or growth. 6. STANDARD SETTING AND TESTING: Checking whether the group is satisfied with its procedures; suggesting new procedures when necessary. | <ol style="list-style-type: none"> 1. DOMINATING: Asserting authority or superiority to manipulate the group or certain members; interrupting contributions of others; controlling through use of flattery, patronizing. 2. WITHDRAWING: removing self psychologically or physically from the group; not talking; answering any questions briefly. 3. AVOIDING: Changing the topic; uncomfortable with conflict; frequently absent. 4. DEGRADING: Putting down others' ideas and suggestions; deflating others' status; joking in a barbed or sarcastic way. 5. UNCOOPERATIVE: Disagreeing and opposing ideas; resisting stubbornly the group's wishes for personally oriented reasons; using hidden agenda to thwart group progress. 6. SIDE CONVERSATIONS: Whispering and having private conversations across the table with another person. |

* Source: Hart, Lois, B., *Faultless Facilitation*, p. 12, 1992.

4. ADULT BEHAVIOUR IN GROUPS:

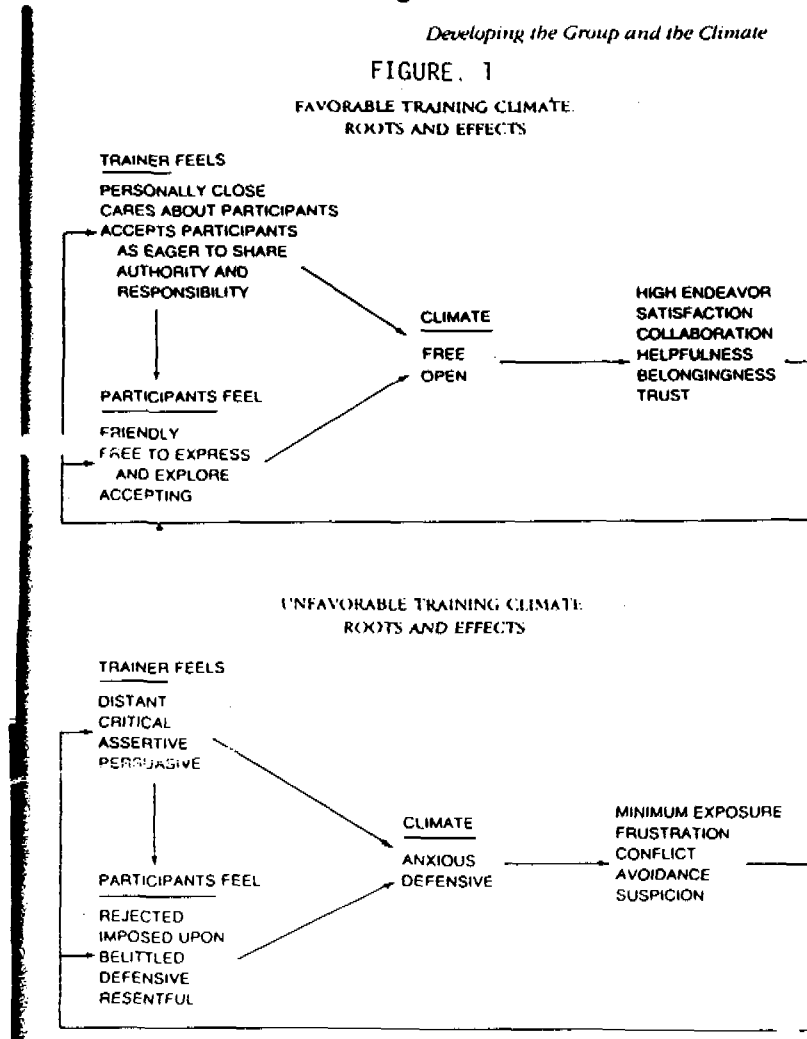
Skilled facilitators and trainers learn to recognize various role which participants play in groups, and know how to take advantage of these rather than fight them. In general, most of these roles help in accomplishing group goals and maintaining a supportive environment. But it also helps to be able to define roles which block learning so that leadership can be provided to help individuals to change, or groups to overcome blocks.

A variety of labels have been applied to various roles...leaders, followers, workers, authorities, advisors, entertainers, peacemakers, etc. Hart, in Table F., offers a useful breakdown:

5. RESISTANCE TO TRAINING AND "CLIMATES" WHICH INFLUENCE LEARNING:

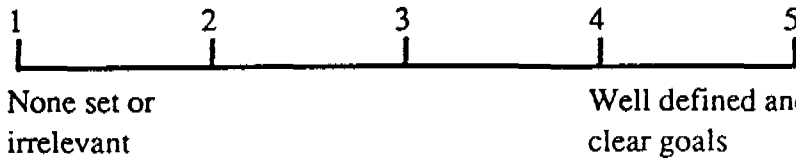
Even with the best of preparations and facilitator skills, some resistance to training is to be expected. Participants bring with them their own personalities, parochial self-interest, distrust, levels of self-esteem and confidence. They respond differently to perceived peer group pressures and first impressions. Many will be ambiguous about attending the course, its timing, content or duration; they will arrive with thoughts still on other pressures, demands and frustrations.

Hopefully, sensitive facilitators and skillful trainers will be able to minimize disruption resulting from such resistance by establishing a favorable training climate. Lynton and Pareek, in Figure 1., lay out favorable and unfavorable training climates.

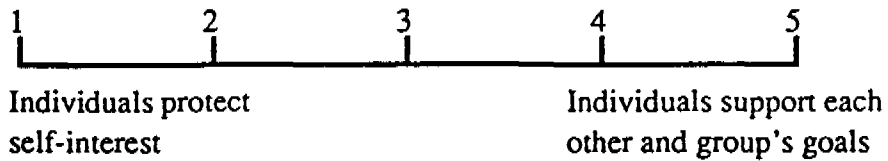


FORM 1.

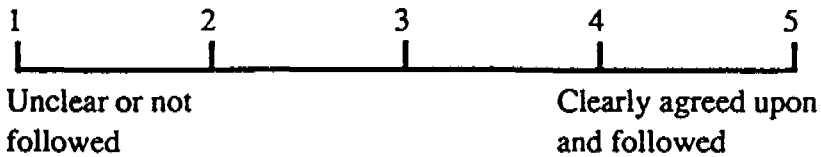
Hart offers a tool for assessing the training climate via a scaled evaluation form, as follows:



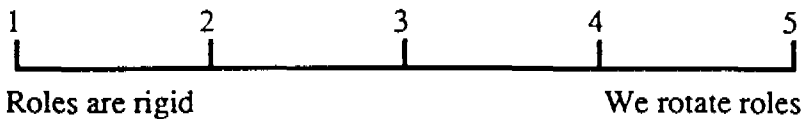
Commitment



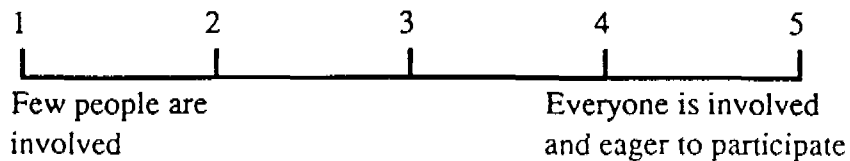
Procedures & Guidelines

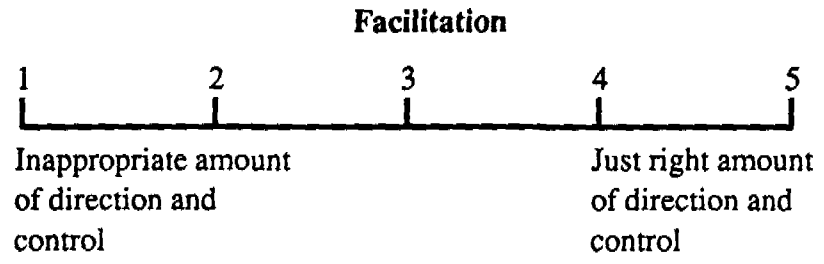
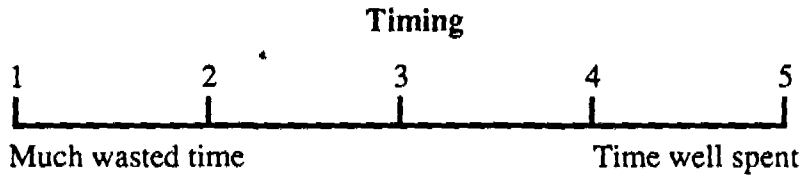
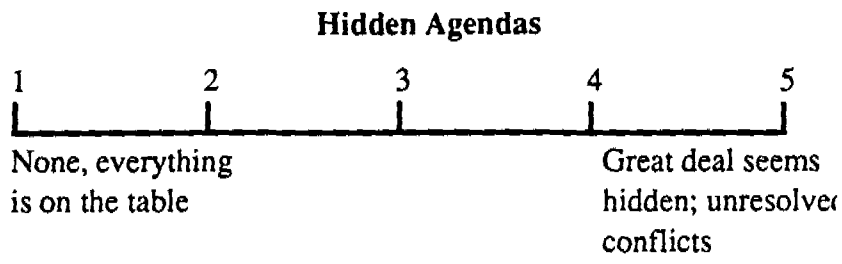
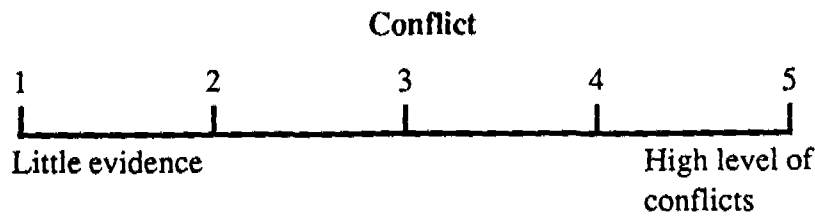
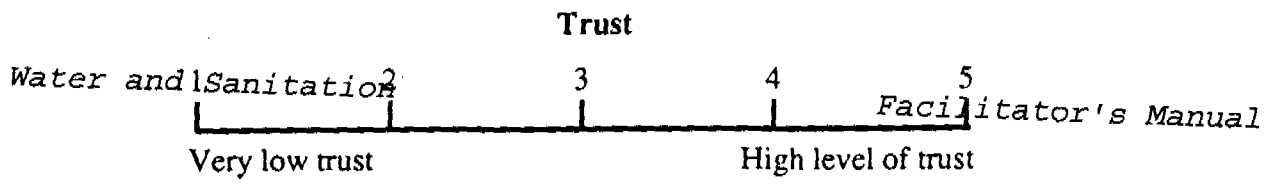


Roles



Participation





It is well worth considering using this form as a monitoring tool by having participants complete it after the first, third and final days of training. Summaries can be presented to participants for discussion.

6. PHYSICAL FACTORS WHICH INFLUENCE LEARNING:

Physical factors can have both overt and subtle impacts on learning. Facilitators will wish to assure that:

- seats are comfortable;
- lighting is not too bright or too dim;
- room temperature is appropriate for participants;
- participants can see you, visual aids and each other;
- messages can be received without undue disruption;
- rules about smoking are clear;
- breaks are provided for about every 90 minutes;
- windows can be open, closed or covered, as needed;
- noise and other distractions are kept to a minimum.

Room configurations do more than allow for vision or hearing. They constitute a statement about the status of participants and what is expected of them. Rows and columns imply a teacher-centered model, with communications being directed from an information giver to a receiver. Other patterns establish expectations for participant interactions, teamwork or greater equality. Each pattern has its uses and limitations, according to learning goals and situations. Take some time to consider the significance of your choices.

There are countless patterns possible. In Figure 2., Hart offers a series of room configurations other than straight rows and columns:

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 1: WHY SHOULD WE INTEGRATE WATER, SANITATION AND HYGIENE EDUCATION

1. Review the session objectives

Participants will be able to:

- give at least four reasons for integrating water, sanitation and hygiene education;
- explain how integration of water, sanitation and hygiene education can lead to improved opportunities for achieving the global goals in water and sanitation;
- relate at least four ways to improve integration at entry level.

2. Explain that the following methodology will be used:

- Group Exercise
- Plenary
- Overview by Facilitator
- Individual Exercise
- Plenary
- Group Exercise
- Plenary
- Summary and Evaluation of session

3. Design and Timing:

- Exercise I: Why ^{and how} Integrate Water, Sanitation and Hygiene Education? 5 minutes
- Plenary 10 minutes
- Overview by Facilitator 10 minutes
- Exercise II: Present Levels of Integration in water, sanitation and hygiene education? 10 minutes
- Plenary 5 minutes
- Exercise III: Ways to Improve Integration . (how) 10 minutes
- Plenary 10 minutes
- Summary and Evaluation of session 5 minutes

TOTAL 1 HOUR AND 5 MINUTES

HOW TO PROCEED

1. GROUP EXERCISE I: WHY INTEGRATE

Ask the participants in pairs to write down one reason why integrating water, sanitation and hygiene education can bring increased programme benefits.

2. PLENARY

Ask the groups to read out their responses and record these on flipcharts.

3. OVERVIEW BY FACILITATOR

Explain the following:

- Many health impact studies have been performed which have encountered numerous problems. However summaries of these studies have shown that the health benefits of water combined with a strong sanitation and hygiene education programme are more successful than when not combined (Transparencies 1.1.2 and 3).
- A study in 1990 (Esrey et al.) reviewed 144 health impact analyses. The conclusions were that water, sanitation and hygiene education interventions had different impacts on incidence of different diseases (Transparency 1.1.4).
- There are many other benefits from providing water and sanitation services (Transparency 1.1.5) namely:
 - 1) Time and energy savings for women and young girls.
 - 2) Improved hygienic use of water at home.
 - 3) Improved economic activity related to more available water.
 - 4) Improved water-related attitudes and beliefs.
 - 5) Through community participation and through skills learnt, greater ability to apply problem solving and organisation skills in future projects.
 - 6) Health benefits related to reduced incidence of diarrhoeal diseases, parasitic and skin infections.

- However certain conditions are necessary before any socio-economic changes will occur (Transparency 1.1.6).
- Developing a successful integrated programme does not have to detract from the targets of achieving universal coverage. It may slow activities initially, but thereafter, due to increased benefits, it can lead to increased involvement and sustainability at village level (Transparency 1.1.8).
- Time has to be given to developing an integrated approach. Different approaches will need to be attempted and attention given to the development of suitable sanitation and hygiene education components.

2. EXERCISE II: PRESENT LEVELS OF INTEGRATION

Ask the participants to individually complete questions one to three of the answer sheet on page ten of the session notes.

3. PLENARY DISCUSSION

Discuss the responses by asking the participants randomly to give their views on present levels of integration within their programmes. List the constraints on one flipchart and how these were overcome on a second flipchart.

4. EXERCISE III: WAYS TO IMPROVE INTEGRATION

Ask the participants to respond to question four on the answer sheet in their groups. Their answers should be recorded on overhead transparencies.

5. PLENARY

Ask all groups to present their answers.

6. SUMMARY AND EVALUATION

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 1: WHY SHOULD WE INTEGRATE WATER, SANITATION AND HYGIENE EDUCATION

OBJECTIVES

By the end of the session, you will be able to:

- **give at least four reasons for integrating water, sanitation and hygiene education;**
- **explain how integration of water, sanitation and hygiene education can lead to improved opportunities for achieving the global goals in water and sanitation;**
- **relate at least four ways to improve integration at entry level.**

EXPECTED REDUCTION IN MORBIDITY FROM IMPROVED WATER SUPPLY AND SANITATION*

| | NUMBER OF STUDIES | MEDIAN | RANGE |
|--------------------------------------|----------------------|--------|----------|
| DIARRHOEAL DISEASES | | | |
| - MORBIDITY | 49 | 22% | 0 - 100% |
| - MORTALITY | 3 | 65% | 43 - 79% |
| ASCARIASIS | 11 | 28% | 0 - 83% |
| GUINEA WORM | 7 | 76% | 37 - 98% |
| HOOKWORM | 9 | 4% | 0 - 100% |
| SCHISTOSOMIASIS | 4 | 73% | 59 - 87% |
| TRACHOMA | 13 | 50% | 0 - 91% |
| OVERALL IMPACT ON CHILD MORTALITY | 9 | 60% | 0 - 82% |

* Indicates Morbidity Reduction Unless Noted Otherwise

Source: S.E. Esrey et al., "Health Benefits from Improvements in Water Supply and Sanitation: Survey and Analysis of the Literature on Selected Diseases" WASH Technical Report No. 66, April 1990.

PERCENTAGE REDUCTION IN DIARRHOEAL MORBIDITY
RATES ATTRIBUTED TO WATER SUPPLY AND/OR
EXCRETA DISPOSAL IMPROVEMENTS

| TYPE OF INTERVENTION | NUMBER OF RESULTS | PERCENTAGE REDUCTION | |
|--|-------------------|----------------------|---------|
| | | MEDIAN | RANGE |
| All Interventions | 53 | 22 | 0 - 100 |
| Improvements in water quality | 9 | 16 | 0 - 90 |
| Improvements in water availability | 17 | 25 | 0 - 100 |
| Improvements in water quality & availability | 8 | 37 | 0 - 82 |
| Improvements in excreta disposal | 10 | 22 | 0 - 48 |

Source: Esrey, Feacham and Hughes, "Interventions for the control of diarrhoeal diseases among young children: Improving water supplies and excreta disposal facilities", Bull. WHO, 63(4), 757-772 (1985).

POTENTIAL RELATION BETWEEN WATER AND SANITATION INTERVENTIONS AND MORBIDITY DUE TO SELECTED DISEASES

Source: Esrey et al., "Health Benefits.." WASH T. Rep. No.66

| | IMPROVED/INCREASED WATER | | EXCRETA DISPOSAL | |
|-----------------|--------------------------|------------------|------------------|----|
| | QUALITY | QUANTITY | | |
| | | DOMESTIC HYGIENE | PERSONAL HYGIENE | |
| DIARRHEA | + | ++ | ++ | ++ |
| ASCARIASIS | + | ++ | - | ++ |
| GUINEA WORM | ++ | - | - | - |
| HOOKWORM | - | - | - | ++ |
| SCHISTOSOMIASIS | - | ++ | ++ | ++ |
| TRACHOMA | - | + | ++ | - |

Two pluses indicate that the intervention will have a stronger impact than an intervention with only one plus. A blank (-) indicates that the specific component has little or no impact on reducing disease rates. For a particular disease, a package of interventions with two pluses is expected to produce a larger impact than any one alone.

BENEFITS FROM WATER AND SANITATION

- 1) Time and energy savings for women and young girls.
- 2) Improved hygienic use of water at home.
- 3) Improved economic activity related to more available water.
- 4) Improved water-related attitudes and beliefs.
- 5) Through community participation and through skills learnt, greater ability to apply problem solving and organisation skills in future projects.
- 6) Health benefits related to reduced incidence of diarrhoeal diseases, parasitic and skin infections.

NECESSARY CONDITIONS PRIOR TO SOCIO-ECONOMIC CHANGES

- 1) time and energy savings for women and young girls will not be realised unless sources of water are made more convenient and reliable;
- 2) improved hygienic use of water in the home; and availability of water for economic activities depend upon an increased quantity of water available per capita per day;
- 3) improved hygienic use of water in the home will be realized as latrines are put in use by nearly all families in a community and as special efforts are made to train mothers and children in the proper disposal of the stools of small children;
- 4) changes in attitudes and beliefs related to water use and sanitation will take place only very slowly as the other benefits of a programme are experienced by a population; and
- 5) the enhanced ability of a local community to tackle other problems of local development assumes that its participation in the water supply and sanitation project has been successful.

**TO MAXIMISE HEALTH BENEFITS OF PROJECTS,
THE FOLLOWING FACTORS
SHOULD BE CONSIDERED:**

- ▶ **Water supplies should be as close as the home as possible.**
- ▶ **Water supply and health programmes should emphasise hygiene education.**
- ▶ **Sanitation facilities should be culturally appropriate.**
- ▶ **Use of facilities is essential during critical season transmission periods for diseases.**
- ▶ **In achieving health impacts, safe excreta disposal and proper use of water for personal and domestic hygiene appear to be more important than water quality.**
- ▶ **Sanitation facilities should be installed in conjunction with water facilities when faecal-related diseases are prevalent.**

Developing a successfully integrated programme does not have to detract from the targets of achieving universal coverage. It may slow activities for the initial phase, but thereafter, due to increased benefits, it can lead to increased involvement and sustainability at village level.

The primary rationale for integration of water supply and sanitation is their complementarity. The expected benefits from improved water supply are basically the same as those for sanitation, namely: CONVENIENCE, HEALTH and ECONOMIC PRODUCTIVITY.

**BEFORE PLANNING AN INTEGRATED PROJECT,
THE FOLLOWING SHOULD BE UNDERTAKEN:**

- 1. Assess existing resources including manpower and financial within government, NGOs and private sector.**
- 2. Evaluate ongoing and past sector programmes.**
- 3. Collect relevant information at community level including assessment of village level, organisation including committees, socio-economic status and ability to pay, health behaviour patterns and provision of health services.**
- 4. A analysis of the present situation with respect to women and children.**

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 2: MAKING THE CASE FOR IMPROVED PROGRAMME LINKAGES

1. Review the session objectives

Participants will be able to:

- list at least three reasons why improved programme linkages are important;
- list at least five ways to link WATSAN with health, nutrition and education respectively;
- describe three ways to improve inter-sectoral cooperation within UNICEF-assisted programmes;
- identify the programme implications of health impact studies related to water and sanitation.

2. Explain that the following methodology will be used:

- Exercise I: Developing Inter-Sectoral Programmes
- Plenary
- Overview by Facilitator
- Group Work
- Exercise II: Health Impact of water and Sanitation Programmes
- Plenary Discussion
- Summary and Evaluation of Session

3. Design and Timing

- Exercise I: Developing Inter-Sectoral Programmes 20 minutes
 - Plenary 15 minutes
 - Overview: Inter-relationship between disease and malnutrition; conceptual framework, for analysing the underlying causes of morbidity and mortality 15 minutes
 - Exercise II: Health Impact of Water and Sanitation Programmes 45 minutes
 - Plenary 20 minutes
 - Summary and Evaluation 5 minutes
- TOTAL 2 HOURS**

HOW TO PROCEED

1. EXERCISE I: DEVELOPING INTER-SECTORAL PROGRAMMES

Ask participants in their groups to complete the exercise: Developing Inter-Sectoral Programmes on page eleven of the session notes.

For question b and c, refer to learning points 16 and 24 in the participants manual which list some examples of programme coordination and ways to improve this.

2. PLENARY

Ask each group to present their responses separately on overhead transparencies.

3. OVERVIEW BY FACILITATOR:

- 3.1 Explain the triple A Approach as developed by the Nutrition Cluster, UNICEF (Transparency 1.2.2) including:

Most discussions are consecutive steps in a process of assessing the problem, analysing its causes and taking action based on this analysis. Normally the results of these actions are observed and analysed, and then new actions taken. It is therefore important in any programme development to acknowledge the processes, identify them and learn how they function to be able to design actions to support and accelerate the most promising.

ASSESSMENT

The decision to make an assessment is dependent on awareness and commitment, while the quality of the assessment is dependent on perceptions of the nature of the problem.

ANALYSIS

The determinants of disease and malnutrition are very complex while others are more context-specific. If the analysis is performed by a combination of people from different disciplines and backgrounds, it is more likely that the whole exercise will be successful.

ACTION

Based on the analysis of causative processes and an assessment of available or potential resources, actions are designed and implemented.

3.2 The Conceptual Framework

Malnutrition, morbidity and death are the results of a long sequence of interlinked events. It is difficult to base any action in the assessment of those manifestations of malnutrition but they indicate the situation is serious and requires further investigation. (Transparency 1.2.3)

Inadequate dietary intake and disease are the most significant immediate cause of malnutrition. In most cases malnutrition is the combined result of inadequate dietary intake and disease.

Use Transparency 1.2.4 to discuss the criteria for the conceptual framework.

Dietary inadequacies might be caused by an inadequate supply of food or by mothers having too little time to prepare food or to feed their children. Similarly, death from disease may result from any one or a combination of causes, such as the lack of or low utilisation of health services, inadequate water supplies and sanitary facilities, poor food hygiene or inadequate child care. It is only in a particular context that the exact causes can be identified. These underlying causes can be numerous and are usually interrelated. In order to simplify analysis at this level, the underlying causes may be grouped into three main clusters: basic health services and a healthy environment; household food security; and maternal and child care.

Of the three clusters, the first two are prerequisites for adequate dietary intake and the control of common diseases among children. However, plentiful food of good quality, the availability of health services and a healthy environment are not enough in themselves to ensure adequate nutrition or proper health care in children and women. There also has to be a system to ensure that the foods and health services are properly used for the benefit of children and women. Defined in broad terms, the maternal and child care sector encompasses some of the services necessary in this system. Education, water and environmental sanitation and housing may all affect the outcome of any of these sectors.

Use Transparencies 1.2.5 and 1.2.6 to show the Conceptual Framework from a negative and positive perspective.

The lack of ready access to water and poor environmental sanitation are important underlying causes of malnutrition. These conditions directly affect health, food production and preparation and general hygiene. Inadequate access to water also affects nutrition indirectly by increasing the work load of women, thus reducing the time available for child care.

The framework primarily should help in asking relevant questions. It accommodates possible determinants but also facilitates reduction to the most important determinants in a given context. It further facilitates dialogue and cooperation among people of different professions.

It also helps to clarify the objectives of actions selected for implementation.

Use Transparency 1.2.7 to discuss conclusions of using the conceptual framework.

4. EXERCISE II: HEALTH IMPACT OF WATER AND SANITATION PROGRAMMES

The participants should be allocated one of the two case studies the night before in order to read the article in preparation for the session. They should be allowed 45 minutes to discuss the questions and prepare overheads for the plenary. Use the exercise sheet on page 20 of the session notes.

5. PLENARY

Ask the groups for each case study to present their responses. Discuss the results only after each case study has been finished.

6. SUMMARY AND EVALUATION

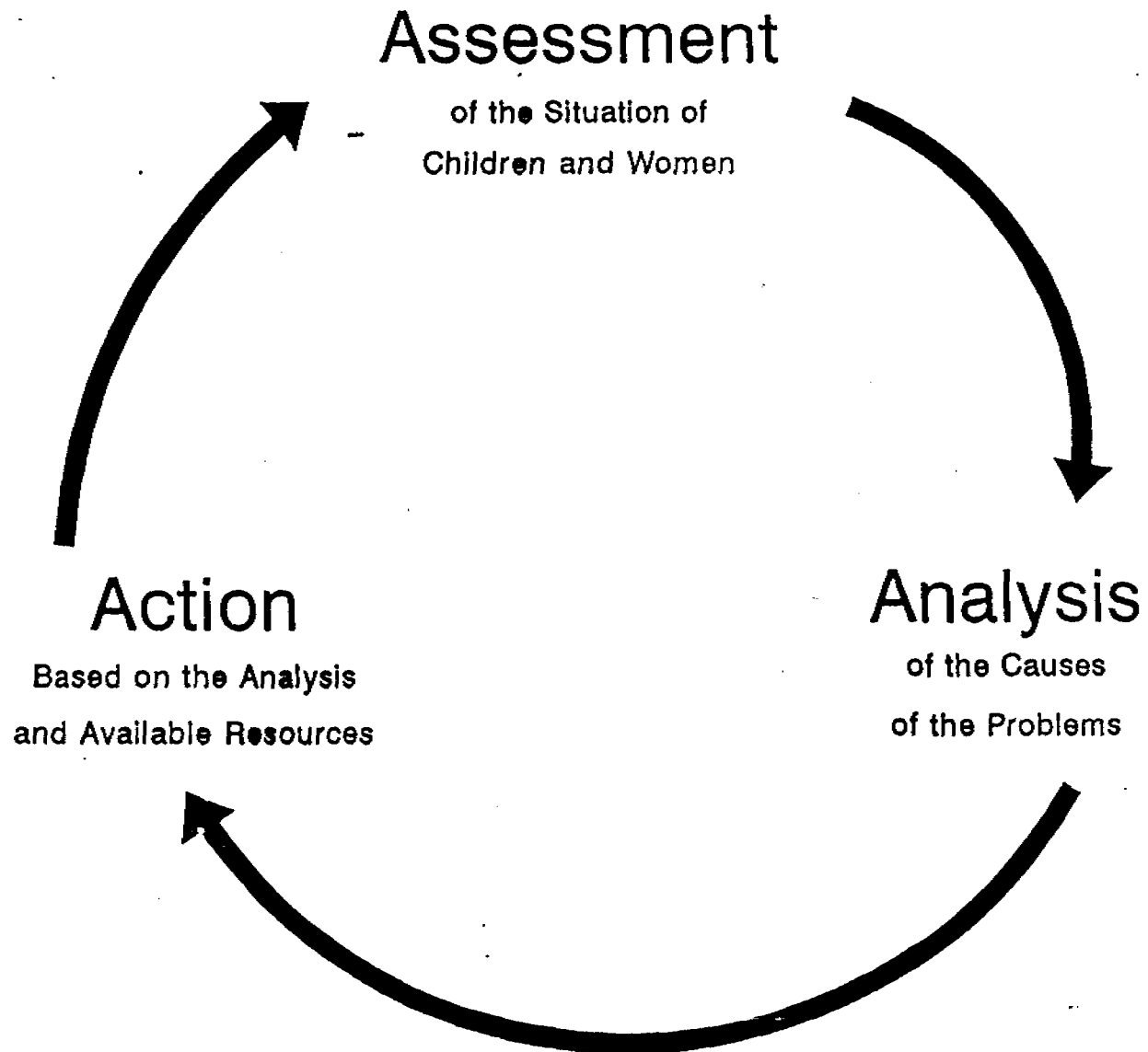
MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 2: MAKING THE CASE FOR IMPROVED PROGRAMME LINKAGES

OBJECTIVES

By the end of the session, you will be able to:

- **list at least three reasons why improved programme linkages are important;**
- **list at least five ways to link WATSAN with health, nutrition and education respectively;**
- **describe three ways to improve inter-sectoral cooperation within UNICEF-assisted programmes;**
- **identify the programme implication of health impact studies related to water and sanitation.**



THE FRAMEWORK HAS THREE DISTINCT CYCLICAL STAGES

- **ASSESSMENT**

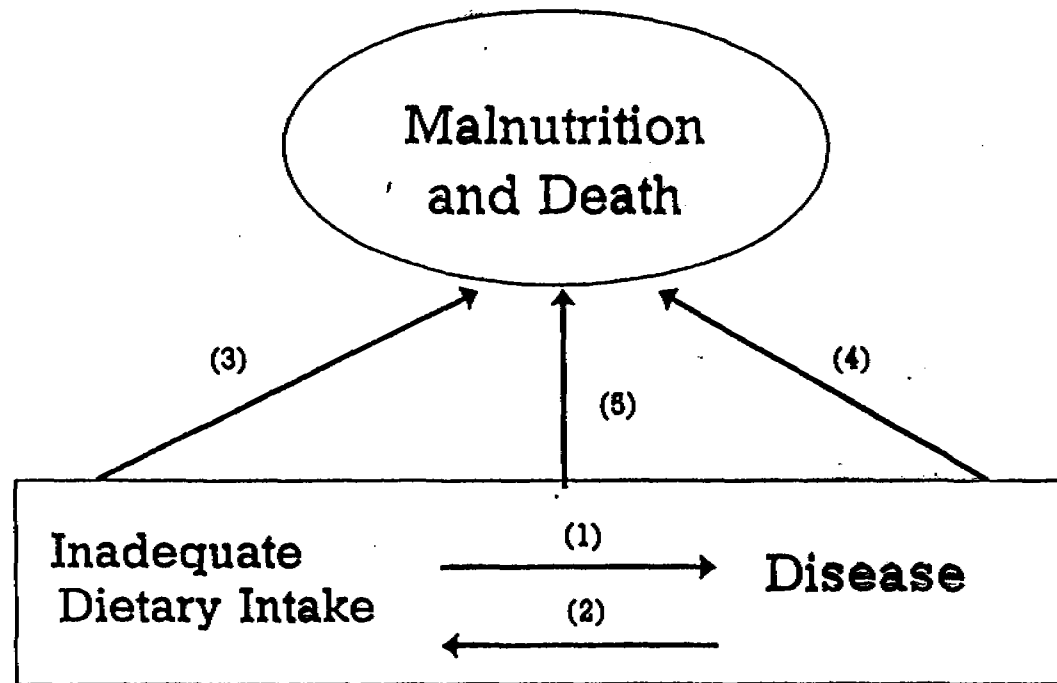
An assessment is made of the relevant responsibilities and activities in a given situation or area to draw out in detail who does what. It is important to understand how current realities of womens life absorb time and resources.

- **ANALYSIS**

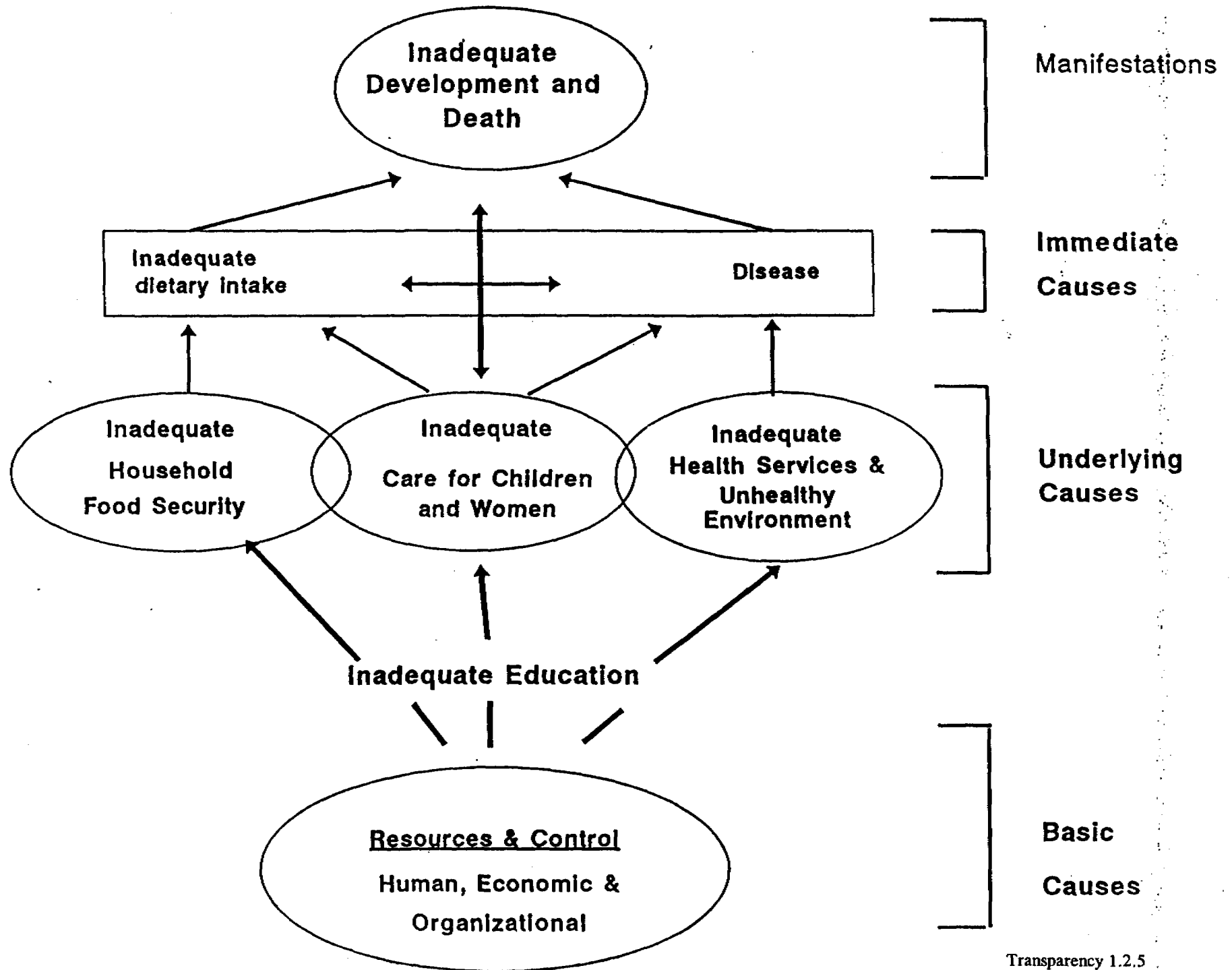
At this stage the hierarchy of causes is applied to a specific problem which has been identified either through the assessment or prior to it.

- **ACTION**

At this stage answers should be sought to ascertain what should and can be done to solve the problem or manifestation. The following processes should be completed: identification, planning and formulation, implementation, monitoring and evaluation.



Causes of Inadequate Child Development and Death



Determinants of Child Survival & Development

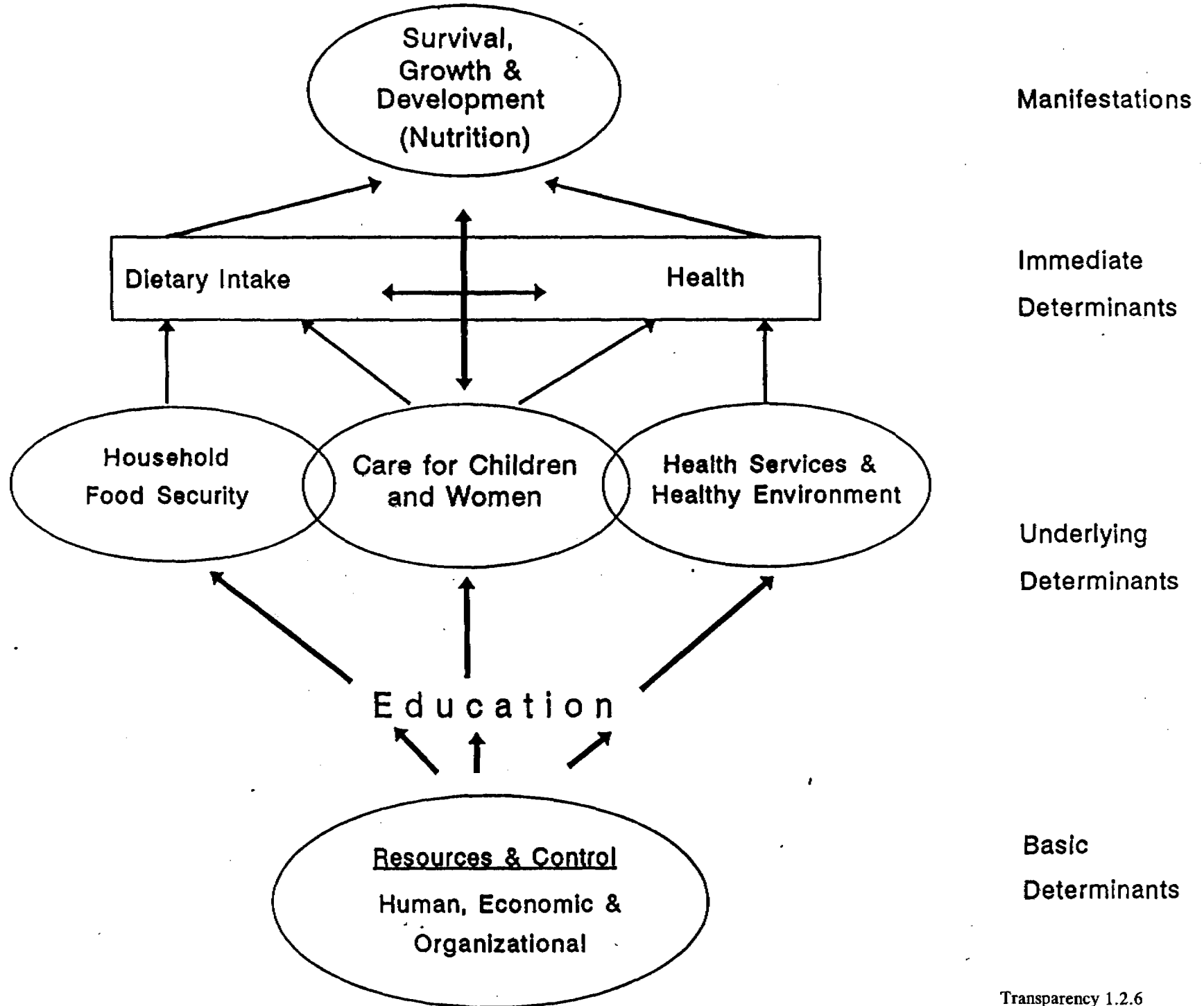
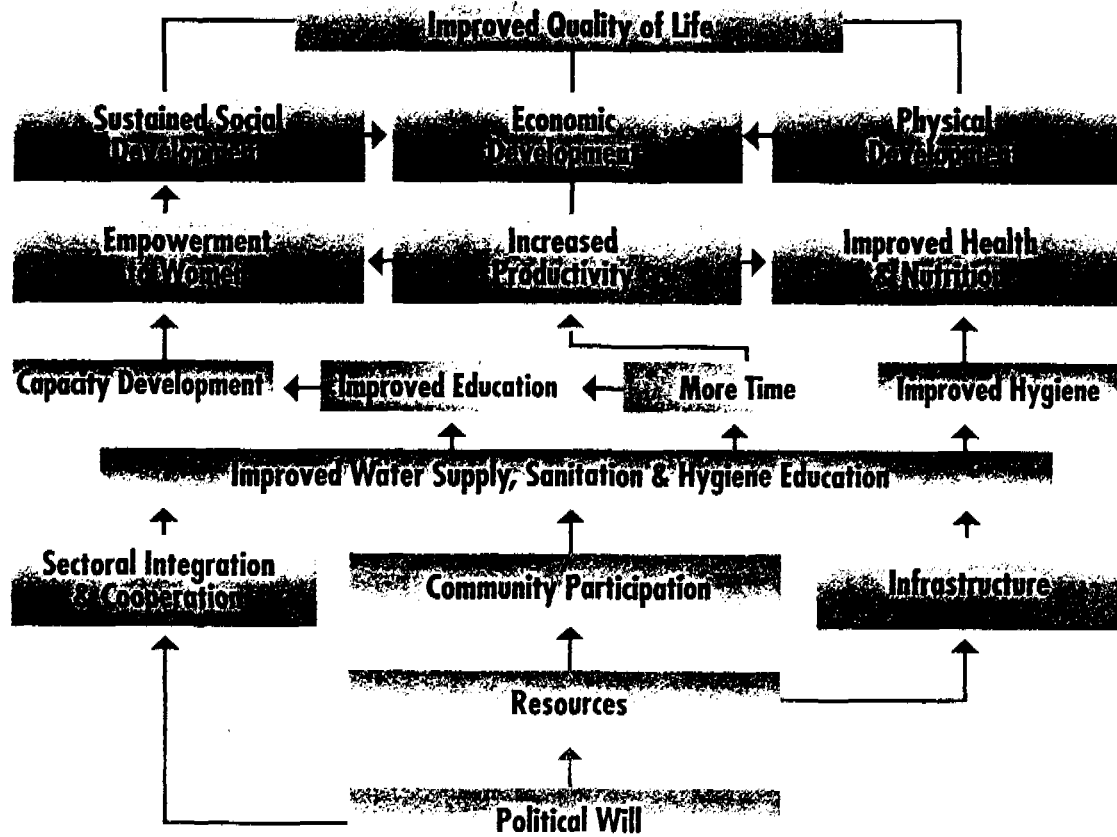


Figure 11

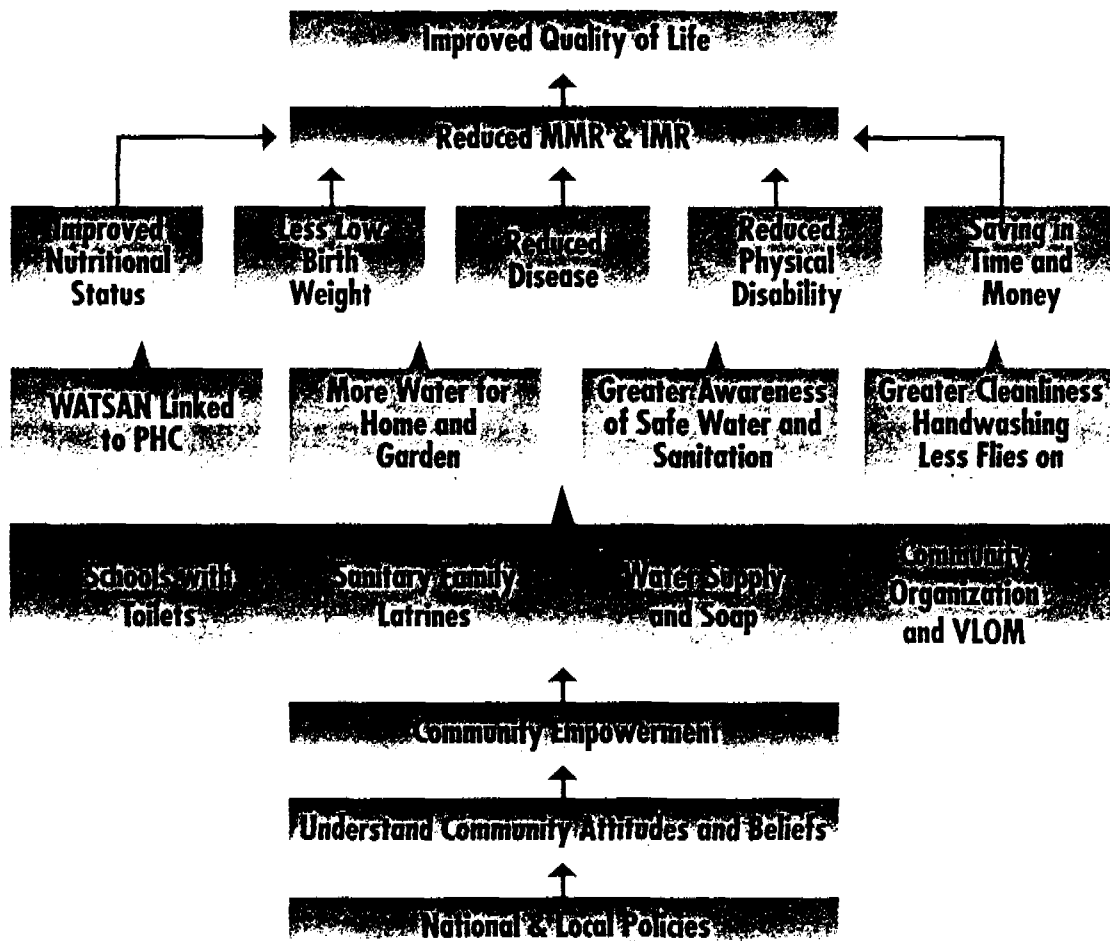
WES conceptual framework: Part B



- Water and Sanitation Programmes

Figure 12

WES conceptual framework: Part C



CONCLUSIONS

- ◆ There is a "hierarchy" of causes
- ◆ Some causes are proximate, others more underlying or basic
- ◆ Disease & dietary in-take are immediate causes of malnutrition
- ◆ "Food-chain" models are "food-biased"
- ◆ Complex models show that everything depends on everything

INTEGRATION
VS
INTERLINKAGES

- **Both terms are used to describe interventions**
- **An integrated intervention is one in which the components are indivisible - if you want one, you get them all!**
- **Interlinked interventions are separate interventions, each of which has a greater (more rapid?) impact because of the progress of other interventions at or about the same time.**

SUMMARY OF HOW TO INTERLINK

- **A conceptual framework is necessary**
- **The Country Programming Exercise is a critical opportunity**
- **Develop better relationships with multi-sectoral ministries e.g. planning, local government**
- **Look for bi-sectoral opportunities e.g.**
 - **Water, latrines at health posts schools**
 - **Watsangiene training to promote EPI, ORT, etc.**
 - **Hygiene education through schools and health workers**
- **41 ca-based, area-focused programmes provide special opportunities**
- **Get involved in the PMC policy development process**
- **Link with successful programmes, movements**

DEVELOPING INTERSECTORAL LINKAGES

Country Programme Objectives:

- Reduce IMR by 50% by next week
- Reduce malnutrition by 150%
- Reduce MMR to 1 per 100,000 LG
- Eradicate female illiteracy

| <u>You are</u> | <u>How do you link with?</u> |
|-----------------------|------------------------------|
| 1. Health & Nutrition | WATSANGIENE |
| 2. Education | WATSANGIENE |
| 3. WATSANGIENE | HEALTH & NUTRITION |
| 4. WATSANGIENE | EDUCATION |

- **Bamako Initiative (revolving funds) for spares**
- **Area-based**
- **Growth-monitoring**
- **Facts for life**
- **Adult literacy materials**
- **Guinea worm**
- **Cholera/epidemics**
- **Nutrition**
- **IDD**
- **EFA Policy discussion**

WHY LINKAGES ARE IMPORTANT

- **People are not sectoral!**
- **Progress towards "sectoral" goals is accelerated and reinforced by progress in other sectors**

SYNERGISM **enhances**

Progress in:

Health

Education

Water, Sanitation, Hygiene

Progress in:

**Education, Water,
Sanitation, Hygiene**

**Health, Water,
Sanitation Hygiene**

Education, Health

- **Interlinkages lead to more efficient and effective use of scarce human, material, logistic and financial resources**

- **Despite the logic and rhetoric over intersectoral linkages**

**WE HAVE NOT BEEN WORKING
TOGETHER AS A TEAM!**

- **Each side of the "argument" can find "evidence" to support its case**
- **But are we wasting our time?**

Most health impact studies and cost effectiveness comparisons are methodologically flawed

WHAT HAPPENS WHEN LINKAGES ARE WEAK?

What problems do you face when services, projects, programmes, funding are divided sectorally?

- As a mother in a poor community
- As a chairman of a District Development Committee
- As the Minister of Planning
- As the UNICEF Representative

MODULE 1: INTRA- AND INTER SECTORAL LINKAGES

SESSION 3: THE HEALTH IMPACT OF WATER SUPPLY AND SANITATION PROGRAMMES: SEPARATING MYTH FROM REALITY

1. Review the session objectives

Participants will be able to:

- understand why water and sanitation are considered basic elements of primary health care;
- list key elements and weaknesses of health impact studies;
- Explain why water and sanitation interventions are considered more expensive than other aspects of child survival and the implications for designing more cost-effective programmes.

2. Explain that the following methodology will be used:

- Overview by Facilitator
- Plenary Discussion
- Group Exercise
- Plenary
- Summary and Evaluation of Session

Design and Timing

- Overview by Facilitator 20 minutes
 - Plenary Discussion 5 minutes
 - Exercise: Health Impact in
Developing Countries: New Evidence
and New Prospects by A.M. Cairncross 30 minutes
 - Plenary 30 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR AND 30 MINUTES**

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

1.1 BASIC ELEMENTS OF PRIMARY HEALTH CARE

Ask participants to give eight essential components of primary health care. Discuss the importance of the Declaration and how water and sanitation plays a role in primary health care.

1.2 HEALTH IMPACT STUDIES

Water and sanitation programmes have economic and social, as well as health implications, these decisions are not and should not be made solely on the basis of health considerations. Nonetheless it is evident that reliable information on impact of water and sanitation programmes is necessary if sound decisions are to be made.

1.3 Discuss approach of "Selective Primary Health Care" that has been promoted through Warren and Walsh's concept which received widespread and generally favourable attention in the scientific and development communities.

The SPHC package that emerged was almost exclusively medical e.g. vaccination, oral rehydration, more systematic non-medical activities in general, and community water supply and sanitation programmes in particular, were rejected as not being cost effective.

Describe the methodological problems that have beset health impact evaluations as recorded by Blum and Feachem (1983), (Transparency 1.3.3).

- ◆ Epidemiological evidence that a given treatment (or intervention) has produced a specific effect is best established in the context of a randomised control trial where the treatment (or intervention) is randomly allocated to individuals (or areas).

Problem: Environmental interventions are not as a rule introduced on a random basis but rather as a result of political, economic, humanitarian and other considerations.

- ◆ Random allocation is sometimes possible mostly it is not → in both cases, methodological problems must be controlled.

◆ Eight major methodological problems:

1) Lack of adequate control

Without adequate control observations, there is no way of distinguishing between health improvements resulting from intervention and those that would have occurred anyway because of other factors.

Controls must be similar to intervention sample except for the intervention itself.

2) The one-to-one comparison

Unit of analysis = community, not individual

Some studies compare one control and one intervention village analogous to comparing two individuals for the effect of a drug - *it is not valid*.

You can confine study to different groups within one village but this has problems of confounding and is not usually generalisable.

Solution: *Increase sample size*

3) Confounding variables = factors that might conceivably influence the selected health indicators

Key: identify confounding factors and measure them at the outset as well as at regular intervals.

Solution: *control for as many confounding variable as possible.*

4) Health indicator recall

e.g., with diarrhoea surveys - remembering episodes over a set period of time.

Reasons why such info may be unreliable or incomplete

- a) diarrhoeal history of child unknown to the respondent
- b) unwillingness to divulge information even if known
- c) respondent is unable to remember episodes accurately (shortest period possible should be chosen)

Unlikely that recall problems will occur randomly because of confounding factor of intervention.

Solution: choose 48 hours or less as recall period or rely on presence of infection as indicator (has its own problems)

5) Health indicator definition

Need to standardize definitions which are applicable to particular cultural settings

Solution: carefully define indicators

6) Failure to analyse by age

Diseases and infections considered in environmental impact studies are unevenly distributed by age (e.g. diarrhoea affects young children)

Solution: age-specific data analysis

7) Failure to record facility usage

Water supplies and latrines by themselves have no impact on health

Impact depends on how and by whom they are used

Determining usage : ask/observe (this is preferable)

Solution: Record/observe use and non-use (e.g. use of facilities vs. defecation in the open)

8) Seasonality

Analyse data by season

Solution: try to observe during different seasons → if not, control for imbalance.

◆ Recommendations:

- opportunistic rather than 'set piece' studies
- study a limited selection of health and environmental variables in the context of a specific hypothesis about how a given intervention may affect a given infection.

Solution: Collect data on "intervening processes" e.g. usage of new facilities.

FOR PROGRAMME, EVEN MORE IMPORTANT THAN THE FACT THAT THERE WAS AN IMPACT IS WHY THERE WAS AN IMPACT.

IDEAL TEAM: ENGINEERS, EPIDEMIOLOGISTS AND SOCIAL SCIENTISTS.

◆ **Conclusions**

- Taken as a whole health impact studies provide firm evidence that water supplies, excreta disposal and hygiene education can have a significant impact on diarrhoeal disease.
- Need to go beyond health impact - focus on behaviour



***THE FACT THAT THERE WAS AN IMPACT IS INTERESTING
BUT WHY WAS THERE AN IMPACT?***

Discuss each of these problems referring to the learning points in the participants manual.

1.4 COST-EFFECTIVENESS

Stress that both the Warren and Walsh and the Patel studies referenced fail to consider some important factors (Transparency 1.3.3).

FACTORS TO CONSIDER WHEN CALCULATING COST EFFECTIVENESS:

- Per capita costs quoted are based on the initial capital investment.
- If prorated for the lifetime of the system, the cost of water interventions would reduce considerably i.e. the system will continue to save lives beyond one year.
- Interventions such as ORT, ARI are costed on the basis of one episode therefore representing single point interventions rather than long term ones.

Conclude with the key question for UNICEF is rather than continuing to devote time and energy on "proving" the importance of water and sanitation for improved health, it seems more profitable to maximise the chance of this

occurring by improving programme linkages.

2. EXERCISE: HEALTH IMPACT IN DEVELOPING COUNTRIES

Give one question to each group from the exercise sheet on page nine and ask them to present their answers on overheads. Use the answer sheet prepared for guidance to participants.

1. "Health impact studies are not an operational tool for 'project evaluation' or 'fine-tuning' of interventions".

- a) What justification does Cairncross give for this statement?

Results are unpredictable, often surprising in that they offer no firm interpretation.

Duration is too short

Design too basic

- b) Based on your own experience, do you agree or disagree?

2. According to Cairncross, what are the main problems besetting attempts to demonstrate the health impact of water and sanitation interventions? Indicate whether you agree or disagree with his analysis.

Confoundings → People who are most sensitive to health education messages are different from those who are not.

If possible list 2 or 3 additional problems with health impact studies, based on your own experience.

No impact evident for substantial periods of time (too long term to help programme)

Impossible to target most malnourished, most vulnerable groups (unethical)

3. Given the several problems he identifies, what alternative(s) does Cairncross suggest?

- *Focus interventions on places where existing services are weakest.*
- *Groups in the most deprived situations are (1) most likely to pay for water; (2)*

respond best to improvements in hygiene.

- *Focus on behavioural changes related to hygiene improvements (if no changes occur, the only health benefits will be those stemming from improved water quality - often negligible).*
- *Focus on the conditions in which these behavioural changes occur.*
- *Need for guidelines for the study of hygiene practices.*

Do you agree? Can you think of any others?

3. PLENARY

Ask each group to present their responses. Discuss each response with the participants.

The conclusion of Cairncross' study is that more attention should be given to changing hygiene behaviour before attempting to measure health impact. Discuss with the participants the implication of this.

4. SUMMARY AND EVALUATION

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 17: THE HEALTH IMPACT OF WATER SUPPLY AND SANITATION PROGRAMMES: SEPARATING MYTH FROM REALITY.

OBJECTIVES

By the end of the session, you will be able to :

- **understand why water and sanitation are considered basic elements of primary health care;**
- **list key elements and weaknesses of health impact studies;**
- **Explain why water and sanitation interventions are considered more expensive than other aspects of child survival and the implications for designing more cost-effective programmes.**

ELEMENTS OF PRIMARY HEALTH CARE

- 1) Education on prevailing health problems and methods of prevention and control
 - 2) Promotion of food supply and proper nutrition
 - 3) Adequate supply of safe water and basic sanitation
 - 4) Maternal and child health care including family planning
 - 5) Immunisation against the major infectious diseases
 - 6) Prevention and control of locally endemic diseases
 - 7) Appropriate treatment of common diseases and injuries
 - 8) Provision of essential drugs
-

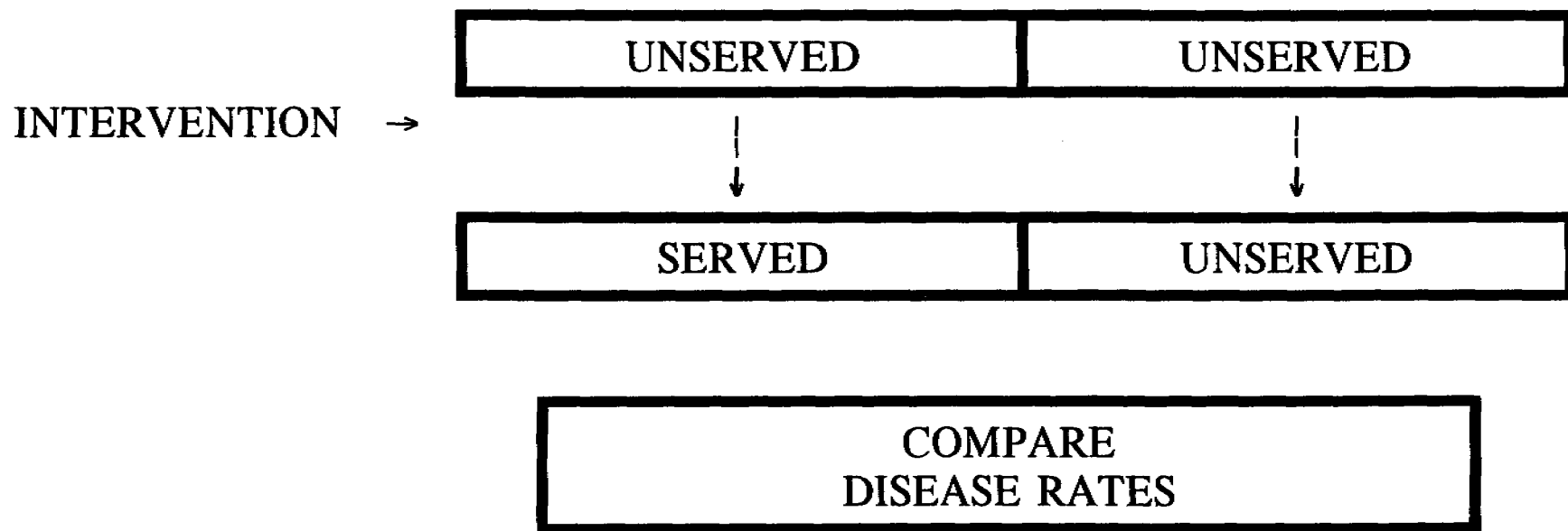
METHODOLOGICAL PROBLEMS OF HEALTH IMPACT STUDIES

- **Lack of adequate control**
- **The one to one comparison**
- **Confounding variables**
- **Health indicator recall**
- **Health indicator definition**
- **Failure to analyse by age**
- **Seasonality**
- **Failure to record facility usage
(intervening variables)**

FACTORS TO CONSIDER WHEN CALCULATING COST EFFECTIVENESS:

- Per capita costs quoted are based on the initial capital investment.
- If prorated for the lifetime of the system, the cost of water interventions would reduce considerably i.e. the system will continue to save lives beyond one year.
- Interventions such as ORT, ARI are costed on the basis of one episode therefore representing single point interventions rather than long term ones.

QUASI-EXPERIMENTAL STUDIES



- **WATER AND SANITATION ARE EFFECTIVE ENTRY POINTS FOR OTHER HEALTH PROGRAMMES**

- **SANITATION HAS A GREATER IMPACT THAN WATER SUPPLY ON THE HEALTH OF WOMEN AND CHILDREN.**

WHAT ARE THE MOST USEFUL THINGS TO MEASURE?

1+2 You want to improve the health impact of your interventions. What would you study, and why?

3+4 You want to improve the cost-effectiveness of your interventions. What would you study, and why?

NB No external expertise available - so keep it
SIMPLE!

IMPACT AND COST EFFECTIVENESS

- **Many studies have shown that water, sanitation and hygiene improvements have an impact on health, especially when combined**
- **Other studies have shown little or no impact**
- **Some studies have shown that other improvements such as immunization and oral rehydration are more cost effective "per death averted"**
- **This last observation led to the approach of "Selective Primary Health Care"**
- **This has been one of the main barriers to intersectoral linkages within UNICEF**

SUMMARY OF HOW TO INTERLINK

- **A conceptual framework is necessary**
- **The Country Programming Exercise is a critical opportunity**
- **Develop better relationships with multi-sectoral ministries e.g. planning, local government**
- **Look for bi-sectoral opportunities e.g.**
 - **Water, latrines at health posts schools**
 - **Watsangiene training to promote EPI, ORT, etc.**
 - **Hygiene education through schools and health workers**
- **41 ca-based, area-focused programmes provide special opportunities**
- **Get involved in the PMC policy development process**
- **Link with successful programmes, movements**

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 4: WATER AND SANITATION AS AN INTEGRAL COMPONENT OF THE CDD PROGRAMME

1. Review the session objectives

- understand the synergistic effect of integrating CDD and WES interventions;
- list at least three measures to advocate at the global level to integrate CDD and WES interventions;
- develop a strategy for linking CDD and WES at the country level.

2. Explain that the following methodology will be used:

- Overview by Facilitator
- Plenary Discussion
- Individual Work
- Group Work
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator 15 minutes
- Exercise I: Improved Linkages
between WES and CDD 10 minutes
- Plenary 5 minutes
- Exercise II: Strategies for
Improved Linkages 20 minutes
- Plenary 15 minutes
- Evaluation of Session 5 minutes

TOTAL 1 HOUR 10 MINUTES

HOW TO PROCEED

Overview by Facilitator

PART I - CDD & WES: MAKING THE CONNECTION

Use Transparency 1.4.2 to demonstrate that as far back as the early 1980s, improved water supply and sanitation was recognised as having significant, positive effects on the reduction of diarrhoea-related morbidity and mortality. An early review of the subject, based on 67 studies from 28 countries included the following:

- ▶ Impact of WES intervention on diarrhoeal diseases morbidity and mortality.
- ▶ Median reductions in diarrhoea morbidity rates are between 22-27 per cent.
- ▶ Median reductions in diarrhoea mortality rates are between 21-30 per cent.
- ▶ Improvements in water quality have less of an impact than improvements in water availability or sanitation.

Summarise the major findings of the previous session i.e. it is probably not very productive for anyone other than academic researchers to agonise any longer about methodological problems and whether an impact on diarrhoea exists at all. It is perhaps more constructive to ask under what conditions the greatest benefits to health may be obtained (Cairncross, 1989).

PART II - POLICY AT GLOBAL LEVEL

Discuss approaches for CDD/WES linkages using Transparency 1.4.3 extracted from the 1991-95 workplan of the Water and Environmental Sanitation Team. Refer to the notes in the participants manual. Show Transparency 1.4.4 and 1.4.5 to discuss expected achievements and implications.

The Global Strategy for the Control of Diarrhoeal Diseases (1990) includes "improved access to and use of safe water supplies and sanitation facilities" as one of three key interventions to reduce diarrhoea morbidity. Refer to learning point seven which states the following:

- ▶ Two of the major goals for children in the 1990s are universal access to safe drinking water and sanitary means of excreta disposal. Interventions in both these areas have also been identified as effective measures for preventing diarrhoea,

although their precise impact on diarrhoea incidence requires further study. There are already examples of UNICEF-assisted CDD programmes that incorporate water-related interventions (e.g. Bangladesh, Lesotho, Pakistan). These interventions are appropriate areas of emphasis for UNICEF for at least three reasons:

- ▶ UNICEF is firmly committed to the goals of universal access to safe drinking water and sanitary means of excreta disposal by the year 2000. Closer links with other programmes and sectors, e.g. CDD, will contribute toward the achievement of these goals.
- ▶ Water and sanitation efforts are a major component of most country programmes, often constituting the largest financial commitment outside the health sector. While the UNICEF contribution to the water and sanitation sector in any given country may be small in relation to other agencies, it is often quite substantial relative to UNICEF assistance to other areas within that country.
- ▶ UNICEF is one of the few agencies that has close working relationships with both the CDD programme (i.e. the Ministry of Health) and water and sanitation efforts (i.e. the Ministry of Water and/or Hydraulics). In addition, most UNICEF offices have staff responsible for both these sectors. For these reasons, UNICEF may be in a unique position to forge meaningful programme connections and integrate efforts in these two areas.

Use Transparency 1.4.6 to show specific actions, as recommended in the CDD Global Strategy.

Refer to learning point 9 on improving personal and domestic hygiene practices. Use Transparency 1.4.7 to discuss possible support to intervention-related research, including studies and/or trial projects.

Use Transparency 1.4.8 to summarise that both programmes are reinforcing the same messages.

PART III - CDD VS WES

Explain sometimes these interventions are seen as being competitive rather than complementary. Refer to learning point ten referencing the article of D. Okun (1983)

in order to discuss the relative importance of ORT and WES interventions. Use Transparencies 1.4.9 and 1.4.10 to characterise the role of ORT.

2. EXERCISE I: IMPROVED LINKAGES

Ask participants to work in pairs answering question one of the worksheet provided on page seventeen.

The participants should work in groups to answer question two listing five obstacles and solutions to the effective integration of CDD and WES.

3. Plenary

Discuss results of exercise without group presentation. Discuss difficulties of overcoming obstacles to present programme implementation. Ask participants to give in their responses so that they can be typed and distributed.

4. EXERCISE II: STRATEGIES FOR IMPROVED LINKAGES

The participants will work in groups studying the case studies prepared to determine the most successful strategies for improved programme linkages at the policy level.

5. PLENARY

Ask the groups for each case study to present their responses. Discuss the results only after each case study has been finished.

6. SUMMARY AND EVALUATION

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 4: WATER AND SANITATION AS AN INTEGRAL COMPONENT OF THE CDD PROGRAMME

OBJECTIVES

By the end of the session you will be able to:

- **understand the synergistic effect of integrating CDD and WES interventions;**
- **list at least three measures to advocate at the global level to integrate CDD and WES interventions;**
- **develop a strategy for linking CDD and WES at the country level.**

- * Impact of WES intervention on diarrhoeal disease morbidity and mortality.
- * Median reductions in diarrhoea morbidity rates are between 22-27 per cent.
- * Median reductions in diarrhoea mortality rates are between 21-30 per cent.
- * Improvements in water quality have less of an impact than improvements in water availability or sanitation.

**APPROACHES FOR CDD/WES PROGRAMME
LINKAGES EXTRACTED FROM 1990-1995
WATER AND SANITATION WORKPLAN**

JOINT PLANNING: Ensure that common areas are selected for ORT and WES activities.

BALANCED CURRICULA: Courses for trainees on CDD, promotional literature, school text books.

SANITARY AMENITIES: CDD training centres, schools, health centres etc. should have at least a water point and a sanitary latrine.

APPROPRIATE HEALTH MESSAGES: Messages emanating from CDD programmes should reflect both the preventive and curative aspects.

IMPLICATIONS ON COUNTRY PROGRAMME PROCESS

- **The planners and other participants of this process should re-orient their thinking regarding CDD, to give significance not only to the curative aspect but also to preventive means. Thus, all CDD programmes should include the intervention of water, sanitation and hygiene education.**
- **The WES and the CDD entities at the country level should determine modalities for joint planning.**

EXPECTED ACHIEVEMENTS BY 1995

- **An effective linkage of WES with CDD in the country plans of action and at the implementation of the latter.**
- **A positive impact on the number of diarrhoeal disease cases, relative to the present.**

EXERCISE

You are the UNICEF Representative in a country where 50 percent of child deaths are due to diarrhoea (35 percent) and other waterborne diseases. The high level of diarrhoea deaths becomes a national scandal after the 1 year old son of a minister dies of dehydration.

The President decides to make the reduction of diarrhoeal diseases the major child health initiative of her administration.

After two years of effort, you have finally secured a meeting with the President. The objective of your meeting is to convince her to adopt improved water and sanitation facilities as the central strategy for her anti-diarrhoea campaign.

You develop a clear, convincing five-minute argument to present your case.

- * Impact of WATSAN intervention on diarrhoeal disease morbidity and mortality.
- * Median reductions in diarrhoea morbidity rates are between 22-27 per cent.
- * Median reductions in diarrhoea mortality rates are between 21-30 per cent.
- * Improvements in water quality have less of an impact than improvements in water availability or sanitation.

ELEMENTS OF PRIMARY HEALTH CARE

- 1) Education on prevailing health problems and methods of prevention and control
 - 2) Promotion of food supply and proper nutrition
 - 3) Adequate supply of safe water and basic sanitation
 - 4) Maternal and child health care including family planning
 - 5) Immunisation against the major infectious diseases
 - 6) Prevention and control of locally endemic diseases
 - 7) Appropriate treatment of common diseases and injuries
 - 8) Provision of essential drugs
-

MODULE 1: INTRA- AND INTER-SECTORAL LINKAGES

SESSION 5: FIELD TRIP: RESOURCE MAPPING

TRIP OBJECTIVES:

- Gain experience in collecting data from people who are or might be expected to be community water supply and sanitation managers;
- Increase your insights concerning community points of view about past developmental experiences which may influence local responses to water and sanitation proposals.

ASSIGNMENT:

Collect data from person-to-person interviews, and from small group discussions which might determine community readiness for water and sanitation projects or their modification. Present a brief community development history to workshop participants, and discuss implications for programme planning or strategy selection.

SESSION FLOW AND METHODOLOGY:

- Divide participants into two groups. Group "A" will develop short questionnaires, screen them to limit question bias, add probe questions where needed, and present its proposed questionnaire to the full group for comments. Group "B" will design a small group or "focus" group discussion plan, and group review. Each group will need to define respondent characteristics which they will be seeking by sex, age group, leadership positions, etc. Pre-planned introductions should be included as part of questionnaires which explain who you are, why you are asking questions, how long will be needed, and how this information is to be used. Training group resources, such as linguistic abilities, will help determine numbers of interviews possible, and types of respondents.
- Preparations for field trip will include: reproduction of questionnaires, identification of communities to be visited, and securing appropriate approval to work in these communities.
- If desired, practicing of interviews and roles as discussion leaders should be considered.

- Determine approximately how much time will be available for data collection in terms of travel time, time needed for each interview, numbers of desired group discussions and types of respondents, etc.
- Consider inclusion of data collection by observation on the part of some participants.

POST-TRIP DATA ANALYSIS AND PRESENTATIONS:

Groups "A" and "B" are to re-assemble and plan for plenary presentations and summaries according to time schedule.

MODULE 2: CROSS-CUTTING CONCERNS

SESSION 6: GENDER ISSUES IN WATER AND SANITATION

1. Review the session objectives

Participants will be able to:

- use a women's empowerment framework to identify the major socio-cultural and economic factors which affect women's access and participation in water and sanitation programmes;
- analyse your own Situation Analysis and Master Plan of Operations and note the strengths and weaknesses of these to address identified sector disparity concerns;
- determine the implications and strategies for programming.

2. Explain that the following methodology will be used:

- Overview by Facilitator
- Plenary
- Exercise: Gender Issues in Water and Sanitation
- Plenary
- Exercise: Applying the Framework to the Situation Analysis.
- Plenary
- Exercise: Assessment of Master Plan of Operations
- Summary and Evaluation of Session

3. Design and Timing:

- Overview by Facilitator 20 minutes
- Plenary 10 minutes
- Exercise: Gender Issues
in Water and Sanitation 20 minutes
- Plenary 10 minutes
- Exercise: Applying the Framework
to the Situation Analysis 15 minutes
- Plenary 10 minutes
- Exercise: Assessment of Master
Plan of Operations 20 minutes
- Plenary 10 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 2 HOURS

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

- ▶ Start with a discussion of how women fare in society at present including having less access to education, and sometimes food and health care. As adults they receive less education and training, work longer hours for lower incomes and have few property rights and little or no control over development resources such as information technology, credit and land.
- ▶ Discuss discrimination against women and the form that this can take.
- ▶ Explain that the role of women in the water and sanitation sector is still very undefined. Agencies and governments are still unsure to what extent women can be involved in sector activities. Women and young girls are the main beneficiaries of improved water and sanitation facilities since they are primarily the ones who draw water for household use, transport it home, store it until it is used and use it. It is essential that they know about water sources, their quality and reliability, restrictions and advantage of their use, acceptable storage methods etc.
- ▶ Discuss the following:
 - Amount of time women spend hauling water.
 - How much this translates into in terms of calories and energy.
 - Effect on children of time and energy spent on water collection.
 - Men, women and children in different societies have specific and different customs related to cleanliness and defecation.
 - Practices often encourage separation of men and women.

Women's empowerment framework

- ▶ Start with questioning the participants of the difference between sex and gender. The participants should make lists of items under these headings.
- ▶ By using a 'gender lens' with which to view development, it becomes obvious that although women, almost globally have two spheres of work- around the home and outside it, their work remains unrecognized, under-supported, under-valued and frequently underpaid.

- ▶ Explain the following:
 - How to remove these disparities.
 - How the women's empowerment framework can be used (refer to "UNICEF's Women's empowerment framework" document included in reading material).
- ▶ Review distinctly the three stages: assessment; analysis and action. Refer to Transparency 2.6.6 to explain the following:
 - Assessment is the first stage of the cycle to examine responsibilities and activities in a given situation or are to draw out in detail who (men and women) does what. A primary reason for assessment is to understand how current realities of women's life absorb the time and resources available to them. The assessment serves to generate a profile of potential target groups, especially girls and women, for UNICEF programme assistance, and, how their current roles and responsibilities have an impact on introducing change.
 - Analysis. At this stage, the hierarchy of causes is applied to a specific problem which has been identified either through the assessment or prior to the assessment. Examples include the low participation of girls in education, high maternal mortality rates. The causes are identified at three levels of complexity and viability: immediate, underlying and basic/structural categories. Frequently the hierarchy of causes will show that even through the problem as it is manifested is a women's problem, the presence, authority, control and influence is inextricably linked to the resolution of the problem.
 - Action. Having made an assessment of the problems and analysed its causes, answers are sought to the question "what should be done, what can be done?" The following steps should be completed: Identification, planning and formulation, implementation, monitoring and evaluation. This stage allows action to feed into the assessment through measurement of impact and incorporation of lessons learned. The use of GADF will allow the opportunity to accommodate modifications in the interventions as they are being made, given the cyclical nature of the framework.

2. PLENARY

Have an open discussion regarding the gender framework. Request the participants to view their opinion of how this can be applied to the sector.

3. EXERCISE

Have the participants fill in Worksheet One individually.

4. PLENARY

The participants should be selected to share their responses on a request basis. An open discussion should be held on each of the four questions. Responses should be listed on four flipcharts, one for each question.

5. EVENING WORK

EXERCISE: APPLYING THE FRAMEWORK TO THE SITUATION ANALYSIS AND THE MASTER PLAN OF OPERATION

The participants should have read the water and sanitation chapter of the SA and the MPO of the country provided on arrival at the workshop. Participants should answer question two and three, parts (a) - (e) the night before the session.

6. PLENARY

Ask the participants to select a rapporteur to record the group consensus on transparency. The plenary session should be devoted to a review and discussion, question by question of each group output. The emphasis should be on having participants who work in the group add points they may have; make comments and ask questions of the group that made the presentation.

7. SUMMARY AND EVALUATION

MODULE 2: CROSS-CUTTING CONCERNS

SESSION 6: GENDER ISSUES IN WATER AND SANITATION

OBJECTIVES

By the end of the session, you will be able to:

- * use a women's empowerment framework to identify the major socio-cultural and economic factors which affect women's access and participation in water and sanitation programmes;**
- * analyse your own Situation Analysis and Master Plan of Operations and note the strengths and weaknesses of these to address identified sector disparity concerns;**
- * determine the implications and strategies for programming.**

SENIOR/MIDDLE MANAGEMENT LEVEL INVOLVEMENT OF WOMEN

- ▶ **Untrained for technical positions**
- ▶ **Not recruited for technical positions since untraditional**
- ▶ **Leaving due to pregnancy and marriage**
- ▶ **Assigned to less senior positions as not considered equal**
- ▶ **Not listened to by senior staff**
- ▶ **Reluctance of females to work outside family areas**
- ▶ **Cultural/social/religious barriers against women working including lack of childcare support.**
- ▶ **Insufficient incentives.**

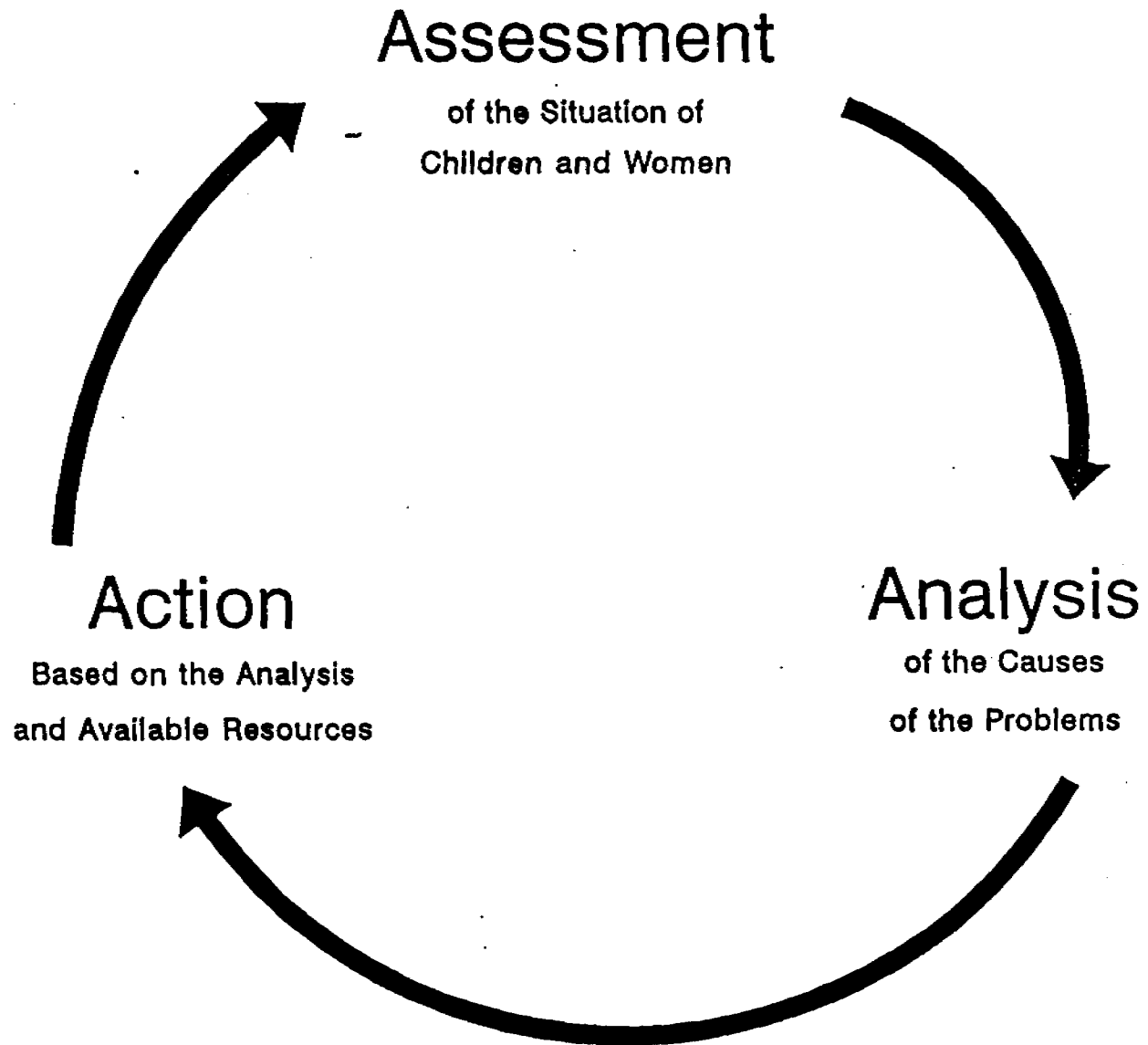
VILLAGE LEVEL INVOLVEMENT

- ▶ **Cultural/social/religious barriers against women involved in decision-making.**
- ▶ **Demand for girls/women to do disproportionately heavy housework, agriculture and other labours.**
- ▶ **Pregnancy and early marriage.**
- ▶ **Lack of time and/or interest in village decision making process.**
- ▶ **Time and calories expended in collecting water by women/young children.**
- ▶ **Exposure to disease whilst collecting water e.g. schistosomiasis.**

The rationale for devising a conceptual framework for gender and development stems from the necessity to link together the policy, programme and training dimensions of UNICEF's overall women and development policy. The framework in essence allows the reader to understand the analytical concepts of the policy and to apply such concepts in a practical manner.

**THE WOMEN'S EMPOWERMENT FRAMEWORK
MAKES IT POSSIBLE TO:**

- **Analyse the current situation of women and men, girls and boys as a set of human relationships observed in the present;**
- **look for the forces that brought them into being;**
- **search for trends which point to how the future is being structured in the present;**
- **identify where immediate, basic, fundamental, short term or long term changes have to be made to correct deficiencies or disparities in the situation.**



MODULE 3: LOW COST OPTIONS

SESSION 8A: WHAT ARE THE TECHNICAL OPTIONS FOR WATER SUPPLY? (FOR NON-SECTOR STAFF ONLY)

1. Review the session objectives

Participants will be able to:

- describe the most suitable low cost options to be used under different circumstances;
- identify new technologies i.e. solar, wind energy that could be applied in your country of assignment;
- assess programmes in your country of assignment in terms of technical efficiency.

2. Explain that the following methodology will be used:

- Slide Presentation and Demonstration by Facilitator
- Overview by Facilitator
- Work in Pairs
- Group Exercise
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Slide Presentation and Demonstration:
Suitable Technical Options
used by UNICEF-Assisted Programmes
and how they work 25 minutes
- Overview 10 minutes
- Work in Pairs: Deciding Factors
in Selection of Technical Options
in your Country of Assignment 15 minutes
- Plenary 10 minutes
- Exercise: Improved Technical Efficiency; *use video*
Groups to Develop Criteria for *minutes*
Improving Efficiency 15 minutes
- Plenary 15 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR & 35 MINUTES

HOW TO PROCEED

1. SLIDE PRESENTATION AND DEMONSTRATION BY FACILITATOR

A slide presentation (slide set one) will be given to show what technical options are presently used in UNICEF-supported programmes, and a short summary of how these work including:

- handpumps-equipped boreholes
- gravity-flow water supply system
- motorised-pumping systems
- hand dug wells

The facilitator will use the handpump provided to explain to the participants how the system works.

2. EXERCISE: DECIDING FACTORS FOR TECHNOLOGY SELECTION

Ask the participants to work in pairs to list one technical criteria for selecting appropriate technologies.

3. PLENARY

Ask the participants to read these out while someone writes them up on a flipchart. Refer to Transparency 3.8.2.

4. OVERVIEW BY FACILITATOR

The facilitator will explain the following referring to learning points 1-17 of the participants manual:

- groundwater as the primary source of water in UNICEF assisted projects
- assessment of groundwater resources

- different types of handpump systems (Transparency 3.8.3); recent developments and problems (Transparencies 3.8.4 and 3.8.5)
- piped water supply systems
- Recent developments which have lowered costs (Transparency 3.8.6)
- Water pollution and quality control (Transparency 3.8.7)
- Alternative water supplies including solar, wind energy and rainwater harvesting.

5. EXERCISE: IMPROVING TECHNICAL EFFICIENCY

Ask the participants to work in groups to list at least four methods they would use to improve technical efficiency in their country of assignment.

6. PLENARY

Ask each group to present their answers. Review each for technical correctness, appropriateness and efficiency.

7. SUMMARY AND EVALUATION

MODULE 3: LOW COST OPTIONS

SESSION 8B: WHAT ARE THE TECHNICAL OPTIONS FOR WATER SUPPLY? (FOR SECTOR STAFF ONLY)

1. Review the session objectives

Participants will be able to:

- relate new technical developments in the water and sanitation sector;
- identify where relevant information can be obtained;
- assess programmes in your country of assignment in terms of technical efficiency.

2. Explain that the following methodology will be used:

- Overview: Session to be Convened for Current Topics of Interest and Technical Development
- Plenary Discussion
- Formulation of Recommendations
- Summary and Evaluation of Session

3. Design and Timing

- **Technical Working Sessions:** Topics will be selected based upon current major concerns. e.g. handpump development, review of drilling methods etc.
A maximum of two topics to be included.
Presentation to be given by Facilitator(s) 45 minutes
- Plenary Discussion 20 minutes
- Formulation of Recommendations 25 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 35 MINUTES

- **NB:** *Clinic sessions may be convened in the evening for specific topics that cannot be included in the session. A list of topics is included in the procedures for conducting the session.*

HOW TO PROCEED

The formatting of this session is somewhat different since technical sessions will be convened followed by a plenary discussion. Time will then be allowed for the formulation of sector recommendations on a regional basis. An outline of each session is given below.

1. TECHNICAL WORKING SESSION

1.1 DRILLING DEVELOPMENTS

1.1.1 Review of Drilling Methods

The facilitator will review the following methods with respect to the advantages and disadvantages of each method; selection of methods based on application, rock, and material type, depth and cost factors (with special attention to quality of design).

Primary Drilling Methods

- cable tool
- mud rotary
- air rotary
- downhole percussion hammer

Secondary Drilling Methods

- auger
- driving
- bailing
- jetting

1.1.2 Drilling Rig Selection

Latest developments in types of drilling rigs available and accessories.

1.1.3 Aquifer and Water Well Hydraulics

- occurrence and movement of groundwater
- drawdown and recovery
- aquifer boundary conditions
- well efficiency
- testing wells for drawdown and yield
- testing sedimentation in water from pump

1.1.4 Well screen, casing and gravel pack design

- selection of screen slot size
- well screen materials and slot configuration
- selection of casing materials
- casing/screen joints
- gravel pack material

1.1.5 Geophysics

- surface methods
- electrical resistivity and conductivity methods
- downhole methods
- geophysical logging methods.

1.2 RECENT RESEARCH AND DEVELOPMENT IN HANDPUMP TECHNOLOGY

1.2.1 Review of State of the Art Technology in Handpumps

- INDIA MARK III
- AFRIDEV
- TARA

Recent developments in these pumps; ongoing research projects; countries presently installing the pumps and field results.

1.2.2 Standardisation

The issues that need to be considered in standardising handpumps in countries.

- groundwater level
- number of handpumps presently in use and their performance
- user preferences

1.2.3 Capacity Building

- local handpump manufacture
- quality control issues
- acceleration of coverage

1.2.4 Accessories

- use of PVC rising mains
- casing materials

2. PLENARY DISCUSSION

An open discussion should be convened on elements of the presentations in order to draw a consensus of opinion in preparation for the formulation of recommendations.

3. FORMULATION OF RECOMMENDATIONS

The facilitator (s) should develop with the participants a series of recommendations for further research and implementation on the selected topics. This list should be regional-specific and should list the action to be taken, when and by whom e.g. country, NYHQ, other agencies etc. This should be typed and distributed to all participants.

4. EVALUATION OF SESSION

MODULE 3: LOW COST OPTIONS

SESSION 8: WHAT ARE THE TECHNICAL OPTIONS FOR WATER SUPPLY? (FOR NON-SECTOR STAFF ONLY)

OBJECTIVES

By the end of the session, you will be able to:

- * describe the most suitable low cost options to be used under different circumstances;**
- * identify new technologies i.e. solar, wind energy that could be applied in your country of assignment;**
- * assess programmes in your country of assignment in terms of technical efficiency.**

**TECHNOLOGIES SHOULD BE SELECTED
ON THE BASIS OF:**

- **The nature of location of suitable water resources**
- **Quantity of water required**
- **number and density of population to be served**
- **resources to pay for installation and for operation and maintenance**

HANDPUMPS

A number of factors influence handpump selection:

- **Cost**
- **Suitability**
- **Durability**
- **Discharge rate**
- **Required lift**
- **Planned number of users per pump**

HANDPUMPS

What has happened in the past ten years?

- Promotion of Village Level Operation and Maintenance (VLOM) systems.

HAS THIS REALLY BEEN ESTABLISHED?

- Promote development of designs and implementation strategies which will improve reliability of schemes based on groundwater and handpumps.
- Enable schemes to be managed by the communities and replicated on a large scale.

Failures cannot be blamed solely on the handpump. Other major causes:

- ▶ inadequate maintenance
- ▶ poor management
- ▶ supervision
- ▶ M & E
- ▶ poor well design
- ▶ allowing sand to enter and damage pumping elements
- ▶ corrosive effects of groundwater

RECENT TECHNICAL DEVELOPMENTS WHICH HAVE LOWERED COSTS OF:

- **Low cost pre-packed gravel filters which have lowered cost of tubewell and handpump installation.**
- **Improved handpump designs such as the AFRIDEV, TARA and INDIA MARK III pumps.**
- **Use of universal spanners with which all the operation necessary for the installation and repair of a handpump can be undertaken.**
- **Improved use of PVC casing, screens and rising mains which are cost effective and easier to install.**
- **Use of simple hand drilling equipment in unconsolidated soil conditions has drastically reduced costs and accelerated coverage.**

WATER POLLUTION

An open well can be polluted by any of the following means:

- ◆ Polluted ground water
- ◆ Seepage water from the surface
- ◆ Vessels used for draining water
- ◆ Rubbish thrown down the well
- ◆ Surface water
- ◆ Spilt water

MODULE 3: LOW COST OPTIONS

SESSION 9: MAINTENANCE OF WATER SUPPLY SYSTEMS

1. Review the session objectives:

Participants will be able to:

- identify major problems of maintenance and propose possible solutions;
- identify the factors to be considered in the development of a successful maintenance programme;
- list at least five to six strategies that could be included in the development of a good maintenance programme.

Case study on busbar system

2. Explain that the following methodology will be used:

- Work in Pairs
- Plenary
- Overview by Facilitator
- Case Study
- Plenary
- Summary & Evaluation of Session

3. Design and Timing

- Work in Pairs: Problems of Maintenance and Proposed Solutions 15 minutes
- Plenary 5 minutes
- Overview by Facilitator: Factors to consider in developing a good maintenance programme 15 minutes
- Case Study: Strategies in Developing a Good Maintenance Programme 30 minutes
- Plenary 20 minutes
- Summary & Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 30 MINUTES

HOW TO PROCEED

1. GROUP WORK

The participants will work in pairs listing at least two problems regarding maintenance and propose solutions to these.

2. PLENARY

Select two participants to write down the problems on one flipchart and the other to write down the solutions. Go round the room to get the responses of all the groups. Discuss with the participants whether they agree with the solutions that have been proposed for each problem.

3. OVERVIEW BY FACILITATOR

Ask the participants to suggest factors that should be considered in developing a good maintenance programme and write these onto an overhead sheet. Use Transparency 3.9.2 which lists the major factors.

Discuss the following:

- Importance of community involvement in terms of training in operation and maintenance, contribution towards O & M costs; involvement of women in maintenance issues.
- Institutional Requirements: these should be developed appropriate to the local political, administrative and geographical context. Government commitment should be secured for appropriate strategies of institutional and human resource development.
- Technical Requirements: technical options should be selected which are easy to maintain, preferably at the village level; trained technicians or mechanics available at sub national level.

4. PLENARY DISCUSSION

Discuss additional points raised by the participants not covered in the learning points.

5. EXERCISE: STRATEGIES FOR DEVELOPING A GOOD MAINTENANCE PROGRAMME

Allow the participants ten minutes to read the article "The Three Tier Maintenance System" describing the maintenance system in India. Ask participants to work in groups to respond to questions one to three. For question one, the participants should select one country to describe after discussing the maintenance system used in each of their countries amongst themselves.

6. PLENARY

The participants should prepare their answers on overheads. All the groups will be asked to present their answer to question one. Groups will be selected to answer questions two to four with the other groups being asked to add to the responses.

Discuss the advantages and disadvantages of the maintenance systems described.

7. SUMMARY AND EVALUATION

MODULE 3: LOW COST OPTIONS

SESSION 9: MAINTENANCE OF WATER SUPPLY SYSTEMS

OBJECTIVES

By the end of the session, you will be able to:

- * identify major problems of maintenance and propose possible solutions;**
- * identify the factors to be considered in the development of a successful maintenance programme;**
- * list at least five to six strategies that could be included in the development of a good maintenance programme.**

MAJOR PROBLEMS ENCOUNTERED WITH MAINTENANCE OF WATER SUPPLY SYSTEMS

1. Logistics
2. Spare parts
3. Lack of training and tools
4. Preventive maintenance
5. Coordination-central/district/village
6. Organisational aspects
7. Information/communication
8. Lack of policy statement
9. Lack of community involvement

MODULE 4: COMMUNITY MANAGEMENT

SESSION 10: COMMUNITY MANAGEMENT: WHERE HAVE WE COME FROM?

1. Review the session objectives

Participants will be able to:

- define what a community is and list at least three criteria for choosing which communities to work with;
- list and explain at least five reasons supporting community participation;
- define the different types of community involvement and decide what level of community involvement exists within your own programme.

2. Explain that the following will be used:

- Group Exercise
- Plenary
- Overview by Facilitator
- Group Exercise
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Exercise: Definition of a Community and which Communities to work with 15 minutes
- Plenary 10 minutes
- Overview: Reasons to Support Community Participation; Present levels of Community Involvement 15 minutes
- Plenary 5 minutes
- Exercise: Community Participation: The Mythology for the Decade? 25 minutes
- Plenary 15 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL . . . 1 HOUR AND 30 MINUTES

HOW TO PROCEED

1. EXERCISE: DEFINITION OF A COMMUNITY AND SELECTION CRITERIA

- ▶ Ask the participant to give their definition of a community. Write these up on a flipchart.
- ▶ Continue the exercise by asking participants to list three criteria for choosing which communities to work with. This should be done in groups.

2. PLENARY

Ask participants to present their answers for choosing communities on overhead transparency sheets. Discuss the concept that "true" community participation is only achieved when the local people are in full control of the process or decide entirely for themselves which activities should be included. Is this feasible?

3. OVERVIEW BY FACILITATOR

- ▶ Start the session by brainstorming with everyone the reasons why community participation is important. List these on an overhead transparency sheet.
- ▶ Explain the following:
 - That community participation arose as a concept in the mid sixties. It was not adopted by the International Drinking Water Supply and Sanitation Decade (IDWSSD) until the mid eighties after it became apparent that donors and governments could no longer afford totally centralised operation and maintenance systems for water supply and sanitation. Planners began to realise that in order to share the responsibilities for maintenance, beneficiaries or users would have to be involved in some way in the ongoing maintenance of their own community systems.
 - If communities are to take responsibility for maintenance, they must also be involved in the planning and implementation of the project from the initial stages. It is important that they develop a sense of 'ownership' of the system.
 - Communities should be perceived as informed consumer/client/managers capable of making choices as to the type of services they have the ability to maintain rather than passive receivers. Many communities may already have a level of management and organisational skills and this should be recognised.

- The central agency responsible for water and sanitation must change from benefactor that makes all the decisions to that of facilitator enabling communities to make their own decisions.
 - The role of self-help activities is an ambiguous one, which calls for further analysis. Some projects mention voluntary labour and contributions in cash or kind as a cost saving element which also:
 - increases local pride and commitment
 - offers training possibilities
 - stimulates proper use and maintenance
 - Some project state that private contractors are more efficient as they avoid delays and increased costs, over-burdening the community and poor construction leading to frequent breakdowns.
- ▶ Briefly go through the classification of different types of community participation which was developed by Whyte (1981) [listed in Transparency 4.10.2].
1. Consultation.
 2. A financial contribution by the community.
 3. Self-help projects by groups of beneficiaries.
 4. Self-help projects involving the whole community.
 5. Community specialised workers.
 6. Mass action.
 7. Collective commitment to behaviour change.
 8. Endogenous development.
 9. Autonomous community projects.
 10. Approaches to self-sufficiency.

4. PLENARY DISCUSSION

Discuss the classification system and the level of community participation within the programmes of the participants.

5. EXERCISE: COMMUNITY PARTICIPATION; THE MYTHOLOGY FOR THE DECADE

Allow the participants ten minutes to review the article by R. Feachem that they should have read the night before. They should then completely the questions individually.

6. PLENARY

Discuss the answers to questions one and two by asking people to volunteer their responses. Place the answers to question three on a flipchart and discuss these with the participants.

7. SUMMARY AND EVALUATION

MODULE 4: COMMUNITY MANAGEMENT

**SESSION 10: COMMUNITY INVOLVEMENT:
WHERE HAVE WE COME FROM?**

OBJECTIVES

By the end of the session, you will be able to:

- * define what a community is and list at least three criteria for choosing which communities to work with;**
- * list and explain at least five reasons supporting community participation;**
- * define the different types of community involvement and decide what level of community involvement exists within your own programme.**

CLASSIFICATION OF DIFFERENT TYPES OF COMMUNITY PARTICIPATION

- 1. Consultation.**
- 2. A financial contribution by the community.**
- 3. Self-help projects by groups of beneficiaries.**
- 4. Self-help projects involving the whole community.**
- 5. Community specialised workers.**
- 6. Mass action.**
- 7. Collective commitment to behaviour change.**
- 8. Endogenous development.**
- 9. Autonomous community projects.**
- 10. Approaches to self-sufficiency.**

MODULE 4: COMMUNITY MANAGEMENT

SESSION 11: HOW TO IMPROVE COMMUNITY INVOLVEMENT

1. Review the session objectives

Participants will be able to:

- understand the importance of consulting communities in the planning and implementation of projects;
- describe at least three different approaches to improve community participation in water and sanitation projects.

2. Explain that the following methodology will be used:

- Video Presentation
- Plenary Discussion
- Overview by Facilitator
- Summary and Evaluation of Session

3. Design and Timing

- Video Presentation: The Water of Ayole 25 minutes
- Plenary Discussion 10 minutes
- Overview by Facilitator:
Consulting Communities 5 minutes
- Presentation: Examples of Different
Approaches to Improve Participation 15 minutes
- Plenary Discussion 5 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 5 MINUTES

HOW TO PROCEED

1. VIDEO PRESENTATION

Briefly describe the film "The Water of Ayole" before showing it to the participants.

2. PLENARY DISCUSSION

Discuss the major learning points gained from the video.

3. OVERVIEW BY FACILITATOR

CONSULTING COMMUNITIES

Explain the following:

- information gathering: in order to plan effective community participation, a considerable amount of information must be gathered about the community.
- Firstly, there is the information required about a community in order to approach them in a suitable fashion.
- Secondly, there is the information required to confirm that the community conforms to the selection criteria set by the government/ NGO etc.
- Thirdly, there is the information required by the agency in planning and design of the project. Most of this can be provided by the community during consultation but will need to be supplemented with information gathered by staff in informal contact with community members.

Consultation: The community should be involved in the decision making process which is proposed. If the project is to achieve its objectives, the facilities must be used. Optimal use can be encouraged by prior consultation with users concerning their needs.

Administrative Arrangements: Community participation techniques require dialogue with community members in which their ideas are treated as valuable contributions. These dialogues are to be conducted by lower level staff whose technical position may lead them to emphasise the superiority of their technical position. The solution may lie in developing a special cadre of promoters/community development staff within a technical agency.

Focal Points for Consultation in the Community:

- Local Authorities: While some consultations take place with local authorities, in many countries it works at a level far removed from that of the ordinary villagers.
- Development Committees: A committee started for the project can subsequently take on other functions. Development committees are often founded with broad aims including that of raising agricultural or other reproduction.
- Traditional Bodies: In some countries, the traditional institutions retain considerable authority. It may be expected that any approach to a community will be made through them and it may be difficult for outsiders to penetrate beyond the picture presented by the community's spokesman.

4. PRESENTATION: DIFFERENT APPROACHES TO COMMUNITY INVOLVEMENT

Ask three participants the night before to prepare their country experience of what approaches were taken to improve community participation to present during this session.

5. SUMMARY AND EVALUATION

MODULE 4: COMMUNITY MANAGEMENT

SESSION 11: HOW TO IMPROVE COMMUNITY INVOLVEMENT

OBJECTIVES

By the end of this session, you will be able to:

- * understand the importance of consulting communities in the planning and implementation of projects;**
- * describe at least three different approaches to improve community participation in water and sanitation projects;**

MODULE 4: COMMUNITY MANAGEMENT

SESSION 12: FROM COMMUNITY INVOLVEMENT TO MANAGEMENT: CAN THE GAP BE BRIDGED?

1. Review the session objectives

Participants will be able to:

- define community management in the context of UNICEF-assisted water and sanitation projects;
- list and explain at least ten pre-conditions for community management;
- List and explain the benefits of community management within your own programmes.

2. Explain that the following methodology will be used:

- Overview
- Work in Pairs
- Plenary
- Group Exercise
- Plenary
- Summary and Evaluation

3. Design and Timing

- Plenary Discussion: Unclearness regarding
Community Management in
UNICEF-assisted Programmes 10 minutes
- Overview by Facilitator 10 minutes
- Work in Pairs: Pre-conditions
for Community Management 5 minutes
- Plenary 10 minutes
- Exercise: Force Field Analysis
of Stages Necessary to Reach
Community Management 25 minutes
- Plenary 15 minutes
- Individual Work 10 Minutes
- Plenary 10 minutes
- Summary and Evaluation 5 minutes

TOTAL 1 HOUR AND 30 MINUTES

HOW TO PROCEED

1. PLENARY DISCUSSION

Discuss the lack of clarity concerning community management in UNICEF-supported programmes.

2. OVERVIEW BY FACILITATOR

Explain the following:

- If real community participation and management are accepted as essential to the global thrust towards universal access to water supply and sanitation, it must be recognised that concepts of empowerment and equity cannot end at the water source. Traditional power structures can be threatened by new pumps and latrines which benefit the poor.
- UNICEF-assisted programmes must be clear regarding the definition of community management. Obviously the implications are that communities should be more actively involved in the whole development process including situation analyses, strategies and programme development.
- Use Transparency 4.12.2 to explain the difference between involvement and management of projects. It refers to the ability of a community to control, or at least strongly influence, the development of its water and sanitation systems.
- Discuss the components of Community Management (Transparency 4.12.3) as developed by Mc Common et.al.(1990).

3. EXERCISE: PRE-CONDITIONS FOR COMMUNITY PARTICIPATION

Ask the participants to work in pairs for five minutes listing at least two pre-conditions for community participation.

4. PLENARY

- ▶ List up the responses of the participants on flipcharts.

- ▶ Use Transparency 4.12.4 to examine pre-conditions for community management namely:
 - There must be community demand for an improved system.
 - The information required to make informed decisions must be available to the community.
 - Technologies and levels of service must be commensurate with the community's needs and capacity to finance, manage, and maintain them.
 - The community must understand its options and be willing to take responsibility for the system.
 - The community must be willing to invest in capital and recurrent costs.
 - The community must be empowered to make decisions to control the system.
 - They should have the institutional capacity to manage the development and operation of the system.
 - The community should have the human resources to run these institutions.
 - There should be a policy framework to permit and support community management.
 - Effective external support services must be available from governments, donors, and the private sector (training, technical advice, credit, construction, contractors, etc.).

- ▶ Use Transparency 4.12.5 to discuss the benefits of good community management. Ask the participants to add to these.

5. **EXERCISE: FORCE FIELD ANALYSIS OF STAGES NECESSARY TO REACH COMMUNITY MANAGEMENT**

- ▶ Explain to the participants that this exercise is to be done in groups. Give each group has a card labelled **PRESENT SITUATION**. These will contain details of the present situation in a fictitious country. They will also be given a card named **DESIRED SITUATION** which will be blank.

- ▶ Their first task is to define what is wrong in the present situation, then to define and write down the desired future situation.

- ▶ Secondly the participants should write a list of the resources and constraints that apply in their case.

6. PLENARY

Each group should present the resources and constraints on a flipchart after describing the present situation and the desired goal.

7. INDIVIDUAL WORK

Each participant should take one constraint identified in their group and identify the steps that could be taken to counteract or eliminate it with the help of one or more of the resources identified.

8. PLENARY DISCUSSION

Go through all the constraints identified and ask who responded to each. List the responses on overhead sheets with the constraint.

9. SUMMARY AND EVALUATION

MODULE 4: COMMUNITY MANAGEMENT

SESSION 12: FROM COMMUNITY INVOLVEMENT TO MANAGEMENT: CAN THE GAP BE BRIDGED?

OBJECTIVES

By the end of the session, you will be able to:

- * define community management in the context of UNICEF-assisted water and sanitation projects;**
- * list and explain at least ten pre-conditions for community management;**
- * List and explain the benefits of community management within your own programmes.**

It is essential to define participation more precisely in context of the Decade's experience. Communities must now be assisted to become clients, not mere users or beneficiaries, because clients manage programmes while beneficiaries do not. Participatory models for the 1990s must therefore be models of community management.

**Extension, Communications and
Community Management,
Global Consultancy, New Delhi,
1990**

**ACCORDING TO McCOMMON ET.AL. (1990),
COMMUNITY MANAGEMENT CONSISTS
OF THREE BASIC COMPONENTS:**

- **Responsibility.** The community takes on the ownership of the project and attendant obligations to the system.
- **Authority.** The community has the legitimate right to make decisions regarding the system on behalf of the users.
- **Control.** The community is able to carry out and determine the outcome of its decision.

**ACCORDING TO MCCOMMON ET AL.,
IMPORTANT PRECONDITIONS FOR COMMUNITY MANAGEMENT
ARE LIKELY TO INCLUDE THE FOLLOWING:**

- **There must be community demand for an improved system.**
- **The information required to make informed decisions must be available to the community.**
- **Technologies and levels of service must be commensurate with the community's needs and capacity to finance, manage, and maintain them.**
- **The community must understand its options and be willing to take responsibility for the system.**
- **The community must be willing to invest in capital and recurrent costs.**
- **The community must be empowered to make decisions to control the system.**
- **They should have the institutional capacity to manage the development and operation of the system.**
- **The community should have the human resources to run these institutions.**
- **There should be a policy framework to permit and support community management.**
- **Effective external support services must be available from governments, donors, and the private sector (training, technical advice, credit, construction, contractors, etc.).**

**THE BENEFITS OF COMMUNITY MANAGEMENT
SHOULD INCLUDE THE FOLLOWING:
(MCCOMMON ET AL., 1990)**

- **Short term improvements in system performance such as greater use of water and sanitation facilities, adoption of improved hygiene practices, and greater community support for system maintenance.**
- **Changes in support conditions: long term improvements in available resources and complementary investments.**
- **Long term impacts: anticipated health, social well-being economic and environmental quality changes.**

MODULE 4: COMMUNITY MANAGEMENT

SESSION 13: TRAINING FOR IMPROVED LOCAL MANAGEMENT

1. Review the session objectives

Participants will be able to:

- relate the advantages and disadvantages of a participatory training approach;
- assess the "SARAR" Methodology for training communities in your own country as developed by PROWESS/UNDP;
- assess your own present capacity to support community level training.

2. Explain that the following methodology will be used:

- Video Presentation
- Overview by Facilitator
- Plenary
- Summary and Evaluation of Session

3. Design and Timing:

- Video Presentation:
Training for Community Management 30 minutes
 - Plenary Discussion 10 minutes
 - Overview: Who should be involved in
Participatory Training;
Present Capacity to Support Activity 10 minutes
 - Plenary 5 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. VIDEO PRESENTATION

Explain that this session is very much linked to module one, session four, human resource development. Briefly describe the video "Tools for Community Participation".

2. PLENARY DISCUSSION

Describe the SARAR methodology using Transparency 4.13.2. Discuss the advantages and disadvantages of a participatory approach.

3. OVERVIEW BY FACILITATOR

Use Transparency 4.13.3 to describe social constraints that can be encountered in communities which need to be addressed.

Participatory Training can be incorporated into ongoing programmes. The participatory approach uses a learner-centered approach in which the focus is on the learners developing abilities and skills to diagnose and solve their own problems. The trainer merely facilitates a process of competency building and self-discovery for the learners, whose needs, experience and goals are the focus for the training.

Discuss who should be involved in participatory training programmes. Stress that one cannot rely on training alone to change the way extension staff relate to local communities. They need support, guidance and a continuing flow of inspiration from those who make policies and set standards. Without this kind of back up from policy makers and trainers, they are not likely to innovate or make special efforts to involve people, particularly if good judgement is judged in quantitative terms.

4. SUMMARY AND EVALUATION

MODULE 4: COMMUNITY MANAGEMENT

**SESSION 13: TRAINING FOR IMPROVED LOCAL
MANAGEMENT**

OBJECTIVES

By the end of the session, you will be able to:

- * relate the advantages and disadvantages of a participatory training approach;**
- * assess the "SARAR" Methodology for training communities in your own country as developed by PROWWESS/UNDP;**
- * assess your own present capacity to support community level training.**

THE SARAR PROCESS

FIVE CHARACTERISTICS:

SELF-ESTEEM

The self-esteem of groups and individuals is acknowledged and enhanced by recognising that they have the creative and analytic capacity to identify and solve their own problems.

ASSOCIATIVE STRENGTHS

The methodology recognises that when people form groups, they become stronger and develop the capacity to act together.

RESOURCEFULNESS

Each individual is a potential resource to the community. The method seeks to develop the resourcefulness and creativity of groups and individuals in seeking solutions to problems.

ACTION PLANNING

Planning for action to solve problems is central to the method. Change can be achieved only if groups plan and carry out appropriate actions.

RESPONSIBILITY

The responsibility for follow-through is taken over by the group. Actions that are planned must be carried out. Only through such responsible participation do results become meaningful.

SOCIAL CONSTRAINTS WHICH CAN INHIBIT A PARTICIPATORY APPROACH TO COMMUNITY DEVELOPMENT

- * diffidence in the presence of authority**
- * fear of speaking up in group meetings**
- * low self-esteem**
- * distrust of the motives of those in power**
- * reluctance to take risks**
- * fear of economic consequences or social loss of face**
- * fear of criticism for overstepping customary roles**
- * factional differences**
- * a sense of powerlessness or fatalism**
- * lack of experience in working with groups**
- * lack of skills in planning and problem solving**

MODULE 5: HYGIENE EDUCATION**SESSION 14: CHANGING HYGIENE BEHAVIOUR****1. Review the session objectives:**

Participants will be able to:

- identify the most important changes in behaviour needed to achieve health and hygiene goals;
- recognise the major steps in facilitating behaviour change and be able to assess the likelihood of desirable changes in behaviour being made;
- write objectives that take behaviour change into account and to assess the planning implications of behavioural goals.

even global goals include behaviour

*① Start with a hand of the first day
② What is hygiene?
③ Real life situation (water supply)*

2. Explain that the following methodology will be used:

- Overview by Facilitator: Elements of behaviour change
- Dramatic presentation: Different perceptions of hygiene behaviour
- Exercise: Changing Hygiene Behaviour
- Plenary
- Overview by Facilitator
- Exercise: Setting behavioural objectives
- Plenary
- Discussion: The planning implications of integrating water, sanitation and hygiene education
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator:
Elements of behaviour change 10 minutes
 - Dramatic presentation: Different
perceptions of hygiene behaviour 10 minutes
 - Group Discussion: Assessing Constraints
to Behaviour Change 5 minutes
 - Overview by Facilitator: Writing Objectives
as though Behaviour Change Mattered 10 minutes
 - Exercise: Setting behavioural objectives 20 minutes
 - Plenary 20 minutes
 - Discussion: The planning implications
of integrating water, sanitation
and hygiene education 10 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR AND 30 MINUTES**

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

- Explain that reaching people and encouraging them to change their behaviour are fundamental factors in the success or failure of any social development programmes. Effective communication is the key. It is easy to change technology but hard to change beliefs and behaviour.
- Use Transparency 5.14.3 to explain how changes in health behaviour can be explained and predicted by four basic factors.
- Explain the following:
 - ◆ The perception of the ability of the individual to make the change.
 - ◆ The inter-relationship between the characteristics of the individual, physical, social and institutional environment within which the individual lives.
 - ◆ Process of behavioural change (Transparency 5.14.4)⁶
 - ◆ Resistance due to traditional or religious beliefs.
- Conclude the overview by discuss the need for a variety of approaches to be taken, the most effective approaches usually being emotional. Messages may apply to the individuals fears, greed, self esteem or desire to live a long time.
- Project objectives should reflect any planned changes in behaviour. If not, there is a danger that project implementation will not be well guided.

2. DRAMATIC PRESENTATION

The facilitator will select participants the night before to prepare a short presentation of existing behaviours and attempts to change these. It is preferable to use an example other than hygiene for this purpose.

3. EXERCISE 1: CHANGING HYGIENE BEHAVIOUR

Give each group an example of a required behaviour change and ask them to use the chart for "Criteria for Evaluating Likelihood of Behaviour Change" to estimate a score for the behaviour.

4. PLENARY

Ask each group to present their responses on overheads and discuss with everyone.

5. OVERVIEW BY FACILITATOR

Explain how to write good behavioural change objectives (Transparency 5.14.5).

6. EXERCISE 2: SETTING BEHAVIOURAL OBJECTIVES

The participants should have read the village case study for Lao the night before. The participants should respond to question two in their groups.

7. PLENARY

Ask each group to present their answers to question 2 on overheads.

8. DISCUSSION

Discussion the planning implications of integrating water, sanitation and hygiene education referring back to module two.

9. SUMMARY AND EVALUATION OF SESSION

MODULE 5: HYGIENE EDUCATION

SESSION 14: CHANGING HYGIENE BEHAVIOUR

OBJECTIVES

By the end of the session you will be able to:

- * identify the most important changes in behaviour needed to achieve health and hygiene goals;**
- * recognise the major steps in facilitating behaviour change and be able to assess the likelihood of desirable changes in behaviour being made;**
- * write objectives that take behaviour change into account and to assess the planning implications of behavioural goals.**

"Water supply projects do not achieve their full impact unless they are linked first to hygiene education and then to sanitation...the critical factor in the success of hygiene education is reaching people and changing the way they do some very private, personal things - defecating, washing, cooking, getting, carrying and using water"

(Lessons Learned from the WASH Project, USAID, Washington, 1990:31)

**CHANGES IN HEALTH BEHAVIOUR
CAN BE EXPLAINED
AND PREDICTED
BY FOUR BASIC FACTORS:**

- **The way in which the individual perceives the risk.**
- **The way the individual perceives the severity of the problem should it occur.**
- **The way the individual perceives the benefits of taking a health action.**
- **The way the individual perceives barriers or obstacles to taking the action.**

COMMUNICATION AND EDUCATION CAN:

- **Inform**
- **Create Awareness**
- **Arouse Interest**
- **Motivate to Change**
- **Create Demand**
- **Create Support**

COMMUNICATION AND EDUCATION CANNOT:

- **Overcome Poor Planning**
- **Overcome Poor Management**
- **Restore Faith in Failed WATSAN Projects**
- **Motivate Everyone to Change**

METHODS OF BRINGING ABOUT BEHAVIOUR CHANGE

- **INFORM**
- **SOCIALISE**
- **PERSUADE**
- **DEMONSTRATE**
- **CAJOLE**
- **BRIBE**
- **BLACKMAIL**
- **LEGISLATE**

MOST EFFECTIVE ARE:

- ▶ **Clearly perceived benefits**
- ▶ **Social or Peer Pressure**
- ▶ **Social norm**

**START WITH SMALL, EASY CHANGES THAT HAVE LITTLE
COST AND OBVIOUS BENEFITS.**

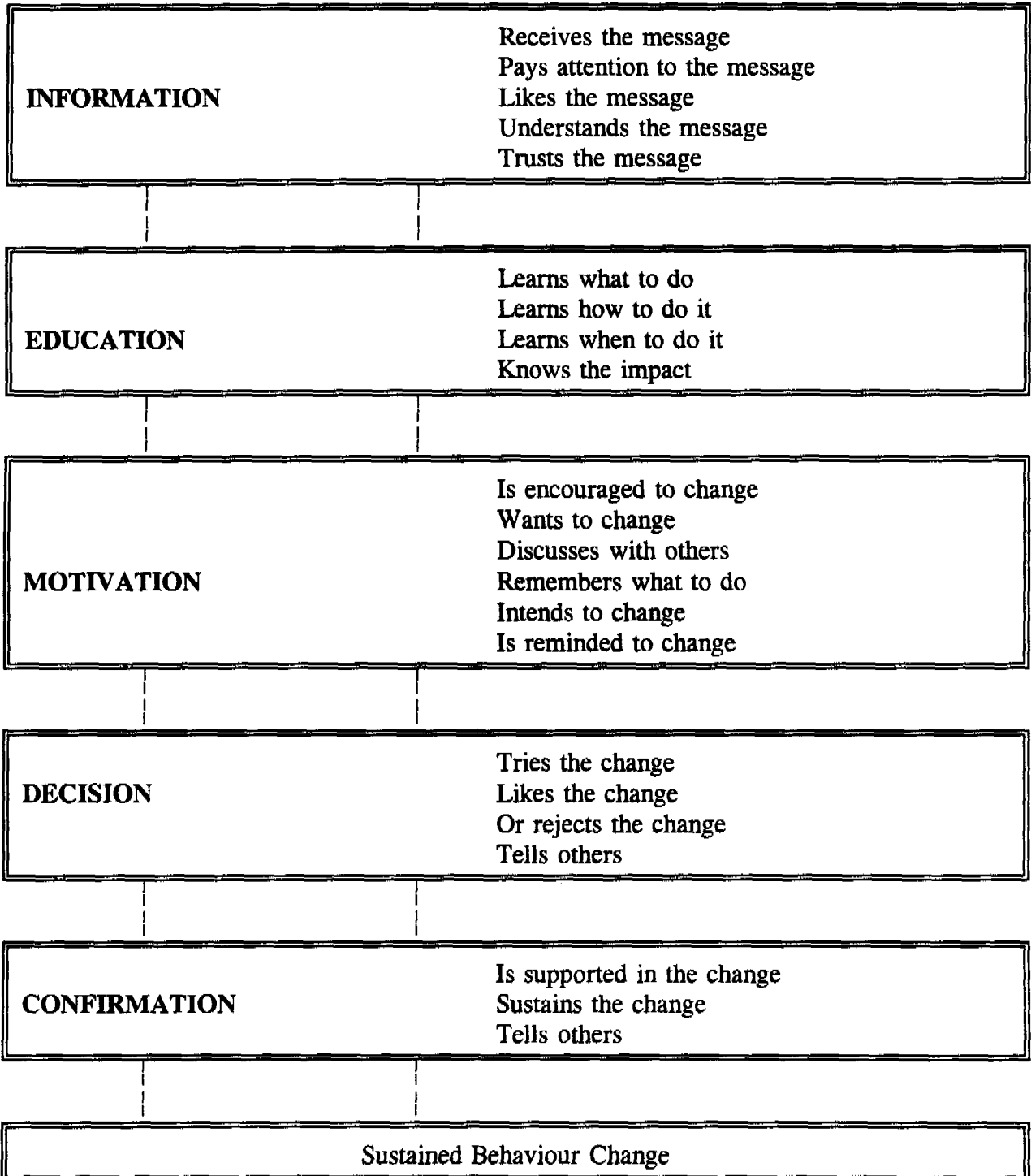
RATIONAL PROCESS OF BEHAVIOURAL CHANGE

- **Receive information**
- **Be interested in information**
- **Believe the information**
- **Be attracted to the information**
- **Understand reasons for change**
- **Know what to do, how, where, when**
- **Be able to afford the change**
- **Be motivated to try the change**
- **Try the change**
- **Be encourage to continue the change**

THE ROLE OF COMMUNICATION IN BEHAVIOUR CHANGE

Communication Process

Impact on Audience



WRITING BEHAVIOURAL OBJECTIVES

- **Behavioural objectives should reflect the changes in behaviour you aim to achieve in the project.**
- **They must be related to the project goals.**

ALL OBJECTIVES SHOULD BE:

Simple

Measurable

Achievable

Realistic

Time-Bound

- e.g.
- **By 1995 all families in 36 villages in ABCD province will practice safe excreta disposal.**
 - **By 1995 to have two trained women sanitary inspectors in six ABCD provinces.**

MODULE 5: HYGIENE EDUCATION

**SESSION 15: COMMUNICATION STRATEGIES FOR CHANGING
HYGIENE BEHAVIOUR**

1. Review the session objectives

Participants will be able to:

- recognise the major communication strategies and know how and when to use them;
- provide a framework for integrating communication support into a water, sanitation and hygiene education plan;
- recognise the importance of identifying appropriate target audiences for hygiene messages.

2. Explain that the following methodology will be used:

- Overview by Facilitator: Communication strategies for improving health and hygiene education and motivating changes in behaviour
- Plenary
- Group Exercise
- Plenary Discussion
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator: Communication strategies for improving health and hygiene education and motivating changes in behaviour 10 minutes
- Plenary 5 minutes
- Exercise: Identifying primary, secondary and tertiary target audiences and communication strategies 20 minutes
- Plenary 15 minutes
- Discussion: The planning implications of the communication component 5 minutes
- Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

- Use Transparency 5.15.2 to discuss the strategies that can be used in development of a hygiene education programme.
- Explain the following using transparencies 5.15.3 and 5.15.5.
 - ◆ Social mobilisation is the overall process for enlisting support for policies and activities that will help achieve goals; advocacy, alliance building and programme communication are communication activities; social marketing is a technique and community participation is an ideology and a process.
 - ◆ Communication process and activities operate at different levels of society. For example, advocacy is usually undertaken among planners, political leaders and allies at national level; alliance building usually takes place among institutions and organisations at national and provincial levels while programme communication is usually directed at communities and individuals and is designed to bring about specific behavioural change through information, education and empowerment.
 - ◆ In any communication or hygiene activity it is of vital importance to identify the target audience or audiences to whom you want to address messages or information.
 - ◆ Adequate communication and health education is impossible unless the existing behaviour of the target audience and the constraints to change are known by those responsible for planning and implementing the communication aspects of the programme and are addressed and overcome.
 - ◆ One of the most important rules governing effective communication is:

"Base the communication strategy and message on detailed knowledge or a carefully selected target audience".

A common reason for failure of development projects is addressing the wrong people with the wrong information. The most common reason for failure of water supply and sanitation programmes is expecting people to change without providing them with any information at all.

- ◆ Changing behaviour is more rapid and more sustainable if the same messages are received through a variety of communication channels and if an integrated approach is used involving all appropriate organisations, institutions and government departments to channel information. A fragmented approach causes confusion and is counter-productive.
- ◆ Repetition and reinforcement of the same messages is imperative. This is seldom given consideration and a common problem is trying to spread health education messages too far, too thinly.
- ◆ The mass media can provide awareness and information but alone seldom bring about desired changes in the way people act.
- ◆ Face-to-face communication and demonstration on a sustained basis can persuade people to change their behaviour.
- ◆ The communication component must be incorporated and budgetted for in the initial programme plan.
- ◆ Effective communication and community participation may mean that planners and implementers also have to change their way of doing things.
- ◆ Participatory and inter-active hygiene education is much more effective than lectures.

2. PLENARY DISCUSSION

Discuss with participants strategies that are presently used for health education at the country level.

3. EXERCISE: SELECTING TARGET AUDIENCES

Ask the participants to answer questions one, two and three in groups using the Lao case study on the exercise sheet on page seventeen. Each group should present their answers on overheads.

4. PLENARY

Ask one group to present their answer to each question. Ask the other groups to contribute to the responses.

5. DISCUSSION

Discuss with the participants the planning implications of the communication component.

6. SUMMARY AND EVALUATION

MODULE 5: HYGIENE EDUCATION

SESSION 15: COMMUNICATION STRATEGIES FOR CHANGING HYGIENE BEHAVIOUR

OBJECTIVES

By the end of the session you will be able to:

- * recognise the major communication strategies and know how and when to use them;**
- * provide a framework for integrating communication support into a water, sanitation and hygiene education plan;**
- * recognise the importance of identifying appropriate target audiences for hygiene messages.**

COMMUNICATION STRATEGIES

- ◆ **Social mobilisation**
- ◆ **Advocacy and information**
- ◆ **Communication support,
including health and hygiene
education**
- ◆ **Alliance building**
- ◆ **Social marketing**
- ◆ **Community participation**

COMMUNICATION STRATEGIES

- ◆ **ADVOCACY:** Lobbying for support
- ◆ **SOCIAL MOBILISATION:** Mobilising partners or allies to assist in reaching shared goals.
- ◆ **PROGRAMME COMMUNICATION:**
Communicating messages to selected groups of people through a variety of channels with the intention of informing and educating to encourage behavioural change.
- ◆ **SOCIAL MARKETING:** Using commercial marketing techniques to encourage desired social change.
- ◆ **COMMUNITY PARTICIPATION:** Assisting communities to define their own needs, set their own goals and identify the solutions.

ESSENTIALS FOR GOOD COMMUNICATION

- Identify the target audience
- Research the target audience
 - ◆ what are their felt needs
 - ◆ what is their knowledge
 - ◆ what are their beliefs
 - ◆ what do they do
 - ◆ what are their expectations

WHAT IS THE COST OF THE CHANGE?

- ◆ time
- ◆ money
- ◆ social acceptability
- ◆ access

WHAT ARE THE CONSTRAINTS TO CHANGE?

- ◆ select appropriate messages and media
- ◆ pre-test
- ◆ Repeat - repeat - repeat - repeat - repeat - repeat and repeat again.

"BASE THE COMMUNICATION STRATEGY AND MESSAGE ON DETAILED KNOWLEDGE OR A CAREFULLY SELECTED TARGET AUDIENCE".

MODULE 5: HYGIENE EDUCATION

SESSION 16: RESEARCH TO SUPPORT EFFECTIVE HYGIENE EDUCATION

1. Review the session objectives

Participants will be able to:

- assess different research methods and select those most appropriate for gathering information that will facilitate desired changes in behaviour;
- identify priority communications research needs and know at what stage in the programme cycle research should be conducted.

2. Explain that the following methodology will be used:

- Group exercise
- Plenary
- Overview by Facilitator
- Video presentation
- Plenary Discussion
- Group Exercise
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Group participation exercise:
Perceptions and their social,
cultural and physical determinants 10 minutes
- Plenary 5 minutes
- Overview by Facilitator:
Types of communication research,
when to use them; where to use them 10 minutes
- ~~Video presentation:~~ *Knowledge* ~~20-25~~
Rapid Assessment Procedures 15 minutes
- Discussion:
Research methods used in RAP 15 minutes
- Exercise: Planning research
for developing a hygiene
education strategy 20 minutes
- Plenary 20 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 30 MINUTES

RAP



Plan / Mon / Ho

(1.5)

*Sanitation training
Drama*

*20 minutes
15*

*to discuss a sanitation hygiene
flow over in*

3 more ...

*1. ...
2. ...
3. ...*

... application ...

HOW TO PROCEED

1. GROUP PARTICIPATION EXERCISE

An exercise should be developed on people's perceptions and how these can be misunderstood. This can be arranged with 2-3 participants or facilitators before the session.

2. OVERVIEW BY FACILITATOR

- Explain the following:
 - ◆ The importance of communication research in planning health and hygiene education for water supply and sanitation programmes (Transparency 5.16.2) and how to use it (Transparency 5.16.3).
- Use Transparency 5.16.4 to discuss the pre-requisites of commercial marketing, namely:
 - ◆ Clear identification.
 - ◆ Knowledge of the target audience and their perceptions, practices and beliefs about the product or behavioural change to be promoted.
 - ◆ Knowledge of the competition and constraints behavioural change.
 - ◆ Knowledge of the target audiences' media habits.
 - ◆ Careful pre-testing of all communication training, messages and materials.
- Use Transparency 5.16.5 to discuss the type of health and hygiene education data that is required:
 - ▶ The major target audience or audiences
 - ▶ Their existing knowledge, attitudes and practices relating to hygiene, sanitation and health
 - ▶ Likely constraints to changes in health and hygiene behaviour
 - ▶ The existing channels of communication and possible communication resources, including those provided by the mass media, front-line workers (health workers, school teachers, water and sanitation facilitators), NGOs,

community leaders, and community groups including formal or informal women's groups

- ▶ Existing hygiene and health education, its quality and quantity
- ▶ Training requirements of health workers, water and sanitation engineers, community workers, village women
- ▶ Opportunities for integrated communication efforts
- Discuss the type of research methods that can be used to collect communication data including KAP studies, media surveys, focus group discussions and rapid assessment procedures (Transparencies 5.16.6a and 5.16.6b). Discuss each of these in detail with the participants referring to the learning points. Bring attention to research biases using Transparency 5.16.7.
- Use Transparency 5.16.8 to discuss what the results of communication research can be used for.
- Explain the difference between measuring behavioural change and health impact (Transparency 5.16.9).

3. VIDEO PRESENTATION

Show the video " Rapid Assessment Procedures"

4. DISCUSSION

Discuss the methodologies used in the RAP video.

5. EXERCISE

Ask the participants to work in groups to complete the exercise sheet on page nine of the participants manual.

MODULE 5: HYGIENE EDUCATION

**SESSION 16: RESEARCH TO SUPPORT EFFECTIVE
HYGIENE EDUCATION**

OBJECTIVES

By the end of the session you will be able to:

- * assess different research methods and select those most appropriate for gathering information that will facilitate desired changes in behaviour;**
- * identify priority communications research needs and know at what stage in the programme cycle research should be conducted.**

WHY DO COMMUNICATION RESEARCH?

- ◆ To find out what people believe.
- ◆ To find out what people know.
- ◆ To identify constraints to change.
- ◆ To identify competition and conflict.
- ◆ To establish expectations.
- ◆ To identify needs.
- ◆ To identify major sources of credible information.
- ◆ To establish media use patterns (male/female)
- ◆ To identify organisations, groups who can assist.
- ◆ To identify the level of assistance.
- ◆ To establish exactly who your target should be.

HOW TO USE COMMUNICATION RESEARCH

- ◆ To establish what interventions are feasible.
- ◆ To identify what desirable changes in behaviour are possible and at what state in the project.
- ◆ To identify exactly whose behaviour you want to change.
- ◆ To identify priority audience for messages.
- ◆ To develop culturally appropriate messages.
- ◆ To ensure use of most effective media/channels.
- ◆ To test messages.



**TO DEVELOP GOALS AND OBJECTIVES THAT ARE
PEOPLE FRIENDLY.**

TO DESIGN PLANS THAT ARE ATTAINABLE.

THE PRE-REQUISITES OF COMMERCIAL MARKETING ARE:

- ▶ **Clear identification of a major target audience**
- ▶ **Knowledge of the target audience and their perceptions, practices and beliefs about the product or behavioural change to be promoted**
- ▶ **Knowledge of the competition and constraints to behavioural change**
- ▶ **Knowledge of the target audiences' media habits**
- ▶ **Careful pre-testing of all communication training, messages and materials**

TO PLAN THE HYGIENE EDUCATION COMPONENT DATA IS NEEDED ON:

- ▶ The major target audience or audiences
+ characteristics: educational, social, economic status, community & hh social structure
- ▶ Their existing knowledge, attitudes and practices relating to hygiene, sanitation and health
Water use, water quality, sanitation, personal hygiene, environmental hygiene and health/ill health
- ▶ Likely constraints to changes in health and hygiene behaviour
Can be predisposing, enabling and reinforcing factors
- ▶ The existing channels of communication and possible communication resources
Usual source of any health related information, Preferred channels of communication, Access to media
- ▶ Existing hygiene and health education, its quality and quantity
Different perceptions of visual materials
- ▶ Training requirements at all levels
community men and women / community level workers, W & S experiences
- ▶ Opportunities for integrated communication efforts
→ join up other efforts / interventions, CDD / Educative

communication resources is also health workers, school teachers, W & S facilitators, etc some community leaders etc

KAP STUDIES FOR HEALTH AND HYGIENE WOULD SEEK INFORMATION ON:

- ▶ Educational status
 - ▶ Social, political and economic status
 - ▶ Community and household social structure
 - ▶ Usual daily activities allowing for seasonal variation
 - ▶ Knowledge, attitudes and practice of water use, water quality, sanitation, personal hygiene, environmental hygiene and health/ill health
 - ▶ Usual source of any health-related information
 - ▶ Major channels of communication used by the target audience
 - ▶ Available channels of communication
 - ▶ Differential access to media
 - ▶ Differential perceptions of visual materials
 - ▶ Preferred channels of communication
 - ▶ Legitimate and trusted channels of communication
 - ▶ Media habits of the target audience/audiences
-

RESEARCH METHODS

- Observation
- Informal discussion with individuals
- Informal group discussion
- Questionnaires
- Document/library search

ORGANISING RESEARCH

- 1) Prioritise your questions then select the ten most important.
- 2) Check that answers to these questions will provide the information you want.
- 3) Add only the questions you feel are vital.
- 4) Decide on the research methods - some questions require specific methods. Decide who you want to talk to.
- 5) Place questions in logical sequence.
- 6) Decide who will do what.

A VARIETY OF RESEARCH METHODS IS ESSENTIAL.

RESEARCH BIASES

URBAN RURAL

NEAR TARMAC OFF TARMAC

HIGH STATUS LOW STATUS

MALE FEMALE

LITERATE ILLITERATE

IN VILLAGE IN FIELDS

DAY NIGHT

RESULTS OF COMMUNICATION RESEARCH SHOULD BE USED TO:

- ▶ Establish which interventions are feasible
- ▶ Identify which desirable changes in behaviour are possible and at what stage of the project
- ▶ Identify exactly whose behaviour you want to change and how
- ▶ Identify priority target audiences
- ▶ Develop messages that are culturally appropriate and have an emotional appeal that will be effective among the target audience
- ▶ Ensure the selection of the most effective media channels and communication strategies

MEASURING BEHAVIOUR CHANGE

- 1) Are you measuring behaviour change or health impact? *Don't confuse them.***
- 2) There are simple ways of measuring behaviour change.**
 - latrine use
 - water use and storage
 - children's latrine use
 - hand washing
- 3) The most obvious method is the easiest (observation)**
- 4) You can collect reasonably valid data on the impact of hygiene education on behaviour change by using control villages and by doing base-line studies and follow up studies. While you cannot hold all variables constant you can get reasonable data.**

MODULE 5: HYGIENE EDUCATION

SESSION 17: SELECTING MESSAGES AND MEDIA FOR HEALTH AND HYGIENE EDUCATION

1. Review the session objectives

Participants will be able to:

- develop criteria for assessing the likely effectiveness of hygiene education materials;
- × list the major characteristics of the different media;
- select appropriate media for disseminating hygiene education messages to specific audiences;
- × select appropriate messages for encouraging hygiene behaviour change and know how to phase these messages over time.

2. Explain that the following methodology will be used:

- Plenary Discussion
- Individual exercise
- Plenary
- Overview by Facilitator
- Group Exercise
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Plenary: Develop criteria for assessing hygiene education materials (see Manoff reading) 5 minutes
- Individual exercise: Using the criteria developed assess the hygiene education materials displayed 5 minutes
- Plenary: Assessing hygiene education materials: major learning points 5 minutes
- Overview by Facilitator: The characteristics of the media; message development and message phasing 10 minutes
- Exercise: Selecting messages and media for the water, sanitation and hygiene education project in Khammouane Province, Laos 15 minutes
- Plenary 15 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 30 MINUTES

- 52 cards
- 26 cards
- ① *Public analysis*
Why do our present materials do so well? How have we observed results? 2 cards
 - ② What's How can communication materials become more effective?
 - ③ See at checklist what's being covered.
 - ④ Groups Overhead of media channels in the classroom
 - ⑤ In various communities - what is appropriate/ appropriate media mix? Group work
 - ⑥ Plenary.

HOW TO PROCEED

1. PLENARY

Ask participant to suggest criteria that should be considered in the development of health education material and messages. Use Transparency 5.17.2 to summarise the criteria. Show Transparencies 5.17.3 - 5.17.8 to discuss message design which includes content, design, persuasion and memorability factors.

2. EXERCISE I: ASSESSMENT OF HEALTH EDUCATION MATERIALS

Discus with the participants examples of health education materials which are displayed around the room. Give each group one poster to analyse with respect to the criteria developed in the plenary session.

3. PLENARY DISCUSSION

Discuss the conclusions reached from the exercise.

4. OVERVIEW BY FACILITATOR

Refer to learning points 1-7 to explain the following:

- How messages are understood depending on gender, culture, education and experience.
- Messages must take into account the existing knowledge of the target audience.
- Messages must overcome resistance points.
- Good messages are simple short clear, easy to understand, in simple languages or pictures.
- Messages must be placed in a logical sequence.
- Facts for Life is a good source of basic messages
- Presentation is important

Explain the different type of media that are presently used including their positive and negative points.

- Radio
- Posters
- Flipcharts
- Video
- Television
- Inter-personal communication
- Role-plays
- Puppet Shows

5. EXERCISE II: SELECTING MESSAGES AND MEDIA

Ask the participants to refer to the Lao case study in session 19. Ask them to complete questions 1-4 of the exercise sheet on page six of the participants manual, in their groups. The participants should have read the Ghana Case Study "Message Design and Material Production" the night before. Ask them to place their answers on overhead sheets.

6. PLENARY

Ask one group to give their response to each questions. The other groups can add to this afterwards.

7. SUMMARY AND EVALUATION

MODULE 5: HYGIENE EDUCATION

**SESSION 17: SELECTING MESSAGES AND MEDIA
FOR HEALTH AND HYGIENE
EDUCATION**

OBJECTIVES

By the end of the session you will be able to:

- * develop criteria for assessing the likely effectiveness of hygiene education materials;**
- * list the major characteristics of the different media;**
- * select appropriate media for disseminating hygiene education messages to specific audiences;**
- * select appropriate messages for encouraging hygiene behaviour change and know how to phase these messages over time.**

**"I give them a lecture about bacillus, amoeba,
and how germs get into the alimentary tract and
cause morbidity and mortality....No they never
ask questions"**

Sanitation promoter explaining the information he gives
village people. North West Frontier Province, Pakistan,
June 1990

"Yes, I like that wall paper - I like the colours"

Woman in a Papua New Guinea health clinic when
asked if she looked at the hygiene posters on the
clinic walls. Mende, Southern Highlands, October
1989

MATERIALS SHOULD BE:

- SIMPLE
- EASY TO UNDERSTAND
- ATTRACTIVE
- CORRECT INFORMATION
- RELEVANT TO PROBLEM
- CULTURALLY APPROPRIATE
- CREDIBLE

CONTENT FACTORS INCLUDE:

- ◆ **THE PROBLEM**
- ◆ **TARGET AUDIENCE**
- ◆ **RESISTANCE POINTS**
- ◆ **SOLUTION**
- ◆ **REQUIRED ACTION**
- ◆ **AUTHORITATIVE SOURCE**

MODULE 5: HYGIENE EDUCATION

SESSION 18: HYGIENE EDUCATION IN THE EDUCATION SYSTEMS

1. Review the session objectives

Participants will be able to:

- identify and assess the opportunities available for integrating hygiene education into the formal and non formal education systems;
- list the ways the formal and non formal education systems can be used to reinforce desired behavioural change;
- assess the likely effectiveness of educational materials and methods in facilitating changes in hygiene behaviour.

include school systems

2. Explain that the following methodology will be used:

- Plenary Discussion
- Group Exercise
- Plenary
- Presentation of country experiences
- Group Exercise
- Plenary Discussion
- Summary and Evaluation of Session

Discussion

3. Design and Timing

- Plenary: Develop criteria for assessing education materials 10 minutes
 - Exercise I: Review school primers 20 minutes
 - Plenary 10 minutes
 - Discussion: How to use the formal and non-formal education systems to support hygiene behaviour change 10 minutes
 - Presentation of country experiences in using the education systems to support water, sanitation and hygiene education projects 15 minutes
 - Exercise II: Identifying opportunities for hygiene education within the formal and non formal education systems 10 minutes
 - Plenary 10 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR AND 30 MINUTES**

HOW TO PROCEED

1. PLENARY

Ask the participants to suggest criteria that are important in the development of good health education materials. Ask someone to list these on one of the flipcharts.

2. EXERCISE I: REVIEWING SCHOOL PRIMERS

The participants should be asked to read the following school primers the night before:

- Reading II: Prototype Action-Oriented School Health Curriculum
- Reading III: Tion and Meere
- Reading IV: Basic Primary Science and Health for Uganda

The groups should then answer questions 3.1 - 3.3 on page 6 of the session notes.

3. PLENARY

Briefly discuss the answers with the participants without having a formal presentation of group results.

4. DISCUSSION

Discuss how to use the formal and non formal education systems to support hygiene behaviour change.

Review learning points 1-11 with the participants briefly stressing the following:

- ▶ Who will be responsible for hygiene education in schools
- ▶ Coordination within UNICEF
- ▶ Agency and inter-departmental coordination
- ▶ Review of all formal and non-formal education opportunities
- ▶ Review of all existing curricula
- ▶ Review of non-formal education for women

- ▶ Using NGOs
- ▶ Training of teachers and Health Workers
- ▶ Training of WATSAN staff
- ▶ Development of supplemental material for schools

Use Transparency 5.18.2 to discuss what questions should be asked in assessing formal and non formal education.

5. PRESENTATION OF COUNTRY EXPERIENCE

Ask at least three participants the night before to prepare a 3-4 minute presentation of how the education system in their countries have been used to support water, sanitation and hygiene education projects.

6. EXERCISE II: USING THE EDUCATION SYSTEM TO SUPPORT WATSAN PROJECTS

The participants should again refer back to the Lao case study. Ask them to complete in groups the answer sheet on page 8. All groups should answer both questions one and two. Their answers should be prepared on overhead sheets.

7. PLENARY

Ask each group to present their answers to both questions. At the end briefly discuss the planning implications of promoting hygiene education through the education systems.

8. SUMMARY AND EVALUATION

MODULE 5: HYGIENE EDUCATION

SESSION 18: HYGIENE EDUCATION IN THE EDUCATION SYSTEMS

OBJECTIVES

By the end of the session you will be able to:

- * identify and assess the opportunities available for integrating hygiene education into the formal and non formal education systems;**
- * list the ways the formal and non formal education systems can be used to reinforce desired behavioural change;**
- * assess the likely effectiveness of educational materials and methods in facilitating changes in hygiene behaviour.**

**IN ASSESSING FORMAL AND NON FORMAL
CURRICULA YOU SHOULD ASK:**

- Is the information accurate?
- Does the information complement the messages given through the mass media or by front line workers?
- Is the level of information appropriate for the level of the students?
- Is the language used appropriate?
- Are the lessons presented in an interesting way?
- Does the curriculum allow for regular practical activities?
- Is the material well illustrated?
- Are there teaching support materials - e.g. charts, posters, cassette tapes, videos, games?
- Are there texts books for each student?
- Are the hygiene and health messages continually reinforced?
- Does the curriculum encourage students to practice good hygiene or is it presented as a theoretical exercise?

MODULE 5: HYGIENE EDUCATION**SESSION 19: THE ORGANISATIONAL REQUIREMENTS FOR HYGIENE EDUCATION**

1. Review the session objectives**Participants will be able to:**

- assess the organisational requirements needed to implement integrated water, sanitation and hygiene education projects;
- list how you would go about co-ordinating the hygiene education activities of different agencies, organisations and departments involved in a water, sanitation and hygiene education project;
- determine the personnel and training requirements for an integrated project.

2. Explain that the following methodology will be used:

- Plenary: Review the organisational structure established for the Northern Ghana Water Users Project
- Presentation of three country office examples of existing organisational structures
- Individual exercise: Reviewing existing UNICEF organisational structures for hygiene education
- Exercise: Designing an organisational structure for the integrated Khammouane Province project
- Plenary
- Summary and Evaluation of Session

*include NGO's &
other sections esp.
industry and community
Women's groups.*

3. Design and Timing

- Plenary: Review the organisational structure established for the Northern Ghana Water Users Project, list the major organisational characteristics of the project; then consider their applicability to UNICEF-supported projects 10 minutes
 - Presentation of three country office examples of existing organisational structures and how they influence integration of water, sanitation and hygiene education 15 minutes
 - Individual exercise: Reviewing existing UNICEF organisational structures 10 minutes
 - Discussion 10 minutes
 - Exercise: Designing an organisational structure for the integrated Khammouane Province project 20 minutes
 - Plenary 20 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR AND 30 MINUTES**

HOW TO PROCEED

1. PLENARY

The participants should have read the case study for Ghana the night before the training. Review the organisational structure that was used. List the major organisational characteristics of the project; then consider their applicability to UNICEF-supported projects. Use Transparencies 5.19.2 - 5.19.4 to demonstrate the project organisational structure.

2. PRESENTATION OF COUNTRY OFFICE EXAMPLES

Ask three country offices to make a 4-minute presentation of exiting organisational structures and how they influence integration of water, sanitation and hygiene education. Discuss these with the participants for three minutes.

3. EXERCISE I: ORGANISATION REQUIREMENTS FOR HYGIENE EDUCATION

Ask the participants to use the Exercise Sheet on page 5 to answer the questions individually.

4. PLENARY

Discuss the responses to the exercise by randomly selecting participants to respond.

5. EXERCISE II: DESIGNING AN ORGANISATIONAL STRUCTURE

Ask the participants to refer to the Lao Case Study to answer questions one to four for exercise II on page 5. This should be done in groups.

6. SUMMARY AND EVALUATION

MODULE 5: HYGIENE EDUCATION

**SESSION 19: THE ORGANISATIONAL
REQUIREMENTS FOR HYGIENE
EDUCATION**

By the end of the session you will be able to:

- assess the organisational requirements needed to implement integrated water, sanitation and hygiene education projects;
- list how you would go about co-ordinating the hygiene education activities of different agencies, organisations and departments involved in a water, sanitation and hygiene education project;
- determine the personnel and training requirements for an integrated project.

PLANNING INTERVENTIONS

Implementation Stage

Planning Interventions

Stage I
HAND PUMP INSTALLATION
 1973-1981

**COMMUNITY
 EDUCATION
 PROPOSAL 1976**

Stage II
**COMMUNITY EDUCATION
 PROGRAMME**
 1977-1984

**REVIEW AND
 REDESIGN
 MISSION 1982**

Stage III
**MAINTENANCE
 STABILIZATION**
 1982-1986

**PROGRAM
 EVALUATION
 1984-1985**

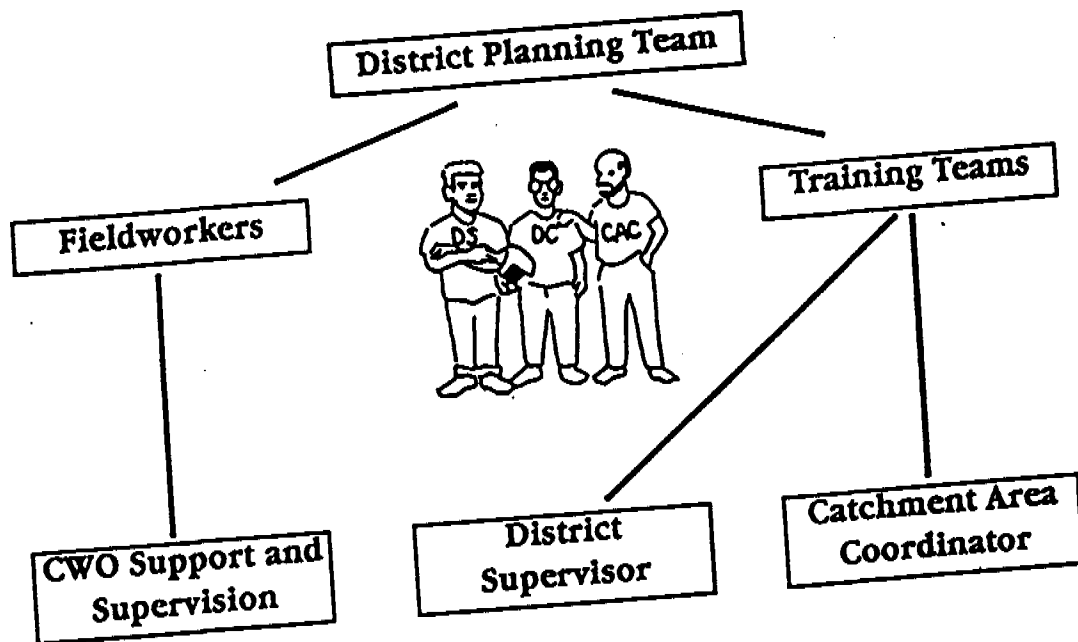
Stage IV
**WATER EDUCATION FOR
 HEALTH**
 1985-1990

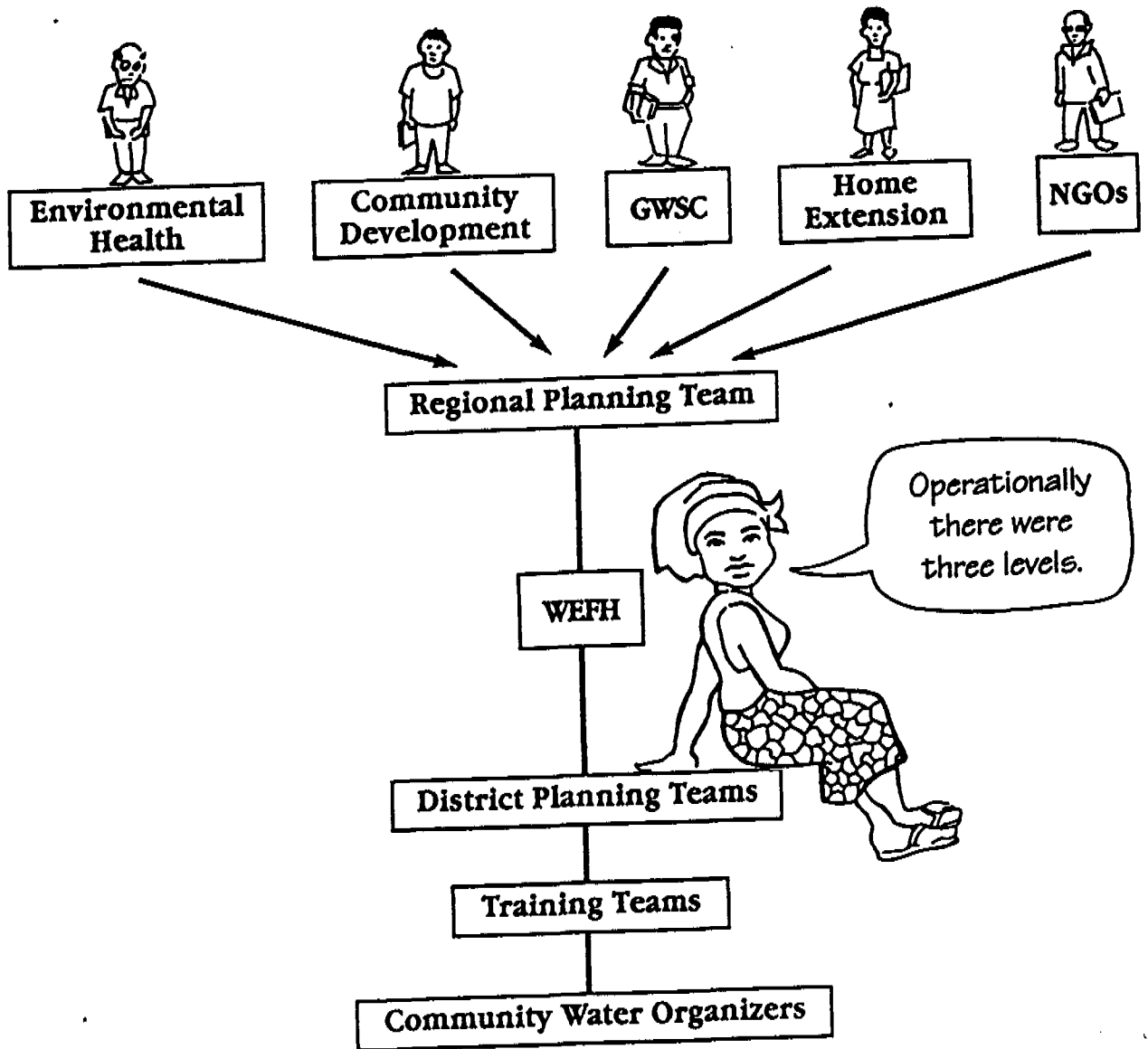
**RADIO LEARNING
 AND REDESIGN
 1986**

**RADIO LEARNING
 GROUP FEASIBILITY
 STUDY 1987**

These were really
 the significant
 ones.







MODULE 6: SANITATION

**SESSION 20: *Barriers to Successful Programs.*
THE EXTENT OF THE PROBLEM**

1. Review the session objectives

Participants will be able to:

- define what sanitation means and the extent of activities that can be undertaken with UNICEF assistance;
- identify 4-5 major problems encountered in sanitation programmes and propose suitable solutions;
- identify social and cultural barriers to successful sanitation programmes;
- develop at least 3-4 methods to overcome the barriers to sanitation programmes.

2. Explain that the following methodology will be used:

- Exercise (in pairs)
- Plenary
- Overview by Facilitator
- Case Study
- Plenary
- Group Exercise
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Exercise (in pairs): Definition of sanitation in the context of UNICEF-supported programmes 5 minutes
- Plenary 10 minutes
- Overview by Facilitator 10 minutes
- Case Study:
The Sanitation Programme in Wagoma 20 minutes
- Plenary 15 minutes
- Exercise: Values of Latrine Users and Administrators 20 minutes
- Plenary 10 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 35 MINUTES

HOW TO PROCEED

1. EXERCISE (in pairs)

Ask the participants to work in pairs to define what sanitation means in the context of UNICEF-supported programmes.

2. PLENARY

Ask the groups to present their answers on overhead sheets. After the groups have finished their presentations, then show transparency 6.20.2 and 6.20.3 which give the dictionary definitions and the definition as reflected in the UNICEF workplan for 1991-95.

3. OVERVIEW BY FACILITATOR

Use Transparency 6.20.4 to show the global situation at present with respect to rural and urban sanitation coverage levels.

Discuss UNICEF inputs to sanitation and hygiene education. At present it is estimated that less than ten per cent of the UNICEF budget is allocated to sanitation. Clearly offices should be making endeavours to increase this to at least twenty per cent. Use Transparencies 6.20.5 and 6.20.6 to show the statement included in the Water and Sanitation Workplan for 1991-95.

Ask the participants to each give one problem that they have encountered and ask two participants to stand by the flipcharts in order to list these.

Ask two other participants to stand by the other two flipcharts and ask the participants to come up with proposed solutions to each problem identified.

4. CASE STUDY: THE SANITATION PROGRAMME IN WAGOMA

Ask the participants to review the article that should have been read the night before. Ask them to respond to questions one to three on page 12 in their groups.

5. PLENARY

Ask the groups to present their answers on overhead sheets. One group should answer each question and the other groups can add to this.

6. EXERCISE: VALUES OF LATRINE USERS AND PLANNERS

Before the exercise briefly explain the difference in views between users and planners. Use Transparency 6.20.9 to explain this.

7. PLENARY

Have plenary discussion regarding the responses to each question rather than a presentation.

8. SUMMARY AND EVALUATION

MODULE 6: SANITATION

SESSION 20: THE EXTENT OF THE PROBLEM

OBJECTIVES:

By the end of the session, you will be able to:

- **define what sanitation means and the extent of activities that can be undertaken with UNICEF assistance;**
- **identify 4-5 major problems encountered in sanitation programmes and propose suitable solutions;**
- **identify social and cultural barriers to successful sanitation programmes;**
- **develop at least 3-4 methods to overcome the barriers to sanitation programmes.**

SANITATION: The promotion of hygiene and prevention of disease by maintenance of sanitary conditions.

Websters Dictionary

Extracted from Water and Sanitation
Workplan 1990-95

"BROADEN THE DEFINITION OF
SANITATION TO INCLUDE NOT
ONLY LATRINE PROMOTION,
CONSTRUCTION AND USE BUT,
ALSO, SOLID WASTE (GARBAGE)
DISPOSAL, ENVIRONMENTAL
(HOUSEHOLD) HYGIENE,
PERSONAL HYGIENE, ETC.

Extracted from Water and Sanitation Workplan 1990-95.

"ALLOCATION OF A GREATER PROPORTION (ABOUT 20%) OF THE WATSAN COUNTRY-LEVEL BUDGET TO THE SANITATION COMPONENT."

"COUNTRY OFFICES SHOULD REASSESS THEMSELVES IN LIGHT OF THE FOREGOING EXPOSITION ON SANITATION, TO RE-DETERMINE THEIR NEEDS. NOTE-WORTHY ARE, THE PROPORTION OF FUNDS ALLOCATED TO SANITATION IN RELATION TO THE OTHER COMPONENTS OF THE SECTOR, WHETHER SOCIAL MOBILISATION PLAYS A SIGNIFICANT OR INSIGNIFICANT ROLE IN THE PROGRAMMING OF SANITATION, AND THE SUITABILITY OF THE SANITATION STAFF TO DEAL WITH THE MOBILISATION ISSUE."

MAJOR PROBLEMS ENCOUNTERED IN SANITATION PROGRAMMES FALL INTO THE FOLLOWING CATEGORIES:

- ◆ TECHNICAL
- ◆ SOCIAL
- ◆ MANAGERIAL
- ◆ CULTURAL
- ◆ ECONOMIC

**MOST SANITATION EVALUATIONS HAVE
FOUND THAT PEOPLE CONSTRUCT
LATRINES FOR REASONS OF
CONVENIENCE, PRIVACY AND STATUS
AND NOT FOR REASONS OF HEALTH OR
HYGIENE.**

DIFFERENCE IN VIEWS OF PLANNERS AND LOCAL PEOPLE

| PLANNER'S VIEW | COMMUNITY'S VIEW |
|---|--|
| <u>Practical Factors:</u> | |
| 1. <u>Objectives</u> Aim for health benefits | Privacy, convenience, status |
| 2. <u>Costs</u> Villages cannot afford to construct latrines - government and donors should pay. | Linkage subsidies are not necessary as long as appropriate |
| <u>Cultural Factors</u> | |
| 1. Discuss excreta disposal problems directly. | Do not want to discuss excreta with women. |
| 2. Attitudes to poverty i.e. equated with inferior status. | Communities may want more expensive/permanent designs. |

MODULE 6: SANITATION

SESSION 21: EXCRETA DISPOSAL

1. Review the session objectives

Participants will be able to :

- recognise the major technical problems presently met in different countries and propose possible solutions;
- identify different technical options that can be selected for rural and urban areas;
- realise the importance of monitoring functioning and utilisation of excreta disposal facilities.

2. Explain that the following methodology will be used:

- Slide Presentation
- Exercise: Selection of Technical Options and Solutions to Major Technical Problems
- Plenary
- Overview by Facilitator
- Summary and Evaluation of Session

3. Design and Timing

- Slide Presentation 15 minutes
 - Exercise: Selection of Technical
Options and Solutions to Major
Technical Problems 20 minutes
 - Plenary 10 minutes
 - Overview by Facilitator 10 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. SLIDE PRESENTATION

Use the slide presentation to describe the different type of latrine options that are presently being used including the VIP, pour-flush, septic tank and shallow sewer systems. Explain the relative advantages and differences in cost and maintenance. Use Transparencies 6.21.2 and 6.21.3 to demonstrate these. Pause after every slide in order to describe briefly how each system works; the advantages and disadvantages.

2. EXERCISE: SOLUTIONS TO MAJOR TECHNICAL PROBLEMS

The participants should complete question one to three in their groups.

3. PLENARY

- ▶ For question one, ask the groups to read out their answers and write the responses on an overhead sheet.
- ▶ For question two, ask the groups to read out their responses. List these on two flipcharts; one for problems and the other of solutions.
- ▶ For question three, ask the groups to prepare overheads and for each to present these.
- ▶ Each should be followed by a plenary discussion.

4. OVERVIEW BY FACILITATOR

Describe the importance of the effective functioning and utilisation of facilities. Refer to the Minimum Evaluation Procedures developed by WHO (1983) and Rapid Appraisal Methods. Describe how to conduct simple surveys in order to investigate these on a regular basis.

MODULE 6: LOW COST OPTIONS

SESSION 21: EXCRETA DISPOSAL

OBJECTIVES

By the end of the session you will be able to:

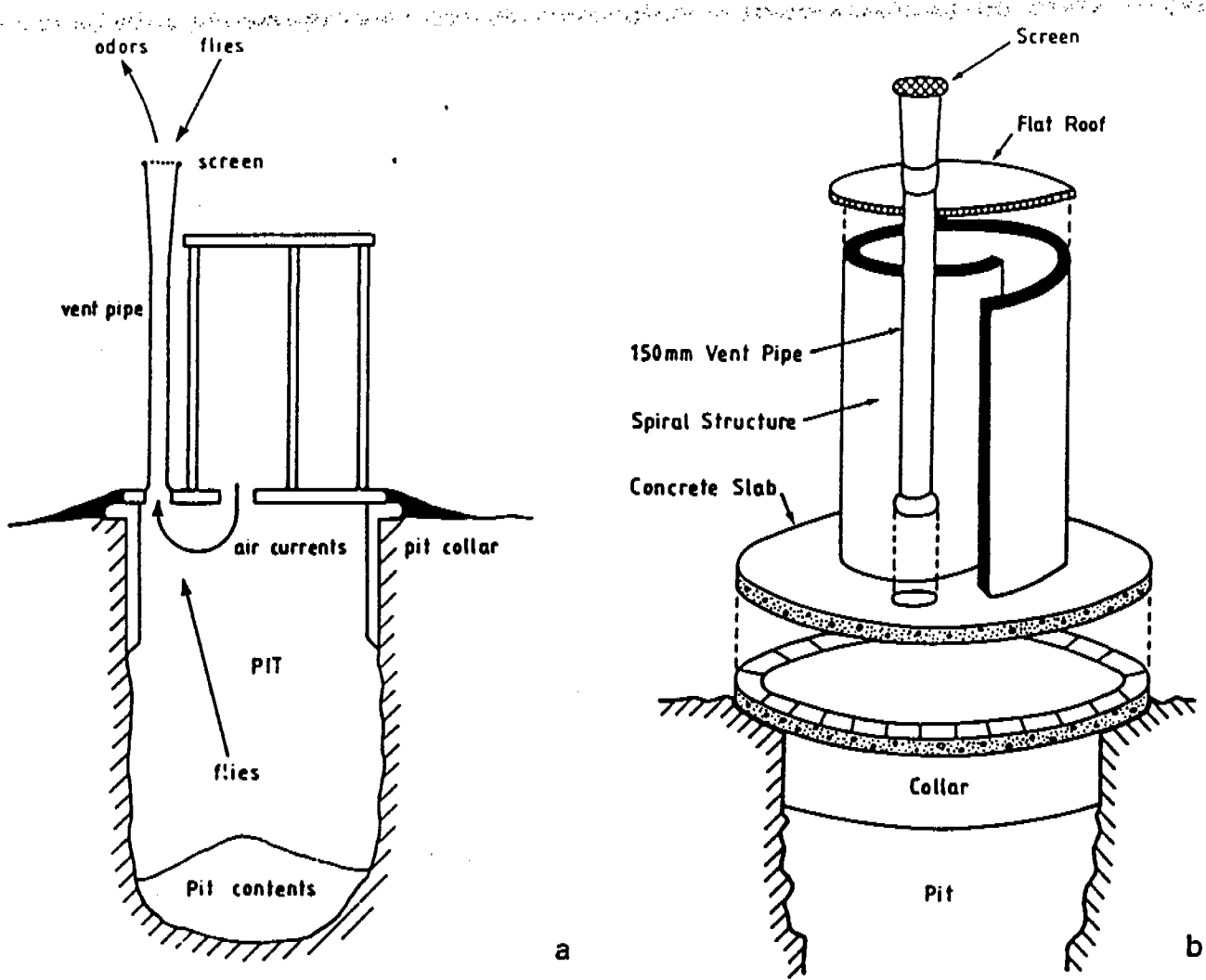
- * recognise the major technical problems presently met in different countries and propose possible solutions;**
- * identify different technical options that can be selected for rural and urban areas;**
- * realise the importance of monitoring functioning and utilisation of excreta disposal facilities.**

DESCRIPTIVE COMPARISON OF SANITATION TECHNOLOGIES

| Sanitation Technology | Rural Application | Urban Application | Construction Cost | Operating Cost | Ease of Construction | Self-Help Potential | Water Requirement |
|---------------------------------|---------------------------------|---|-------------------|----------------|---|---------------------|---------------------------------|
| VIP Latrines and ROECs | Suitable | Not Suitable | Low | Low | Very easy except in wet or rocky ground | High | None |
| DVC Toilets | Suitable | Not suitable in high density areas | Low | Low | Easy | Medium | None |
| Chinese 3 stage-septic tank | Suitable | Not suitable | Medium | High | Requires skilled builder | Medium | Water near toilet |
| Vault toilets and vacuum trucks | Not suitable | Suitable where vehicle access and maintenance available | Medium | High | Requires skilled builder | High | Water near toilet |
| PF toilets | Suitable | Not suitable in high density | Low | Low | Requires skilled builder | High | Water near toilet |
| Sewered PF toilets | Not suitable | Suitable | High | Medium | Requires skilled engineer | Low | Water piped to house |
| Conventional sewerage | Not suitable | Suitable where it can be afforded | Very high | Very high | Requires skills engineer | Low | Water piped to house and Toilet |
| Septic tanks | Suitable for rural institutions | Suitable in low density suburbs | Very high | Very high | Requires skilled builder | Low | Water piped to house and toilet |

ROEC = Reed Odourless Earth Closet
DVC = Double Vault Composting
PF = Pour Flush
GWT = Ground Water Table

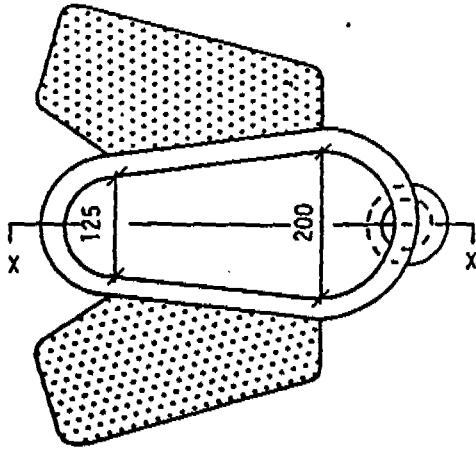
Source: UNICEF Programme Guidelines; Water Supply, Sanitation and Hygiene, Chapter 3 - Section; September 1987.



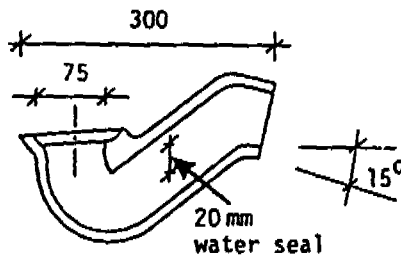
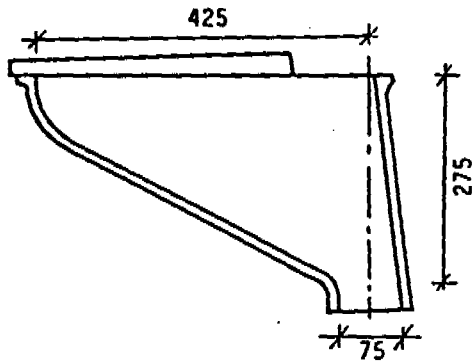
These pictures show VIP latrines as developed in Zimbabwe

- a. Schematic diagram of a VIP latrine
- b. Exploded schematic diagram of a VIP latrine with a spiral, ferro-cement superstructure
- c. A VIP latrine with a spiral, ferro-cement superstructure and an asbestos cement vent pipe
- d. Exploded schematic diagram of a VIP latrine with a spiral, ferro-cement superstructure and an asbestos cement vent pipe

PLAN

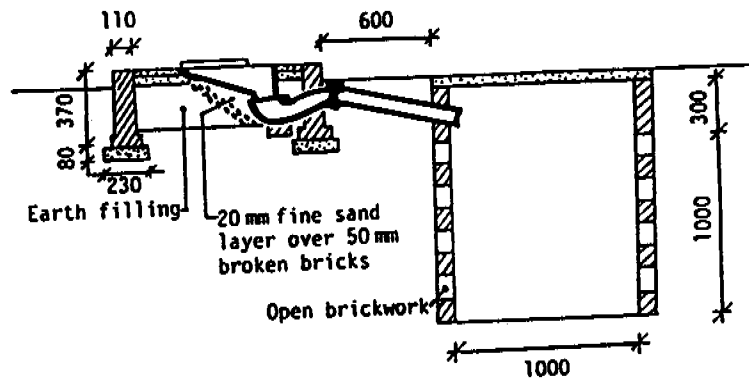
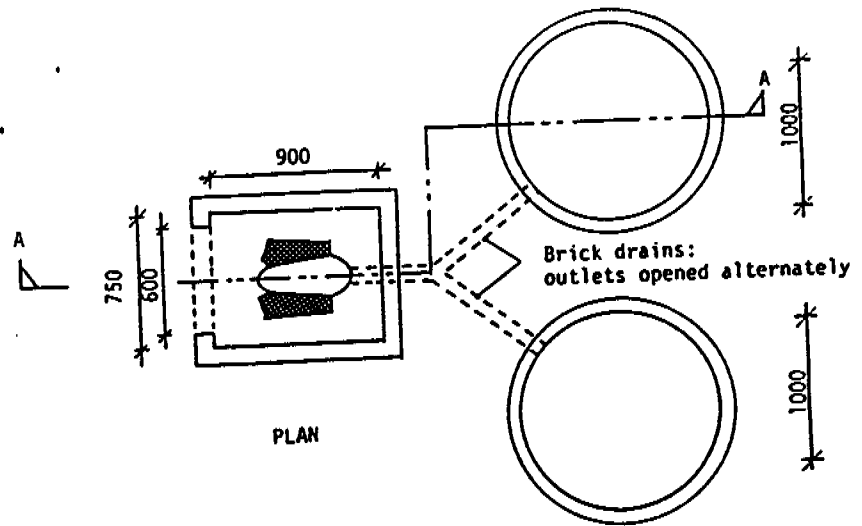


SECTION X-X



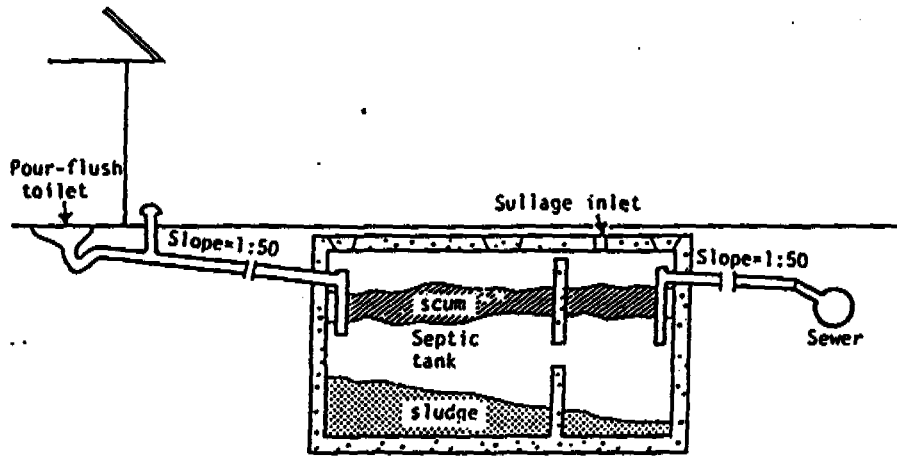
Pour-flush
squatting pan and trap
developed by the Indian
Standards Institution
(dimensions are in
millimetres)
(Drawing: A K Roy)

Types of Excreta Disposal System



Twin-pit
pour-flush toilet
developed by the World
Bank/UNDP
Technology Advisory
Group for urban
sanitation projects in
India (dimensions are in
millimetres)
(Drawing: A K Roy)

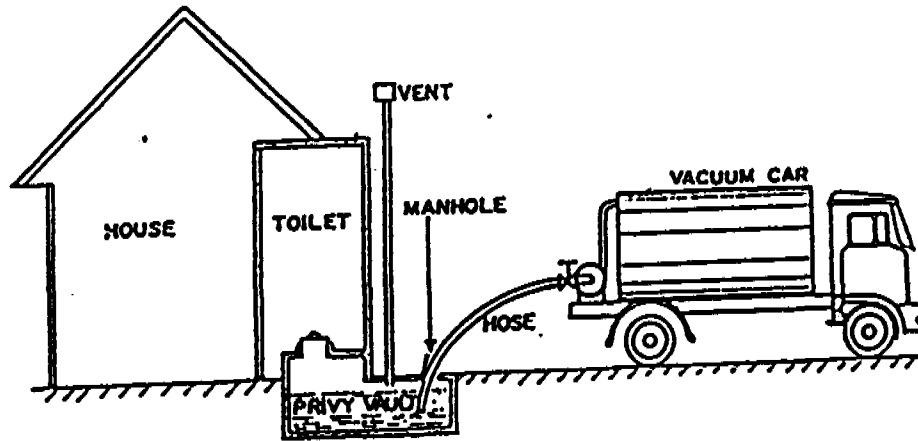
Environmental Health Engineering in the Tropics



A sewered
pour-flush toilet with a
two-compartment sept
tank
Source: After
Kalbermatten *et al.*
(1982)

Types of Excreta Disposal System

Typical arrangement for household nightsoil collection with vault and vacuum truck



MODULE 6: SANITATION

SESSION 22: STRATEGY FOR SUCCESSFUL PROGRAMMES

1. Review the session objectives

Participants will be able to:

- determine what are the essential elements of a successful sanitation programme;
- list at least five key strategies that have been used in the development of more successful sanitation projects.

2. Explain that the following methodology will be used:

- Group Exercise
- Plenary
- Case Study
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Exercise (in pairs):
Key Elements of a Successful
Programme 5 minutes
 - Plenary Discussion 10 minutes
 - Case Study: Developing Suitable
Strategies for More Successful
Programmes 20 minutes
 - Plenary 20 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. **EXERCISE: KEY ELEMENTS OF A SUCCESSFUL SANITATION PROGRAMME**

Ask the participants (in pairs) to list at least two essential elements of a good sanitation programme.

2. **PLENARY**

Ask someone to list the elements on a flipchart. Discuss with the participants the list that was developed by Feachem and Cairncross (1983) using Transparency 6.22.2.

3. **CASE STUDY: STRATEGIES FOR SUCCESSFUL SANITATION PROGRAMMES**

Assign one of the two articles "Rural Sanitation in Lesotho" and "Promotion of Rural Sanitation in Bangladesh" to each group. The articles should be read the night before the session. Allow the participants five minutes to review the articles. Ask the groups to place their answers to questions one to three on overhead transparencies.

4. **PLENARY**

Ask the participants to present their responses. Finish the first article before starting the second.

5. **DISCUSSION**

Discuss the strategies used, their positive and negative aspects. Use Transparency 6.22.3 to summarise different strategies that can be used.

6. **SUMMARY AND EVALUATION**

MODULE 6: SANITATION

SESSION 22: STRATEGY FOR SUCCESSFUL PROGRAMMES

OBJECTIVES

By the end of the session, you will be able to:

- * determine what are the essential elements of a successful sanitation programme;**
- * list at least five key strategies that can be used in the development of more successful sanitation projects.**

KEY ELEMENTS THAT A SANITATION PROGRAMME SHOULD CONTAIN:

- 1) A central steering committee comprising of ministries or departments involved in programmes.**
- 2) Sound project management.**
- 3) Pre-programme study of social factors.**
- 4) Development of an extension system including health education, technical assistance etc.**
- 5) Access to and delivery of construction materials.**
- 6) Integration of designs with infrastructure development.**
- 7) Integration of management with existing administrative structures.**
- 8) A training programme for government, extension workers, villagers etc.**
- 9) A monitoring and evaluation programme.**

Cairncross & Feachem (1983)

STRATEGIES FOR SANITATION

1. Set achievable target to attract donor/government support and funding.
2. Adopt standardized appropriate designs and subsidy practice.
3. Promotion of package approach water/sanitation/personal hygiene using water as an entry point.
4. Using 2 and 3 above - Introduce demonstration projects.
5. Donor/government co-ordination for adoption of above.
6. Mobilise partners and community level to accelerate implementation.
7. Before deciding on undertaking a socio-cultural research - review existing studies/knowledge.
8. If found that additional info. require to address local situations - undertake study (localize - low-cost)
9. Select/decide on development of IEC materials, design educational campaigns (hygiene education) training, etc.
10. The planning should be based on the study.

MODULE 6: SANITATION

SESSION 23: URBAN MARGINAL AREAS

1. Review the session objectives

Participants will be able to:

- assess the major sanitation problems in urban marginal areas;
- list four to five strategies that can be used for urban sanitation programmes.

2. Explain that the following methodology will be used:

- Video Presentation: Slum Improvement Project, Bangladesh
- Overview: Review of urban sanitation projects in different countries; strategies used and activities undertaken
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Video Presentation:
Slum Improvement Project, Bangladesh 30 minutes
 - Plenary Discussion 5 minutes
 - Overview: Review of urban
sanitation projects in different
countries; strategies used
and activities undertaken 10 minutes
 - Plenary 10 minutes
 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. VIDEO PRESENTATION

Show the two videos of the slum improvement project, Bangladesh. Stop after the first film to discuss it. Then continue with the second film.

2. PLENARY DISCUSSION

Discuss the contents of the film with the participants. Conclude what were the main strategies used.

3. OVERVIEW BY FACILITATOR

► Explain the following:

- The major sanitation problems in urban areas (Transparency 6.23.2). Discuss each of these and the extent of the problem in the countries of the participants.

► Outline low cost methods that have been developed for:

- urban excreta disposal
- drainage
- waste disposal

► Discuss country examples including Tegucigalpa, Honduras, Baldia (Pakistan) including the strategies that were used for each (Transparencies 6.23.3 and 6.23.4).

4. PLENARY DISCUSSION

Discuss which countries in Africa are on the way to developing good examples of urban sanitation programmes. How would strategies have to be modified in the African context?

5. SUMMARY AND EVALUATION

MODULE 6: SANITATION

SESSION 23: URBAN MARGINAL AREAS

OBJECTIVES

By the end of the session, you will be able to :

- * assess the major sanitation problems in urban marginal areas;**
- * list four to five strategies that can be used for urban sanitation programmes.**

DIFFERENCES OF WATSAN DEVELOPMENT BETWEEN URBAN AND RURAL SECTOR

- Population density > urban
- More heterogeneous population in urban
- Greater demand for services → urban
- Greater willingness to pay → urban
- More cash → urban
- Solid waste greater problem → urban
- Drainage greater problem (higher per consumption)
- Disease transmission process
- Media channels +
- Less transport → easier logist
- Cultural barriers broken
- Administration structures better
- **O & M more complex/Greater pressure**
- Urban problems higher visibility

SMALL BORE SEWER

Advantages

- convenience
- reduced water requirements
- reduced treatment requirements
- lower cost means of upgrading onsite sanitation systems
- **more cost effective when population density > 200 per hectare (HABITAT)**

Disadvantages

- new technology
- maintenance requirements

Small bore sewers are appropriate

- : in areas with existing on site sanitation systems that can no longer handle sullage flows
- : in low income areas where existing on site sanitation systems are being upgraded

Conventional sewers are more likely to be appropriate:

- in very densely populated areas
- high income areas
- business and commercial districts

MODULE 7: MOBILISING SUPPORT

SESSION 24: MOBILISING SUPPORT FOR WATER, SANITATION AND HYGIENE EDUCATION

1. Review the session objectives

Participants will be able to:

- identify the kind of support needed for effective water, sanitation and hygiene education programmes;
- list appropriate political, economic, social, commercial and religious allies or partners who could support WATSAN and hygiene education activities;
- assess the contributions these partners could make, how often, for how long, and on what basis;
- identify the major steps required to mobilise support for water, sanitation and hygiene education;
- identify how the New Delhi Statement can be used to mobilise support.

2. Explain that the following methodology will be used:

- Video: Race Against Time
- Overview by Facilitator: The mobilisation process
- Exercise 1: Identifying appropriate partners and mobilisation activities
- Plenary
- Exercise 2: Using the New Delhi Statement to mobilise support
- Plenary
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator:
The mobilisation process 10 minutes

 - Exercise 1: Identifying appropriate
partners and mobilisation activities 10 minutes

 - Plenary 5 minutes

 - Exercise 2: Using the New Delhi Statement
to mobilise support 15 minutes

 - Plenary 15 minutes

 - Summary and Evaluation of Session 5 minutes
- TOTAL 1 HOUR**

HOW TO PROCEED

1. VIDEO PRESENTATION

Show the video 'Race Against Time'

2. OVERVIEW BY FACILITATOR

Explain the following:

- Social mobilisation is an important way of expanding water, sanitation and hygiene education projects.
- Social mobilisation is a process for planning and implementing a variety of mutually reinforcing communication activities.

Use Transparency 7.24.2 to discuss the different approaches that can be taken in the social mobilisation process.

Summarise by discussing the steps one should go through to motivate changes in behaviour.

3. EXERCISE: IDENTIFYING APPROPRIATE PARTNERS

Ask the participants to develop criteria for selecting appropriate allies and partners using page seven of the session.

4. PLENARY

Discuss the results in plenary without a formal presentation of results.

5. EXERCISE II: USING THE NEW DELHI STATEMENT

Ask the participants to work in groups listing at least two to three ways that they could use the New Delhi Statement to mobilise support at the country level. These should be written on overhead transparencies.

6. PLENARY

Ask the groups to present their results to exercise II. Summarise the methods that can be used by using the New Delhi Statement to mobilise support.

7. SUMMARY AND EVALUATION

MODULE 7: MOBILISING SUPPORT

SESSION 24: MOBILISING SUPPORT FOR WATER, SANITATION AND HYGIENE EDUCATION

OBJECTIVES

By the end of the session you will be able to:

- * identify the kind of support needed for effective water, sanitation and hygiene education programmes;**
- * list appropriate political, economic, social, commercial and religious allies or partners who could support WATSAN and hygiene education activities;**
- * assess the contributions these partners could make, how often, for how long, and on what basis;**
- * identify the major steps required to mobilise support for water, sanitation and hygiene education;**
- * identify how the New Delhi Statement can be used to mobilise support.**

The social mobilisation process is concerned with mobilising human, financial and technological resources through several approaches. These are:

- ◆ Political mobilisation
- ◆ Government mobilisation
- ◆ Commercial mobilisation
- ◆ Community mobilisation
- ◆ Beneficiary mobilisation

IMPORTANT ALLIES FALL INTO TWO MAJOR GROUPS:

- **Those who can influence political and for economic policy.**
- **Those who provide widespread or popular appeal for water, sanitation and hygiene education activities.**

THE TWO ARE NOT NECESSARILY MUTUALLY EXCLUSIVE.

To mobilise communities, you must go through steps similar to those for motivating changes in behaviour:

- ◆ know about the programme and its benefits
- ◆ be interested and attracted by the goals
- ◆ understand the benefits to themselves
- ◆ be motivated and encouraged to do something to help
- ◆ be given recognition for their support.

MODULE 7: MOBILISING SUPPORT

SESSION 25: PLANNING HEALTH EDUCATION AND MOBILISATION STRATEGIES

1. Review the session objectives

Participants will be able to:

- identifying any changes that should be made to your water, sanitation and hygiene education programme to ensure adequate integration of health and hygiene education and mobilisation;
- develop a plan for incorporation of health, hygiene education and social mobilisation.

2. Explain that the following methodology will be used:

- Overview by Facilitator: Planning the Social Mobilisation Component
- Group Work: Review existing water, sanitation and hygiene education programmes and develop a social mobilisation plan for water, sanitation and hygiene education.
- Plenary
- Evaluation of Session

3. Design and Timing

- Overview by Facilitator:
Planning the Social Mobilisation
Component 15 minutes

- Group Work: Review existing water,
sanitation and hygiene education programmes
and develop a social mobilisation
plan for water, sanitation
and hygiene education 25 minutes

- Plenary 20 minutes

- Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 5 MINUTES

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

Explain the following:

- Social Mobilisation is integral to the water, sanitation and hygiene education programme.
- Use Transparency 7.25.2 to discuss the number of sequential activities needed prior to developing the plan. Follow by Transparency 7.25.3 which lists what the plan should allow for.

Discuss the following:

- Who should be responsible for the plan.
- Synchronising with the overall WATSAN plans.
- Clarification of Activities.
- Development of four individual plans (Transparency 7.25.4).
- Monitoring

2. EXERCISE: REVIEW THE SITUATION ANALYSIS TO DEVELOP A SOCIAL MOBILISATION PLAN

The participants should review the situation analysis provided to develop a social mobilisation plan for water, sanitation and hygiene education.

3. PLENARY

Ask each group to present their plans in plenary.

4. SUMMARY AND EVALUATION

MODULE 7: MOBILISING SUPPORT

**SESSION 25: PLANNING HEALTH EDUCATION
AND MOBILISATION STRATEGIES**

OBJECTIVES

By the end of the session you will be able to:

- * identifying any changes that should be made to your water, sanitation and hygiene education programme to ensure adequate integration of health and hygiene education and mobilisation;**
- * develop a plan for incorporation of health, hygiene education and social mobilisation.**

**NUMBER OF SEQUENTIAL ACTIVITIES NEEDED
PRIOR TO DEVELOPING THE PLAN:**

THESE INCLUDE:

- review overall programme goals and objectives
- include communication-related goals where appropriate (these are often related to behaviour change)
- identify behaviour changes needed to meet the goals and objectives
- assess likely constraints
- review overall situation
- review communication resources available and/or needed
- identify the target audience
- review budgetary resources

THE PLAN SHOULD ALLOW FOR:

- research on target audience/audiences - the community situation; existing knowledge, attitudes, practice and beliefs; media habits; communication channels available; constraints to changing behaviour
- communication/mobilization goals and objectives
- message development
- identification of media and communication channels
- identification of personnel and training needs
- plan for communication/health education training (who, where, how long, in what)
- development of training materials
- review and pre-test training materials
- time sequence for training
- responsibility for training
- develop communication support materials
- pre-test messages and materials
- time sequence for communication support activities
- monitor and evaluate

In developing the overall social mobilisation plan it is more manageable to draft four individual plans:

- research
- mass-media
- mobilisation
- face-to-face health and hygiene education

MODULE 8: CAPACITY BUILDING

SESSION 26: IMPROVED PLANNING AT THE COUNTRY LEVEL

1. Review the session objectives using Transparency 8.26.1

Participants will be able to:

- outline the major goals for child survival, development and protection by the year 2000 and how these relate to water and sanitation;
- describe the New Delhi Statement and how this relates to UNICEF sector planning;
- describe the UNICEF 1990-95 sector workplan goals, objectives and framework for action;
- list at least ten factors to consider in improved sector planning.

2. Explain that the following methodology will be used:

- Overview by Facilitator
- Group Work Planning
- Plenary
- Group work
- Plenary Discussion
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator 15 minutes
- Work in Pairs: Factors to Consider
in Improved Sector Planning 15 minutes
- Plenary 15 minutes
- Exercise: Planning for an Impact 20 minutes
- Plenary 20 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR AND 30 MINUTES

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

The facilitator should start the session by requesting each participant to write on a piece of paper which policy documents they refer to when planning UNICEF supported water and sanitation programmes. Ask the participants to read these out while someone lists them on the flipchart. Create two lists: one for general documents and the other for sector documents. When lists are completed review these for their relative importance with the participants.

- ▶ Describe the following:
 - The Global Goals and Strategies for the 1990s (Transparency 8.26.2)
 - The New Delhi Statement (Transparency 8.26.3)
 - United Nations Resolution (A/RES/45/181 (Reading IV))
- ▶ Use Transparency 8.26.4 to discuss the lessons of the 1980s. Follow by Transparency 8.26.4 which lists the major constraints as identified by the governments of developing countries.
- ▶ Give a brief overview of the UNICEF Sector Workplan 1990-95 and review the primary and subsidiary goals (Transparency 8.26.6 and 8.26.7).

The facilitator should discuss how these should be used in the planning and implementation of UNICEF supported programmes.

- ▶ Run through the framework for UNICEF's contribution to the primary and subsidiary goals (Transparency 8.26.8).

2. WORK IN PAIRS

Immediately prior to the work in pairs, give one example of what is required, i.e. one factor to consider in improved sector planning, to ensure that pairs work on the right track.

3. PLENARY

During the plenary session go round at random from pair to pair at least for the first five pairs to elicit responses. Put these up on flipcharts at the front of the room. Then open up the discussion to ask if anyone has any additional points to make that have not been recorded. This way a consolidated list can be developed. The more the participants themselves come up with the factors to consider in improved sector planning, the better. Only when the collective wisdom

of the participants has been exhausted, should the moderator add and discuss any points that have been missed. Refer to Transparency 8.26.9.

4. EXERCISE: PLANNING FOR AN IMPACT

This exercise should be done initially individually and then together by all participants who work in the same country. Participants should complete the exercise sheet on page nine.

5. PLENARY DISCUSSION

Questions 1 and 2 should briefly be reviewed by randomly asking people for their responses and listing these on flipcharts. Most time should be given to reviewing question three. This should lead into an open discussion on how to reconcile the sector goals and strategies.

6. SUMMARY AND EVALUATION OF SESSION

The facilitator should run through the major points again for one minute followed by distribution of the session evaluation form.

MODULE 8: CAPACITY BUILDING

SESSION 26: IMPROVED PLANNING AT THE COUNTRY LEVEL

OBJECTIVES

By the end of the session, you will be able to :

- * outline the major goals for child survival, development and protection by the year 2000 and how these relate to water and sanitation;**
- * describe the New Delhi Statement and how this relates to UNICEF sector planning;**
- * describe the UNICEF 1990-95 sector workplan goals, objectives and framework for action;**
- * list at least ten factors to consider in improved sector planning.**

1990S GOALS FOR CHILD SURVIVAL, DEVELOPMENT AND PROTECTION

- **Reduce infant and U5MR by one-third or to 50 or 70 per 1000 live births respectively**
- **Reduce MMR by half**
- **Reduce severe and moderate malnutrition among children under 5 by half**
- **Universal access to safe drinking water & to sanitary means of excreta disposal**
- **Universal access to basic education & completion of primary education by at least 80% of primary school age children**
- **Reduce adult illiteracy to half 1990 levels with emphasis on female literacy**
- **Improved protection of children in especially difficult circumstances**

ESSENTIAL COMPONENTS DERIVED FROM THE DELHI GUIDING PRINCIPLES

- **PROTECTION OF THE ENVIRONMENT AND SAFEGUARDING OF HEALTH THROUGH THE INTEGRATED MANAGEMENT OF WATER RESOURCES AND LIQUID AND SOLID WASTE.**
- **INSTITUTIONAL REFORMS PROMOTING AN INTEGRATED APPROACH AND INCLUDING CHANGES IN PROCEDURES, ATTITUDES AND BEHAVIOUR, AND THE FULL PARTICIPATION OF WOMEN AT ALL LEVELS IN SECTOR INSTITUTIONS.**
- **COMMUNITY MANAGEMENT OF SERVICES, BACKED BY MEASURES TO STRENGTHEN LOCAL INSTITUTIONS IN IMPLEMENTING AND SUSTAINING WATER AND SANITATION PROGRAMMES.**
- **SOUND FINANCIAL PRACTICES, ACHIEVED THROUGH BETTER MANAGEMENT OF EXISTING ASSETS, AND WIDESPREAD USE OF APPROPRIATE TECHNOLOGIES.**

LESSONS OF THE 1980S

IN RETROSPECT, THE DECADE OF THE 1980S HAS REVEALED THE FOLLOWING:

- **Progress has been made in developing models for sustainable development of water and sanitation programme in rural and peri-urban areas of developing countries. But greater efforts are required to translate these models into workable approaches for application to programmes, especially for the rapid delivery of programmes and acceleration of the coverage rate.**
- **Active and systematic management of the 1980s decade could have resulted in greater progress, if applied.**
- **Globally, virtually all developing countries lack properly-devised action plan for methodical guidance of their decade activities.**
- **Women's involvement, crucial for community participation, has not been systematically applied, but, at best, is ad hoc.**
- **The promotion and acceptance of cost-sharing mechanisms (cost recovery schemes for operation and maintenance, etc.) face formidable resistance at government level in many countries, and are difficult to put in practice at the community level.**

**THE MAJOR CONSTRAINTS TO THE WATER AND
SANITATION PROGRAMME, AS IDENTIFIED BY
DEVELOPING COUNTRIES' GOVERNMENTS**

- **Asia & the Pacific: Insufficient trained professionals, funding limitations, lack of cost recovery, and inadequate operation and maintenance -- in that order. In addition, several countries, particularly small island nations, underscored the difficulties associated with basic shortages of water resources.**

PRIMARY LONG-TERM GOAL

Universal access to water and sanitation by the year 2000. (Indicative definition of access: for water supply, availability of at least 20 litres of safe water per person daily, located at a total distance of within one kilometre from the user's dwelling. For sanitation, hygienic practices manifested by sanitary means of excreta/waste disposal, can suffice).

SUBSIDIARY GOALS

- **Linkage of water and sanitation with the control of diarrhoeal diseases (CDD) to assist in bringing about a significant reduction in the mortality and morbidity rates, resulting from these diseases.**
- **Elimination of guinea worm disease during the 1990s via use of health education and the provision of safe water supply to affected areas in endemic countries. (The latter will be singled out for complete coverage with water supply by the mid 1990s).**
- **Pursuit of water and sanitation programmes via sustainable development, including environmental sustainability, by paying attention to management of watersheds and catchment basins, lowering of groundwater levels by overpumping, and pollution of groundwater by on-site means of excreta disposal.**

FRAMEWORK FOR UNICEF'S CONTRIBUTION TO THE PRIMARY AND SUBSIDIARY GOALS

1. Placing of water and sanitation within UNICEF corporate thrust.
2. Charging the UNICEF Representative with the responsibility for this concern.
3. Using sustainable development including environmental sustainability.
4. Paying increased attention to human resource development.
5. Encouraging more widespread use of low cost technologies.
6. Giving greater priority to peri-urban slums.
7. Increasing the role of monitoring and evaluation.
8. Strengthening linkages of water and sanitation with health and nutrition especially CDD, guinea worm and others.
9. Using systematic and concerted mobilisation.
10. Allocating a greater share of UNICEF budget to water and sanitation.
11. Managing through objectives or short-term goals to guide the way to the primary long-term goals of universal access to water supply and sanitation.

FACTORS TO CONSIDER IN IMPROVED SECTOR PLANNING

- 1. Planning for a well integrated programme with strong inter-sectoral linkages.**
- 2. Assessment of capacity of government and NGOs in terms of finance and manpower. Can they absorb assistance given?**
- 3. Advocacy of suitable policies in order to influence national policy making.**
- 4. Capacity building in terms of training, sector planning, monitoring and evaluation.**
- 5. Affordable and appropriate technologies.**
- 6. Provision of sustainable services.**
- 7. Close planning and coordination with government.**
- 8. Standardisation - planning design and implementation.**
- 9. Procurement of equipment.**
- 10. Environmental issues.**
- 11. Operation and maintenance.**
- 12. Monitoring and evaluation.**
- 13. Private sector.**

Role of WES Section at Headquarters to Meet the WES Challenges

- ***Strategy development for improved health and socio-economic impact***
- ***Support Country Programming Process to improve efficiency through enhanced WES programme design and implementation***
- ***Capacity building of WES staff to meet 1990s challenges***
- ***Actively promote gender empowerment in WES***
- ***Support Guinea worm eradication and control of diarrhoeal disease***
- ***Research and development activities***
- ***Strengthening links with strategic partners***
- ***Global sector monitoring and advocacy***

What Can the UNICEF WES Sector Do?

III. Use WES Programmes to Influence the Formulation of National Policies

- a) support national sector monitoring, reporting and advocacy
- b) support sector strategy development and large scale replication of successful WES interventions
- c) strengthen coordination of ESAs at national level
- d) strategic advocacy to restructure sector resources of all partners in favour of the unserved poor

What Can the UNICEF WES Sector Do?

- I. ***Actively disseminate and implement lessons learned from the past***
- II. ***Improve Impact and Efficiency of WES Programmes Through:***
 - a) capacity building (human, institutional, community and systems)
 - b) effective coverage
 - c) cost reduction (i.e. rig monitoring, production bonus etc.)
 - d) sustainability of systems (O&M of handpumps etc.)
 - e) focussing upon behavioural change for enhanced hygiene
 - f) enhance TCDC

MODULE 8: CAPACITY BUILDING

**SESSION 27: MONITORING AND EVALUATION AS A
MANAGEMENT TOOL**

1. Review the session objectives

Participants should be able to:

- describe how monitoring can assist in improving sector management and accelerate coverage levels;
- describe the new Joint Monitoring Programme developed by WHO and UNICEF and how to apply the JMP within your own programmes;
- identify problems and solutions in terms of developing an effective an effective monitoring system at the country level.

2. Explain that the following methodology will be used

- Group Work
- Overview by Facilitator
- Plenary discussion
- Group Work
- Plenary Discussion
- Summary and Evaluation of Session

3. Design and timing

- Exercise I: How Monitoring and evaluation
can Assist Programme Development 10 minutes
- Overview by Facilitator 10 minutes
- Exercise II: Improved Monitoring
and evaluation at Country Level 20 minutes
- Plenary 15 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR

HOW TO PROCEED

1. EXERCISE I: HOW MONITORING AND EVALUATION CAN ASSIST PROGRAMME DEVELOPMENT

Give one example of how monitoring can assist programme development. Ask the participants to work in pairs to give another example.

2. PLENARY

The facilitator should develop a plenary list by going round the room and questioning each pair. A summary should be made of the major ways monitoring can assist programme development.

3. OVERVIEW BY FACILITATOR

- ▶ Using Transparency 8.27.2 and 8.27.3, an estimate of coverage levels in 1990 and projected levels for 2000 should be presented and discussed with the participants.
- ▶ Follow with Transparency 8.27.4 and 8.27.5 which shows what will be achieved if the present rates of coverage are maintained.
- ▶ Distinguish the difference between monitoring and evaluation using Transparency 8.27.6.
- ▶ Describe the Joint Monitoring Programme including why and how it was developed as a country-based and country controlled monitoring system. Refer to learning points 8-13.
- ▶ Transparency 8.27.7 should be used to describe the indicators to be covered:
 - coverage
 - systems management
 - funding
- ▶ Describe the establishment of the National Monitoring Unit (NMU) at the country level.

- ▶ Explain that information collected initially may be "decentralised guestimating". However, over time the decentralisation process of data collection will lead to estimating and "real data collection".

4. EXERCISE II: IMPROVED MONITORING AND EVALUATION AT THE COUNTRY LEVEL

The participants should read the article "Information - A Complex Support System" before the session. The exercise is to be done in groups and answers should be made on overhead transparencies.

5. PLENARY

Ask each group to present their answers separately. Discuss the conclusions of the exercise.

6. SUMMARY AND EVALUATION OF SESSION

A one minute summary should be made followed by the session evaluation form.

MODULE 8: CAPACITY BUILDING

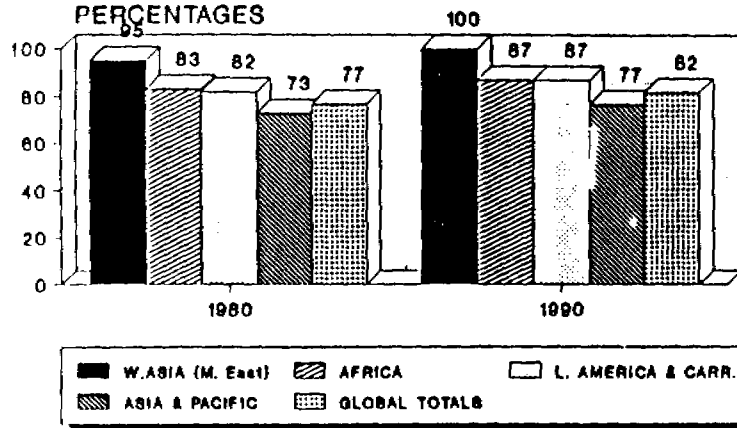
SESSION 27: MONITORING AND EVALUATION AS A MANAGEMENT TOOL

OBJECTIVES

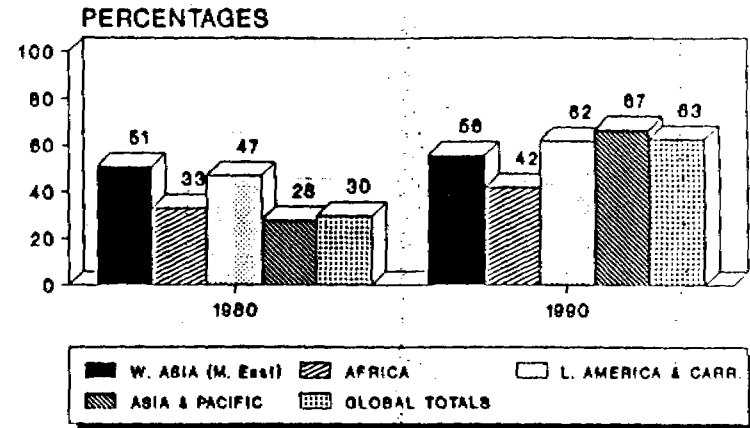
By the end of the session, you will be able to :

- * describe how monitoring can assist in improving sector management and accelerate coverage levels;**
- * describe the new Joint Monitoring Programme developed by WHO and UNICEF and how to apply the JMP within your own programmes;**
- * identify problems and solutions in terms of developing an effective monitoring system at the country level.**

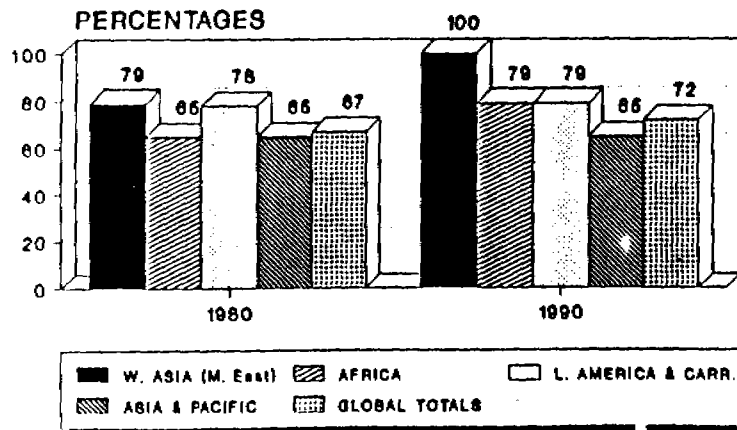
**Fig. 1: DECADE PERFORMANCE
URBAN WATER SUPPLY COVERAGE**



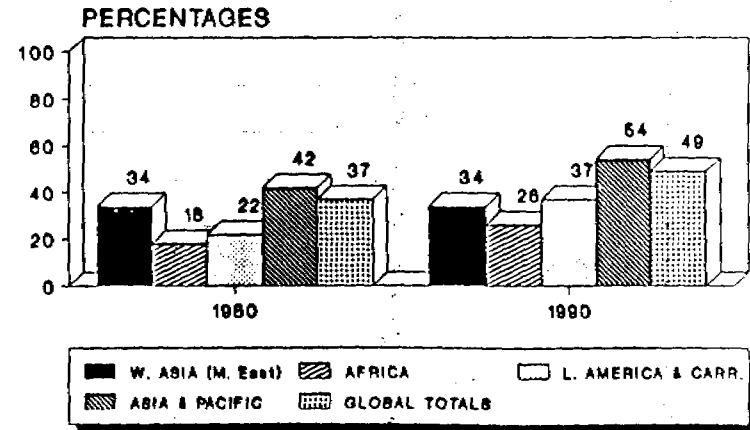
**Fig. 2: DECADE PERFORMANCE
RURAL WATER SUPPLY COVERAGE**



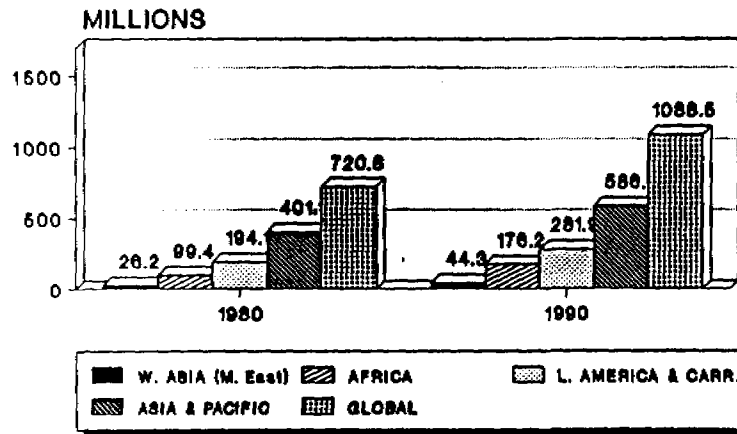
**Fig. 3: DECADE PERFORMANCE
URBAN SANITATION COVERAGE**



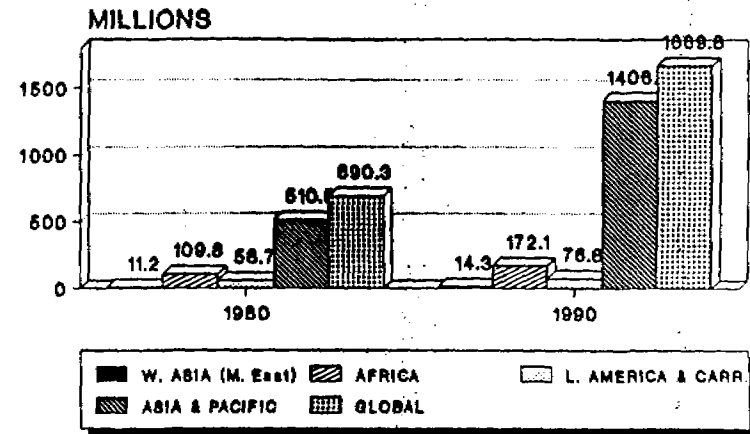
**Fig. 4: DECADE PERFORMANCE
RURAL SANITATION COVERAGE**



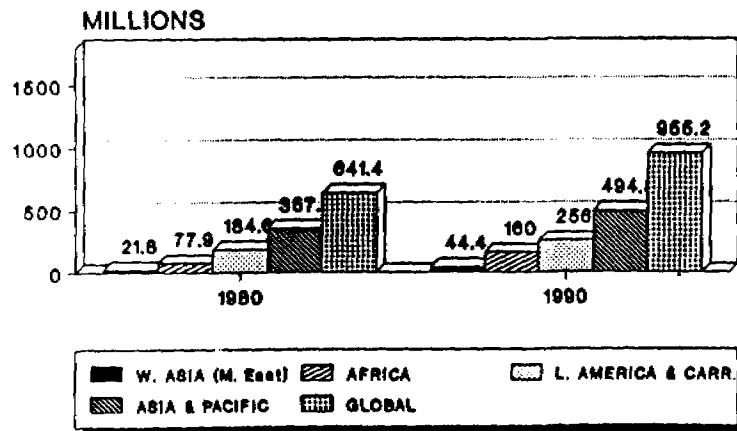
**Fig. 5: ABSOLUTE COVERAGE 1980s
URBAN WATER SUPPLY**



**Fig. 6: ABSOLUTE COVERAGE 1980s
RURAL WATER SUPPLY**



**Fig. 7: ABSOLUTE COVERAGE 1980s
URBAN SANITATION**



**Fig. 8: ABSOLUTE COVERAGE 1980s
RURAL SANITATION**

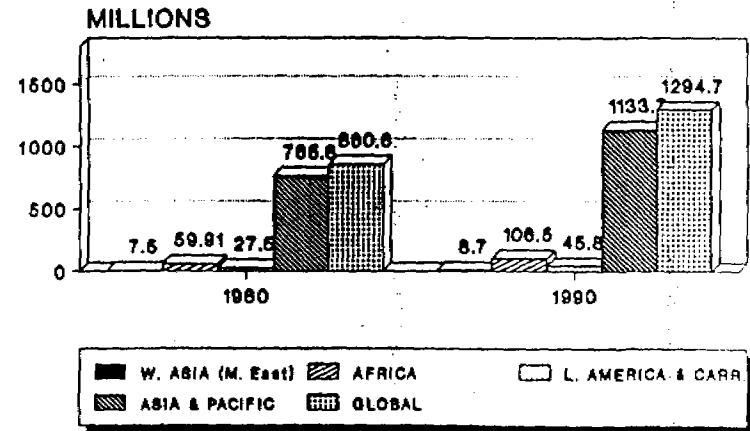
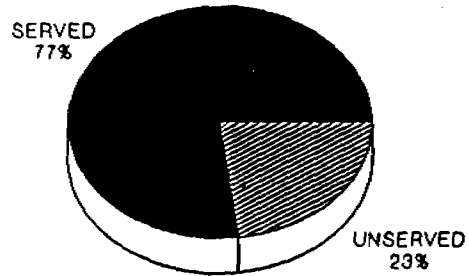


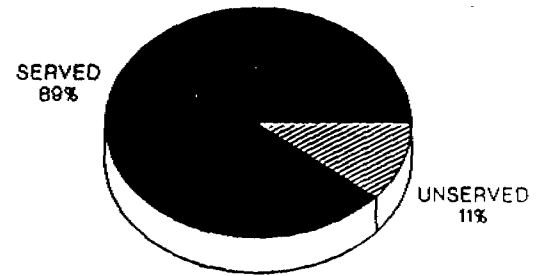
Fig. 13 PROJECTED % COVERAGE - YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



URBAN WATER

Unserved Population 445.5 M.

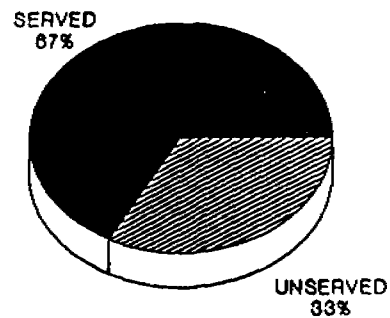
Fig. 14 PROJECTED % COVERAGE - YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



RURAL WATER

Unserved Population 321.3 M.

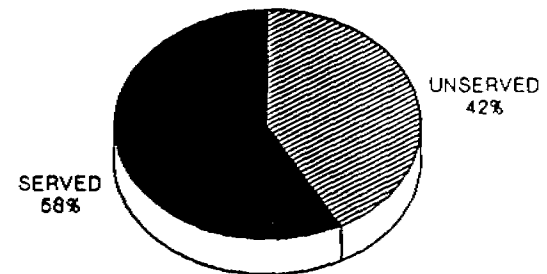
Fig. 15 PROJECTED % COVERAGE - YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



URBAN SANITATION

Unserved Population 632.7 M.

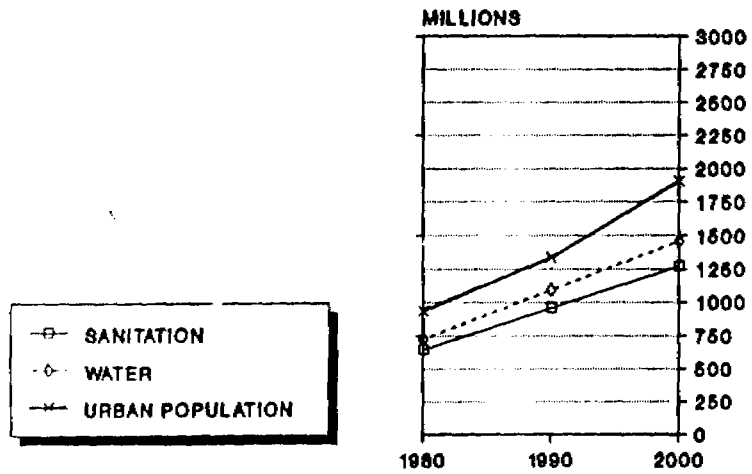
Fig. 16 PROJECTED % COVERAGE - YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



RURAL SANITATION

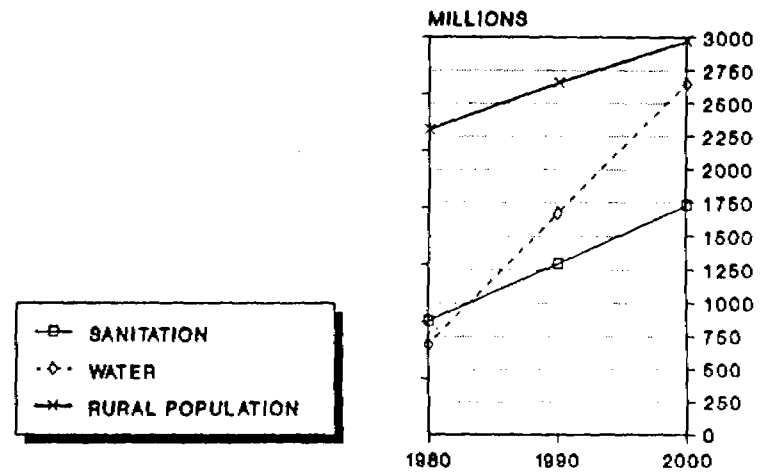
Unserved Population 1241.8 M

Fig. 17 PROJECTED COVERAGE FOR YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



WATER AND SANITATION - URBAN AREAS

Fig. 18 PROJECTED COVERAGE FOR YEAR 2000
GIVEN 1980s' IMPLEMENTATION RATES



WATER AND SANITATION - RURAL AREAS

EVALUATION aims primarily to provide feedback for planning and design and this is best achieved by carrying out a systematic review of selected existing projects from time to time.

MONITORING

Regular monitoring of a programme allows management to anticipate problems and make adjustments, reallocate resources or, if necessary, change project targets.

Information from monitoring normally makes a major contribution to evaluation studies.

CORE INDICATORS

COVERAGE: Quantifies the population served with different systems ranging from household water connection and sewerage to handpumps and ventilated improved pit latrines.

SYSTEMS MANAGEMENT: Aims at quantifying the proportion of contribution made by users or beneficiaries or by communities to operational and maintenance costs. This management indicator is used as a proxy for system use and sustainability.

FUNDING: Funding indicators are used to determine the proportion of investments made into low-income urban and rural areas where the majority of unserved populations reside. Information obtained from data on funding indicators assists decision-makers to monitor whether investments for the unserved populations are adequate.

MODULE 8: CAPACITY BUILDING

SESSION 28: ECONOMIC AND FINANCIAL ASPECTS

1. Review the sessions objectives

Participants will be able to:

- know the importance of cost awareness at all stages of programme development;
- describe how cost-effectiveness can be considered in your country of assignment;
- describe the methodology developed for cost analysis of UNICEF supported sector programmes.

2. Explain that this session uses the following methodology:

- Overview
- Presentation of Cost analysis Package
- Plenary Discussion
- Summary and Evaluation of Session

3. Design and Timing

- Overview by Facilitator 15 minutes
- Presentation of Cost Analysis Package 20 minutes
- Plenary Discussion 20 minutes
- Summary and Evaluation of Session 5 minutes

TOTAL 1 HOUR

HOW TO PROCEED

1. OVERVIEW BY FACILITATOR

1.1 COST AWARENESS

Discuss the following learning points:

- Breakdown of unserved population into service types (Transparency 8.28.2).
- Estimate of costs for low, intermediate and high cost technologies (Transparencies 8.28.3. and 8.28.4).
- Technology types and funds needed for 100% coverage (Transparency 8.28.5).
- Potential impact of restructuring resources (Transparency 8.28.6).

1.2 COST EFFICIENCY

Explain that it is essential to investigate the unwillingness of people to pay for services. Water supply agencies should provide adequate services that harmonise with the level of tariffs that the consumers are willing and able to pay for.

Ask the participants to write down on a piece of paper what percentage of water supply programmes are paid for by:

- donors
- government
- communities

Ask people randomly to read these out. Conclude this by stating that water and sanitation services in most countries are provided at prices which are unrelated to financial or economic costs. It is essential to investigate the willingness and ability of people to pay for services. Water supply agencies should provide services that harmonise with level of tariffs that the consumers are willing and able to pay for.

1.3 COST EFFECTIVENESS

Review learning points 10-13 with the participants, namely:

- Optimise the use of existing assets so that they deliver the most cost-effective service.
- Improve management and planning to ensure that optimum use is made of existing assets.
- One should identify major WATSAN alternatives and cost these. Difference in terms such as quality of services, quantity of services, type of service, areas to be served, training programmes, educational activities and administrative and maintenance organisations.
- Cost effectiveness can be measured in terms of reduction in disease, economic and social benefits. For example economic benefits were far more important in terms of guinea worm eradication and programme effectiveness in Nigeria. However there are numerous problems with the cost-effective analysis of WATSAN programmes which will be discussed later.

1.4 COST ANALYSIS

In order to properly monitor programme activities, one must analyse the financial inputs into programmes. This enables one to monitor if too much or too little has been spent on any element of the programme. It also allows one to reallocate resources from one activity to another depending on expenditure levels.

2. PRESENTATION: COST ANALYSIS PACKAGE

Explain that a software package and manual has been developed for estimating costs for UNICEF-assisted water supply and sanitation programmes. The package includes costing of all intra-sectoral components e.g. water supply, sanitation and hygiene education/social mobilisation. Each of these is in turn desegregated into activities both general, such as training, as well as specific, such as borehole, latrine construction or hygiene education training. Additionally, it allows for provision of data on a project level (geographic area), programme level (nature of programme such as urban, rural or emergency) and a country level aggregation. Finally, it allows for analysis of the costing of UNICEF interventions in the sector in a holistic way, including overhead costs at several levels from the country level through regional offices to headquarters, and taking into consideration the inputs of our partners ranging from government to communities.

3. PLENARY DISCUSSION

Allow participants to ask questions regarding the use of the cost-analysis package. Explain that the package will eventually be distributed to all field offices after field testing is completed.

4. SUMMARY AND EVALUATION

MODULE 8: CAPACITY BUILDING

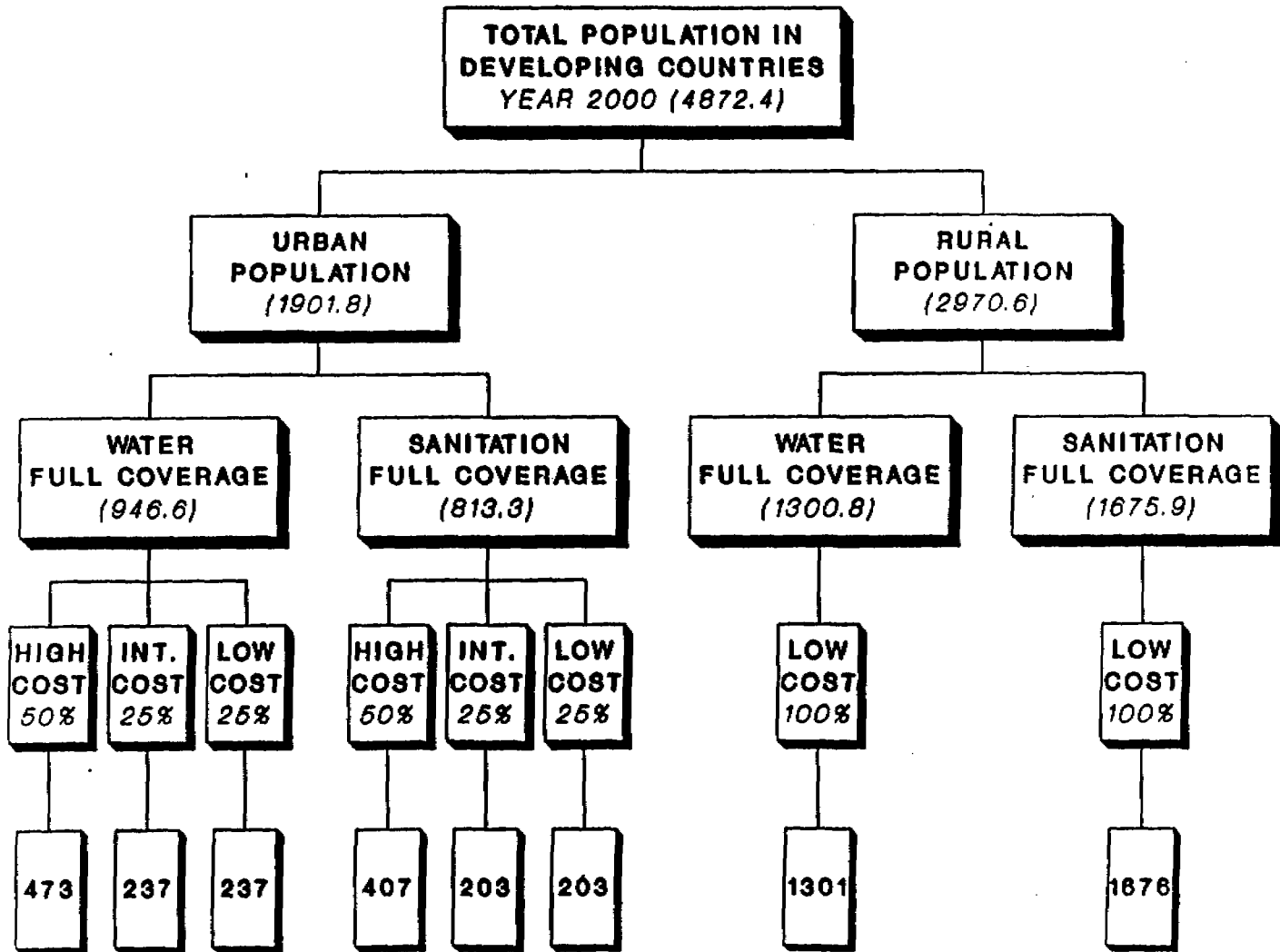
SESSION 28: ECONOMIC AND FINANCIAL ASPECTS

OBJECTIVES

By the end of the session, you will be able to :

- * know the importance of cost awareness at all stages of programme development;**
- * describe how cost-effectiveness can be considered in your country of assignment;**
- * describe the methodology developed for cost analysis of UNICEF supported sector programmes.**

Table 2: BREAKDOWN UNSERVED POPULATION
(YEAR 2000) INTO SERVICE TYPES



ALL POPULATION FIGURES IN MILLIONS

**THE GEOGRAPHIC GROUPS
WITH THEIR CORRESPONDING
TECHNOLOGY CATEGORIES AND UNIT COSTS
ARE AS FOLLOWS:**

| <u>Technology Category</u> | <u>Cost per Capita (in US\$)</u> |
|----------------------------|--|
|----------------------------|--|

HIGH-COST TECHNOLOGY

| | |
|--------------------|-----|
| Urban Water Supply | 200 |
| Urban Sanitation | 350 |

INTERMEDIATE TECHNOLOGY

| | |
|-------------------------|-----|
| Peri-urban Water Supply | 100 |
| Peri-urban Sanitation | 25 |

LOW-COST TECHNOLOGY

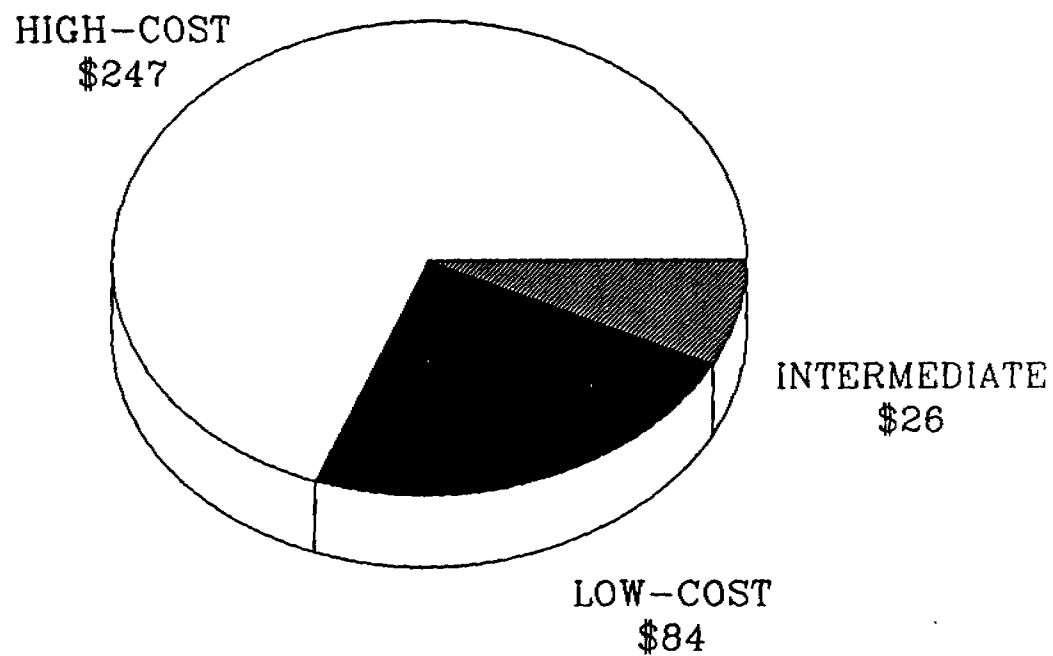
| | |
|--------------------|----|
| Rural Water Supply | 30 |
| Rural Sanitation | 20 |

High Cost Technology applies to the urban-type system with elaborate pumping stations, water and sewerage treatment plants, complete distribution systems and individual household connections for both water supply and sewerage.

Intermediate Technology, applicable to peri-urban areas essentially, comprises pipeborne water supply (no allowance for elaborate treatment) leading to public standposts, and 'on-site' sanitation including technologies such as pour-flush and ventilated improved pit latrines.

Low-Cost Technology, targeted to rural areas essentially, includes handpump-equipped boreholes or handdug wells, rainwater harvesting systems and pipeborne gravity-fed systems with public standposts, for water supply. Sanitation technologies are the same as those located to the 'intermediate technology' category with a slight cost reduction allowing for the use of locally available construction materials for the building of latrine super-structures.

Fig.19: TECHNOLOGY TYPES & FUNDS NEEDED
FOR 100% COVERAGE BY YEAR 2000

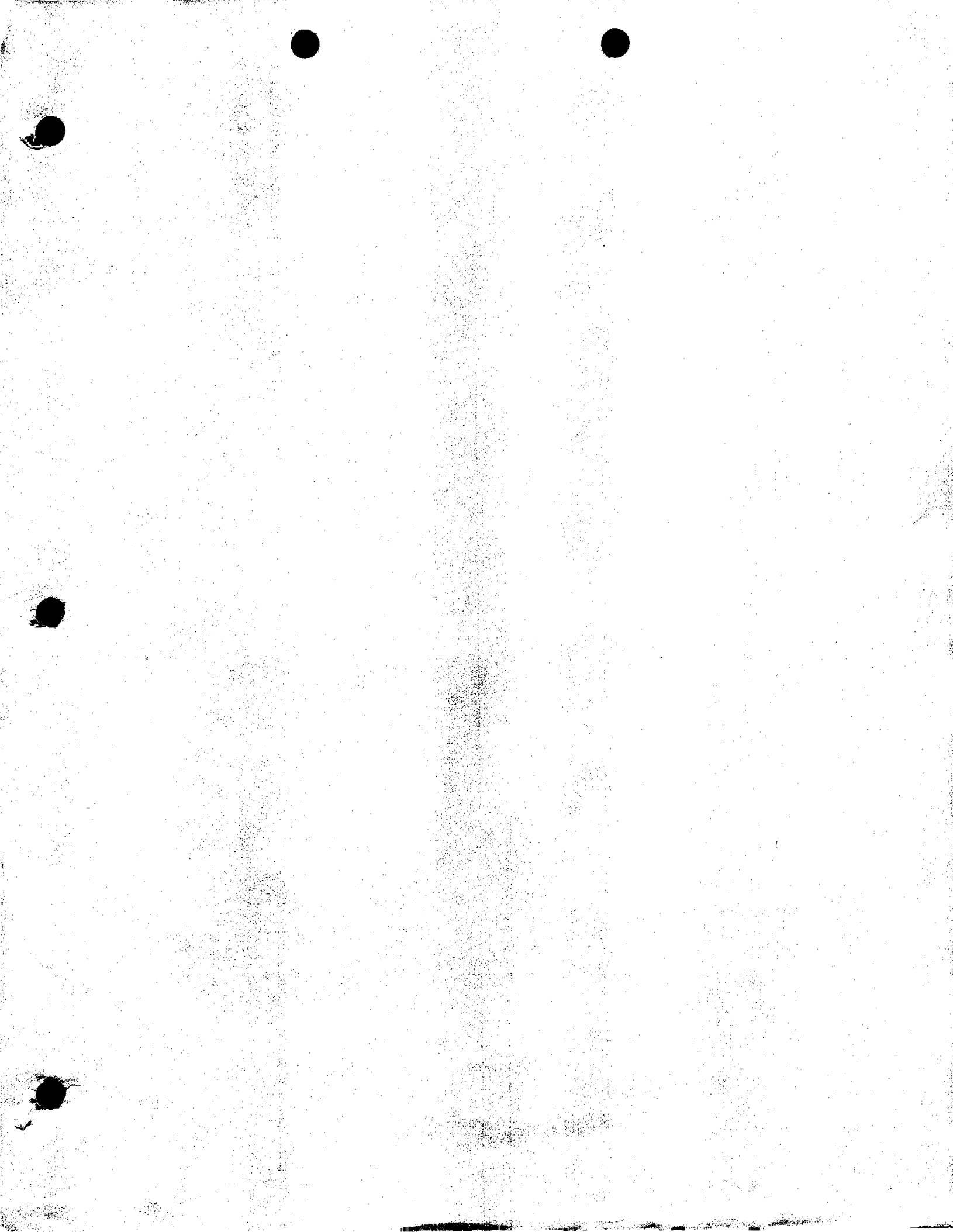


IN BILLIONS OF US\$

POTENTIAL IMPACT OF RESTRUCTURING RESOURCE ALLOCATIONS

**UNIVERSAL ACCESS TO WATER AND
SANITATION BY THE YEAR 2000 COULD
COST A MASSIVE US\$36 BILLION ANNUALLY.**

**BUT BY SHIFTING RESOURCES TO LO-COST
TECHNOLOGIES, INVESTMENT AT 30 PER
CENT OF THIS LEVEL COULD PROVIDE FOR
80 PER CENT OF THE UNSERVED.**



**WATER AND SANITATION SKILLS/STRATEGY
WORKSHOP
10-15 OCTOBER 1993
DHAKA, BANGLADESH**

AGENDA

Day 1

Sunday 10 October

Morning

Introduction 09:00 - 09:30

Module 1: Inter- and Intra-Sectoral Linkages

Session 1: Why should we Integrate Water,
Sanitation and Hygiene Education? 09:30 - 10:30

Coffee/Tea Break 10:30 - 11:00

Session 2: Making the Case for
Improved Programme Linkages 11:00 - 13:00

Lunch Break 13:00 - 14:30

Session 3: The Health Impact of Water Supply and
Sanitation Programmes: Separating Myth
from Reality 14:30 - 15:30

Afternoon

Session 4: Water and Sanitation as an Integral Component
of the CDD Programme 15:30 - 16:30

Coffee/Tea Break 16:30 - 17:00

Module 2: Cross-Cutting Concerns

Session 6: Gender Issues in Water and Sanitation 17:00 - 18:00

Evening Reception 18:30 - 20:00

Day 2

Monday 11 October

Morning

Module 2: Cross-Cutting Concerns (Cont'd)

| | |
|---|---------------|
| Session 7: The Sector and the Environment | 08:30 - 10:00 |
| Coffee/Tea Break | 10:00 - 10:15 |

Module 3: Low-Cost Options

| | |
|---|---------------|
| Session 8: What are the Technical Options for Water Supply? | 10:15 - 11:45 |
| Briefing for Field visit | 11:45 - 12:15 |

Afternoon

| | |
|---|---------------|
| Session 5: Field Trip | |
| Departure for Dhamrai Thana to observe hygienic practices and low cost latrine construction at household level. | 12:15 - 13:30 |
| - Arrival in the villages. | 13:30 - 1600 |
| - Talk of beneficiaries to assess hygiene awareness. | |
| - Meet NGO workers/leaders to discuss strategies. | |

(While walking around the village(s), visitors will have chance to observe rural communities, their life style, culture, child rearing practices and various other behaviors).

| | |
|---------------------|-------|
| Departure for Dhaka | 16:00 |
| Arrival in Dhaka | 17:30 |

Note: Participants will be divided into three groups and each will visit different villages/areas. A packed lunch will be provided by the hotel.

| | |
|--|-------|
| Reception at home of Mr. R. Carriere, UNICEF Representative, Dhaka | 19:30 |
|--|-------|

Day 3

Tuesday 12 October

Morning

Feedback from Field Trip 08:15 - 09:45

Session 9: Maintenance of Water Supply Systems 09:45 - 11:15

Break 11:15 - 11:30

Module 4: Community Management

Session 10: Community Involvement:
Where Have We Come From? 11:30 - 13:00

Lunch Break 13:00 - 14:30

Afternoon

Session 11: How to Improve Community Involvement 14:30 - 16:00

Break 16:00 - 16:30

Session 12: From Community Involvement to Management.
Can the Gap be Bridged? 16:30 - 17:30

Evening Session on Programme Planning/Process 19:00 - 20:30

Day 4

Wednesday 13 October

Morning

Module 4: Community Management (Cont'd)

Session 13: Training for Improved Local Management 08:30 - 10:00

Module 5: Hygiene Education

| | |
|--|---------------|
| Session 14: Changing Hygiene Behavior | 10:00 - 11:00 |
| Coffee/Tea Break | 11:00 - 11:30 |
| Session 15: Communication Strategies for Changing Hygiene Behavior | 11:30 - 13:00 |
| Lunch Break | 13:00 - 14:00 |

Afternoon

| | |
|---|---------------|
| Session 16: Research to Support Effective Hygiene Education | 14:00 - 15:00 |
| Coffee/Tea Break | 15:00 - 15:30 |
| Session 17: Selecting Messages and Media for Health and Hygiene Education | 15:30 - 17:00 |

Day 5

Thursday 14 October

Morning

Module 5: Hygiene Education (Cont'd)

| | |
|--|---------------|
| Session 18: Hygiene Education in the Education Systems | 08:30 - 09:30 |
| Coffee/Tea Break | 09:30 - 10:00 |
| Session 19: Organisation Aspect of Hygiene Education | 10:00 - 11:00 |

Module 6: Sanitation

| | |
|---|---------------|
| Session 20: Barriers to Successful Programmes | 11:00 - 12:30 |
| Lunch Break | 12:30 - 14:00 |

**WATER AND SANITATION SKILLS/STRATEGY TRAINING WORKSHOP
BANGLADESH, 10-15 OCTOBER 1993**

| No. | Participant Name | Position | City/Country |
|-------|---|--|------------------------|
| 1. | Mr. Arun Pekurel NOC | Project Officer, WES | Kathmandu/Nepal |
| 2. | Dr. (Miss) Krishna Mahapatra L3 | Project Officer, Sanitation/Health Education | Kathmandu/Nepal |
| 3. | Mr. Nimal Weerasinghe NOC | Programme Officer, WES | Colombo, Sri Lanka |
| 4. | Mr. Abdulla Saeed | Programme Officer | Male, The Maldives |
| 5. | Ms. Ugyen Doma NOB | Programme Consultant, Health & Nutrition | Thimphu, Bhutan |
| 6. | Ms. Sara R. Ahmad | Project Officer, Women in Development | Islamabad, Pakistan |
| 7. | Mr. Raja Sher Afzal NOC | Project Officer, WES | Islamabad, Pakistan |
| 8. | Mr. Khalil Khakar GS-7 | Sr. WES Project Asst. | Kabul, Afghanistan |
| 9. | Mr. Ershadul Karim L3 | WES Project Officer | Kabul, Afghanistan |
| 10. | Mr. Jayanta Ray NOC | Project Officer Water Systems | Calcutta, India |
| 11. | Mr. S. R. Mendiratta NOC | Project Officer, Sanitation | Patna, India |
| 12. | Mr. Abu S. Azad NOD | WES Section | Dhaka, Bangladesh |
| 13. S | Ms. Ayesha Hossain NOC | WES Section | Dhaka, Bangladesh |
| 14. | Mr. T. Kanagarajan L3 | WES Section | Dhaka, Bangladesh |
| 15. | Mr. Md. Jahangir Kabir NOB | WES Section | Dhaka, Bangladesh |
| 16. | Ms. Shaila Khan NOA | WES Section | Dhaka, Bangladesh |
| 17. | Dr. Kamal Islam/ Ms. Sarah Oo NOD L-3 | H&N Section | Dhaka, Bangladesh |
| 18. | Mr. J.K. Baral NOB | Divisional Office | Dhaka, Bangladesh |
| 19. | Mr. Kamrul Alam GS-6 | Divisional Office | Dhaka, Bangladesh |
| 20. | Mr. Md. Ohidur Rashid GS-6 | Divisional Office | Chittagong, Bangladesh |
| 21. | Mr. A.Y.M. Fazlul Hoque NOB | Divisional Office | Khulna, Bangladesh |
| 22. | Md. Barkat Ullah GS-6 | Divisional Office | Khulna, Bangladesh |
| 23. | Mr. H.K. Banik NOB | Divisional Office | Rajshahi, Bangladesh |
| 24. | Mr. Mohammad A Latif NOB | Divisional Office | Rajshahi, Bangladesh |
| 25. | Ms. Randi Davis | UNDP | Dhaka, Bangladesh |
| 26. | Ms. Sabita Shaha NOB | IBS Section | Dhaka, Bangladesh |

Improved Basic Services

| No. | Facilitators | Position | City/Country |
|-----|-------------------------|---|----------------------------|
| 1. | Mr. Henk van Norden 932 | Project Officer (WES) | Thimphu, Bhutan |
| 2. | Mr. Mansoor Ali 721 | Project Officer | New Delhi, India |
| 3. | Mr. Ashoke Chatterjee | National Institute of Design | Ahmedabad, India |
| 4. | Ms. Marieke Boot | IRC | The Hague, The Netherlands |
| 5. | Ms. Marilyn Dawson | Programme Officer, Asia Section | UNICEF New York |
| 6. | Mr. Ashok Nigam 1031 | Project Officer, OSPEA | UNICEF New York |
| 7. | Ms. Bilquis Hoque | Coordinator, Community Health Division, ICDDR'B | Dhaka, Bangladesh |
| 8. | Vanessa Tobin 426 | Senior Programme Officer WES Section | UNICEF New York |
| 9. | Mr. Philip Wan | Chief, WES Section | Dhaka, Bangladesh |
| 10. | Mr. Neill McKee | Chief, PCIS | Dhaka, Bangladesh |
| 11. | Ms. Nuzhat Shahzadi | Consultant, PCIS | Dhaka, Bangladesh |

Ms Jowsha Rahman for Issues