OCCASIONAL PAPER SERIES

TRAINING COMMUNITY MOTIVATORS
IN WATER SUPPLY AND SANITATION

IRC
WATER AND SANITATION CENTRE

TRAINING COMMUNITY MOTIVATORS IN WATER SUPPLY AND SANITATION

A reference document

Alastair White and Gill Gordon

Preparation of this document has been made possible by a financial contribution of WHO

International Reference Centre for
Community Water Supply and Sanitation
The Hague, the Netherlands
1987

Acknowledgements

The preparation of this publication was made possible by a grant from the World Health Organization, Division of Environmental Health.

In the compilation of this documents extensive use has been made of the following works:

- D. Werner and B. Bower: Helping Health Workers Learn (Hesperian Foundation, Palo Alto, 1982) .. A number of passages on teaching methods, and of stories have been taken or adapted from this work, and many of its excellent illustrations.

- Works of T.R. Batten, all published by Oxford University Press: Training for Community Development (1962). Much of Chapter VII, section 3.2. is adapted from this book. The Human Factor in Community Work (1965). Most of Chapter VII, section 3.3. is taken from this book. The Non-Directive Approach in Group and Community Work (1967). Chapter VI, section 24 is an adapted version of a passage from this book.

- F.R. Abbatt: Teaching for Better Learning: A guide for teachers of primary health care staff (WHO, 1980). Chapter III, section 3 is an adapted version of a section of this work. So is Chapter VII, section 2, and the whole of Chapter VII is strongly influenced by it.

We acknowledge very gratefully the debt which we owe to these authors, and to many others for particular ideas, illustrations etc. The most important reference are listed in the Bibliography (Part 1).

We are also highly indebted to a number of reviewers: the late Ray Isely; David Yohalem, David Werner, Ma Yansheng.

Particular thanks should go to Dick Ballance of WHO and Enric Hessing who guided the gestation of the document, and to Hülda de Vries and Jeannette Klop of IRC who played the main role in typing and physical production.

Note: Preparation of this reference document has been made possible by a financial contribution of WHO.

The views contained in this document are those of the authors and are not necessarily those of the IRC or WHO.

TABLE OF CONTENTS

PREFACE

This reference document is intended to cover the questions involved in training community motivators in water and sanitation. We do not offer a manual directly to be used in courses and workshops, with details of what to do on day 1, day 2, etc. Nor do we explain some of the simpler things about all work with communities. Our assumption is that those who will use this reference document has their own experiences on which to draw, and that readers will be able to compare what we say on each topic with ideas and situations with which readers are familiar, think about what we say and whether it applies in the local circumstances, and then plan the relevant aspect of the training programme.

Users will be programme administrators and leaders, course planners, and trainers. Our view is that as far as possible these should not be separate categories, but that those who are formulating policy for a programme should also be involved in implementing it, that all trainers should participate in planning the training, and that the trainers should also be the supervisors of the motivators in post. The problem with the setting-up of separate training units whose staff do not take part in the work itself is that they can become removed from the realities of the job.

Since we hope they will not be entirely separate categories, we do not address part of the document explicitly to programme leaders and the rest to trainers. However, in general the early chapters are more concerned with policy issues in mobilisation aspects of the programme and in training: these must be planned together. Chapters I, II, and the first two sections of Chapter III are particularly concerned with programme policy issues as a whole and the place of community motivation or mobilisation within it. Chapter III section 3, and Chapters IV and V are more directly concerned with the training itself.

Chapter VI is the central chapter of the document, and is concerned with what to teach, but even this cannot be separated from many of the policy issues concerning the mobilisation aspects of the programme (the way in which the community is to participate in decision-making, financing, constructing, maintaining, and managing its water or sanitation project). Thus Chapter VI includes discussions of policy questions, even in sections which are formally addressed to trainees. These sections are in fact intended to be read by all users of the document: the reason they are addressed formally to trainees is to give trainers a more direct idea of the way in which the themes might be covered in lesson plans or locally-produced manuals.

Chapter VII is specifically intended for trainers. It covers training methods, primarily for use in courses. But we must emphasise that course-work is only one part of training. Perhaps two thirds or more of the time spent in training community motivators should be spent in teaching and practising skills. This includes manual and technical skills, which we do not cover in this document, and the practice of social and communication skills during periods of supervised work in the community.

Chapter VIII concludes the document with a statement of the attitudes required among senior programme staff, politicians and the public if participatory approaches are to be adopted and are to be successful. It is directed primarily to programme leaders.

We are very conscious of the fact that many programme leaders may not take the time, and some may not even have the inclination, to read this document critically in the way suggested. They may be looking for something much shorter and more directive - simply telling them what to do. There is perhaps room for a different type of simple reference document to cover some basic universal aspects of mobilising communities. But we think that as soon as a reference document gets into the more crucial and difficult areas for which national staff are less likely to have prior training and experience, it can no longer be simple and directive with recommendations to be applied universally. It must, as we attempt to do, explain more about advantages and disadvantages of different ways of doing things, and in general give more background on which the users can make up their own minds and draw up their own plans.

Thus, we do not see our purpose as that of "training" programme leaders: we are addressing programme leaders as colleagues to whom we can bring some information (about what is done in other countries) and some views which we hope they will find useful. Much the same goes for trainers (insofar as they are different people from programme leaders); we do not say much about a need to provide training for trainers, because we assume that the trainers appointed will generally have relevant experience, and that a careful reading of this document, particularly Chapter VII, will give them much of the additional "training" they might require. We think that the most useful preparation for training motivators, however, would be to spend some time doing their jobs (Ch. V. section 5.2.).

Nor is this document intended as a manual to be given directly to trainees. We recommend the preparation, in each country or programme, of its own manual for trainees (Ch. VI, section 1), and we think that the present document could be used in the preparation of such country-specific manuals, especially relevant items from Chapter VI; but the locally-specific manual should go into greater detail in respect of the tasks required of the mobiliser in that programme, so that it can serve as a reminder to the mobiliser of what is expected of him or her and a source to look up information which he or she might not be able to remember. It should be prepared in draft form first and tested in the field, by those who have compiled it acting as mobilisers as well as by regular mobilisers themselves, so that it can be revised in such a way as to make it most useful for the job.

It is also intended that this reference document should assist in the preparation of other national and programme training materials and planning documents for the training of mobilisers. It will be possible for these to be much more specific and to omit much which is irrelevant for the country or programme in question.

One further point of explanation: many community participation reference documents lay considerable emphasis on "community diagnosis", or an initial phase in the community when a motivator is charged with gathering, perhaps together with community members, a considerable amount of information of various kinds about the community, from the educational attainment of each community member to how much water is used per capita for what purposes (drinking, washing clothes etc.), or

how many people have "correct" beliefs about the causes of certain illnesses. And some programmes send mobilisers to communities with long questionnaires on such subjects, to be filled in and returned to headquarters for numerical processing and report-making.

Those accustomed to such methods may read the sections of this document dealing with information-gathering and the initial approach to the community (Ch. VI, sections 6.1 - 6.3 and 6.10), and assume that we are just not saying all that needs to be said or mentioning all that needs to be done. In fact, we think that far too much is usually recommended and even carried out: that there is no point in collecting so much recorded information. There might be a point if a really exhaustive and well-designed study of the benefits of the water supply were to be carried out, requiring baseline data, and perhaps the practice originates in the planning of such studies. Otherwise, the only apparent purpose is to make a report about the community which will give some formal, precise data about it. This gives the misleading impression that such formal data are what is required for planning a project in the community, and even that the project in the community, including its mobilisation and health education aspects, can be planned by someone at headquarters on the basis of the data in the report. But this would be a negation of the participatory approach we wish to encourage. We also do not think it is effective even for a non-participatory approach to planning for the community: the formal data are too far removed from what is real and important in the community. A person who wishes to plan a mobilisation or health education programme for a particular community must at least get to know that community in more informal ways which cannot easily be expressed in reports. That is also why we do not say much about report-writing in this document: it should be kept to the minimum because the kinds of facts which can be easily expressed in reports are not very important in the work of motivation as a whole, and report-writing tends to give them too much prominence - there is a danger of making the motivator's approach to the work too formal and bureaucratic.

This reference document is intended to be of use to all types of agencies involved (or wishing to become involved) in motivating local communities to participate in water and sanitation projects. There are several different types of agencies, government and private (see Ch. I, section 1.2) with different approaches (Ch. III, section 2.1), and the type of physical facility to be constructed also makes a great difference to the kinds of methods which need to be used. We try to take these differences into account and explain their consequences, rather than assume we addressing one type of agency and one set of circumstances. As a result, it may appear that at times we are recommending a non-directive approach, at other times a more directive one. (A "non-directive" approach may be briefly defined as one in which more decisions are left to the community). The reality is that we think that non-directiveness is a desirable ideal, but that most water and sanitation agencies operate under constraints which limit the degree to which it can be applied. We hope to encourage agencies to take a more non-directive approach within the limits of their circumstances, but also to provide useful guidance or suggestions for those which cannot go far in this direction. Hence, for instance, the prominence given to the "project plan approach" in Chapter VI. sections 6.1 - 6.23. Most water and sanitation agencies plan projects for facilities which they offer to communities on condition that the community participates with its own contribution.

This is fairly directive, but we do not recommend that these agencies abandon it and turn instead to a completely different approach; rather, we make suggestions for somewhat more participation in planning by the communities which are to benefit from these planned projects, and also more small-scale help for other smaller communities to carry out their own improvements.

The word "motivator" is not often used by itself as the job title of those who carry out community motivation, and we have mainly used the word "mobiliser". A third word, "promoter", is frequently used in the sources we quote, but is perhaps mainly associated with a project plan approach (especially in Latin America). A variety of other titles are used by different agencies. The "mobiliser" as we use the term - the person whose training is the subject of this document - is an agency staff member who will work in a number of communities as community motivator in respect of water and sanitation improvements. The mobiliser may or may not have other tasks as well: technical tasks in construction or maintenance of water supplies, for example, or tasks outside water and sanitation - in the field of health, say, or general community development. But we cover only the mobilisation tasks in the context of water and sanitation, together with the health education tasks which we consider should be an integral part of mobilisation. The document is not intended for the training of village volunteers or of persons who will work only in their own community. An agency which uses village-based workers of this kind will still require agency staff who train them and liaise with them: this document will then apply more to the training of this staff level. But mobilisers may well be selected from among the local population of the area where the agency works: the training methods we describe (esp. Ch. VII) are suitable for training persons with little formal education.

I INTRODUCTION

The introduction states the need for community participation, defines what is needed, and describes the types of agencies, involved in water supply and sanitation, which can adopt a participatory approach and for which this document is intended.

Community motivation is needed not just as a way of influencing communities to cooperate with plans laid down by the agency, e.g. by providing labour for construction, by using the facilities or paying for them. Full participation means involvement in planning and all stages of implementation. A participatory programme should be responsive to community needs, should involve the community in maintenance, and should include a health education component.

Seven types of agency involved in water supply and sanitation are listed: they have different responsibilities and different patterns of training. Thus there is great diversity in what they do to encourage community participation. The present document does not present one recommended method in detail, but offers suggestions for training. It covers social and health aspects, not technical ones.

This document is presented as a contribution to the support which WHO gives towards meeting the goals of the International Drinking Water Supply and Sanitation Decade (1981-1990); and the wider goal of achieving Health for All by the year 2000, largely through the implementation of primary health care in all countries.

The full participation of the community in the solution of its health problems is one of the main elements of Primary Health Care, as it came to be defined in 1970's (1). This means participation at all stages from the initial diagnosis of problems and planning of actions, to implementation and the establishment of the organization needed to keep new facilities and services working.

A special effort is required to provide for, promote and organize this full participation. This is especially true in countries where services are normally provided to communities, but not organized with them. Staff will need specific training for the tasks involved in facilitating community participation in water supplies and sanitation. This document is intended to provide guidance for their preparation.

The tasks involved in facilitating community participation go well beyond simply arranging for community members to provide labour for constructing facilities planned by an external agency; or persuading people to use them or to pay for part of their cost.

1. Three vital requirements

There are three vital requirements in a participatory water and sanitation programme, namely:

1.1. Responding to community needs (community participation in planning

The agency must be willing and able to respond to the needs of the community. The staff of the agency should not see community "motivation" or "promotion" only as a matter of influencing the community, but also of allowing the community to influence what is done and the way it is done. There are a number of reasons for this.

First, there is the simple point that people should have the right to participate actively in the processes which affect them, with a voice in the decisions that are taken. It can be expected that it will give them direct satisfaction to do so, and encourage greater community spirit and the feeling of having a valued place in the national society. Concretely, this might lead to further community efforts for development in other fields. Second, there is the likelihood that the community will feel greater commitment to and responsibility for the facilities, leading to more careful use and better maintenance. Last but not least, the community may have very valuable ideas to contribute to ensure that the facilities meet their requirements without costing too much (2). Of course, there are also cost considerations to be taken into account, and there are limits to the degree to which agencies can be flexible in meeting community wishes. An increase in the scope and depth of community participation will require changes in the actions of the community motivator or "mobiliser" and the managers and policy makers in the agency. Often staff will have to change their attitude, and increase their confidence in the capacity of the local population to take a useful part in decision-making.

1.2 Community participation in maintenance

The community must take some responsibility for the maintenance and repair of new facilities. They need adequate support from the external agency.
Planners from water agencies are thinking more about maintenance because, in many countries, water supply and sanitation facilities are falling into disuse at a rate similar to that at which new facilities are being built.
Agencies usually give insufficient funds and attention to maintenance in comparison with construction. They nearly always report their "achievements" in terms of the number of new facilities built. Also capital funds for development are easier to obtain than recurrent funds for operation and maintenance, especially from international sources. The number of completed projects increases year by year, so there are increasing requirements for maintenance, but most agencies find that the regular budgetary provision which they receive from the government fails to take this into account. Because of these difficulties, planners increasingly suggest that communities should take responsibility for the maintenance of their own facilities. However, it is often found that communities cannot simply take on this burden without any help. Programmes in different countries are trying out various different approaches to the problem of maintenance in connection also with different technical solutions.

This document discusses these approaches towards cooperation between the agency and the community in the maintenance of facilities.

1.3. A participatory health education component

One of the main reasons for the improvement of water supplies and sanitation facilities is to have a more direct effect for the solution of health problems. In most Third World Communities water and sanitation improvement can be very important for health. However, it is likely that the community will only obtain the full health benefits if they consciously seek them.
This means that the promotion of community participation in water supplies and sanitation should include a health education component. Otherwise, the diseases which are transmitted by polluted water and poor sanitation will still be spread by dirty hands, re-contaminated water and other routes. Increased quantities of water may even lead to new problems through lack of drainage.

2. The types of agencies involved in water supply and sanitation

There are various types of agency involved, in particular:

1) Water departments, or water and sanitation departments, of national or regional government are responsible for the provision of facilities to the population. They may require participation by the community, particularly in the form of labour and construction. Water departments may be attached to any one of the various ministries, but generally have considerable autonomy in practice; for example in deciding how they will cooperate with local communities.

2) Environmental sanitation divisions of ministries of health are usually responsible for sanitation in rural areas, and this most often means promoting the construction of latrines by individual households and providing guidance and subsidised materials. They may also be responsible for water supplies; these are usually smaller-scale supplies using simpler technology than those provided by water departments in the same areas. In some countries, however, environmental sanitation divisions are responsible for all water supplies to rural areas or places below a certain population figure. In this case we may also consider them as "water departments" and the distinction breaks down.

3) Community Development ministries or departments are responsible for assisting communities in their own development efforts. These usually include small-scale water supplies and sanitation facilities. The technology for water facilities is generally very simple. However, in at least two countries[3)], technical water divisions have grown up within community development departments. They have also taken on the characteristics of "water departments", with relatively higher levels of technology.

4) Regional development corporations are usually semi-autonomous government agencies; with few exceptions their methods of providing water supplies have not been very participatory.

5) Local government are in positions to foster community participation in the process of providing and administering various facilities. However, many do not fully take advantage of this opportunity.

6) Non-governmental organizations, especially voluntary health or development projects operating in particular local areas seek to encourage maximum self-reliance on the part of communities to solve their own problems, and use highly participatory methods.

7) Finally, governments may also foster the formation of village-level local government bodies, village development committees, or autonomous local self-help groups, to carry out their own development projects including in water and sanitation.

The staff of these various external agencies often have very different patterns of training. Water departments largely train staff in engineering and water technology; environmental sanitation departments focus on public health; community development departments deal with community mobilisation and social aspects. Sometimes, separate sections are established to deal with aspects which the main staff are less prepared to undertake. For example there are promotion sections in water departments, or technical sections in community development departments. Sometimes, agencies avoid this by training staff for two or more functions.

This document deals with training in the social aspects and the public health aspects needed for health education. We refer to technical aspects, but do not explain them in detail.

Since the agencies have different responsibilities and different patterns of training, it is not surprising that what they do to encourage community participation also differs greatly from agency to agency: what they are in a position to do differs greatly. Therefore this document does not recommend one universal approach or formula of training, but offers suggestions for methods and approaches which can be considered.

Notes

(1) As defined in WHO, Director General, and UNICEF, Executive Director: Primary Health Care, Geneva and New York (1978), a joint report prepared for the Alma Ata Conference on Primary Health Care, it is "essential health care made universally accessible to individuals and families in the community by means acceptable to them, through their full participation, and at a cost that the community and country can afford. It forms an integral part both of the country's health system of which it is the nucleus, and of the overall social and economic development of the community".

(2) White, Alastair: Community Participation in Water and Sanitation: Concepts, strategies and methods, IRC, Rijswijk (Technical Paper 17, 1981), Ch. II: "Desirability of community participation, a discussion of the arguments", reprinted in Assignment Children No. 59/60 (1982), Pp. 17-34.

(3) Malawi and Cameroon. In Malawi, the water division mentioned has been transferred to a newly-created Department of Lands, Valuation and Water which, since 1980, has responsibility for all water supplies. Glennie, C.: A Model for the Development of a Self-Help Water Supply Program, World Bank, Washington (Technology Advisory Group Working Paper No. 1, 1982), is based on the Malawi experience as it developed within the Community Development Department.

II STATE OF THE ART

Community motivation is not just one technique or method to be taught and used in the same way in all kinds of programme. This chapter shows the variety of what is currently being done to promote community participation in different water and sanitation projects in different countries.

First, an explanation is given of why there is increasing emphasis on communities participating also in planning and decision-making, and of misunderstandings over the role the community can play in design. There is a wide gap between theory and practice here: between agreement on the need for community involvement in planning, and the limits placed on this involvement in most programmes.

The current practice of agencies adopting a participatory approach in water and sanitation is then described in terms of the main types of programme involved: those providing:

- piped supplies with yard connections
- gravity/piped supplies with standposts
- wells with handpumps
- pumped supplies requiring fuel bought by community
- simple technologies for water improvement (e.g. protected springs)
- new "appropriate technology"
- integrated participatory programmes (including sanitation)

Each of these requires rather different methods of motivation. There is also considerable variation between countries in the kinds of people to train as motivators, and in the kinds of incentive they need to be given to ensure conscientious performance: special attention might be needed to morale and team spirit. Differences are also discussed in the amount of money which different countries can afford to spend on mobilisation, and in how the effort can fit into local political and administrative structures.

---

1. Increasing emphasis on fuller participation

In the mid 1970's there was an upsurge in enthusiasm for community participation in all fields of development, at least at the level of international rhetoric. Before this time, water agencies saw community participation mainly in terms of a community labour contribution to the construction of supplies. It is true that in Latin America, many water agencies also set up community water boards to administer the new supplies under agency guidance. But the main aim was, and still is, the practical one of passing some tasks to the community so that the water agency can get on with other tasks elsewhere. This enables the agency to build and operate more supplies per year with its given budgetary and human resources.

Since the mid 1970's other concerns and objectives have become important, particularly at the level of policy formulation. However, these objectives have rarely been fully incorporated into the practice of technical agencies.
We can express these concerns as follows:

- the community has both the capacity and the right to participate in decision-making and planning, and construction, operation, maintenance and administration of its own water and sanitation facilities; it also helps to foster local responsibility for local development in general;
- this capacity and this right do not just apply to some dominant individuals and groups; "ordinary" community members, women as well as men, can and should exercise them too.

These concerns link up with experiences in a number of countries where the work by external agencies may meet coverage targets set from above, but does not really respond to the needs of local communities. We have mentioned poor provision for maintenance, but problems can arise when the community has no say in planning and design. For example: there is insufficient water for the community's consumption, resulting in long queues; or the water is delivered at the wrong place, so that most people find it more convenient to use puddles nearer their houses whenever it rains; or a sewage system is installed but it is so expensive and the charges so high, that only a minority of better-off people take a connection. These are merely a few possible examples: if any one situation were typical, it would be possible to allow for it in planning at headquarters. The point is, that some unforeseen problem often arises when planning does not also take place in the village.

2. Arguments against community participation in planning and design

There is now a clear gap between the full community participation called for in international meetings and publications, on the one hand, and the very limited degree of participation currently practised by most agencies, on the other. Practical agency decision-makers can assent to participatory principles in theory, but when it comes to applying them they see problems.

Engineers often find it difficult to accept the idea that the community has any role to play in design. They think of it as being an area of technical expertise in which no lay person can have a useful opinion. There are probably three misunderstandings involved here.

The first is that when we say "community involvement in design" we need to make a distinction, not always made in people's minds, between involvement in the discussion of what the design is to do, and how it is to do it. Take, for instance, the diameter of pipes to be used. To determine the diameter of pipes needed to bring a certain flow of water from a certain water source to a storage tank for a community is a technical skill. No-one expects the community to be involved in deciding what diameters of pipes will do that job. But a community has a legitimate point of view on how much water will be enough. "Involvement in design" can mean that the technician informs the community how he has decided - whether on cost grounds, or because of the capacity of the source etc. - with flexibility to alter criteria in line with community observations.

Secondly, there is another distinction to be made between two situations in design, even though both are part of "how to do it", not of what is to be done. One is the situation where the engineer or technician responsible for design knows all the relevant facts and has all the relevant skills, and moreover is conscientious in applying them. This would normally be the case in the example just mentioned, where it is a question of calculating the diameter of pipes. The other is the situation where members of the local community can provide facts or skills which the engineer or technician lacks, or by being involved can ensure that work is done with due care and attention. For example:

- Community members may know about water sources which may be tapped for a small gravity scheme; or about whether water sources dry up in severe drought; in the case of schemes to provide wells with handpumps, they may know which apparently suitable sites will be flooded in severe rains. These may appear trivial examples, in that agencies using otherwise non-participatory methods often do at least consult local people in these respects, but failures of schemes where this has not been done are also often reported.

- Where water is to be used for livestock as well as domestic consumption, cattle-owners may know more about the implications of water use patterns for design than engineers of planners do. In East Africa, many mistakes have been made in providing water for pastoralists without respecting their views: water points have then led to over-grazing of all the pasture within grazing distance, and ecological disaster (1).

- Community members may have relevant practical skills, e.g. as well-diggers in their local area, or as builders using local materials. A case is mentioned of a well design made by a local artisan in Kiribati (in the Pacific) which proved better than those suggested by outside engineers (2).

- Where it is intended to develop new appropriate technology or to adapt appropriate technology designs from elsewhere to the local environment, the experience of local people may be of particular help; surprisingly, it is often ignored in field tests, even by engineers who are very open to the idea of community participation.

- In some parts of the world there are consistent reports of crass errors in design which must be due to a combination of poor training and lack of conscientiousness: a desire to complete a scheme rather that to make sure it works properly. Gravity piped schemes are installed which never give any water because it would have to flow uphill, etc. Local people may be able to see the mistakes that are being made.

Thirdly, engineers in charge of rural water supplies know from experience that when community representatives or "leaders" are asked to comment on design, they are liable to put requests which, if granted, would not be fair to others. They might request the siting of wells or standposts near to their own houses rather than at the points most convenient to the majority of community members. Or they might request more expensive facilities for their own community which cannot be provided everywhere. So "community participation in planning and design" is rejected as being likely to lead to unfair advantages for some at the expense of others.

The misunderstanding here is that the authors do not see community involvement in planning as being a short consultation with some leaders, we see it as a wider involvement of the whole community, in which the financial limits on what the agency can do for the community are made clear. It is because this does need a certain amount of attention and skill that these guidelines are offered.

Project administrators and engineers may also have a justified concern to standardize the technical solutions adopted within a project as far as possible, in order to achieve economies of scale. This can appear to be a strong argument against allowing communities any choice. However, perhaps there is some degree of misunderstanding here too. Where communities are similar over a region they are likely to have similar requirements. The important thing is to consult in detail with those of the region's communities which are served early on in a project, then the solutions agreed with those communities are likely to be agreed by the others also (3). To the extent that different solutions are wanted by different communities, it is likely to be because their circumstances are crucially different and they really do need them.

Another reason for the gap is that the methods which can be adopted in some situations are not feasible or are in appropriate in others. For instance: often the ideal prescriptions for full community participation are worked out within small voluntary agency or experimental projects, where highly qualified people devote considerable time and attention to particular villages. The recommendations are often not appropriate for agencies of a different type operating on a large scale. There is not enough recognition of the different circumstances in which different agencies operate, the implications of the use of different technologies for improving water supply, or the difference between introducing a communal facility as most water supplies are, and individual facilities as in most sanitation programmes (household latrines).

3. Types of participatory programme in relation to water technologies

3.1. Piped supplies with household connections: individual labour contribution, community administration

Among water agencies, the most detailed procedures for community participation have been elaborated by a number of Latin American agencies[4] whose programmes primarily involve piped supply to individual households with yard connections in villages and areas of dispersed rural settlement (where people live on their own small farms).

The circumstances in Latin America are ideal for agencies who want to use community participation as a means of extending the provision of water supplies to rural areas:

- national budgets are strong enough to subsidise the provision of piped supplies in some rural areas, especially where gravity supplies are possible at low cost;
- many people live in hilly, well-watered areas where gravity supplies are possible;
- many people live within the money economy; and they can afford to pay small tariffs for a household connection to a subsidised supply, especially a gravity supply where the purchase of fuel is no problem.

In these circumstances, the Latin American water agencies are able to require a labour contribution from each household to the construction of the supply, as a condition for receiving a connection. Usually there is no alternative of a free standpost. The agencies can make the users responsible for collecting tariffs, and employing and paying a part-time operator. This is done through a community water committee whose obligations are fully set out, and whose operations are supervised by the agency.

The system works well in a number of Latin American countries, although not all agencies have adopted it. However, we must emphasise that planners cannot simply transfer these procedures to places with different circumstances, expecting that they will be equally successful. This is not mainly because of differences in culture. The reason is that in the rest of the Third World most governments and/or rural people cannot afford this level of supply, even where sources are suitable and there is enough water for household connections. Even in Latin America, over-reliance on this system may result in neglect of the poorer sections of the population and those who live in more remote areas. This happens because the agency focuses on extending a fairly high level of supply to those who can afford to pay a substantial part of the cost.

This system of participation usually achieves its practical objectives; water supplies are constructed, administered and maintained. However, the agency does this in a highly controlled way, and encourages little community initiative. This means that it meets few of the wider goals for community participation at present.

3.2. Gravity piped supplies with standposts: communal labour, community maintenance team

African countries including Malawi have developed another system of community participation procedures, particularly for gravity piped supplies with standposts. With standposts, it is impossible to cut off the supply to an individual household which does not pay its water tariff, or to exclude a family which did not participate in construction. The water agency makes an agreement with the community, but not with individual households. The community agrees to provide labour, local materials, and perhaps a cash contribution, for the construction of the supply.

The community must ensure that individual households make their labour contribution, through its formal and informal social controls, for example, the authority of a chief, council or committee, and the mutual pressure of neighbours on one another. Maintenance costs are usually fairly low for these supplies, especially for simple gravity systems. A community water committee will be able to handle much of the maintenance, with back-up by the external agency. This model works very well in the densely populated hilly areas of Malawi, where a number of other factors operate in its favour[5]. The fullest reports come from the Malawi case, and its procedures are set out in a handbook (6). However, the procedures for mobilising the community are not set out in the detail given by the Latin American manuals for programmes with yard connections. This is partly because this aspect is left to the structures of authority within the villages and traditional chieftaincy areas.

This points to a problem which may arise with this model in some socio-political circumstances. Can programmes generally rely on local structures of authority and social pressures to ensure that enough people turn out for work?

In too many countries, an even bigger problem is the failure of the water agency to fulfil its promises and obligations towards the local communities. These communities and their neighbours learn that there may not be any point in digging a trench because the pipes never arrive, or the supply never works, or it only serves some of those who put in the effort.

3.3. Community financing of pumped water supplies with standposts

Some projects have introduced powered pumping requiring community purchase of fuel, and providing a service to public standposts or water-points at the pump-head, but not to household connections. These projects have often met with failure and the authors are aware of few cases of success. The Latin American programmes with household connections, mentioned earlier, do sometimes build supplies requiring pumping and purchase of fuel, covered by community water tariffs. There are more problems than with gravity supplies, because of the higher levels of tariff required, but this does often work well enough.

The difficulty lies with the regular collection of funds when community members have to ask their neighbours to pay, and there is no ultimate sanction like the cutting off of a household supply. People may be able to collect small amounts, especially if this is done at convenient times; i.e. after the harvest. But buying fuel usually costs too much for communities other than those where most people are relatively well off and the extra cost of household connections would be preferred anyway. We may find exceptions in places where community members have no alternative source of water they find acceptable (provided there is also strong community cohesion), or where the community can raise funds for fuel purchase by levies on cash crops, profits from a community enterprise or some form of local taxation.

3.4. Handpump programmes: community responsibility in maintenance

Agencies providing wells with handpumps or footpumps have used community participation mainly as a means of ensuring the maintenance of the pumps. Maintenance is the main problem with handpumps of all types, but there are important differences between designs. Some designs now follow the principle of Village Level Operation and Maintenance (VLOM), which means they are made as easy as possible for local people to lift and repair with limited equipment. Most pumps, on the other hand, still require heavy lifting equipment and many special tools, on the assumption that major repairs will be carried out by a specialist team arriving with a strong vehicle. Nevertheless, even with such pumps, including the popular India Mark II, it has proved possible for a local person to be trained and provided with tools to carry out even major repairs (Roy, S., 1984). Still, many programmes simply ask the community to select, usually two, caretakers; give them a brief training in certain maintenance tasks; and ask them to perform these tasks as part-time volunteers, reporting faults that they cannot handle to the agency. Experience in many countries shows that in most communities there is too little incentive for the caretakers to do the work conscientiously.

This disappointing experience provides one of the pressures for increased community participation in water supply programmes and for more information on practical ways of handling it.

Agencies providing wells with handpumps on a large scale are searching for ways to secure what they see as greater commitment from the community in the maintenance of the pumps; greater "acceptance of responsibility for their own water supply". The results of ceremonies and certificates by which pumps and wells are handed over to community "ownership" are also disappointing. Water agencies now hope that a fuller involvement of the community from the beginning will arouse enough interest to ensure that people carry out preventive maintenance at least, report more difficult problems and even that they will pay for the agency's maintenance service. Therefore, this involvement, it is concluded, should include the community participating in construction - so that hand-dug wells, which require plenty of unskilled labour, are in this respect preferred to drilled wells, and hand-drilled wells preferred to mechanically-drilled wells which require none and therefore cannot involve people in construction and make people feel the well is their own; it should also involve the community participating in administration and maintenance through a well committee; and finally, it should involve parallel activities such as health education and latrine construction.

A policy formulated in some West African countries to overcome the maintenance problem requires the community to ensure that local caretakers carry out preventive and simple maintenance; and to pay for an intermediate level of repairs carried out by self-employed craftsmen covering a number of villages. The most difficult repair and replacement jobs are to be done by the district maintenance team of the water agency. Usually the village is to pay a part of this cost also. No agency has so far implemented this policy for a long period, or on a large scale, so we have yet to see how well it works, particularly in regard to the collection of funds in the villages.

3.5. Simple technologies: community wholly responsible for upkeep

Some water technologies have little or no maintenance costs, apart from occasional repairs or maintenance which community members are willing and able to do on a voluntary basis: they do not regard them as routine or heavy work. These technologies include protected springs; dug wells protected by a parapet but open at the top, or furnished with a windlass, bucket and chain; rainwater catchment; and small dams. Water agencies usually regard these "simple technologies" as too rudimentary to interest them, and/or as unable to provide an adequate water supply. They think this despite the fact than many rural people in most Third World countries lack a supply even of this level of safety and convenience. Environmental sanitation departments of ministries of health, or community development departments are most likely to introduce these simple technologies.

A typical way of carrying out such projects is to provide communities with technical assistance in the form of a skilled craftsman, experienced in the technology in question (say, a well-digger), who stays in the village for a period. He shows the local people the techniques and supervises the construction work. Sometimes he also acts as mobiliser, but more often the initial mobilisation is carried out by a separate staff member.

Community mobilisers do not usually meet difficulties in obtaining voluntary labour for construction, at least when only a fairly small amount of labour is required, and the need for the improvement is clear. Problems are much more likely to arise on the side of the agency. The agencies involved in this kind of work often do not have enough resources for the purchase of materials, transport of staff and materials, the payment of travel allowances, or sometimes for the engagement of skilled labour. They can therefore only cooperate with a very small proportion of the communities which they could otherwise help in this way. This crucial constraint is obvious to the agencies, but not recognised enough at national and international levels. Here people think correctly that community participation offers a cheap solution and they see that small-scale projects with full community participation and using simple technologies are often successful. But they draw the wrong conclusions from this. They assume that the problems with community participation are similar with all types of technology and are found at community level. They therefore conclude that the need is to spread knowledge of the methods used in these successful small projects to the larger ones using different technology.

There are indeed problems at village level, but they tend to be different in relation to different technologies and scales of agency operation. It is wrong to assume that experiences referring to successful projects where communities were mobilised to build a protected spring or well can give guidance on community participation where the problems are over the maintenance of a handpump or the fact that the poor will not be able to pay the charges for a piped supply.

Meanwhile, people do not realise that programmes could achieve more by transferring funding from the more expensive to these simpler technologies (here we cannot consider even handpumps to be a simple technology). This may mean transferring funding to the agencies which are already mobilising communities to improve their water supply using these simple technologies. Or it may mean water agencies themselves turning increasingly to these technologies. Programmes are likely to achieve a greater improvement in health and well-being if they use a given sum of money to help, say, 10,000 people to improve their grossly polluted supply, from a measurement of more than 24,000 coliforms per 100 ml. to a small fraction of that amount, than if they supply completely safe water to just 2,000 or even 5,000 people.

3.6. Appropriate technology: community role in development and adaptation

Some projects have concentrated on the development of new "appropriate technology" in close cooperation with the local population. Such projects are typically implemented by voluntary agencies or by individuals working in a voluntary capacity. An example is the development of a roof catchment system in some Dogon villages in Mali (8). Here an engineer worked with local craftsmen to adapt traditional granaries for water storage. They aimed to develop a solution which people in other villages of the region could copy or adapt. This would enable people to build improvements to water supplies themselves, using their existing resources, without any need for further external assistance. In another example, in Java, an engineer worked with local craftsmen to develop a chain and washer pump which local artisans could make with locally available parts in the particular region.

Some engineers dismiss such solutions as being technically inferior and/or irrelevant to the need for the provision of water on a large scale. They think that external agencies are needed to introduce uniform, mass-produced technologies which obtain economies of scale. They cannot work intensively with craftsmen in each village. On the other hand, others believe that because government is not providing everyone with water, people will have to do it for themselves. They assume that these appropriate technologies are the answer everywhere; that there is always some form of improvement on traditional sources which local people are willing and able to carry out with their own resources. All they need is the knowledge of what to do. In reality, there are some situations where people would adopt an appropriate device which provided a useful solution. This device might be introduced from another part of the world, or developed by an innovative engineer for local circumstances. However, there are other situations where lack of knowledge is not a constraint. Everyone knows what they could do, but the money or motivation are lacking. Just as agencies could give more attention and funding to "simple technologies", they could at the same time look at the possibilities for implementing new appropriate technologies in a similar way. That is to say, they could provide communities with technical assistance in the form of a skilled craftsman, who should be experienced in the appropriate technology and would stay in the village for a period. He would show local people the techniques and supervise their construction. If necessary, the agency could provide materials such as cement. It is probably best to help each community make its own appropriate technology objects (such as simple windmills made from locally available materials, or chain and washer pumps), rather than making them in one place and installing them in other, perhaps distant communities. They might not suit the physical conditions of the new place, and even if they do, local people will best be able to maintain and repair such an object if they have made it themselves.

3.7. The integrated participatory programme

This represents another innovative direction taken by voluntary agencies, and a few official aid projects. They help with water supplies only as part of a wider programme, which involves at least health education and sanitation, and sometimes a nutrition or income-generating component. These programmes vary so much in the way that they approach the goal of changing behaviour that perhaps it is wrong to put them all into one category. For instance, the Imo State Project in Nigeria (9), with UNICEF support, will only drill wells in a village on the strict condition that the village supports other activities in environmental sanitation (at first it was required that a rather expensive type of latrine should be constructed). The project coordinates the work of several teams in a closely organised way with complex logistics. Altogether about 70 staff with different tasks follow one another into each community. There is an initial mobilisation team; a survey team; a team for training village-based preventive health workers; a sanitation team for organising latrine building; and a drilling team. The village-based workers are taught to persuade people to adopt certain health practices. Chiefs and headmen are asked to lend their weight to this insistence on behaviour changes. We can describe this process as somewhat authoritarian, but we must judge it in the light of local circumstances. These include traditional behaviour between chiefs and their subjects. That is to say, authority should appear firm, absolute and respected, but it is not necessarily enforced strictly in practice.

The Imo State Project is an extreme example of its type. Other projects make water supply conditional on latrine building, and many agencies attempt to coordinate the work of different departments or teams in sanitation, health education and water supply. However, no other project is combining all these aspects in such a comprehensive large scale programme. It may be adopted as the model for the whole of Nigeria.

The voluntary agency Agua del Pueblo (meaning "People's Water"), in Guatemala, provides one contrast to the Imo State approach to an integrated participatory programme. Instead of 70 staff with different tasks, Agua del Pueblo trains one technician-promoter. This person covers all aspects, including mobilisation, sanitation, health education and engineering design for simple gravity piped supplies (the designs are checked by the agency's engineer). This is probably the fullest training given anywhere to a paraprofessional water technician. In many ways the Agua del Pueblo approach to health education appears less authoritarian than that of the Imo State Project. However, Agua del Pueblo also requires latrine construction as a condition for the construction of a water supply (10).

Some integrated participatory programmes follow the approach which David Werner calls "liberating" (11). These programmes contrast even more sharply with the Imo State Project. The Jamkhed Comprehensive Health Project in India provides an example of this approach.
The approach sees the poor majority of the rural population as capable of self-reliant development but as subject to various forms of oppression and manipulation by the more powerful. The application of this approach to health education and sanitation means that changes are not advocated merely because "we think it is better for them" but only after a process of dialogue in the community. In the course of this dialogue, the costs and drawbacks of making changes are given due consideration, and the reasons why the changes are advocated are fully appreciated by the local people. The application to water supply often means making a particular effort to ensure that the poorest and least powerful sections of the community have equal access to any public supplies which are installed. In India, this is particularly a problem for the harijan or "scheduled caste" communities; in other countries, it is often a problem for the poorest when charges are made.

The Jamkhed Project assisted villages in building wells at an early stage. It ensured that they were located in the harijan sections, because harijans were not allowed to use wells located in the main caste sections. Later, they carried out enough patient dialogue with caste villagers, while providing health care training and other assistance, to change their attitudes towards harijans. Now in the project villages harijans would certainly no longer be denied access to wells.

4. Variability between countries

Often when recommendations are given for carrying out a development activity in different countries - or, as here, guidelines which are supposed to apply to the whole Third World are offered - attention is drawn to the need to adapt them to local circumstances, or to use them only as possible suggestions but to develop the activity on the basis of conditions in each country. Then the recommendations are made in great detail, with little further advice on which of them might suit which circumstances or conditions.

The practice of community motivation has progressed considerably since the time when people assumed that development workers only needed to know about those social and cultural differences concerned with personal etiquette and religious taboos: for example: "One should not attempt to seat oneself higher than a Chief or cross one's legs in front of him. One should not pat an Eastern child on the head (this can be most offensive) or allow one's dog to run up to Muslims who, if it should lick them and they are strict in the practice of their religion, will have to go to the Mosque to be purified..." (12).

Nevertheless, people still too often assume that socio-cultural variables refer only to problems at the community level. To put it crudely, they think that problems exist because they, the local people, do not think and behave as we do, and that we therefore must study these differences and take them into account in designing a project for them.

It is now increasingly recognised at last that for the most part local people think and behave in a way which any one of us would think and behave in their circumstances. What has stopped us from realising this in the past has been our failure to think through fully the implications of being in their circumstances. Their circumstances mean, on one hand, that they have less exposure to proven knowledge, and hence may hold erroneaous beliefs clearly contradicted by scientific knowledge (e.g. that you catch someone's desease by defecating onto his excreta in a latrine). It is appropriate for us to educate them when we are sure that their beliefs are erroneous in this way (see Ch. VII, section 4.11). On the other hand, their circumstances also mean that they are obliged to live in an way which we might not regard as healthy. For example, they may allow domestic animals to roam and leave droppings about the yard or even inside the house, because penning the animals would mean much greater expense and effort in collecting fodder for them. It is not appropriate to try to "educate people that this is a harmful practice; rather it is necessary to open an dialogue with them (see Ch. VI, section 6.25). Many aspects of "culture" are related to the way of life in this sense. The same sensitivity to local realities is needed everywhere through the particular aspects or cultural traditions will differ.

The differences between countries which we need to consider in the first place then are not those between cultural traditions at the community level. They are those affecting the organization of the projects themselves. These are aspects such as:

- the educational level of staff which agencies can employ as community mobilisers: This is a matter of national educational levels in relation to alternative opportunities;

- the incentives required for community motivators and agency staff to perform their jobs conscientiously;

- affordable levels of water supply and types of sanitation in relation to physical characteristics of terrain, population density and so on;

- the type of political and administrative system which provides the setting for the water supply and sanitation programmes, to which they have to relate.

Educational levels vary greatly from one country to another, in a way which must necessarily affect the whole way in which a mobilisation programme is set up. In Sri Lanka and parts of southern India, at one extreme, university graduates even with masters degrees are found in villages, living with their parents and feeling they have nothing to do because there are no jobs available which require their qualifications. In contrast, in some African countries (especially the most recently independent and where education was most neglected under the colonial regime), even primary school leavers are reluctant to work in rural areas. They have "scarcity value" and have opportunities in town which they feel are "better" or will lead to further advancement.

What matters is not so much the proportion of an age group coming into the labour market with primary, secondary, or higher qualifications, as the relationship of this proportion to the employment opportunities available requiring qualifications. This will determine the willingness of people with particular educational qualifications to work in rural areas as community mobilisers. Just as important, it will affect the attitude they can be expected as a group to have toward such work if they are engaged for it. "Dedication" to work is not simply a matter of personality characteristics to be spotted at selection, or of the leadership given by programme heads - though it is both of these things too; it is also a matter of whether the community mobilisation work, with its inconvenient hours, its uncomfortable travelling etc., is seen as a fulfilling career, and this will be in comparison with alternative opportunities open to the worker. Therefore, in some countries water agencies will be able to find trainee mobilisers with, say, secondary education and they will perform well, while in others, trainees with secondary school will be out of the question and it may well be best to design programmes around trainees of low educational level but who will value the job (13).

Countries also vary greatly in the kinds of incentive necessary for staff to do their jobs conscientiously. This is partly related to the state of the labour market and their alternative opportunities, just mentioned, but not entirely. There is also the very important but too little acknowledged question of the norms of performance of duty which are informally regarded as acceptable, for instance in government service. A community mobiliser must be highly motivated and conscientious. This will be no problem in some countries, where by and large this is the spirit which prevails in general. In a second country, standards of performance in government service are maintained at a moderate level by an elaborate system of supervision and setting of numerical targets of performance which have to be reported to higher levels in great detail. In a third country, there may be even greater difficulties. There is room for endless discussion as to why these differences occur; unfortunately too often people are simply blamed for being lazy or not public-spirited: it is not understood that people respond to incentives, and that these incentives come from the economic, political, and social system around them. At any rate, for a community mobilisation programme, the climate of public attitudes is all-important: public attitudes towards how much each person should be expected to do for the public good, as against his or her private interests. And this applies first to the mobilisers themselves.

In some countries, programme managers will not have to worry about this question. In others they will find it a big problem, and will need to consider ways in which they can insulate their staff from the low morale of other surrounding institutions, i.e. ways in which they can create a special loyalty to the team and the job. Such a commitment can be created, but only if programme heads themselves are the first to show it.

There is also the obvious question of how much the country can afford per head for water supply, which should be reflected in the budget of any agency - directly in the case of government-funded agencies, but also in the case of aid-funded projects or voluntary agencies because it is inappropriate to favour certain regions or population groups with projects at a level of subsidy higher than what can be afforded for all. The amount available per head should determine what levels of water supply are offered (too often a relatively high level of service is taken as fixed, and the funds are then not enough to supply more than a small percentage of the population). The amount available per head will also determine to some extent the funding of the mobilisation or promotion effort itself. Governments may be reluctant, for instance, to create new posts, and it may be necessary to combine mobilisation with maintenance functions or to train a general category of "project assistant" (as in Malawi) who will also carry out many technical tasks.

Finally, how a mobilisation effort is set up will depend crucially on the political and administrative system of the country. Some countries mobilise their rural population for many aspects of development, and have an established system for doing this. In some socialist countries, agricultural production is collectively organised, and these collectives can then be mobilised for the construction and maintenance of water and sanitation facilities on the basis of giving work-points for this work as for work in the fields - work-points entitling the person to a share in the harvest. Other countries have established the principle that each community should have its own productive enterprises - a communal farm on which each community member works perhaps one day a week, and/or other enterprises such as a grain mill or a shop. Such "corporate" communities may then more easily be able to pay one of their members for maintenance work on a water system, or even to pay outsiders for repairs. It may or may not also be easier to organise community members to carry out other communal labour, for instance on a water system. (If people feel they have been cajoled by local officials into working on the communal farm, and have seen few results from it in terms of benefits to themselves, then they may be more resistant to mobilisation for work on a water system: they may need more convincing that their labour will not be wasted.)

There is also a great variation between countries in the role which can usefully be taken by local authorities at the district or municipal level. In an ideal case their involvement might itself be seen as a form of community participation. The reality is often, however, that at district political and administrative level there is least understanding of the need to mobilise people and to help them with low-cost solutions which can be afforded for all: there is pressure, on the contrary, for the "best" technical solutions, provided at the expense of the national budget but in the allocation of which, to particular local communities, the district level plays its political role.

Or, when district or municipal authorities are themselves responsible for water supplies, they are run without any other form of popular participation, and are in fact often less responsive to the needs of the majority of the local population than national agencies may be. Variations between countries at the level of national administration should be even more obvious: they affect crucially the climate for community mobilisation. In particular, there is the difference between countries where any mobilisation which is not kept under strict control from above - where all that is done is on the terms of the government agency, with no real scope for local participation in decision-making - will be regarded as undermining government authority, and countries where on the other hand it will be welcomed.

5. Variations between communities

There is also enormous variation between communities in their socio-cultural characteristics, and this will have to be taken account of in programmes even to the extent of adopting different approaches in different types of community. There are, for instance, cultural differences between how communities are organised, what kinds of people have authority or power and how they exercise it, how decisions are made. We shall deal with the problems which are met in some communities, not others, and how to deal with them, in Chapter VI. It is sometimes said, however, that some communities are not ready for community participation or are too poor to cooperate in a project (14). We think that there can always be found an appropriate way of cooperating with a community and motivating it to meet its needs, if these needs are real and if some help is offered. What it will often require from the agency, however, is a willingness to be flexible in adapting the type of help offered (e.g. the technical solution for water or sanitation) to the circumstances of the community.

Notes

(1) See articles by Gerhard Tschannerl and by others in Coulson, Andrew, ed.: African Socialism in Practice: the Tanzanian experience. Nottingham: Spokesman (1979).

(2) Cochrane, G.: "The administration of Wagina resettlement scheme", Human Organization, Vol. 29 (1970), Pp. 123-132, cited van Wijk-Sijbesma, C., Participation and Education in Community Water Supply and Sanitation Programmes: A Literature Review (rev. ed. 1981), IRC, Rijswijk, P. 97.

(3) Feachem, Richard G.: "Community Participation in appropriate water supply and sanitation technologies: the mythology for the Decade", Paper presented to the Royal Society, London, Nov. 1979, p.16. Published in Proceedings of the Royal Society B209, 1980, pp. 15-29.

(4) There is a common pattern in a large number of Spanish-speaking Latin American countries: a number of their manuals and other materials have been used in the preparation of these guidelines and are cited in the bibliography. IRC has published in English an edited and annotated version of the Colombian manuals: Whyte, Anne, ed.: The Colombian Field Manuals and Training Guides for the Promotion of Community Participation in Water Supply and Sanitation Schemes, IRC, Rijswijk (1983).

(5) One of these is the strength of authority, with the traditional chiefs acting in coordination with the party of government in a one-party state (the Malawi Congress Party of Life President Banda). Another is the fact that the project was started on a small scale, in one community, and was gradually expanded under the same leadership: the personnel taken on could be carefully selected for their positive attitudes, and could be introduced gradually into a team with an established esprit de corps. Bureaucratic considerations were not allowed to break up this team, which handled all aspects of the rural gravity piped supplies programme from staff training to construction and maintenance. However, in 1983 the decision was taken to transfer maintenance to the regional engineers in charge of urban supplies. See Glennie, C.: Village Water Supply in the Decade: Lessons from field experience. Chichester: Wiley (1983).

(6) Malawi, Office of the President and Cabinet, Department of Lands, Valuation and Water, Rural Water Section:
a) Handbook for the training of project assistants (mimeo, 1977 & revisions)
b) Refresher course programmes for supervisors (mimeo, Jan. 1982)

(7) Roy, S.: "One-tier system: the Tilonia approach to hand pump maintenance", Waterlines Vol. 2 No. 3 (Jan. 1984),, pp. 13-16. See also p. 224, note 15.

(8) Guggenheim, Hans & F. Finale: "Water storage through shared technology: four projects among the Dogon in Mali", Assignment Children No. 45/6, Pp. 151-66 (1976).

(9) Black, Maggie: "Spreading the good news about sanitation", UNICEF News No. 116, 1983, Pp. 13-24 (on Imo State Project, Nigeria).

10) Agua del Pueblo, Guatemala: Sector Analysis and Program Planning Document for Environmental Sanitation Activities in Highland Guatemala. Final report for USAID under Contract No. 520-473 (Jan. 1980, 181 pp.). Cox, Stephen and Sheldon Annis: "Community partcipation in rural water supply", Grassroots Development Vol. 6 No. 1.

(11) Werner, D. and Bower, B.: Helping Health Workers Learn. Hesperian Foundation, Palo Alto (1982. 27 chapters, circa 500 pp.).

(12) O'Kelly, Elizabeth: Aid and Self-Help. London & Tonbridge: Charles Knight & Co. (1973), P. 57.

(13) The question of educational qualifications for selection is taken up further in Chapter IV, 1.2.

(14) Isely, Raymond B.: "Planning for community participation in water supply and sanitation: accounting for variability in community characteristics", Proceedings of the WEDC Conference: Water, People and Waste in Developing Countries (1981), pp. 24-28. Also, in relation to PHC activities in general: Muller, Fritz: "The myth of Primary Health Care: Case studies from Peru", Ideas and Action No. 145, pp. 7-12 (FAO, Rome, 1982), special issue on Rural Health; republished in "Contrasts in community participation: case studies in Peru" as Morley, David, Jon Rohde and Glen Williams, eds.: Practising Health for All, OUP, Oxford (1983), pp. 190-207.

III STARTING POINTS: PLANNING THE TRAINING

In order to plan the training, the trainer must be clear about what knowledge, skills, and attitudes are required for the job. Hence there is a prior requirement for a description of what the mobiliser is going to do. This will depend on the type of programme; and the programme should itself be planned in relation to the goals being pursued.

The chapter begins, therefore, with a discussion of the goals which may be pursued by a water and sanitation programme. Each is given a critical look, in terms of current evidence on how much effect may be achieved. The goals examined are:

- improvement of health
- reduction of the burden on women, time gains
- improvement of quality of life (convenience etc.)
- economic benefits
- enhanced community capacity for self-reliance
- protection of interests of poorer and less powerful sections
- favouring position and interests of women

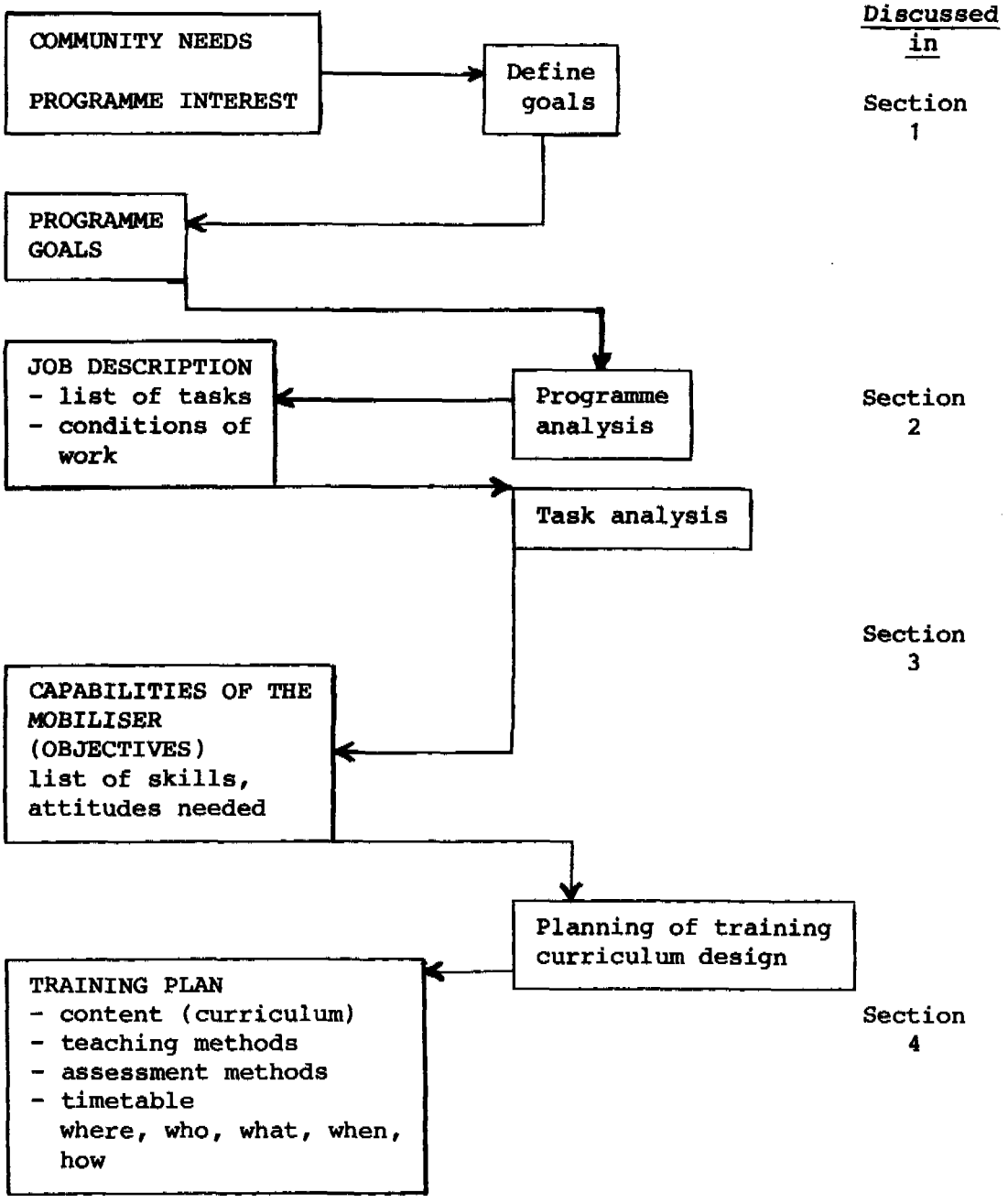
The types of programme involved in water and sanitation activities are then discussed in relation to these goals. Three basic approaches are distinguished:

- project plan approach, the usual one for water agencies which must offer similar services to many communities: participation is subject to uniform conditions set by the agency;
- mass campaign approach, in which large numbers of communities are mobilised to improve their own water or sanitation situation largely by their own efforts;
- non-directive community development approach, in which the agency helps the community to decide and plan what to do in any field of activity, not necessarily water or sanitation.

The job of the mobiliser will depend largely on which of these three types of programme he or she is working in, though elements of a non-directive approach can be used in other types of programme. The next question to decide is whether the mobiliser's job is to include technical aspects and health education, or whether these will be done separately.

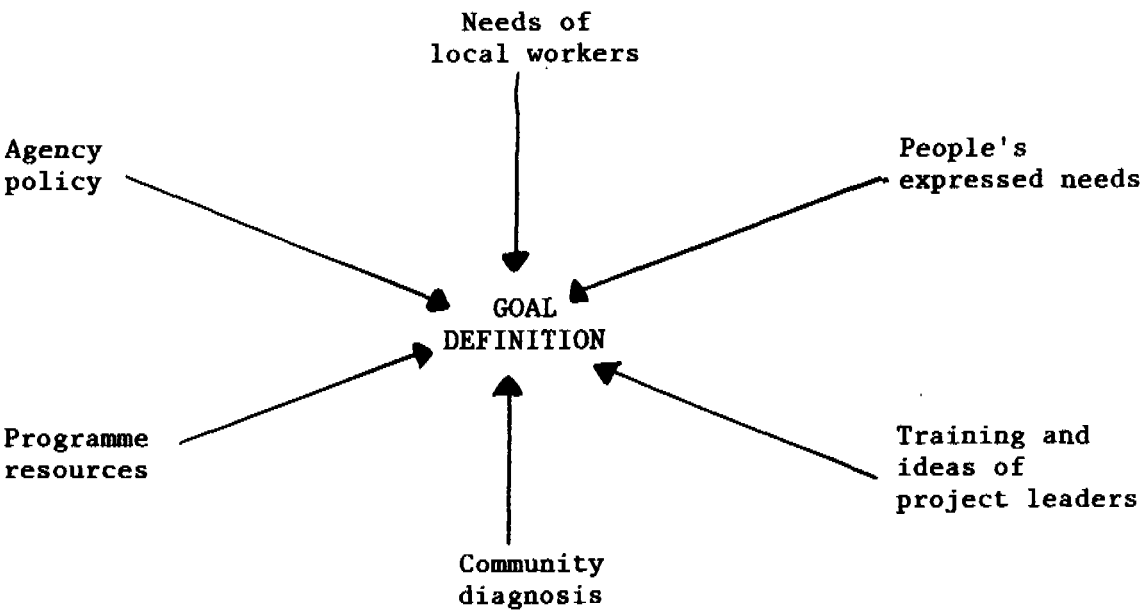
The last section of the chapter covers the need to work out as exactly as possible what the mobiliser will do, in order to plan the training in terms of the tasks themselves, and the knowledge, skills, and attitudes required for these tasks. A complete analysis cannot be carried out for every task, especially in non-technical areas where there must be a flexible response to the situation in each community: for mobilisation tasks, what may be needed is a discussion of the problems likely to arise and the preparation needed to deal with them.

Are you starting a new programme, or do you already have a programme in operation? Either way, the first step in planning your training course is to think about the goals of your programme, and the most effective way to achieve them. The planning of the training course follows on from the planning of your programme in the following steps:



1. WHAT ARE YOUR PROGRAMME'S GOALS?

Programmes arrive at a definition of their goals in a variety of ways. In national programmes using a project plan approach, a central ministry or agency defines goals, but may allow local mobilisers some flexibility to work towards additional benefits along the way. If you work for a small programme which allows community members to decide on their own activities your goals will be defined partly by their wishes. In fact, most project planners end up doing what they think they can do. The goals depend more on their resources and ideas than the local situation. Even when you ask some community members what they need, they tend to answer in terms of what they think you might be able to help them with. So, while ideally you should do a community diagnosis and respond to the communities' expressed needs, in practice this is often not how goals are arrived at.



The first step of arriving at a detailed, realistic description of your programme's goals is very important. It enables you and programme workers to agree about your purposes and move on to looking at which approaches and methods will enable you to achieve your goals most effectively.

Why do people need water and sanitation facilities? Why is it good to involve people in the planning, construction and maintenance of these facilities? You could be pursuing a number of possible goals when you undertake these activities. You may hope to achieve several goals at once because the more good things you can do at the same time, the better it is.

Some possible goals.

From the facilities themselves:
- less sickness;
- lighter burdens on women who carry water;
- higher quality of life: for example, water and sanitation facilities conveniently in the house;
- economic benefits.

From your approach:
- to foster the growth of communities' capacity for self-reliant cooperation;
- to ensure that the interests of the poorer and less powerful families in the community are enhanced;
- to favour the interests and position of women.

How can you best achieve these goals?

Water and sanitation programmes can hardly help addressing several of these goals at the same time. The more the better. In what follows we do not intend to suggest you should choose between the goals mentioned, only that in order to have the maximum impact on each one it needs to be planned for consciously. Providing the facilities by themselves may not be enough, at least not to maximise the effect. The discussion below is intended to help you to plan for this maximum impact on each goal.

Programmes aim to bring the greatest benefit to the most people at the lowest cost per person, in the shortest possible time, in relation to specific goals. Studies from around the world give us some evidence on the effectiveness of different activities and approaches. You can only judge the likely costs and benefits of an activity in your own situation by looking at the characteristics of your programme and your region.

1.1. Do you aim to improve health levels?

Many programmes undertake, or justify, water improvements on account of their health benefits. Many studies show that we can indeed expect a reduction in illness when water supplies improve (1). But the question is not simple, and in some cases people have not enjoyed better health with an improved supply. This means that programmes which aim to improve health must plan their approach in a way that achieves the greatest health benefits possible. This approach depends on the exact nature of the problem in your local situation.

Health may benefit from the use of purer water, or the use of more water, or both of these things. How much benefit is achieved depends on the type and severity of the initial problem, and the type of improvement.

- Improvements in quality or purer water, is achieved when the improved supply contains fewer harmful organisms or substances than the supply used before. People must use the improved supply, at least for drinking, if health is to benefit. Also the purer water must not be so contaminated in storage, drinking vessels, and so on, that all advantage is lost.

- Improvements in quantity/accessibility.
  Health is likely to improve if people use more water for personal and domestic hygiene. The provision of a more abundant, reliable and/or accessible supply will make it easier for people to use more water. Again, the effect on health will be greater if people understand why using more water for washing can improve health, and discuss together exactly how they need to change their behaviour.

There has been some argument in recent years about whether improvements in quality or in quantity of water supplies are more important in their effects on health. Our view is that this argument is somewhat misplaced, because in some situations one will be more important, in other situations the other. It all depends on what were the main deficiencies of the previous water supply, and what sorts of improvements are made. (It is too often assumed that all "traditional" supplies are equally bad: not that anyone thinks that this is actually the case, but some act as if they did in planning new supplies, and others talk as if they did when they are discussing the health effects of new supplies).

If you want to make the maximum health improvements possible by providing purer water, then you will look for the people who are currently using the most heavily polluted water. You will then help to provide them with a supply which is considerably better. (You will not, as you might think at first sight, be concerned primarily to provide water which is perfectly pure).

If you want to make the maximum health improvement possible by providing water closer to where people live, or providing more adequate quantities, you will also select the worst cases.

Some examples

In places where, say, irrigation canal water is plentiful and comes right by the houses, but is heavily polluted, a programme to provide purer water will make the greatest health impact. This will be so even if the water is provided at public standposts a little further away from the houses, provided that people go there for their drinking water.

In other places, women may walk several miles every day to fetch a small amount of pure spring water. In this case, a programme to provide abundant water closer to the house will make the most impact on health.

The construction of lined wells in a community which is crippled by guineaworm caught by drinking polluted dam water, will achieve a greater health impact than the provision of pure piped water to a community already using lined wells with parapets.

In some communities, people use only 14 litres of water per person per day because women spend four hours a day climbing up steep slopes to fetch it. In other communities women have a pleasant walk along a path for half a mile when they fetch water. The provision of water closer to the house is likely to increase the amount of water used by the former women much more than the latter, and therefore benefit health more.

These are extreme cases, but the point they illustrate applies in many less serious situations. It leads to two alternative strategies. One emphasises water improvements to the worst-off communities; the other an effort to mobilise all communities to bring their own water supplies up to a certain minimal level with small assistance in the form of advice and materials such as cement. This strategy requires workers who are skilled in stimulating people to take action together for the common good, and able to help people to select the most appropriate solution to their problems. There is almost always some form of improvement which people can achieve in this way; for example, protection of existing wells or springs, or rainwater catchment.

Looking for communities with the most polluted or distant water supplies and improving them is likely to be expensive per person served. There may be little political support for helping these remote and powerless people; that is often why they are neglected. However, the most neglected communities with the worst problems are likely to be the most willing to make a big effort to improve their own supplies if they are offered some help.

To adopt this strategy, community mobilisers will need high motivation, credibility and an ability to work with poorer people isolated from changes going on in more accessible, better-off communities.

There are relatively few studies on the effect of sanitation improvements on health (2). Sanitary toilets should greatly reduce the incidence of diseases transmitted through faeces, if our present understanding of how this happens is correct. But studies show that latrine programmes often fail to achieve an improvement in health. The main reason for this is probably that the latrines are not kept clean, and in fact become a focus of infection. Some studies show that a dirty latrine is worse than no latrine at all. Also, all the people may not use the latrines all the time. Young children and people away from home may continue to spread infection by defecating on the ground. An important reason for the failure of latrines is likely to be that people do not make those changes in their personal habits needed to stop other routes of disease transmission. For example, adequate hand washing with soap may be as important as using a clean latrine (3). In other places, different aspects of household hygiene may be very important. This means that sanitation programmes are not likely to improve health if workers only aim to get a higher percentage of the rural population supplied with a latrine. Workers need skills to discuss with local people what type of latrine they are willing to use and able to keep clean, and which other changes in practice are important.

When the workers and people have identified an appropriate type of latrine and practicable changes in sanitary habits, the programme can extend these to that local area having similar conditions. This area may be larger or smaller than the administrative district.

Communities rarely choose sanitation programmes as a priority action. This means that if your programme aims to improve health, the community mobiliser must be able to interest the community in changing their practices and building latrines. Latrines are not always necessarily the first priority in sanitation. Villagers can be allowed to decide various options for controlling diarrhoeal disease (see Ch. VI, section 6.25).

In one way this is easy, because people can make sanitary improvements using local materials, including even a version of the ventilated improved pit latrine (4). However, permanent changes in sanitary practices require people to make more effort over a long period, and this demands a high level of motivation. The community mobiliser must have the skills to explain how poor sanitation causes disease, to help people to decide on practicable ways to change their most harmful private habits, and to motivate them to do so.

Combining water, sanitation and health education into a single effort in each community has great advantages.

- It will help people to use the facilities correctly so that they will reap the maximum health benefits.

- People are more likely to listen to suggestions on changing their practices when you introduce new facilities at the same time. You are helping them as well as talking, and the new facilities make it easier for them to change their practices.

- The community can see their "water and sanitation" health problems, and possible solutions, more clearly as a whole. The greater their understanding, the more likely they are to adopt and keep to improved health practices.

1.2. Do you aim to reduce the burden on women?

The burden-reducing effect of bringing water closer to the home depends on how far the initial source was from home, and whether water is brought right into the home.
When you reduce the distance which women walk to fetch water from perhaps five miles to half a mile, the family benefits in two ways. The women collect more water, and they spend less time collecting it. The improvement is big enough to allow for both a health and a burden reducing benefit. However, the greater the amount of water fetched, and therefore the health benefit, the smaller the saving of time and therefore the burden-reducing benefit, and visa versa.

When you reduce the distance that women carry water by a smaller amount, perhaps from one mile to a standpipe two hundred yards from the house, studies suggest that either women bring more water to the house, but spend the same amount of time fetching it; or they save time fetching water, but do not increase the amount that they fetch. In these studies it has sometimes proved difficult to take into account all the changes in practices and what benefits they bring.

People may use different water sources to bathe or wash clothes, children may help to fetch water and so on. But we can say that improvements in accessibility of water in this range may not achieve both health and burden-reducing benefits (5).

When water is brought right into the home, with a house or a yard connection, people use much more water and the water carrying burden disappears.

If you aim to reduce the burden on women, you can either select communities where the journey for water is longest, or you can provide yard or house connections.
In communities where distances are great, there may be no feasible or affordable way of bringing water closer to the house. For example, there may be no shallow groundwater, and pipes or deep wells are too expensive. Rainwater catchment may provide a worthwhile solution even if it only reduces women's burdens for perhaps eight months of the year.
In some communities with distant supplies the men undertake the task of fetching water, perhaps using draft animals. In one case it was reported that when distances were reduced, women had to take over the water carrying and were made worse off. Probably more frequently, women do not benefit from the time saved in fetching water because they are expected to take on another equally hard task, perhaps in the field, and they cannot use the extra food or cash themselves as they wish.

In other places, women may actually enjoy the walk to fetch water because it gives them a chance to get out of the house and socialise.

The community mobiliser needs to have the skill to observe the situation and to help people to look realistically at the likely costs and benefits of a closer water supply. Community representative bodies dominated by better-off men may be less interested in lightening women's work loads than the agency worker. After all, it is the women who feel the problem of water carrying on their own bodies. The men are unlikely to reject outright the idea of bringing water closer in order to lighten women's work. But they may select projects which bring economic benefits if they can choose, or they may just fail to take necessary actions to improve the supply.

In this case the community mobiliser will need skill and influence to make the men see that a closer supply, or less overburdened women are to their own advantage, or they will need to work directly with the women.

1.3. Do you aim to improve the quality of life?

What improves the quality of life is a matter of opinion, and it is the opinion of local people that matters, not that of the agency workers. What seems like an obvious improvement to middle class city dwellers is often less attractive to rural people. This is particularly true when the improvement requires using more money or effort which people can ill afford.

For example, people are asked to pen their animals in order to keep the courtyard clean. But this means that they have to collect or pay for fodder and bring it to the animals.

Community workers may push rural people into the following dilemma which often results in resentment and resistance against the agency:

"I accept that I ought to adopt the suggested changes, but know that I cannot afford them. What to do?"

"I adopt the change, but it is not really beneficial", or

"I do not adopt the change, but feel ashamed about it."

Programmes attempting to persuade people to adopt changes should avoid trying to impose their own view of 'betterment' on rural people, and then reacting to their resentment paternalistically by saying "people are so slow to change - it requires a long period of patient work" or impatiently "our job is to drag these people, kicking and screaming if necessary, into the twentieth century".

Instead, the community mobiliser needs skills in dialogue and empathy which enable him or her to perceive whether the suggested changes are in people's interests. (S)he needs to have a flexible, open attitude which allows him or her to adapt the changes or drop them altogether. (S)he needs an attitude of humility because probably more harm is done by agencies who impose change than is ever suffered by communities who reject change.

The provision of water to a household or yard connection will usually be seen as an improvement in the quality of life, but there may be costs involved which reduce or outweigh the benefit for some people.

The community mobiliser should be sensitive to the following possible problems:

- Payment for water may be more than some people can afford. Water agency personnel tend to think only that water is a good, healthy thing. They forget that the consumers must pay, particularly in the case of a household connection. When agency workers persuade people to meet this cost, they are selling their product like any commercial firm. They are interested in selling their product as a corporation and as employees, and this can lead to overselling. At any given price of supplied water, and given standard of unimproved sources, there is a level of poverty below which it is not in a family's interest to pay for the supplied water. The community mobiliser does such families a disservice if (s)he pressurises or forces them into paying more than they can afford. If a small number of families cannot afford to pay, the programme should examine ways to subsidise the poor. If many families cannot pay, a cheaper technological solution is more appropriate.

- A widening of inequalities may occur because some people have a water connection while others do not; or because some people use the water for economic purposes, while those without cattle or gardens cannot.

- Drainage problems may lead to new environmental problems, particularly around taps. Mosquito breeding causes more malaria, and mud, more intestinal parasites.

The effect on the quality of life of other new water and sanitation facilities depends on exactly what they are replacing and on what they are offering.
The neat distinction between those with "improved" and "traditional" water supplies, or "adequate" and "inadequate" sanitary facilities found in statistics is not so exact in the real world.

We have discussed the factors that may contribute to an important improvement in water supplies. Whether people feel that latrines bring a real improvement to their quality of life will depend on many features of their present situation and the proposed alternative; for example, in a case where people do not use latrines:

- how dense are the houses; do people have their own land around the houses or do they go to common land?

- is there a convenient vegetated area near the house all the year round for privacy?

- do a well-drained soil, wind or dry heat reduce the nuisance and harm (disease transmission) resulting from open defecation?

- do people already select defecation sites or adopt practices which reduce disease and nuisance?

- what is the cost of building the latrine in relation to standards of housing, workloads and availability of materials?

When circumstances vary greatly over the country, the imposition of a single national latrine model is unlikely to be acceptable everywhere. It will result in a costly failure to solve the problem. Community mobilisers need skills to discuss appropriate types of latrine in their own area, and to experiment with adaptations.

1.4. Do you aim to obtain economic benefits?

Around 1970, researchers felt confident that they could show that a domestic water project results in both economic and social benefits. We now know that it is very difficult to demonstrate economic benefits in evaluations.

Problems arise because:
- economic benefits depend on a set of conditions which are often not fulfilled;
- it is difficult to measure economic changes and to show that they occurred because of the water supply rather than other causes.

Planners believed that economic benefits might flow from:
- health improvement;
- time gains;
- economic uses of water;
- increased attractiveness of locality and houses.

Health improvements, it was considered, should lead to increased production because people are stronger and able to work harder, for more hours in the day, and more days of the year.

This will only happen if all the following conditions are fulfilled:
- the water supply continues to function;
- it supplies safer or more accessible water;
- people always use this water, and in the correct way (not getting it re-contaminated before it is drunk);
- this results in a reduction in those diseases in working people which affect their ability to work;
- this happens at a season or in a situation when work is available, and the number of strong workers is an important factor in how much work is done.

In reality, the improvements in health are greatest among young children. In some places, production may increase mainly because mothers do not have to stay at home so often to care for sick children, and can therefore do more work.

If we look at the total production of the community, in some places, abundant labour may result in underemployment all the year around, or seasonally. In this case, improving the health of the workforce may make little difference to total production.
In other cases, an attack of guineaworm in the planting season can plunge a family into hunger and debt for several years. An improved water supply in this situation will make the difference between economic security and crisis.
Probably any community which suffers from labour bottlenecks in a short planting season will benefit economically from a reduction in the 'water and sanitation' diseases which cause tiredness and disability at this time.
In many situations it is likely that economic benefits flow from better health, not because people work harder, but because they spend less money on medicines and curative care. Estimates of the percentage of cash income spent on health care by the poorest families around the world give figures often well over 10%. Much of this expenditure goes on diseases which can be dramatically reduced by improved water supplies; for example, diarrhoea in children.

Economic benefits from <u>time gains</u> also depend on a chain of conditions:
- water is more accessible and people take this benefit in time;
- the supply works, and people do not waste their time gains through queuing or waiting around a tap or pump giving little water;
- the household members who gain the time are able to use it productively; for example, married women gain time rather than children or unmarried girls who do not work;
- part of the extra time is used for productive work (although some is likely to be used for leisure, or child care or hygiene, leading to health benefits);
- the extra working time results in increased production. This will not happen if people work more slowly; or they do not have sufficient land or resources to use the extra time; or the task, e.g. extra weeding, is not very productive. If the farming cycle demands a seasonal peak in labour, the improved water supply must lead to time gains at this particular time. It may not, for example if rainwater is available at this time anyway.

Economic benefits may flow from the use of the water supply for economic purposes, rather than domestic purposes only. People may use the water supply to water animals; for small scale irrigation, particularly of vegetables in kitchen gardens; for the preparation of drinks for sale, for construction work and small industries.

Small scale irrigation projects which enable people in semi-arid areas to cultivate vegetables and other crops over the dry season have increased farm incomes and food supplies dramatically in some places (Burkina Faso). Hunger in the farming season is greatly reduced because farmers can buy grains with income from vegetables. An increase in energy intakes over the season of heavy work is likely to increase productivity because high yields depend on labour intensive practices such as composting and weeding. The division of water supplies into domestic supplies and irrigation is generally convenient for the national administration. Communities may find it easier to discuss ways to meet their water needs for all purposes at one time.
Although economic activities with water vary greatly from place to place, they tend to have one common factor. Some people are likely to gain much more than others. The community mobiliser needs to be able to raise questions of equity and fairness for open and public discussion. Otherwise, it often happens that people with fewer cattle, less land or a less powerful voice on councils have to make an equal contribution to the water supply, but do not receive an equal benefit from it. Sometimes there is no water at all left for them at the end of the line.

The community mobiliser can help the community to compare the likely economic benefits of a water supply as against alternatives; and the likely economic advantages of possible productive projects using a new supply. (S)he can link people up with technical advice and other resources, as well as market information.

Finally, there are the economic benefits resulting from increased attractiveness: a water connection can greatly increase the sale value of a house and the farm on which it stands; a water supply may be a condition for a village to become a tourist resort.
Again questions of equity arise: the families with the better houses and the bigger farms will find their value increased the most, while in the tourist resort it is those who establish tourist businesses such as hotels who will thrive. There may be no way of avoiding unequal benefits like this. But the agency may be able to ensure that everyone at least gets the water, and perhaps arrange that those who get the greatest benefits effectively subsidise the water supply of the poorer families.

1.5. Do you aim to foster the growth of communities' capacity for self-reliant cooperation?

This goal involves a more difficult strategy of actively and imaginatively seeking ways in which community members are more fully involved in all stages of planning and implementation. Mobilisers will need to use more time, effort and human relations skills than if they were using community participation as a means to build facilities in order to achieve better health, for example. The reward is that the community gains in knowledge and capabilities, and in individual and collective self-confidence. Communities will not demand that agencies adopt this approach. The impetus must come from a commitment by the external agency.

You are likely to meet real difficulties when you attempt to achieve a greater depth of community participation, but you can also expect important rewards. In particular, you may achieve much more in health improvement.

The health benefits which result from people having a better water supply may be greatly increased if people understand the reasoning behind the improvements in water and sanitation; and become committed to achieving the potential benefits by deciding how they need to change their behaviour and then changing it.

If this is a goal in itself, progress with water and sanitation coverage may be slowed down because people may choose other priorities, or it may take longer for people to reach a collective decision on what needs to be done. On the other hand, more self-reliant cooperation would prevent many of the problems which hamper the efficiency and limit the impact of water and sanitation programmes. The adoption of this as a goal therefore may enable programmes to reach other goals more effectively.

1.6. Do you aim to ensure that the interests of the poorer and less powerful families in the community are enhanced?

This goal may raise even more difficulties. The attempt to involve most actively those sections of the population who are in an inferior role, is likely to meet with a lack of understanding and the hostility of the dominant groups. In some places you may not be able to achieve much in this direction: more thorough structural reforms may be needed to break the power of dominant groups before anyone can act against their wishes. But in other places it is possible for an external agency, especially a voluntary agency not vulnerable to pressure through higher levels of government, or a government agency where the government is committed to support such a process, to concentrate its efforts on the less powerful groups. All levels of external agency staff will have to be highly motivated always to see to it that the project in a particular community involves all sections of the population and that they all benefit from it. In water agencies, it will often require a revision of rules and procedures which operate to exclude the poor. In communities, the worst problems often occur where there is a "despised" minority. These are often labourers of a different ethnic origin who are not seen as having full community rights.

The training of community motivators must give them both the attitude that it is important that poor people and women are involved; and the skills needed to cope with the lack of understanding, apathy and even hostility of dominant groups. Mobilisers have the difficult task of trying to maintain sufficient rapport with the powerful, to enable them to go on working with the powerless.

1.7. Do you aim to favour the interests and position of women?

Women are also frequently a disadvantaged group, and many of the above points apply. Women suffer from different types of disadvantage, but exclusion from certain types of work is often one of the most important. This affects women who do not have the economic support of a family most seriously. Women are often excluded from work which involves travelling around between villages, and work which requires mechanical skills with new technology.

Water and sanitation agencies may decide to take up the challenge of swimming against this current by training and employing women as mobilisers, as maintenance personnel or technicians, and as caretakers in the community.

They can expect problems and opposition but they may also find advantages. The job at a given level of payment may be a greater asset to a woman with few alternative opportunities, than it would to a man with similar qualifications. For this reason, she may perform her work more conscientiously. (This may not apply to young educated women with alternative opportunities). Also, in many parts of the world, women are more suitable as caretakers because they are likely to stay in the village rather than travel to look for temporary or permanent work.

Water programmes are in a particularly good position to confront the exclusion of women from roles involving modern technology or contact with outsiders. This is because women are the main people concerned with water as carriers and users. They are often involved in the upkeep of traditional water technology. Community mobilisers must certainly bring women into discussion on the design of the user end of facility; for example, the above-ground parts of a handpump, its surrounds, washing slabs and so on. It is only a short step from here to involving women in all technical discussions and arranging for their appointment as caretakers. The programme may have to employ female mobilisers to work with women. Male community mobilisers will need to have empathy with women and a positive attitude to their active involvement in the project.

2. WHAT JOB WILL THE COMMUNITY MOBILISER DO?

2.1. Programme analysis

In your programme, will the community mobiliser:

- offer a certain type of water supply and/or sanitation facility to the community on condition that they contribute towards it? (project plan approach), or

- persuade the community to bring its water and/or sanitation conditions up to a minimal level by its own efforts, perhaps with a little material help? (mass campaign approach), or

- help the community to decide and plan what it can do using its own efforts and resources, with a little material help, in any field of activity, not necessarily water and sanitation? (non-directive approach)

Often you will not be free to decide between these alternatives because of the type of agency you work for; perhaps a government agency which has been given certain responsibilities. Or you may have more flexibility to decide how your mobilisers will operate. You may then find it useful to discuss how these different programme approaches affect your choice of programme goals, and your potential for achieving them.

2.1.1. Promotion within a project plan approach

In this approach, the mobiliser offers the community some facilities on condition that it contributes labour, materials, cash and so on. The mobiliser's job here involves promoting a solution which the agency judges appropriate for the community.

The agency establishes a plan of work in which it selects a number of communities to be served in the next phase of its construction programme. The agency always keeps the initiative. However, it may select communities from among those who have requested the service, and participatory methods may be used in carrying out the project in each community. For instance, many water agencies in Latin America adopt this approach. The village level worker is called a "promoter".

The project plan approach usually involves making a greater subsidy per community or per person served, than is made in the other approaches which depend more on community resources. However, a well organised project plan approach with one of the cheaper technologies, for example, drilled wells with handpumps, need not be expensive per person served. In practice the approach usually allows little room for community involvement in making important decisions such as the type of facility. The technology adopted is usually uniform for communities of a given size over the whole project area, wherever technically feasible. The pressure for uniformity arises in two ways:

- the wish to complete as many projects as possible within a certain time and budget;
- the agency largely pays for the project, and therefore cannot give one community more than another. It must set a uniform limit to the quality of service (6).

In this situation, the agency is likely to define the promotion task as that of getting the community to help construct and maintain the facilities. It is likely to ignore goals such as fostering further community cooperation for other developments or protecting the interests of poorer groups or of women. Of course, an enlightened agency will recognise the importance of these other goals, and it can pursue them within a project plan approach.

For instance, it might encourage further community cooperation by allowing a community water board set up to manage the water system, to use the funds collected not just for the maintenance and expansion of the water system but for other development purposes, and in general by allowing the community a greater freedom of decision making, not setting very strict limits. It might protect the interests of poorer groups by making quite sure they all benefit from the facilities.

2.1.2. Mobilisation within a mass campaign approach

In this approach, the mobiliser's job is to persuade the community to bring its water and/or sanitation conditions up to a minimal level by using mainly its own resources. The mobiliser stimulates people to solve water and sanitation problems for themselves, rather than waiting for the state agency to include them in its plan and provide them with facilities. The mobiliser, the agency or the political leadership decides on appropriate improvements for an area of the country where most communities live under similar conditions. The programme's first aim is to bring everyone up to a minimal standard.

For instance in Vietnam, campaigns run by the provincial health authorities and commune leadership aimed to ensure that everyone benefited from three basic facilities for rural hygiene. These were a family double tank composting latrine; a family or public bathroom, and a communal well protected with a parapet (7).

In other countries, agencies responsible for community development, or "animation rurale" in French speaking Africa, often adopt a similar approach. We may call this the "directive" approach to community development, as opposed to the "non-directive" approach discussed in the next section (2.1.3).

In some countries, campaigns have enjoyed the whole weight of the ruling party, the mass media and the administrative authorities at all levels behind their efforts. In other countries, community development agencies carry out such campaigns with little or no support. Voluntary agencies may adopt this approach in their local areas. Adult education agencies may also carry out this type of campaign. Cooperation between adult education and broadcasting authorities in Tanzania in the "Man is Health" campaign of 1972 is an interesting example.

Radio study groups resulted in a high percentage of the rural population making improvements in sanitation (8).

Mobilisation within a mass campaign approach does have considerable potential to improve health levels, as is clearly shown in the countries where it has the full weight of the political authorities behind it. In the People's Republic of China, the "Patriotic Health Campaign" (largely directed to sanitation and hygiene) and the campaign against schistosomiasis played a very large part in the transformation of health levels following the revolution in 1949, employing the strategy of the "mass line".

The Mass Line

The concept of the mass line rests on the conviction that the ordinary people possess great strength and wisdom and that when their initiative is given full play they can accomplish miracles; that the art of leadership is to learn from the masses, to refine and systematize their experience and, on this basis, to decide on policy.

(In the anti-schistosomiasis campaign in China) To mobilize the peasantry against the snails, it was first necessary to explain to them the nature of the illness which had plagued them for so long and for this purpose lectures, film shows, posters, radio talks were employed. When the peasants came to understand the nature of their enemy, they themselves worked out methods of defeating it.

Twice a year, in March and in August, the entire population in county after county, supplemented by the voluntary labour of all available soldiers, students, teachers and office workers, turned out to drain the rivers and ditches, dig away and bury their banks and tamp down the buried earth.

To empty a complicated system of water channels demands more than back-breaking work; it also requires careful planning for if they are emptied out of proper sequence, serious waterlogging may result. Reliance on the knowledge of the peasants is of key importance. To mobilize the masses does not mean to issue them with shovels and instructions; it means to fire them with enthusiasm, to release their initiative and to tap their wisdom. (from J.S. Horn, "Away with all pests...": An English surgeon in People's China; Hamlyn, London (1969) Pp. 96-7).

The health gains are most likely to result from activities in the area of sanitation and hygiene, and in the protection of wells and springs. These activities greatly reduce contamination, even if they do not completely eliminate it.

A mass campaign will rarely be able to improve the accessibility or quantity of water available, thereby reducing burdens. This is because people will usually have done what they can to obtain more water using their own resources, and to do much more they will need a subsidy from outside. There may be exceptions; for example, when new settlers can get together for the first time to dig wells closer to the settlement. Only if people perceive changes as improving their quality of life will the changes work.

For instance, in Vietnam:
"Like peasants in other regions, the people of Hoang Loc were in the habit of relieving themselves in the fields or along deserted lanes, leaving their waste for hungry dogs to feed on. During the anti-French resistance, a sanitary movement was launched in which each family would dig a cess-pool (sic: perhaps a simple pit latrine is meant) in its garden. However, because of the smell and the flies, the cess-pools were soon left unused and finally filled up. After the restoration of peace, the problem was again brought up, and a new campaign launched for building brick privies. It was again a failure: far from warding off the faecal danger, each family was now bringing it closer to its dwellings, just as before. Another model of hygienic installation was studied, but people had lost much of their enthusiasm and were rather apathetic even after the introduction of the double septic tank (9) which allows on-the-spot composting of the excreta... We succeeded in winning over many people. But there were families who had built and rebuilt their toilets four times and could no longer afford to spend any more money on them. Moreover, there was another serious difficulty: the shortage of building materials. The neighbouring communes which started much later than ours, have all built their double septic tanks" (from Le Zan: "Rural health service at hamlet level", Vietnamese Studies No. 34 (1972), P. 45. Republ. McMichael, P. 91 - see note 7).

The aims of this approach can include economic benefits for example, those flowing from better health and more attractive property. The programme may find it easier to combine economic and domestic purposes when people are doing things for themselves. The problems of unfair subsidies to the rich, and of different ministerial responsibilitites for irrigation, cattle and domestic supplies do not arise. You may be able to combine a water improvement with a cattle trough, or mobilise people to build small dams with several purposes. But in many countries this will require local flexibility - it will in fact require the non-directive approach which is described next.

2.1.3. Community development with a non-directive approach (10)

In this approach the development agent helps each community to decide and plan what it will do by its own efforts and with its own resources usually with a little material help. The activities selected may be in any field, not necessarily water and sanitation. The community mobiliser first gets people together and stimulates them to think about their problems as a community. (S)he then advises and helps them to decide on solutions to their problems and to carry out the necessary actions.

This was always the ideal of the community development movement, from its beginnings in the late 1940's, but there have always been pressures to operate in a more directive way. In fact it was in 1948 defined as: "A movement to promote better living for the whole community, with the active participation and if possible on the initiative of the community, but if this initiative is not forthcoming, by the use of techniques for arousing and stimulating it in order to secure an active and enthusiastic response". (11)

In the early years of the community development movement few practitioners questioned the assumption that rural people were unprogressive and that educated outsiders knew better than they did how they should live, and that the tasks were therefore to "stimulate, help and teach people to adopt new methods and to learn new skills" (12). The leaders of the movement have increasingly realised, through experience, three truths, however:

- that local people usually have methods and skills which are very well adapted to their environment;
- that what outsiders seek to impose on them is often less effective;
- that what is most often needed is to work out through dialogue with local people the best ways that they can adapt to changes which have come to them from outside.

Of course development agents can sometimes introduce new techniques which solve old problems. But the key is to respect what people have done before and not assume that the outside technique is always superior.

The leaders of the movement have realised these things. In practice, however, one of the main problems is that this approach is directly opposite to the assumptions of most teaching in schools and further education systems. These assumptions form a part of the culture and value system of the educated groups, especially those with all but the highest levels of education. The trainees in community development institutions, and even their staff, are taken from these groups. This problem probably applies to your own agency. For this reason we give much attention to this problem in training.

We should mention that we include under the heading of community development with a non-directive approach only those projects in which the major part of the total cost, including labour, is borne by the community. The agency may provide some help, for example, cement for the lining and parapet of a dug well. We exclude the approach where an agency gets local people together to decide on their priority problems, with the main intention of then calling in other technical agencies to provide their services. When water and sanitation agencies are called upon, their project will operate on the lines of "promotion within a project plan approach". We do not recommend this method unless the following problems can be avoided:

- all the technical agencies may concentrate on the few favoured communities which were chosen by the coordinating agency; or
- the technical agencies may not have the resources to meet all the requests put to them, and to fulfill the promises implied by asking people what they want.

Community development with a non-directive approach is particularly suited to the goal of fostering the growth of the community's capacity for self-reliant cooperation. Because the approach gives the most respect to the feelings and wishes of local people, it should arouse the most enthusiasm for working together - provided that the community actually agrees on what to do. If the community is not united, you might find that a more directive approach, focusing on water or sanitation, is more successful in getting people to work together on a project which is in everyone's equal interest. This brings us to an important problem which people often overlook when they idealistically praise the virtues of full community participation. There is often a conflict between doing what the representatives of the community want and supporting the interests of the powerless groups within the community: women, the poor, lower castes, landless immigrants or ethnic minorities. In some cases, all the power in the community is held by a small minority; for example, landowners.

In practice, all development agencies, whatever their approach, face pressures to go along with existing power structures within communities. But an agency which wishes to change power structures or even just to support the interests of a powerless group, for example, the position of women within a water project, cannot adopt a wholly non-directive approach with the community. The agency must use its own influence, and finally its bargaining power in relation to the more powerful members of the community. The agency's power arises from its ability to provide something which powerful people also want, or which the community wants in a way that their leaders cannot ignore. Preferably, the agency worker will use this power in a skilful way, avoiding conflict. But the power will still be there, even if it is not expressed.

In some cases, the mobiliser may be able to work in a non-directive way with powerless groups in the community, helping them to gain confidence and enhancing their position. The basis of the non-directive approach to working with communities, or groups within the community, involves examining (with the community) the costs and benefits, advantages and disadvantages, of different courses of action. This method of working is very effective even when the agency worker is providing a service or suggesting improvements because it helps to ensure that changes are appropriate and acceptable.

If you aim to bring economic benefits or lighten women's burdens, you may find a non-directive approach is most effective. This is because a detailed look at the likely costs and benefits of alternative plans, made with people with local knowledge, is needed to ensure that the most benefits are achieved.

How long does mobilisation using the non-directive approach take in each community, and how many people can agencies benefit in this way? Community development departments have often been unable to cover a large percentage of communities using this approach. This may be because planners do not see that the non-directive approach is effective, and therefore, do not give the agency enough resources. Voluntary agencies are better able to use a non-directive approach, but each agency can usually cover only a small number of communities in one area. Thus if you wish to improve health or bring economic benefits, you must ask yourself two questions:

- What will be done?
- For how many people?

2.1.4. Choosing between the three approaches

Which approach is best? We do not think that any one of the three approaches outlined here is the best one, certainly not for all places. You select the most appropriate approach on the basis of your goals, your organization and resources, and your local situation. What will make the biggest impact on health and well-being is usually whatever will work within your resources and constraints, what you are in the best position to establish successfully. Also, you do not have to keep to one approach only. You can use elements of the non-directive approach to make a project plan approach or a campaign more effective. For example, in a project plan approach it may have been decided to drill a well and provide a handpump, on the condition that the community undertakes responsibility for most maintenance tasks. A non-directive method can be used to discuss with the community how it will fulfill this responsibility. Similarly, you can use elements of the campaign approach to reach more people in a non-directive programme.
This means that a training programme for mobilisers should aim to give trainees skills in working non-directively and directively, and the ability to select the approaches in the most effective way.

2.2. PREPARING A JOB DESCRIPTION

A job description is the list of tasks which the mobiliser must learn to do. In the directive approach to teaching, trainers teach their students how to do a job. The trainer must therefore know exactly what the job is. If the students can do each of the tasks listed in the job specification, then the course has been successful. The job specification is the basis for the course. The teacher designs every teaching session to help students to learn how to do one or more of the tasks. (S)he assesses students to see whether they are able to do the tasks. This directive approach is effective when trainees are learning technical skills, and have no experience of the job. Trainers find it more difficult to describe exactly how to do the mobilisation tasks in different situations. It is very important that trainees learn how to solve problems, make decisions and evaluate their work themselves.

The non-directive approach to training involves the trainees in defining the best way to do the job and in training and testing each other, through group discussions and observations.

2.2.1. How much of the whole job is the mobiliser going to do?

(S)he might do the following tasks:
- mobilisation tasks;
- health education tasks;
- technical tasks, including: surveying, design, skilled tasks in construction or supervision of construction and maintenance and/or training of local people for maintenance.

In some programmes, one person does all of these tasks, as in the case of the Agua del Pueblo programme in Guatemala, which trains technician-promoters. In others, each task is done by separate teams, as in Imo State programme in Nigeria (see Chapter II, section 3.7). Other programmes employ workers who do some of the tasks.

A strong argument for combining as many tasks as possible in the hands of one mobiliser is that this makes full community participation easier. The mobiliser gets to know people well, and can bring them into discussion and decision-making for all aspects of the programme. A separate technician who is not trained for, or involved in, much dialogue, will tend to pay less attention to the community's technical observations. This is also often true of health personnel when they are asked to undertake the health education component of a project.

Most health educators have still not made the understanding of the need for genuine dialogue, with respect for local views and practices, a part of their own approach. For this reason, we recommend that you include at least the health education tasks in the job description of the mobiliser.

In many countries technical tasks are given to engineers who are over-qualified for them - the rural water projects we are discussing are fairly simple technically. This is a waste of scarce talents. In other cases, underprepared people do the technical tasks very badly. In both cases, an intermediate cadre of technicians is needed, suitably trained for the technical tasks, and supervised by an engineer. You may then find that it makes sense to include the mobilisation and health education skills in this training also. Where fewer technical skills are required, the mobiliser may be able to learn the technical tasks too. For example, latrine construction and some of the simpler types of water supply installations.

Once you have decided which of these areas you will cover in the job description, you can move to step 2.

2.2.2. Exactly what do you expect the mobiliser to do in each community?

Finding the answer to this question depends on whether you are working with an existing programme, or whether you are starting a new programme.

Working with an existing programme.

Your agency may have a detailed job description: this will make it easier to list the tasks. Unfortunately detailed job descriptions are rare, and few agencies have a job description which includes details of the mobilisation tasks.

Also, you may want to improve on your current way of working, and adapt the mobiliser's job description accordingly.

There are several ways of building up a list of tasks:

- Ask people who have recently worked in the field themselves, or who have supervised workers, exactly what the job involved. Ask specifically for details of the mobilisation tasks.
- Observe workers as they go about their work, and write down their tasks. Look for gaps in their work, for example, they do not do health education.
- Read our suggestions for the mobilisers' tasks in Chapter VI, and include any which you find appropriate for your programme.
- Hold one or two local workshops with community representatives, mobilisers, and supervisors, to discuss openly any problems with your existing working methods and regulations.

  This type of workshop would be important and appropriate if you already see problems, but their solutions are not obvious. Cross (13) describes how such "community-based workshops" were organised in Lesotho to evaluate and rethink a primary school sanitation project. Two one-day workshops were held at district level. Representatives were invited from each school and from the community it serves. As a result, "many workshop recommendations presented radical departures" from previous practices. In this case, the project personnel had previously developed the procedures and done the planning without local consultation. Participation had been in the form of self-help labour only. The project was clearly going wrong.
  If you have less obvious difficulties, you might identify problems to discuss at such workshops by evaluating programme performance. You may then be able to make your work more effective by changing some aspects of your working methods.

Leave room for adapting the job specification as your programme personnel gain more experience and learn more exactly what tasks and working methods work best in your situation.

Working with a new programme.

Chapter VI of these guidelines may provide suggestions for tasks applicable to your circumstances.
Ideally, the programme leaders should begin to work experimentally in one community and then in several other trial communities. They then perform the mobilising tasks themselves before they train others to do so (14). This has three advantages:
- they know exactly what the job involves, in detail;
- they understand the difficulties involved for their trainees;
- they make more credible teachers because of their experience.

If you cannot manage to do this, the present document and other guides (15) may help you to make up the job description.

When you prepare the job description you must also take into account practical considerations, particularly:
- how much time will the mobiliser be able to spend in each community?
- what resources, for example, transport, will (s)he actually have to work with?
- how will cultural and political factors and resources in the community affect his/her tasks?

3. WHAT KNOWLEDGE, SKILLS AND ATTITUDES DOES THE MOBILISER REQUIRE? (16)

3.1. Definitions

The tasks and subtasks listed in the job description require knowledge, *skills and attitudes which the mobiliser must learn and develop.*

Knowledge is what the mobiliser must know, the facts.
These facts include:
- knowledge about the programme's operation, its links with other agencies, how it might respond to requests from communities;
- technical knowledge about methods of improving water supplies and sanitation;
- health knowledge about the ways that water and sanitation diseases are transmitted, and how to interrupt them; simple treatments such as oral dehydration, and other common diseases;
- social science knowledge which helps trainees to understand community relations and do their work better.

Many courses spend too much time presenting sophisticated theoretical knowledge which is at too high a level, and not usefully related to the mobilisers' tasks in the field. For example, professional sociologists may teach psychological, sociological and political concepts in complicated language which may even make it more difficult for mobilisers to communicate with local people.

Difficult language used in training makes it difficult for mobilisers to use familiar, everyday words in discussions with the community.

There is only so much time on a training course and it is easy to use so much of it on theoretical knowledge that the trainee leaves unable to do the essential tasks.

Skills are what the mobiliser must be able to do. They include:

- use of hands and skill in using equipment and construction (psychomotor skills). The mobiliser should be able to do confidently and well all the practical jobs which he encourages others to do in his work. For example, constructing a pit latrine and lining the pit to cope with a variety of local soil conditions;

- communication and education skills. The mobiliser must be able to present complicated ideas in simple local language so that people can understand. (S)he must be able to listen attentively and take part in purposeful dialogue.

- human relations skills. The worker must be able to stimulate and motivate people to organise and work together with enthusiasm. (S)he must be tactful and able to foresee and avoid situations where people get offended and become uncooperative or obstructive.

- thinking and decision-making skills. The mobiliser must be able to plan and make wise decisions in a range of different circumstances.

- administrative skills. The mobiliser must be able to report on his or her work reliably, using methods suitable for his or her level of literacy. (S)he must also be able to guide community committees in their administrative work, which often includes accounting.

Trainees must leave the training competent in essential skills. Too many new workers are good at facts but poor at skills. You must plan the training course with plenty of time for skills practice.

The attitudes of the mobilisers are more important than their knowledge or skills. A motivated person can improve his or her knowledge and skills rapidly on the job. An uninterested person will not bother to learn. Apart from honesty and willingness to work, the mobiliser must be able to see and respect the point of view of others, particularly the poorer, less educated community members. Many educated trainees will have to change authoritarian, superior attitudes picked up through their education. These attitudes over-value formal education, and under-value the knowledge, skills and experience gained outside this educational system. In fact many service agency personnel have attitudes such as "we provide a service - it is their fault if they don't want to make use of it". They are not willing to look for or appreciate the reasons why poor people find it too difficult, or too expensive to use the service.
This means that the changing of attitudes is an important part of the learning process on the training course, and you must plan specifically for this learning.

3.2. Task analysis

You find out what knowledge, skills, and attitudes are needed to do a job by making a task analysis.

What are the objectives of the course? What skills, facts and attitudes are needed?

TASK ANALYSIS—Finding out what is needed to do a job effectively

Story: Joe, a new instructor, led a series of classes and activities to help health workers learn about sanitation. He explained the importance of latrines, how deep to dig them, and how far they should be from houses and water sources. He showed drawings of different ways to make latrines, and took the students to see two 'model latrines' with cement platforms. He advised them about 'setting objectives' for the number of families they hoped would have latrines after one year.

At the end of the course, Joe gave the health workers an exam with many questions like: "How far should a latrine be from the river?" and "Why is a cement platform better than wood?" Everyone answered the questions correctly, and Joe was pleased.

But when the health workers tried to start latrine projects in their villages, they ran into difficulties.

Mary found that people simply were not interested in latrines because they "smell bad." She did not know how to deal with that.

Frank managed to get 7 people to build latrines—but then they did not use them.

John ran into construction problems. In his village, no one had ever made cement, so he did his best to cast the first platform himself. But John did not think to use reinforcing wire. And he did not know that cement will not harden well unless it is kept wet for 2 or 3 days after casting. So the platform was very weak.

Unfortunately, John had convinced the village chief to build this first latrine. For several days the platform held together. But one evening the chief's wife, who was overweight, used the latrine and the platform broke to pieces.

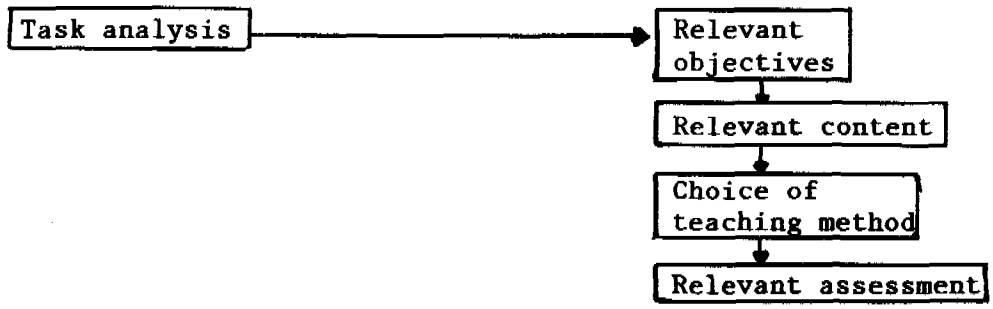
Poor John was never seen again.

Moral: When you teach something, be sure you cover all the points needed to do the job properly.

Task analysis is a way of finding what is needed to do a job effectively.

Even though the task of building latrines was specified, Joe had not thought about how students would actually do the task - he had not done a task analysis.

Task analysis is a method for looking at each part (or task) of a person's job and writing down exactly what is done (16). This description is then analysed to find out what students need to learn in order to do the job well.
To analyse a particular activity or task it is helpful to divide it into stages, and to decide if the stage consists of actions, decisions or communications.



A task analysis should be adapted to suit local conditions, not taken as a perfect way to do things everywhere.

HOW TO MAKE A TASK ANALYSIS.

1. Select a task.
   For example, introducing latrines.
2. Select ways to find out how the task should be done.
   There are several sources of information for a task analysis.
   - you can use your own experience of the tasks being analysed. But remember that you may have been working under different conditions than your trainees. Best of all, you can yourself carry out the job in two or three communities, to learn about the problems likely to be met in your programme; perhaps with a single trainee so that you can judge what mistakes trainees might make or difficulties they might have.

   - manuals from international and local agencies can help with the task analysis. But remember that the manuals may be written for different conditions and levels of trainee. The manuals will not be written as a task analysis, but as background information. You must adapt the information for your task analysis.

   - observe a good mobiliser at work. Observe and write down all that (s)he does. But remember that (s)he may be acting differently because you are watching, or that the situation may be different. Observing mobilisation tasks is particularly difficult because the situation can change from one community to another.

- discuss the tasks with teachers, administrators and advisors from the agency. Use a role-playing method by asking them questions. For example:
  'Imagine that you are a good community mobiliser and you want to help people to understand how diarrhoea spreads from one person to another. What is the first thing you would do?

  The expert might give a vague answer, like
  'I would teach them about germs'. Then you say
  'Yes, but what exactly would you say to the people?'

  In this way you can piece together the specific actions, decisions and communications involved in the task.
  But remember that experts may not know what field conditions are really like and they may not be very good at actually doing the task.

- select a group of mobilisers and use role-playing to talk through a specific task. This will tell you what is practical and feasible in the field, but workers may not be using the best methods because they were trained some time ago, or have picked up poor habits at work.

3. Use the information to write down the various stages in doing the task.
   Think about:
   - how exactly the action is done;
   - the reason for doing it;
   - what might go wrong.

4. Decide on what knowledge, skills and attitudes the mobiliser requires.
   Once you have made the list of subtasks, and defined the facts, skills and attitudes needed to do them, you are ready to use it.

5. Using the task analysis sheet.
   The task analysis gives the trainer relevant objectives which helps him or her to make sure that the course includes all the essential content, and to cut out things that are not needed.

The trainer chooses relevant teaching methods because (s)he knows whether the student needs facts from a lecture, or skills from practice.
The trainer can give relevant tests to make sure that the students can do essential tasks.
When the trainer is training experienced mobilisers on in-service courses, it is best if the students help to define their own training objectives.

Mobilisation tasks are not so easy to analyse because they are vaguer and can be done in different ways by different mobilisers with equal success. But new mobilisers still have to learn how to do these less precise tasks, so trainers must know what they are helping students to do. The trainer can at least show trainees one way of doing a task. Also the task analysis will show that trainees need a lot of practice in communication skills, and that attitudes are extremely important.

TASK ANALYSIS SHEET The Task: Introducing latrines		
Stages of the Task Actions (A) Decisions (D) Communications (C)	Knowledge and Skills Needed	Ways to Learn
1. Find out community interest. (C)	ability to explain and listen	talk with experienced health workers; role plays; group dialogue
2. Decide if latrine project is possible at this time. (D)	understanding of people and customs	community dynamics; discussions about traditions & behavior
3. Help people learn importance of latrines to health. (C)	knowledge of how disease spreads; teaching skills	from observation, books, and discussions; practice teaching
4. Decide where latrines will be built. (D)	knowledge of safety factors	books and discussions; thinking it through with local people
5. Get materials needed. (A)	what local materials can be used; what else is needed; where to buy at low cost, etc.	talk with local mason; trip to market
6. Help people build the latrines. (A)	dimensions of pit and platform; how to mix, cast, reinforce, and cure cement; how to build outhouse & lid	have students take part in actually making latrines
7. Encourage people to use latrines and to keep them covered and clean. (C)	home visits; art of giving suggestions in a friendly way	practice, role plays, and discussion

To collect the information you need to do a complete task analysis, you can use these sources:

- your own knowledge and experience
- books and information sheets
- observation of health workers *in action*
- discussion with other instructors or persons with the skills and experience required
- discussion with health workers

A way of making a task analysis for mobilisation skills.

Gather a group of mobilisers with some experience. Ask them to describe a mobilisation task and then to make a list of problems which they commonly meet in performing this task. Help them to diagnose the cause of these problems through group discussion of actual cases. They can then see which problems could be solved if mobilisers had greater skill or a different attitude. They can discuss how the task could be better performed, and what training the mobiliser would need to do this.

If this is done one will generally find that to learn mobilisation skills:

- rather little knowledge is needed on 'scientific theory';
- there is a great emphasis on communication skills, educating, listening, and motivating people;
- the learning experience which will help students to learn the skills, knowledge and attitudes is mainly practice in talking, listening and decision-making.

The teaching method of discussion of problem cases is further elaborated in Chapter VII, section 3.3.

Finding time for task analysis.

Few trainers have time to do a complete task analysis for every task. But you can still benefit from:

- doing one or two detailed task analyses;
- following a 'task analysis' way of thinking when you plan a course and lessons. For example, when thinking about what facts must be learnt;
- teach your students how to do task analysis by asking them to do it;
- using the experience of in-service trainees as described above.

With a sound idea of what knowledge, skills and attitudes are required of the mobiliser you are ready to think about what approaches and methods will best help your trainees to learn these capabilities. Before you can do this, you need to think carefully about the selection of trainees, the type and length of course, the numbers to be trained, and the location of the course. We discuss these questions in Chapters IV and V.

Notes

(1) McJunkin, Eugene: Water and Human Health, US Agency for International Development, Washington (1982), Esp. Section 9, "Health Impacts of Community Water Supplies"; WHO: Maximising Benefits to Health: an appraisal methodology for water supply and sanitation projects, 1983 (ETS/83.7).

(2) Feachem, Richard et al.: Health Aspects of Excreta and Sullage Management: A State-of-the-Art Review, World Bank, Washington (Volume 3 of the series Appropriate Technology for Water Supply and Sanitation, 1981), Esp. Appendix II, "Uncritical summary of some literature on the impact of improved excreta disposal".

(3) Khan, M.U.: "Interruption of shigellosis by hand washing", Transactions of the Royal Society of Tropical Medicine and Hygiene Vol. 76 No.2 (1982), 164-8.

(4) Morgan, Peter and Mara, Duncan: Ventilated Improved Pit Latrines: recent developments in Zimbabwe, World Bank, Washington (Technical Paper no. 3, Technology Advisory Group, 1982), Esp. Pp. 15-21 (Rural Spirals), also Ryan, Beverly and Mara, D: Ventilated Improved Pit Latrines: Vent Pipe Design Guidelines (TAG Technical Note no. 6, Technology Advisory Group), World Bank, Washington (1983), Esp. P. 12, Annex I: Fabrication of Rural Vent Pipes.

(5) The pioneer study in this field, White, G.F., Bradley, D., and White A.U.: Drawers of Water, University of Chicago Press, Chicago and London (1972), found that in the communities studied in East Africa there was little tendency to use more water except at the extremes (i.e. when water accessibility was reduced from extreme distances - several miles - to moderate ones; or when it was brought right to the house). However, another study in Kenya, Whiting M. and Krystall A.: The impact of rural water supply projects on women, CARE, Nairobi (mimeo, n.d., c. 1977) found on the contrary that many women used the same amount of time to collect more water.

(6) White, Alastair: "Obstacles to full Community Participation in Water Supply Programmes", Community Development Journal, Vol. 18 No. 2 (January 1983), Pp. 182-186.

(7) Le Zan: "Rural Health Service at Hamlet Level", Vietnamese Studies No. 34 (1972), Pp. 27-57 republished in McMichael, Joan K. et al.: Health in the Third World: Studies from Vietnam (Nottingham, Spokesman, 1976), Pp. 78-99.

(8) Hall, Budd: Participation and Education in Tanzania, Institute of Development Studies, Brighton (IDS Discussion, Paper no. 86, 1975), and several other accounts of the "Mtu ni Afya" campaign.

(9) Not, technically, a septic tank: the now internationally-known Vietnamese design referred to is, in fact, a two compartment anaerobic composting privy from which urine is excluded. Democratic Republic of Vietnam, Ministry of Health: Double septic bins (booklet, 33 pp., 1968) summarized in Rybczynski, W., Polprasert, C. and McGarry, M.: Low-cost Technology Options for Sanitation, IDRC, Ottawa (1978), P. 62.

(10) For a description of this approach see in particular: Batten, T.R.: The Non-Directive Approach in Group and Community Work, Oxford University Press, London (1967).

(11) British Colonial Office Summer Conference on Community Development, Cambridge 1948.

(12) As it was still being put by Batten, T.R.: Communities and their Development: an introductory study with special reference to the Tropics, Oxford University Press, London, (1957), P. 5.

(13) Cross, Piers: Community-based workshops for evaluating and planning sanitation programs: A case study of primary schools sanitation in Lesotho, World Bank (1983), TAG Technical Note No.7.

(14) Glennie, Colin, A Model for the Development of a Self-Help Water Supply Programme, World Bank, Washington (1982).

(15) Whyte, Anne: Guide for the Design of a National Support Programme for Community Education and Participation in Water Supply and Sanitation. IRC for WHO (April 1980): WHO document ETS/83.8.

(16) This section is adapted from Abbatt F.R., Teaching for Better Learning: a guide for teachers of primary health care staff, WHO, Geneva (1980), Pp. 18-25.

IV SELECTION OF TRAINEES

The chapter begins by listing the qualities which can be considered in candidates in relation to the requirements of the job. Emphasis is placed on their credibility (also a matter of the support the agency can give), their motivation, competence, and physical ability to do the tasks needed. These will be related to the following characteristics which are discussed in more detail:

1. Sex. Consideration of the appointment of women as mobilisers.
2. Educational qualifications. In different circumstances it may be appropriate to appoint mobilisers with very different educational background, from social scientists with higher degrees to illiterate local people. Preference may be made for a lower educational level than the highest available, in order to find those who will be happy with a rural life.
3. Age, experience, and family status. Advantages of employing those with more life experience as well as experience in similar work.
4. Knowledge of local language and culture, local roots. These are very important; the only exception is that it may be undesirable for mobilisers to work in the very same community where they grew up.
5. Attitudes and personal qualities. The most important consideration: the seeds of an attitude of service, especially to the poor, and respect for the uneducated.

The last section of the chapter outlines suggested procedures for selection, especially for a one or two day "selection workshop". Such a process is needed for finding out about attitudes in particular.

When you select trainees, you aim to get the best match between the achievements and personal qualities of the candidates, and the tasks and working conditions of the job.
You need to think about the mobiliser's credibility, motivation, competence and physical ability to do the job.
A credible worker is accepted, trusted and respected by the community. People must believe in the mobiliser if (s)he is to succeed in communicating with various groups and motivating them to take action.

Credibility comes from two sources:

THE INDIVIDUAL MOBILISER	THE ORGANISATION EMPLOYING THE MOBILISER
Background	Reputation
Age	Support
Sex	Supervision
Literacy	Teamwork
Behaviour and attitudes	Respect shown towards mobiliser
Experience	Resources and power
Training	

Mobilisers may have high credibility because of their personal qualities even when they work in remote areas with infrequent supervision. For example, a mature woman from an influential group, with several healthy children, and a reputation for giving good advice and showing concern for others, will have high credibility. On the other hand, a young man with an arrogant attitude and little experience of rural life may need continuous visible support and resources from the agency to remain credible. Credibility is particularly important for mobilisers using the non-directive approach. Young, inexperienced mobilisers may well be laughed at when they try to discuss problems in an open-ended way.

A motivated person works reliably and with dedication, even in isolated situations, and stays with the programme. In programmes working in scattered rural communities, with a shortage of transport and supervisors, the credibility and motivation of the mobilisers will determine the success or failure of the programme.
Low motivation results in poor work performance and a high turnover of mobilisers. Motivation depends partly on the attitude of the mobilisers, but also importantly, on the rewards and incentives offered by the programme in relation to other job opportunities for the mobiliser. The rewards and incentives must compare well with other work options in terms of income, status, security, job satisfaction and aspirations.

The mobilisers' competence will depend on their intelligence, problem-solving abilities, manual dexterity and personal qualities. Physical ability to do the job depends on health, strength and freedom to live away from home.
The following lists give important qualities of candidates and important features of the job.

Qualities and achievements of people	Tasks and working conditions
Sex, male or female	Travelling around
Age (and experience of life)	Staying in villages
Family status	Communicating with village authorities
Educational achievement	Communication with villagers
Occupational experience	Communication with women
Experience as volunteer	Motivating people to work
Local roots (rural/urban)	Getting people to cooperate
Knowledge of languages/dialects	Not offending people not abusing position
Familiarity with rural life/culture	Planning
Attitudes & personal qualities:	Find solutions to problems
- Not degrading uneducated people	Reporting
- Willingness to stay in villages	Acting independently
- Desire to be of service	Practical demonstration
- Openmindedness	Technical/mechanical tasks
- Teaching ability	Listening
- Learning ability	Leading discussions (dialogue)
- Initiative	Organizing social festivities
- Leadership/motivating ability	
- Tact and empathy with others	
- Keenness	

1. Characteristics influencing credibility, motivation, competence and physical ability to do the job.

1.1. Gender

Currently most (in fact almost all) water and sanitation programmes employ only men as mobilisers. They may do this as a matter of policy, but more often it is the result of many individual decisions and assumptions.

A few programmes now take the opposite approach and employ women (1). In fact, many agencies recognise the great advantages of employing women for activities with women, and that they must involve women in water and sanitation projects. But usually these agencies allow practical reasons to set aside the arguments in favour of women mobilisers. But are these practical reasons always so important?

People argue that women have, or will have, small children which prevent them from travelling between villages on the job. But some programmes have found solutions to this problem.

In the Buba-Tombali Project in Guinea-Bissau, "the choice of young female promoters with children posed some practical problems which were solved by:

- the provision of a baby-sitter taking care of the children, to allow the mothers to take part in meetings with the promotional team;
- for every three teams one extra female promoter was appointed as a stand-in (e.g. for when a promoter could not attend to her work because of illness of one of her children);

- pregnant promoters were given two-months leave; after this, one month work in the project centre followed, and then normal field work would be resumed" (2).

In Guinea-Bissau, children are generally breast-fed up to the age of two. During field trips the female promoters, therefore, usually take their babies with them

Clearly, programmes employing women with children must plan work schedules and approaches which take the needs of mothers and children into account, rather than just ignoring them.

Another solution is to employ childless or older women. The Buba-Tombali Project rejected the older woman as she "might be too bound by the traditional social pattern" (2). Is this image of older women as unusually set in their ways, their behaviour determined by custom and closed to new influences, more than prejudice? Male project managers, and water engineers from outside the community will not usually get to know many older women well.

Even illiterate village women have proved very capable health workers in voluntary agency projects in South Asia (3). Those of us who have met such health workers will have no doubt about their interest in new ideas. What is true is that they are very shy at the start of training, due to their low status:

"It was at this time (in 1973, near Jamkhed, India) that Lalanbai Kadam was chosen as a community health worker, She is a harijan ("outcaste") and a widow, probably the most unfortunate status that a human being in India could have. Every week Lalanbai came for training, mostly out of curiosity. She was hearing things she had never heard before: All people are "equal"; women have as many rights as men; disease is not due to the gods but to germs or lack of food. The nurse showed a child with kwashiorkor and explained that this condition was caused simply by lack of food. Lalanbai came a little closer to the nurse and started listening with greater interest. By the time she had completed the course, Lalanbai was determined to start breaking down the old prejudices which stamped her as a virtually worthless human being.

"Lalanbai started walking boldly round the village, attending public meetings (previously all-male occasions), and entering people's homes to make suggestions for health improvement and development. Though there were murmurings about her "audacity", nobody publicly opposed her. Then disaster struck. A young man in the village died of a cerebral haemorrhage. The whole village panicked. They felt it was God's curse because they were allowing a harijan widow to enter their homes, they were listening to her advice and taking medicines touched by her. Many people wanted to chase her out of the village. On the advice of the project staff, she stayed in the village but stopped her health work. That same day, one of the village women went into labour, and Lalanbai was called.

She refused to attend the delivery, however, on the grounds that the villagers had asked her to stop working. Mothers brought children for medicine, but were obliged to go to the community health worker in the next village because Lalanbai could no longer dispense medicine.
Within two days the whole village realised the importance of the role played in their lives by Lalanbai. She was presented with a petition pleading her to resume her health work. Finally, after a public apology for the shabby way she had been treated, Lalanbai was formally reinstated. A total transformation in the attitude of the whole community to this poor, "outcaste" widow had taken place" (4).

Village women are often "bound by the traditional social system", but only in the sense that they are not offered an alternative. When a project rejects them too, it makes that situation continue. Water and sanitation programmes may even worsen women's position if they employ men as caretakers because women often have traditional responsibilities for the upkeep of communal water sources. The same strong arguments apply to employing mature women at other levels in the programme. People such as the Indian widow described above, who regard the job as most valuable to themselves, are likely to be most conscientious.

Sometimes it is argued that the job of mobiliser involves travelling in rural areas on poor public transport, or bicycles or motorcycles, and that this is dangerous, uncomfortable or socially unacceptable for women. Of course many women would object to this kind of life, particularly educated young urban women with other alternatives and no desire to serve the poor. You should not employ anyone who will want to stay in the office unless they have a vehicle and driver to take them to the village. But will this be true of all women, particularly if you do not require such high educational qualifications?

Sometimes women do not want to use motorcycles or bicycles because people make unfavourable social comments. Here too, some projects have successfully broken these rules of behaviour. For instance, around the Savar project in Bangladesh, people no longer think it strange to see a woman riding a bicycle. Because dangers may be greater for young women, and because husbands may be most opposed to their wives breaking customs, there is a good case for recruiting single, widowed or separated mature women.

Finally, planners argue that women are less effective at dealing with male-dominated village authorities. Even in the Buba-Tombali project where the promotion team consisted of one man and one woman, workers found that: "most village committees directed themselves exclusively to the male promoter, and not to the woman in the promotion team. As a result the male promoters were taking up their tasks more easily and the female promoters made little progress. Once the female promoters, after many discussions, became more secure in taking up their tasks, the male and female promoters became equally effective" (2). But at the same time, "the promotional team was found arrogant by the villagers; the reasons for this might be:

- the manner in which meetings were conducted, with the promoters acting as teachers or instructors;

- the promoters themselves did not fully understand the information they were presenting; this led them to avoid difficult questions by taking an imposing style of discussion which left little opportunity for the people to put their problems forward" (2).

Greater confidence and forcefulness is clearly not the whole answer. You may even find it easier to train women than men in an acceptable approach to discussions and dialogue. They may be less interested in their status and more able to empathise with less powerful groups. They may be more credible as mobilisers to women, particularly when women see men as being irresponsible about domestic needs and child care. "Tell us how you help your own wife in fetching water, or caring for the sick child" as women in Northern Ghana said to a male mobiliser. Women's own experience in providing water will help them to discuss the advantages and disadvantages of alternative designs and plans with women.

In many countries, there may simply be far more applications for the job of mobiliser from men than there are from women. Perhaps more men have the necessary qualifications. Therefore, you must also think about the recruitment of women in relation to your educational requirements. We turn to this next.

1.2. Educational qualifications

Writing of the selection of community development workers, T.R. Batten says: "It is relevant to ask at this point whether too rigid an insistence on youth and academic standards may not sometimes unduly narrow the field of selection to the exclusion of many otherwise highly suitable persons who with training might be expected to develop into the best type of village worker. Most well-educated young men prefer jobs in the towns, and those who offer themselves for jobs in the countryside are likely to be, as (an) Indian report puts it, 'persons who have not been particularly successful in securing other employment or have tried such employment and failed'. Conversely, at a lower educational level, the higher is the proportion of the best persons at that level who are likely to apply, and these may well become better village workers than many of those who have spent longer in school only to be rejected by the towns. Experience in Africa and Central and South America has already proved that persons who are not matriculates (secondary school graduates) can become excellent village level workers. And the same, apparently, is also true of India. On the American Friends Service Committee's project in the Sambalpur district of Orissa, the 'absence of extensive education has not proved a great disadvantage; in fact some of our best workers are amongst those with least schooling and they have been able to adjust themselves and to identify themselves with the villagers more quickly'." (5) T.R. Batten wrote this in 1962. Many other projects have since confirmed that people with only primary school education can prove very effective mobilisers. These projects include water and sanitation projects; for example, the project officers in the Malawi government rural water programmes are primary school graduates (the programme discussed above Ch. 2, sections 3.2 and 3.4).

Two African water projects, financed and organised by official aid donors, have trained rural people who have not even completed primary school as mobilisers. They have been very effective.

However, in both cases problems have arisen on handing the project over to the national authorities. These arose because of regulations which prohibit employment of people without primary school certificates in the non-manual grades of government service. At the time of writing these cases have not been resolved. It appears that the mobilisers will lose their jobs and the training effort will be wasted. In this situation, job insecurity, lack of promotion ladders, and low status in relation to other workers can have a demoralising effect and seriously affect motivation and job performance. Clearly, it is important to think ahead about such problems when you plan.

On the other hand, in some countries you might easily select candidates who have education beyond secondary school, even a university social science degree. In India, one project noted the high level of graduate unemployment in its area and adopted a policy of selecting mobilisers only from local unemployed social science graduates. One can justify this because it provides employment and a start in professional life for a group who find these opportunities very scarce. But the performance of the trainees is mixed. Some have done well, others not so well. Some have left for "better" jobs, for example, in a bank. Others are again unemployed. The problem is that typical social science education often does not give students the finely aware, critical "sociological imagination", which is the potential value of university education, but it does lead to high expectations.

Some Indian projects, with a similar situation of graduate unemployment, have decided to employ mobilisers with higher degrees, for example a masters degree. For these mobilisers, this may be the first stage in a vocational career in voluntary agency rural development. You may find advantages in employing mobilisers of high professional standards, for example, sociologists. But you must be prepared for these mobilisers to take an independent view and question features of the programme. In fact, they may be the best interpreters of the interests of the rural people, and the best representatives of their views. This can upset programme leaders when it disturbs their own assumptions!

Thus, you may find it possible and desirable to employ social scientists with critical awareness and dedication to the poor. If not, you may do better to aim for a much lower educational level. The worst thing do to is to follow many agencies and rural development training schools who select candidates in the way described in this example from Burkina Faso in 1971, "..where the only criteria on which selection rests are school criteria, with a competitive examination for recruitment consisting of tests of dictation, mathematics, natural sciences, and essay writing. Such criteria (as the co-director pointed out in a memorandum) do not permit one to take into consideration personal qualities which are nevertheless essential for future extension agents, such as taste for rural work, sensitivity in human relations, qualities of initiative and of leadership etc." (6).

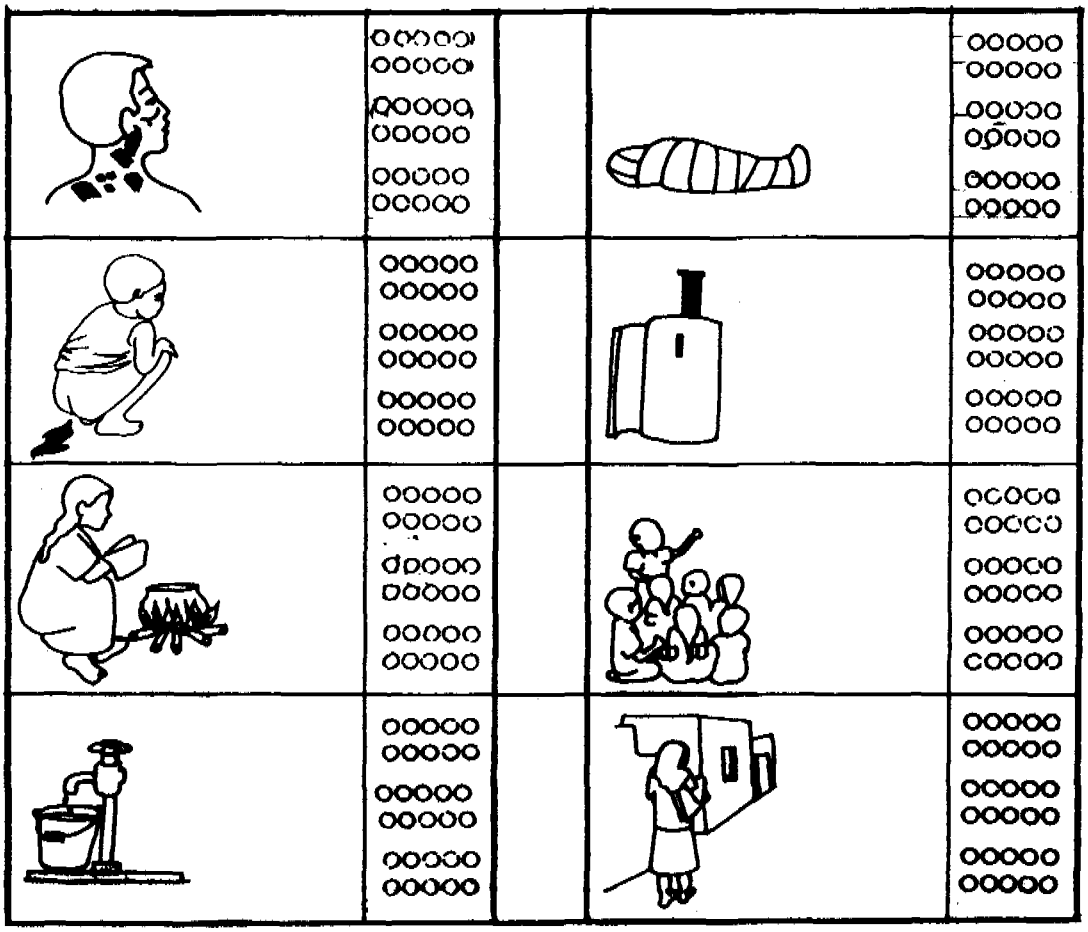
Unless you can employ people with a high level vocational interest in working in the countryside, you will do best to select people of a much lower education who will be happy to work in the countryside because they think it a worthwhile job. These people will not have expectations of an urban, non-manual job and so will not think the mobiliser's work beneath them.

As Batten says: "It is relatively easy to train a group of keen, intelligent rural people for village work, even if they have not had a great deal of formal education. It is far harder to teach a person who has no real interest in, or liking for, rural life, and harder still to re-educate him out of whatever incorrect ideas or inappropriate attitudes his previous education or training may have given him" (5).

Of course, this will point to a different level of prior education in different countries: as we mentioned in the Introduction, the job market in relation to educational achievement varies, and so do the attitudes typical among those with a given educational level toward working in rural areas.
In some countries, for instance in Latin America, you may easily find secondary school graduates who regard the mobiliser's work as a satisfying career. In other areas, this will be difficult because secondary school graduates are in greater demand and have higher expectations. You should choose the educational level of the trainees by thinking about the above questions. You can then plan the mobiliser's tasks and training content to match this educational level. This works better than first laying down the tasks and then deciding what educational level is required. For instance, in Guatemala, and probably in other Latin American countries, it is appropriate to train a single paraprofessional, technician-mobiliser. There, Agua del Pueblo selects keen candidates from among secondary school graduates, with an additional two years' training as rural health technicians. And the programme can train them in a course which lasts only six months. You could not do this where the educational level of the trainees was lower. In other countries, for example, in Africa, you would do better to take candidates of a lower educational level. These trainees may not be able to cope with the work of a single technician-mobiliser, covering all aspects from health education to design. But you could still have just one person in constant contact with the community. (S)he would need closer backup support from more specialised personnel.

Programmes usually require mobilisers to be literate so that they can read manuals, measure things and keep records. Also literate mobilisers may be more credible teachers in the village. However, insisting on a certain level of literacy may limit your choice of mobilisers unnecessarily. You can design training programmes, materials and records to suit mobilisers with very basic literacy.

The following is an example of a picture tally card used by village health workers. It illustrates the type of records which can be kept even by illiterate workers (one circle is ticked off to record each event).



1.3. Age, experience and family status

We have touched on the question of age in previous sections.
Just as there is an unfortunate tendency to assume that the mobilisers should be male and at the highest educational level, so also there is a tendency to assume they should be young. "The reasons are obvious. A young man is less likely than an older man initially to be hampered by marriage and family ties; he has more years of working life ahead of him; and the younger and better educated he is, the easier it is to train him for this job... An advantage in keeping the maximum age fairly low is not only that persons recruited could look forward to a fairly long period of service to enable them to realize the maximum retirement benefits that would be available, but would also be young enough to benefit from successive courses of training" (5).

That is how T.R. Batten lists the reasons used for preferring young men. We can do no better than continue with Batten's counter-points: "These arguments are sound enough as far as they go, but do they go far enough? Village level workers normally have to work among people who traditionally accord respect to age and experience rather than to youth and immaturity, and it may well be that the advantage of recruiting very young workers may be more apparent than real. Du Sautoy in Ghana, for instance, believes that 'it is dangerous to recruit direct from school, since the village people may object to being told what to do by mere youngsters'.

Also, one might think, it must be very difficult to select from among a mass of very young applicants those who really do possess to a high degree the desired qualities (to quote from the Community Projects Draft Handbook for India) of 'personality, initiative, resourcefulness, leadership and spirit of sacrifice and service, simple and intelligent living'." (5).

In Ghana, community health nurses plait their hair in order to look more mature, and find it embarrassing to "teach their mothers". Mothers found nutrition education "more boring and frustrating" from a young woman. The important thing is to choose people with the most desirable personal qualities, and age restrictions narrow the field unnecessarily. You want people who will be vigorous and keen. You will probably do well to aim for people with some life experience following schooling. They are more mature, and you can see their personal qualities more clearly. But you limit choice if you impose strict age limits. This also happens if you insist on unmarried candidates. Unmarried people without family responsibilities may be able to move around easily, but they are likely to have less experience of life. Whether men are willing to move around is probably related to educational levels. A group of men with a high educational background will want to provide a good education for their children also, and so they will want to stay in the city, at least until the children reach boarding school age. For women, mature women who are separated or widowed will probably be more willing and able to move around. When you look for relevant experience, any kind of service in rural areas, especially that which involves travelling, is a useful indicator: for example, previous employment as a mobile health worker or travelling vaccinator indicates a real willingness to lead the life-style of a mobiliser. Some countries make a background of volunteer work a condition for acceptance as a community development worker. You can do this in countries where there us a lot of voluntary activity, but again, this condition may limit your choice unnecessarily.

1.4. Knowledge of local language, culture, and roots

In many countries, all education is provided in one or two national languages, but other languages or dialects are spoken by most rural people, most of the time. Usually, some rural people speak the national language well, others not so well, and the rest not at all. A mobiliser who speaks only the national language can usually get his or her business done because enough people will understand. But it is far better if the mobiliser can converse freely with all the people. (S)he can then judge their mood in a way which is only possible when (s)he speaks the local language or dialect fluently.
You will not be able to make this a rule when there are very small language groups for whom it is impracticable to train a separate mobiliser. And in some countries you cannot select staff on the basis of language because of a policy of national integration. Sometimes you may find it difficult to get people who speak the languages of educationally disadvantaged groups, because few have the required level of education. In this case, you should be able to relax the educational requirements, at least for these groups.

Even where everyone speaks a common language, you should select people who are familiar with the culture of the people with whom they will work. Usually, this person will have grown up in that culture and have local roots.

However, mobilisers may prefer not to work in the particular communities where they grew up. People may reject their advice on the grounds that: "We cleaned your bottom for you once, and now you are telling us what to do. You are one of us, so don't go putting on airs and boasting". Also mobilisers may find it difficult to avoid getting involved in factional disputes, or responding to demands for favours from friends and social superiors. In some cultures, mobilisers may fear actual physical harm if they resist such demands. On the other hand, if people see that a person from their community has changed his or her behaviour, they may feel more confident and motivated to change their own behaviour.

People coming from the local area understand its culture and problems without being taught. They are sensitive to social issues in the community, and better able to judge what to do, although they may find it difficult to report on these issues, particularly in writing. You can expect a local mobiliser to understand better how much work people can be expected to do, or how much influence certain community members enjoy. In health education, they should have a better feel for practicable changes in behaviour, and for ways to explain ideas such as disease transmission in words that people can understand.

A local person is likely to be more credible because (s)he belongs to the same ethnic group, and therefore his or her opinions are more acceptable.

The class position of the mobiliser may influence credibility in communities with great inequalities. For example, high caste mobilisers in an Indian village may not be able to work effectively with lower caste groups. You may have to think about selecting trainees from poorer groups if you want to benefit these groups.

People with different religions may have different customs regarding water and sanitation. It may be appropriate to take religion into account in selection.

1.5. Attitudes and personal qualities

You need to take the background characteristics described above into account in selection. But finding people with the right personal qualities and attitudes is more important. You will often not be able to find candidates with the desired attitudes fully formed. But you can try to select people who are flexible and open-minded enough to develop the right attitudes as a result of their training and work experience. Important attitudes include not looking down on uneducated people, a desire to be of service to the poor, and keenness to do the job well. Try to look for the seeds of these right attitudes when you select candidates.

2. The selection process

You need to adapt the selection process to your local situation but the main steps might follow this pattern:

- Invite applications from candidates with the required background characteristics. In some countries an open advertisement in a newspaper may reach these groups, or it may result in a flood of unsuitable applications. Could you contact specific groups more directly in other ways? For example, if you are looking for those with experience in rural areas, you might approach relevant branches of the service with proposals for a promotion mechanism.

If you are inviting candidates from a limited area, for example a district, you may be able to visit communities to canvass for suitable people. You will need to describe the job in detail, and the characteristics and personal qualities you require. This information should then reach potential candidates, for example, older women, who can apply. Even a national programme could give the responsibility of initial selection to district level officials. Smaller programmes will find it easier to identify suitable candidates because they may know some of them personally, or know people who can give a reliable assessment of their qualities.

- Sort through the applications and perhaps give an initial interview, aimed at sending away those who are obviously unsuitable for one reason or another.

- Give candidates a list of questions aimed at finding out how aware they are of water, sanitation and health problems in their own community. Or ask them to describe these problems or write about them. This gives an indication of how interested they are in the subject.

- Give the candidates detailed information on what the job involves. Ask experienced mobilisers to describe the problems and rewards of their work and to answer questions in small groups.

- Ask people either to write a short essay, or to describe at an interview why they applied for the job, what they hope to gain from it, what they have to offer, and what experiences in their lives they think will help them to do the job well.

- You might at this point select a group who are still keen on the job, and who do best in their answers to the above questions.

Alternatively, you might hold a one or two day selection workshop. This may be too difficult to organise. You can simplify the selection by choosing a few of the methods. But remember that your programme depends on finding credible, motivated and competent mobilisers. It is worth taking time and effort to select the best candidates in order to avoid high turnover rates and ineffective workers later.

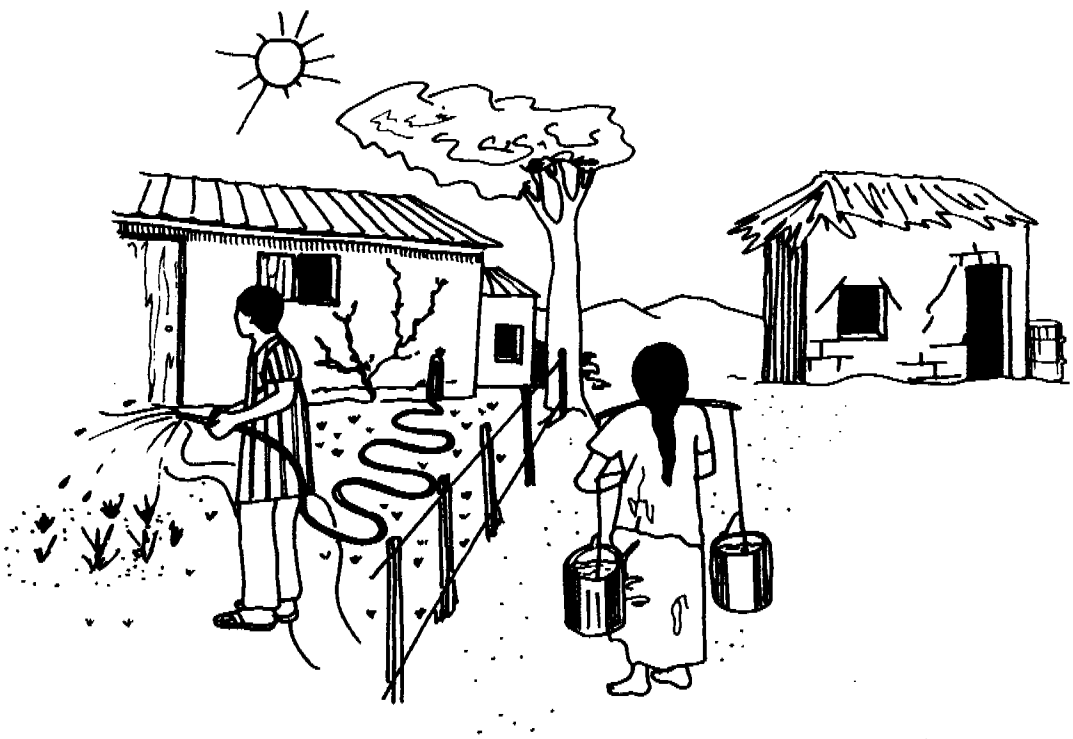
If there are people in your area who are experienced and competent at community work, you might invite them to help you with the workshop. For example, good community development workers. If your programme already has mobilisers on the job, they should be involved fully in the selection process.

A one or two day selection workshop aims at finding out people's attitudes, problem-solving and communicating abilities. You will need first to help candidates to relax a bit and get to know each other.

The following are examples of cases which can be used in discussions to assess attitudes and abilities. They are taken from Werner and Bower: (1982).

Case 1

In the mountains of western Mexico, a village of 850 people decided to put in its own piped water supply. After considerable pressure from outside change agents, the richer landholders finally agreed that each family in the village should contribute to the costs in proportion to its wealth. Then one of the landholders, who is also *cacique* (headman), volunteered to be treasurer for the water program. Soon he took complete control. He arranged for water to be piped into the homes of the few big landholders before the public water supply was extended to the poorest parts of town. Then the *cacique* began to charge so much for the use of public taps that the poor could not afford to pay. So he turned off the public taps. The result was that the water system, built largely with the labor of the poor, was controlled and used exclusively by the rich.



Case 2

"In the village of Losari, in Central Java, the people were helped by an outside volunteer agency (Oxfam) and an 'intermediate technology' agency (Yayasan Dian Desa) to put in a piped water supply. Looking ahead to the time when the pipes would rust, but outside assistance might no longer be available, a plan was made to raise money for eventually replacing the pipe. Each family along the water line has planted ten mahogany trees. In 15 or 20 years' time, these trees will be cut down and sold to raise money to replace the steel pipes.

"The village headman bought the mahogany seeds from the Agricultural Service and planted them on unused patches of his own land. After 12 months, he gave seedlings to the 85 families living near the water supply.

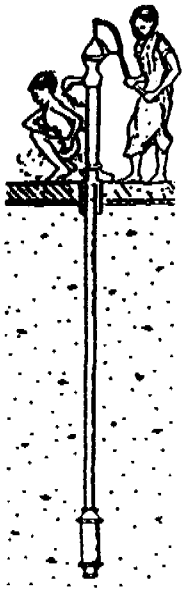
Case 2

"If any young trees die, the people can ask the headman for replacements. He makes no charge for the seedlings and asks only that the people look after their trees well."

The third case comes from the Gonoshasthaya Kendra (or Savar) Project in Bangladesh. Their Progress Report (August, 1980) states:

"In liaison with UNICEF, the government has given hand-pump tubewells to many villages. However, the majority have been situated on the rich mens' property, resulting in limitation of their use...

"In our program, one tubewell is to serve 15 to 25 families (none of these having either private or government tubewells on their homesteads). The tubewell is donated by UNICEF, but the digging and platform expenses are borne by the families whom the well will serve. A committee made up of the various family members is responsible for seeing that 100 taka (local money) is deposited in either the bank or post office for the maintenance of the tubewell. All who use the tubewell must contribute equally to this fund. Otherwise, we are likely to run into the same system we are trying to overcome, of one (rich) person bearing the expenses and thus holding the power over who can use the water supply."



Work in groups of five or six people to find out:

- What attitude does the candidate have towards uneducated people? Present a case where the mobiliser faced a problem in his/her work, which could be seen as the fault of the people, or as the fault of the mobiliser.

- Ask the group to diagnose the problem and discuss how to solve it. Look for those who blame the people for ignorance, stupidity or laziness, and those who show more understanding of the people's point of view, and think about how the mobiliser should change.

- What attitude does the candidate have towards power and inequality in the community? Present these three cases, and ask candidates to discuss what can be learned from the three examples.

- Is the candidate willing and able to live and work with some discomfort, in rural areas?
  Look at the candidates' previous experience and life-style. On the workshop, or the later course, the candidates could walk to a rural village, and sleep simply overnight, doing their own chores. Reactions to this experience may identify those who would be happy to live like this.

- How well can the candidate communicate with local people?
  Ask candidates to do a role play. They could pretend that they are explaining how a disease is transmitted to a village group. Give them the basic facts, and ask them to explain these facts in a way that will help people to understand and want to do something to solve the problem.

- Problem-solving ability.
  Describe a problem faced by the mobiliser, and ask people to find solutions. This could be done by small groups discussions.

- If candidates will do technical tasks, such as construction and maintenance, you might look for practical skills by getting the group to take part in digging a latrine, for example. This will also give you an idea of their attitudes to manual work and their ability to work together.

This type of selection process may mean that quieter, shyer people are not selected, particularly women, or lower status people. You can get over this problem perhaps by forming discussion groups of people with similar status, and by actively encouraging shyer people to talk. Those who dominate the discussion may well have less appropriate attitudes anyway. Also, of course you do not expect candidates to be very skillful in these exercises. You are looking for the seeds of good attitudes and skills, not fully grown mobilisers.

You can then make a final list of trainees with all those involved in leading the workshop, particularly any community workers present.

If you select trainees carefully through pre-course workshops you should not need to "de-select" at the end of the training programme, a demoralising and distressing process. With continuing job experience and practice, the great majority of trainees will, at their own pace, develop into effective mobilisers.

Notes

(1) For example, the Dutch-aided Buba-Tombali Water Project in Guinea-Bissau; see the reports:
IRC: Rural Water Supply Development: The Buba-Tombali Water Project 1978-1981 (1982).

Van der Ploeg, J.D. and Van Wijk-Sijbesma, C., "Community Participation in the Rural Well Construction Programme of Guiné Bissau", Aqua 9/10 (1980).

Van der Ploeg, J.D.: A activaçao social dentro do quadro do abastecimento de agua rural do projecto de agua em Buba e Tombali, Guinea-Bissau, Direcçao International de Ajuda Técnica and Netherlands Ministry of Foreign Affairs (1979).

Other examples are mentioned by Mary Elmendorf: Women, Water and the Decade (WASH Technical Report No. 6, June 1981):
"In Angola where women have been recruited as water source monitors, the breakdown rate has declined decidedly (Ref. to personal communication). As an adjunct to an agricultural development project in Bolivia bi-lingual indigenous women, 17 to 25 years of age, were trained to administer immunizations, provide information on child nutrition and lecture on the proper maintenance of water and sanitation facilities. A number of these young women are now in complete charge of repair and maintenance of the facilities (Ref. J. Stein, Water: Life or Death. International Institute for Environment and Development, Washington 1977)".

(2) IRC: see first item, not 1 above.

(3) Such as the Savar project (Gonoshasthaya Kendra) in Bangladesh, the Jamkhed project in Maharashtra, India and the Deenabandu project in South India. These projects and others are associated in the Asian Community Health Action Network.

(4) Mukhopadhyay, Maitrayee: "Human development through primary health care: case studies from India", in Morley, David, Jon Rohde and Glen Williams, eds., Practising Health for All, OUP, Oxford (1983), P. 138.

(5) T.R. Batten:
Training for Community Development: A critical study of method, OUP, London (1962), Chapter II, "Selecting paid workers", P. 23. This chapter is one of the few writings on this subject. It does not mention the male or female issue, but otherwise we recommend it highly and acknowledge our debt to it in the present chapter.

(6) Belloncle, Guy: "Comment former les cadres: Le Centre de Matourkou en Haute-Volta" (How to train personnel: the Matourkou Centre in Upper Volta), Ch. 9 of Le Chemin des Villages: formation des hommes et développement rural en Afrique (The Way to the Villages: training of men and rural development in Africa), Harmattan and ACCT, Paris (1979), P. 144.

V TYPES OF TRAINING AND TRAINERS

In this chapter we consider:

1. Types of training: how much of the training will be done in a course, how much in supervised on-the-job form, and how much through an instruction manual?

2. Length of courses: if a course is arranged, how long should it be, should it be divided into sections with on-the-job training or practice in between, and should there be regular refresher courses?

3. Location of course and accommodation: Where should the course be held? Should the environment be urban or rural, self-contained with accommodation provided or staying with local families? How many trainees should be trained together?

4. The trainers and their training: Who should teach the course/supervise the on-the-job training? What sort of background knowledge or experience is needed? Should the trainers themselves be trained first and in what ways? Can professional trainers bridge the educational gap with trainees of low educational level? Can experienced mobilisers take over training?

Trainees need plenty of skill practice, good role models (people to imitate) and appropriate attitudes to rural people and rural life if they are to become effective mobilisers. The way that you arrange the training, and the trainers that you select, will determine whether your training is successful.

1. Types of training

Far too often, programme organisers assume that all their training needs are best met by running a course.

Courses have their place, but you should also consider what you could do better through on-the-job training or through a manual.
Courses have several potential advantages and disadvantages. The best courses allow time and space for group learning activities with the trainer and trainees; for example, discussions and role plays. Trainers are able to explain ideas in detail, and to organise activities which help students to use the information. Group feedback on the performance of the trainer and trainees enables trainers to continually improve the course content.

One of the main dangers of courses is that they may become too theoretical and too far away from the practical realities of the work.

Even if experienced workers are able to relate the theory to their practical experience, this theory will mean little to new trainees who are given too few opportunities for practical work until after the training course. Some teachers on courses present material in lectures and give few chances for discussion. Some may even dictate material, and regard the students' notebooks as their future work manual. These teachers would do better to reproduce such material as a manual, and give it in printed or mimeographed form to the students.

Often, teachers use words and expressions in their lectures which are very different from the words used by students when they discuss the same topic at home, out of school. The students then do not connect the lecture with their own conversations and see that it is the same topic. They do not realise that their own experience and opinions have a bearing on the teacher's information. These trainees can leave the course with their "theoretical" knowledge and their life experience still in two quite separate compartments. This can make training completely ineffective. For instance you often find workers who are trained in health education lecturing all the village people to bury or burn their household rubbish. But the worker does not do so in his or her own house, and does not really see that there is a contradiction. We describe ways to avoid these dangers on courses in Chapter VII.

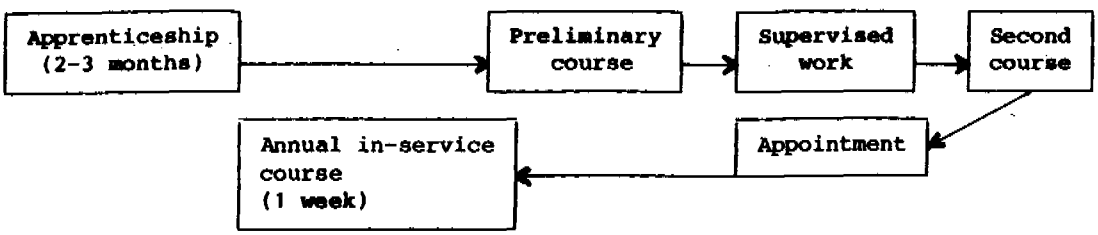
On the job training avoids this problem by building around experience, not theory. But the trainee and trainer must work together in the field for a long period. This takes a long time, and requires enough experienced, competent, motivated field trainers. A programme starting on a small scale and expanding gradually could manage this type of training. Here, the programme leaders would do the training while working directly with the local population in the early stages. Such training might also be possible when a programme already has a number of mobilisers who are working well. Then each worker would take on an "apprentice".

In practice however, most programmes who already employ a number of mobilisers have a more formal training procedure. They may find this difficult to change, although the advantages of adapting the course to include more on-the-job training may well outweigh the problems encountered. The answer for most programmes is probably to combine a good deal of on-the-job training, either apprenticeship or in-service practical training, with several periods of classroom learning. Thus, training sessions would be alternated with periods of supervised work. This is likely to work better than a single preliminary course, because as Batten says:
"the inexperience and immaturity of most of the trainees create many problems during their preliminary training, and it may well be doubted whether any preliminary course can provide adequate training in this peculiarly difficult and complex field (i.e. human relations and extension training, as opposed to technical matters). Only when training is regarded as a continuing process to which in-service training has at least as much to contribute as preliminary training do these seemingly intractable problems begin to disappear. Preliminary training courses are then freed from the unrealistic task of trying to provide a complete training in those parts of their syllabuses which can be dealt with more effectively when the trainees have had some in-service experience, and the trainers are no longer faced with heavily over-loaded syllabuses and impracticable objectives" (1).

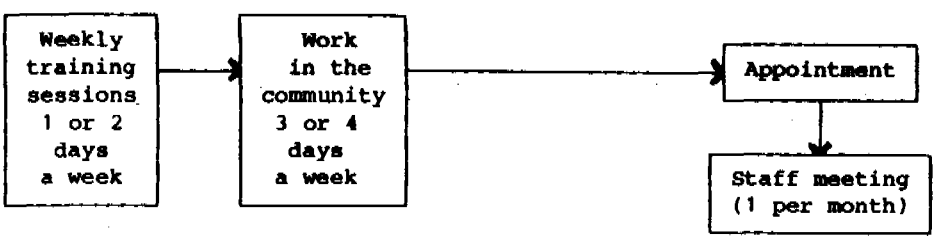
You can arrange these different stages in training to suit your particular training needs and resources.

- For example, you might start with an initial period of apprenticeship. Perhaps trainees would spend two or three months with an experienced worker in existing programmes, or with programme organisers in new programmes. (You would not arrange this first stage if you planned to make important changes in the mobiliser's job in an existing programme).
  You would then hold a preliminary course, followed by a period of supervised work. After a second course period, the mobiliser receives his or her formal appointment. You should continue to provide short courses of in-service training, perhaps for one week every year, for all trained staff. This will provide a forum for staff to discuss their problems and to present new issues or techniques. This annual meeting of promoters is a very important way of increasing their motivation and keeping them with the programme.

A possible training scheme
(for length see next sub-section)



- Another alternative, particularly for small programmes working in limited areas is to bring training and work experience even closer by, say, holding training sessions at the programme centre on one or two days of the week. On the other days trainees carry out work in the villages. These training sessions would continue until the training is complete. They would then be replaced by staff meetings, perhaps monthly, but similar in content. The trainees would need close supervision at first, decreasing gradually as they become more competent.



As well as on-the-job training, consider the manual as a supplement to training courses. A manual, and short training in its use, replace longer training periods otherwise required to learn the same material. In the context of village health worker training, David Werner remarks that two months' training in the use of a reference book can often produce better results than years of memorising facts: "In a short training course, you cannot teach great amounts of detailed information about a wide range of health problems. If you try to do this, students will forget or confuse important points, and end up making many mistakes... Training that focuses on using informative books in problem-solving situations can prepare health workers to handle a wide range of problems in a short time.

We know village health workers who often make better decisions than doctors who have attended the same sick persons. This is mainly because the village workers have learned to take the time to look things up" (2).

Mobilisers for water and sanitation probably do not have quite the same need to look things up as curative health workers. Nevertheless, the same principle applies, and trainers can prepare a manual setting out procedures to follow in the different situations met by the mobiliser. The trainer should teach the mobiliser how to refer to the manual on the job, not to remember everything that it says. This means that the manual should contain "how to do it" instructions for looking up when the worker faces a particular situation. The manual should not attempt to be a textbook in social science or community development, presenting a discussion of concepts or approaches (3).

2. Length of courses

In our opinion, some courses are far too long. For instance, in one typical African country, Community Development Agents are trained initially for 2 years at one of the three national training centres. Then, after a period of work as "level C" agents, they may be admitted to a further 2-year course at one of the centres and promoted to "level B". (Level "A" is achieved at present only through professional training abroad, though the proposal has been made for a university course at the country's main university.) In order to extend coverage to all rural areas, the Community Development Department has presented a plan to increase the number of training centres from three to seven, with a corresponding expansion of the intake and output of students. But the plan has not been accepted by the government. Clearly it will cost too much. The plan requires an increase in the Community Development budget by about 10 times over 20 years (it is now about 0.3% of total national budget). Half of this increase would go on training alone. This type of training can consume far too many of the resources that could otherwise be used to get the work itself done, and can end by turning out people able to talk well about community development, but reluctant to go out to the villages to practise it.

Some countries may be able to afford such intensive initial and upgrading training, on a scale sufficient to achieve full national coverage, either for community development agents, or water and sanitation mobilisers. This seems unlikely to be the best approach, however, even where countries can afford such a long course. Trainers will find it almost impossible to prevent this amount of theoretical preparation from becoming too far removed from the practical requirements of the job. You should probably limit the "classroom" content of the initial course to six months at the most, or 110 course days. This is appropriate for trainees with secondary school education. With trainees who have a lower level of education a "practical" rather than a "classroom" emphasis is even more necessary. Here, the presentation of social science concepts will on the whole not be appropriate. You should use classrooms for discussions of problems arising in practical work, and for explanations of technical and health aspects. Here, you may find three months or less an appropriate course length.
You should alternate classroom work with learning by doing.

In technical aspects, this may mean going out for a few hours in the coolest part of the day to dig and line a latrine or practise joining pipes. Practice in community mobilisation may not be so easily arranged as part of the weekly timetable. You may have to arrange for practical experience in concentrated blocks before, or between the classroom work.

For instance, in the Imo State project in Nigeria, one month's lectures were followed by one month in the community. After that, the trainees came back to the classroom. They could field test what they had learned in the classroom and discuss in the classroom the issues and problems which had arisen in the community. Then they went back to the community again, then back to the classroom. The training structured in this way was found much more useful than just sitting in the classroom (Ma Yansheng, pers. communication).

Again, after the initial course and a period of working, mobilisers should attend a second, "upgrading" course. Here, they will discuss problems encountered in the field, and how they might cope with them better, in detail which was not possible with less experienced trainees. This course might last for six to eight weeks.

Staff need to keep in touch with each other at regular discussion meetings or annual refresher courses of perhaps one week. If your programme employs staff who have not had recent or appropriate training, you will have to consider a real re-training similar to the initial and upgrading courses discussed above.

Finally, in planning the length of courses, you may need to take account of the special needs of women trainees, especially those who have family responsibilities - there may be practical limits to the amount of time they can spend away from home. This applies particularly, of course, to programmes which intend to employ local women to work in the area where they already live.

3. Location of course and accommodation

Pressures and practical considerations make it easier to carry out training in training centres. The centre may be in a town, or it may be a self-contained campus providing bed and board, study and recreational facilities. The problem is that the trainees will be isolated from the rural population.

As Batten says in his discussion of the initial training of paid community development workers, "Training given at a centre has many obvious advantages over training given in the field. Thus a centre is equipped for training. Its buildings are specially designed and equipped. It can have a permanent staff of specialists. It has residential accommodation for the trainees. And it is easy to arrange courses of whatever length may be desired. Moreover, the bigger the centre the greater these advantages become....".

However, he goes on to list the disadvantages:
"One disadvantage is that the more the training is centralised the harder it is for the instructors to relate their training, even in its purely technical aspects, to all the different local environments to which their trainees will return...

Another disadvantage is that the large centre aggravates the ever-present problem of providing the trainees with really relevant field practice and the trainers with adequate opportunities of supervising it. Yet unless field practice is both relevant and well-supervised, much of its value for training purposes is lost" (1).

Batten comes down, on balance, in favour of small district training centres with about 20 trainees and 1 trainer per centre.

The essential thing is that the trainees should develop understanding and sympathy for the problems of the people among whom they will be working, and not an attitude of superiority. If their living arrangements are separate and different from those of the surrounding population, they will not spend much time talking informally with them. Also they might come to regard themselves as having a right to superior living arrangements - in fact to regard themselves as superior people because they are educated.

The best way to achieve the necessary close relationships with local people and conditions might be to hold courses in villages. Perhaps you could arrange to use the village school buildings during the holidays, or other buildings open to the public. You might well select a village where your programme and the community are planning and implementing a water and sanitation project. Then the trainees can become familiar with at least one actual case. The trainees could stay with village households and receive a living allowance to pay for bed and board. They would take part in the manual work in order to gain practical experience and an egalitarian attitude towards rural people. Even if you are obliged to hold your training course in a centre, if it is located in a rural area, or small provincial town, the students will still benefit from boarding with local families. You need to explain this benefit to the students, and link the teaching with the household. Students get the chance to exchange ideas every day with family members. They can observe practices, attitudes, joys and difficulties of the families. They experience the families' problems and ways of coping with them. At the same time the families learn from and with the mobilisers as they bring new ideas from the training course.

If local women are being trained, it may be essential to locate the training site in the local area because women may be unable to travel far from their homes. Similarly, it may be necessary to provide special facilities for child care so that mothers can take their young children with them to the training course.

A good deal of preparation at the village will be necessary in order to use it as a training site. Catering arrangements are bound to be more complicated and may be a major problem. But the extra effort should be repaid in terms of a better development of the required skills and attitudes.

4. The trainers and their trainers

4.1. How many trainees should you train together?

Most trainers find that 12 to 15 trainees is the best number. Group discussion becomes difficult with larger numbers, and this is one of the main teaching methods.

If the course must cater for a larger number, say 30, you could divide the group into two. The one group would have a group discussion while the other did some reading or practical work. The work will be more varied and interesting if the groups change trainers. You might encourage a spirit of friendly rivalry between the groups, both in recreation and in group exercises.

4.2. The trainers

In any type of training, the qualities of the teacher are more important than his or her teaching methods. This is particularly true with human relations training because attitudes and ways of behaving towards other people are crucial. The students will use the trainers as models to imitate in their own attitudes and behaviour. This means that the selection of the right trainers is as important as making the right decisions on all the other questions discussed in these guidelines. You need to decide:

- What skills and experience should the trainers have?
- What extra preparation do they need, if any?
- What attitudes and ways of behaving should trainers have?

4.2.1. Skills and experience

There should not be too big a gap between trainers and trainees, unless the trainer is unusually good at bridging that gap by talking to trainees in a way that they can understand and relate to their everyday experience.
This means that it is usually a bad idea to bring in "outside" experts to lecture on subjects such as social analysis or health education. Instead the trainers should have had work experience similar to that of the trainees' future tasks. In existing programmes, the trainer will have had experience within the programme. In a new programme, the trainers should first acquire experience of the work themselves, or have had very similar experience in other programmes. Trainers may be able to cover all aspects of the training. Or they may be specialists in one field, for example, social mobilisation or technical aspects and work in a team. Preferably specialists should come from within the programme, and know as much about the other areas as the trainees will be expected to know. You would then have a team of trainers with different specialisation. Apprenticeship and practical training will be done with working mobilisers, supervised by senior trainers. After two or three years' experience, some mobilisers will be competent to teach in the classroom. Later, with more experience, talented mobilisers may well become the best trainers, able to take over full responsibility for courses.

The greatest problem will often be to avoid instructors who "talk down" to the trainees. Then the trainees in their turn will "talk down" to others when they go to work in the villages. This leads to a bossy type of mobilisation which people resent. Even if they build the water supplies, they are less likely to change their behaviour or increase their self-reliance as a group.

The trainers provide the example or "role model" for teaching and learning that the trainees will follow in their dealings with the communities. If they are encouraged to discuss their own ideas and ask (why?) or (how?) until they understand, they will be prepared to encourage villagers to do the same.

In part, this is a matter of the individual personality of the trainer: some will encourage discussion and questions whether or not they know the answers. But the educational system often stifles rather than encouraging such an approach, even at university level. Many potential trainers will have been influenced by their own education and will find it difficult or impossible to adopt an open approach themselves. The problem may be greater, in many countries, where people have an intermediate level of education, such as vocational training. Those at the highest level, with the best university training, may feel confident enough not to need to adopt an attitude of superiority.

4.2.2. Training of Trainers

The training will aim to give people with suitable knowledge, skills and attitudes, experience of doing the work of the mobiliser. This will involve practical work, not a classroom course.
In new small programmes, organisers will gain this experience by setting up projects themselves and then training others.
Programmes aiming for a more rapid expansion might gather together consultants with experience in a variety of programmes onto a course for trainers. The consultants could then work with the future trainers on one experimental project. Using the varied experiences of the consultants and trainers, discussions would focus on the advantages and disadvantages of what is being done, possible alternatives in approach and detail, and the skills, attitude and knowledge required of the mobilisers.

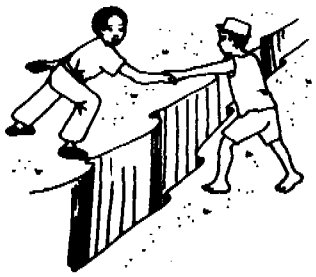
Trainers without teaching experience will require training in both directive and non-directive training approaches and methods. They will need information, skill practice, and sessions aimed at developing appropriate attitudes towards teaching and towards people with less education and status than themselves. They will need to know how to prepare teaching materials, to design and organise activities, to translate theory into relevant practice, and to evaluate their teaching. Because of the importance of "education for change", we describe ways to help teachers become less directive in their teaching in some detail in Chapter VII.

4.2.3. Solving the problem of wide educational gap between trainers and trainees

Trainers who will be separated from their students by a wide social and educational gap must learn how to bridge this gap.

Werner and Bower (2) give the following suggestions for trainers of village health workers. Village health workers are community members, and not all of these remarks are equally applicable to the training of paid staff, but most are worth considering.

Bridging the gap in education



1. Admit openly to your students that the gap exists - and that the shortcoming is yours as much as theirs. Invite your students to discuss and look for ways of bridging the gap together.

2. Do whatever you can to understand in a personal way the life, language, customs, and needs of your students and their communities. Live, if you can, with one of the poorer families in the community (paying your way). Eat their food. Drink their water. Help each day with some of the physical or farm work. Accept no more income than an average member of the community earns. (This is only a suggestion - but a good one).

3. If you are from out of the area, or are specialised in a narrow field (like an engineer), try not to be the main teacher, but rather a teaching assistant or auxiliary. (The main teacher will need a wide range of skills and knowledge, including, above all, teaching skills and inside knowledge of the local people. He or she needs personal understanding of what it is like to approach learning new things without much formal education).

4. When teaching make every effort to always begin with the knowledge and skills the mobilisers already have, and help them build on these. You are the stranger, so try to adapt your language to theirs; don't make them adapt to yours. If they are used to learning from stories or from actually doing things, rather than from lectures and books, try to adapt to their way of learning - even if this means exploring forms of teaching and learning that are new to you.

5. Most important! Make yourself as unnecessary as possible, as soon as possible. Look for local persons who are socially more qualified (less schooled, more in harmony with the people) to take over the training. Work towards having more experienced mobilisers become the teachers of new recruits as soon as possible. Every chance you get, move one step further into the background. Become the teacher of teachers. Then just an adviser or "person with ideas". Then leave.

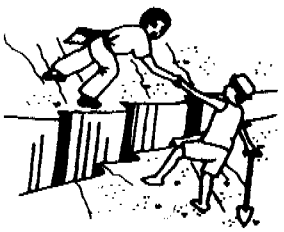
BRIDGING THE EDUCATION GAP

If the student is at this level

and you try to teach him from this level.

You will be talking over his head. You will bore him and, in time, lose him. You will make him feel stupid and he may hate you for it - because he is not stupid. There are probably many things he can do much better than you can, and many important things he knows that you do not.

If you try to learn from him, and to make good use of the language, knowledge, and skills he already has, often you can help him bridge the gap to learning new skills

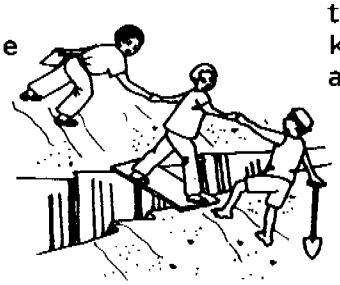


There are many shortcuts to increasing the student's skill and understanding: teaching aids, problem solving, role playing, learning by doing, etc. But it is important to begin with the skills and understanding the person already has.

Go more than halfway to meet him.

CLOSING THE GAP

If the educational gap is wide, better than trying to bridge it is to close it. Work towards training community persons who are closer to the educational level of the students, so they can take over most or all of the teaching.



The sooner a mobiliser can be trained to take over the teaching of new mobilisers the better. then training is more likely to be appropriate and helpful.

If you are an outsider, work towards making yourself as unnecessary as possible, as soon as possible.

Ideally trainers should be close to their students in culture, education level and ways of behaving. At first it may be difficult to find trainers who are culturally close to the students and also have the necessary knowledge and skills in water, sanitation and health, problem-solving in the community and teaching.
"Outsider" trainers can also prepare outstanding and experienced mobilisers to take over the job. Sometimes highly qualified trainers are doubtful whether less educated mobilisers can become effective instructors. Just as with engineers and sociologists, mobilisers who make good trainers are exceptional. The challenge is to find the right combination of attitudes, interests and talents, and then to create the situation that permits and helps them to grow. Some professional trainers may observe a mobiliser teaching, and complain that the class is too informal, chaotic, disorganised, and inaccurate. Werner and Bower describe a visiting nurse's complaints about a village teacher (2).

TOO INFORMAL.
CLASSES DO NOT BEGIN ON TIME.
INSTRUCTORS SLOPPILY DRESSED.
THEY USE VULGAR EXPRESSIONS.
MISSPELLED WORDS.

INCOMPLETE COVERAGE OF MATERIAL.
FREQUENT STRAYING FROM THE TOPIC BEING TAUGHT.
TOO MUCH NOISE AND LAUGHTER.
INACCURATE INFORMATION.

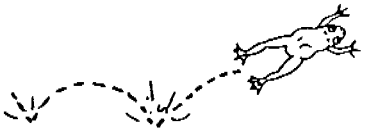
After listening to her many complaints, the village instructors invited the nurse to give a class to show them how to do it better. They suggested a class on "The Human Body and How It Works."

The nurse presented a carefully prepared and expertly delivered lecture called "Anatomy and Physiology", but when she asked students what they understood at the end, one said "I didn't understand beans" (i.e. anything), and neither had anyone else. She had used over 60 words that no-one understood, and admitted that she did not know how to give the same lecture more simply.

The next day, one of the local instructors led a discussion about "The Body and How it Works" (not "Anatomy and Physiology"). Rather than lecturing, he started by holding up a box. He challenged the students to ask as many questions as they could in order to find out whether the box contained something living or not. They asked questions like:

DOES IT GROW?
DOES IT BREATHE?
DOES IT MOVE BY ITSELF?
DOES IT NEED WATER AND FOOD?
DOES IT PEE AND SHIT?
CAN IT MAKE BABIES OR SEEDS?

The instructor wrote the questions on the blackboard and then opened the box. Out jumped a frog!



Next, the instructor asked how we, as people, also do each of the things listed on the blackboard. He started with what the class knew about the body, and built on that, asking questions like:

WHAT BECOMES OF THE FOOD WE EAT?
WHAT HAPPENS TO US WHEN WE DON'T GET ENOUGH FOOD?

At one point, he asked two of the students to run fast around the building, and had the group observe them and take their pulse. Then he asked:

WHY DO WE SWEAT, BREATHE HARD, AND HAVE A FAST PULSE WHEN WE RUN OR DO HARD WORK?

WHAT IS THE PURPOSE OF THE HEART AND LUNGS?

After the group had given their ideas (which were mostly correct), he asked:

WHY DO PEOPLE WHO ARE VERY PALE GET TIRED MORE QUICKLY?

WHAT IS THE PURPOSE OF BLOOD?

He spoke in the people's language, using the village names for different parts of the body: 'guts' for intestines and 'belly' for abdomen.

In this way, the students themselves were able to piece together many of the different systems of the body and their functions. It was like solving a mystery or putting together a puzzle. The students loved it. And everyone understood. The class was noisy and went overtime, but no one objected—this time not even the nurse!

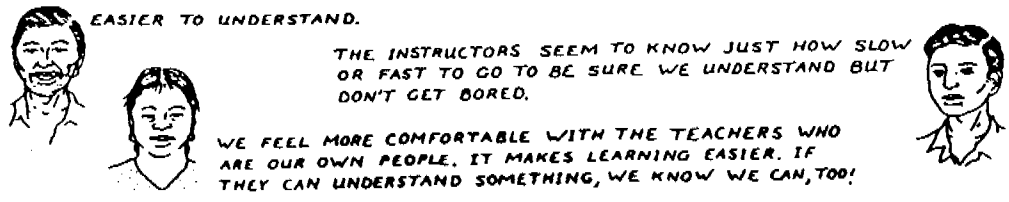
Of course, some of the body systems were forgotten, and others were barely mentioned.

"There is a lot more to the body than we have talked about today," explained the group leader at the close of the class. "But we will talk about other parts of the body and how they work when we need to, to understand about particular health problems as they come up." (See p. 5-11.)

By the time the visiting nurse left, she had changed her mind—and said so. She had seen that, in spite of certain inaccuracies and shortcomings of the teaching, the students had learned more and taken a more active part in the classes taught by their fellow villagers!

Not all the credit is due, of course, to the fact that the instructors were villagers themselves. Much of the difference was in the teaching methods they used. But **the technique of building on the students' own knowledge and experience is often easier for a local person who shares a common background.**

In Werner and Bower's programme, 3 students had attended both a course taught by a highly qualified outsider, and one taught by village health workers. When asked which course they thought better and more appropriate, all 3 agreed, "This one, taught by the village health workers." Their reasons:



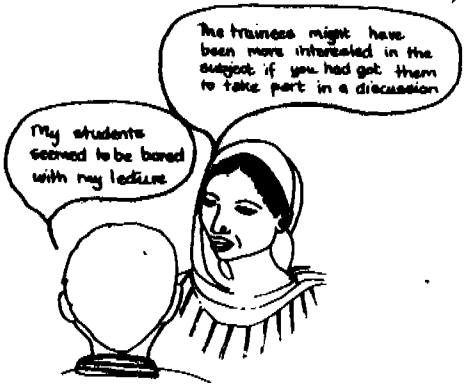
When mobilisers take over the training course, they, like the initial trainers, will benefit when a person with more experience or a different perspective, observes their teaching and makes helpful suggestions.

The role of the training organiser in a health worker training programme in Bangladesh has been described as follows (2):

The "Training Organiser" will sit in the class, quietly and discreetly at the back, and then review the class with the teacher afterwards, with emphasis on points like:

- Did the message get across clearly?
- Did the trainees have an active or passive role in the class?
- Were visual aids used effectively?
- How many of the trainees fell asleep before the end of the class?

The Training Organiser will review some of the above points with the trainees as well as the teacher.



Mobilisers will often at first lack basic teaching skills and experience in course planning. It is here that the training organiser can help. But it is essential that he or she be willing to stay in the background and let the instructors assume full responsibility. Once again:

> Advise, don't boss!

Notes

(1) Batten, T.R.: Training for Community Development: A critical study of method, Oxford University Press, London (1962), P. 71.

(2) Werner, D. and Bower, B.: Helping Health Workers Learn, 1982, a book of methods, aids, and ideas for instructors at the village level.

(3) Examples of the kind of material appropriately given in manuals are to be found in Anne Whyte, ed.: The Colombian Field Manuals and Training Guides for the Promotiono f Community Participation in Water and Sanitation Schemes, IRC (1983).

VI WHAT TO TEACH

The chapter begins with some brief observations on planning the course: the need for a manual of standard procedures, course outline and timetable; assessment of trainees for employment. The rest of the chapter covers the topics and tasks of mobilisation, suggested as the main content of the course (apart from the technical aspects and manual skills which many also be needed).
First, four topics which introduce the work to the trainee:

1. The connection between water and health
2. Natural sources of water and ways of tapping them
3. The water and sanitation situation in the country
4. The role local people, including women, can play in planning.

The main part of the chapter (section 1-27) deal with the tasks involved in community motivation for water and sanitation.

Sections 1-23 broadly assume that they are for use in water projects being carried out by water agencies with a "project plan approach"; projects using other approaches will use these sections more selectively. Sections 1 to 23 are presented in very approximate chronological order of when tasks may be needed in the community: sections 1-16 are concerned with planning, sections 17-18 with construction; sections 19-23 with maintenance and administration. However, within these groupings the order is necessarily somewhat arbitrary, because we are often saying: "Here are some aspects which you may need to consider" rather than "This is what you do next". Thus, while sections 1 and 2 concern the very first things which will need to be done in a project plan approach, sections 3-9 discuss various aspects of motivating a community and planning with a community, and sections 10-16 discuss more specific tasks or problems.
(Section 24). Programmes which follow a non-directive approach may wish to start with this section in preparing their course materials. Other programmes which are not so flexible in terms of being able to help communities decide on their own priorities, but have narrower concerns in water and sanitation, will use this material more selectively in terms of helping the community make those decisions which remain open concerning their water and sanitation improvements.

Section 25 presents a participatory approach to health education.

Section 26 gives a method for mobilising communities to improve their water supplies in simple ways by their own efforts. It may be used either within a mass campaign approach, or as an addition to a project plan approach in order to help those communities which cannot be allocated a full project. Some technical possibilities for simple improvements are listed.

Section 27 concerns socio-cultural aspects of latrine programmes, including the need to consult the community on design, and use.

Throughout Chapter VI, most points made can only be mentioned briefly. The intention is to draw the trainer's attention to subjects he or she may consider discussing with the students.

In this chapter we discuss in detail the topics that you may think about including in a training course or manual.

You need to plan the organization of the course. This will include:

- A course outline;
- A timetable showing the time and place where the students will learn theoretical and practical aspects;
- The methods used to assess the students as condition for employment as mobilisers;
- Development of specific lesson plans, written materials or manuals.

1. A job manual

We recommend that you prepare a manual which lists the mobiliser's tasks, and gives detailed information which mobilisers should look up rather than memorise (1). This might be technical information or standard procedures for setting up a community committee and so on. Use simple language which all the mobilisers can understand. Include sample formal documents used by the mobilisers. For example, requests for a water supply, or documents for the donation or purchase of land.

Set out what the mobiliser is expected to do, in as much specific detail as possible. Include, however, only what is realistically expected: do not overload the mobiliser with instructions which will in reality be ignored because of lack of time or because the mobilisers do not really have the skills to carry them out properly. You can then organize the training course around the topics covered in the manual. The trainer explains and expands each topic, and then gives trainees an opportunity to see the tasks being done, before practising them themselves.
You can only write a fully developed manual for your programme after it has been running for some time. Even here you should leave room for further adaptations and improvements as you go on learning. After some time you will know exactly what tasks and working methods work best in your situation. For a new programme, this chapter may provide suggestions for the contents of a preliminary draft manual, if you select topics applicable to your circumstances.
Teachers should be involved in curriculum planning whether this is for a new course, or improving an existing course. When they are teaching they should constantly think of ways to improve the curricula.

2. Planning the course outline

1. Break the course into smaller parts. Base the course outline on the mobilisers' tasks, rather than separate theoretical subjects taught apart from practical work. Therefore, do not follow this:

Example of a poor course outline:

	Hours:
Sociology	90
Microbiology	30
Psychology	60
Hygiene	60
Surveying	60
Construction	150
Communications	100
Technical I	210
Technical II	220
Community work I	120
Community work II	345

Here the facts are taught separately from their application. The sciences, presented in rigid one hour lectures, are likely to be presented in too theoretical a way, so that the students cannot see their relevance and will forget them or retain them only as isolated knowledge for answering test questions but not for using in what they do.

A better outline based on tasks might be:

Community work
- consultation
- working with groups
- working with leaders
- organising contributions
- dealing with faction
- involving women

Construction
- water supplies
- latrines
- training local people
- supervision

Maintenance
- water supplies
- latrines
- training caretakers

Health education
Surveying
Design

In this outline, the whole course is designed to give students the necessary skills. Theory is learnt at the same time as practical work which makes learning more meaningful. The timetable can be more flexible with longer periods for project work.

3. Timetable: time for classroom learning and for practice

Most courses spend too much time teaching facts in the classroom. You need to spend much more time giving students opportunities to practise skills, using their hands, making decisions and communicating, than in teaching facts. Organising this practice takes time and effort, but you must do it if students are to learn. They must experience working in the community, away from the training school (3).

We cannot specify exactly how much time is needed for practising skills on each course but the rule is:

MORE TIME FOR	LESS TIME FOR
PRACTICE	THEORY - and "theory" presentation of facts and classroom discussion - should be closely related to practice

4. Assessment methods

Assessment methods should measure student performance at a task, not whether they can recall facts.
Therefore, in assessing trainees as a condition for employment as mobilisers, we do not recommend that very much weight should be given to written examinations or tests at the end of the course. Rather, we think that final selection should be based on a probationary period of trial employment at the end of the course. Final acceptance would then depend primarily on the assessment reports of supervisors during this period. At any previous time during the course or probationary period, trainees who do not appear to be following the course adequately or performing the job in a satisfactory way should be called for a discussion with teachers and supervisors concerning their suitability for the job.

5. Suggestions for activities and topics at the start of the course

5.1. "Ice-breaking"

If the trainees do not all know one another, the trainer should try to help them feel more comfortable with one another and taking part in group activities.
One way to do this is through special tricks or games. For instance, the trainer can have the students pair off, each with one whom they did not previously know, talk to him/her for 10 or 15 minutes, then introduce each other to the rest of the group (2).

5.2. Specific topics

These suggestions for specific lessons are largely addressed to the trainees, as examples for trainers of the kinds of training materials they can develop. (But boxes, footnotes, and subsections on "Things to do" and "Objectives" are addressed to trainers.)

5.2.1. What is the connection between water and health?

Can you think of any examples where people become sick because they do not have enough water to drink?

People who attempt to cross deserts, or sick children who are not given enough water to replace what they are losing through diarrhoea, vomiting or sweating are two examples. But these are exceptions. People do not go and live where there is not enough water to drink.

How then can water make people sick? There are two ways:
- The water they drink is not pure. Something in it harms people.
- People do not get enough water to keep themselves clean.

In both cases, the sickness usually comes because the invisible germs or worms' eggs found in human faeces* get passed from the faeces eventually to people's mouths, and then the person becomes sick.

These germs or worms' eggs can get into drinking water. When people drink that water they become sick. Or the germs and eggs get into the dirt around the house and yard, and onto fingers and food. When people eat this food, or babies suck their fingers, the germs or eggs go into their stomachs and make them sick. This does not happen so much when people have enough water to keep their fingers and their houses cleaner.
This means that:

PEOPLE NEED
LARGE AMOUNTS OF
CLEAN WATER
IN THEIR HOME

The water programme aims to supply people with pure, reliable, plentiful water, close to the house.

Sanitation and hygiene are very important as well, because if people continue to spread germs and worm eggs around by defaecating* in the open, or not washing their hands enough, the water cannot improve their health. This means that programmes must include sanitation and hygiene if they want to improve health.

SANITATION AND HYGIENE
ARE NEEDED IN
COMBINATION WITH WATER SUPPLY

What other diseases may come from water supplies?
- Human urine can carry bilharzia and hepatitis, and get into the water source
- Animal excreta can carry worm eggs, and get into the water source
- Poisonous chemicals from industry and agriculture can be washed into the water
- Poisonous chemicals may be found naturally in rocks and gravels underground; for example, arsenic, or fluorides in excessive amounts
- When a person suffering from guinea worm wades into water, the worm releases eggs. If the water is later swallowed by people, they can get the infection.

Tell students about the problems found in their own area; in subsequent lessons, expand on the ways in which these diseases are transmitted (see Appendix)

* There have been discussions what word for this to use in material addressed to trainees. The word used should be understandable, and for some audiences the vulgar word "shit" will be appropriate; but others will find this very shocking. The subject should be dealt with openly even though this is shocking at first: the right attitude can only be encouraged if trainees get used to embarrassment. Here, we shall use various words as it appears stylistically more natural.

Things to do

- Collect water from a polluted source with the students. Show them bacteria and/or worms' eggs under the microscope. Show them a positive stool sample with eggs under the microscope
- Ask students to spend one day using only the amount of water used by a household with a scarce water supply
  Discuss with them the difficulties of keeping everything clean and ways that germs or eggs from stools might spread.

Objectives

- to give students an understanding of how water supplies affect health, and how the water programme can improve health; to help them understand the goals of the agency, and motivate them to want to reach the goals
- to teach about germs and disease transmission in a way that will help students to teach it to community members. For instance, stories or visual aids might be used, such as flannelgraph showing worms, cartoon and pictures from book

5.2.2. Natural sources of water and ways of tapping them

What sources of water can people and communities use?
What are the advantages and disadvantages of each source?

Things to do

Ask students what sources of water they have used at home and at school.
Visit examples of each type of source, and ask people how satisfied they are with it. Test the degree of pollution

---

Rainwater is collected off roofs or on the ground and led into a storage container; for example, an oil drum at the corner of the house, or an underground storage tank.
Advantages. Rainwater is pure when it falls. Roof catchment is cheap. Bird droppings may foul roofs, but not human excreta* (discard first washing)
Problems. There are usually dry periods or seasons when no rain falls. Building big enough storage containers to carry users over the dry season is expensive (so it is necessary to discuss carefully whether it is worth it in any particular case). Rainwater may be badly contaminated in collection and storage (keep containers and pipes very clean and covered).

Surface water includes streams and rivers, pools and lakes, and dams.
Problem. These sources are easily contaminated by dirt washing in with the rain, people washing in the water, or defecating* and urinating near it or in it and animals drinking there. Therefore surface water is usually unsafe. Unsafe surface water needs to be purified, and this adds greatly to the cost of providing a water supply. (Briefly describe purification methods used in your country for rural water supplies).

Surface water is likely to be safe in:

- mountain streams above the level of houses, and especially above land used for farming or pasture.

* See footnote previous page

- Sources where the amount of water is very much greater than the amount of human contamination, and the small creatures which live in the waters have had a chance to eat up the dangerous organisms; for example, the water near the bank of a large lake is likely to be polluted by a nearby village, but the water a few hundred yards out will be safe. Water in a river just downstream from a settlement will be dangerous, but it may be safe a few miles downstream from any settlement.

Groundwater is water which seeps through sand, gravel or broken rocks.
Advantages. Usually the water is cleaned of harmful germs and eggs as it seeps through the ground. Groundwater is safe from germs except near a big source of contamination such as a latrine.
Shallow open dug wells or drilled tubewells may be the cheapest source of water.
Problems. Groundwater may pick up salty minerals which make it undrinkable, or sometimes poisonous minerals. These can be detected by tests.
Open dug wells can get contaminated from dirt and dirty water washing in from the rim (around the edge), from things that people throw in, and from dirty buckets and ropes. People should at least protect the well with a parapet around the top. The safest thing to do is to close the opening at the top and fit a handpump. But then the handpump must be kept working, and this often causes problems. Groundwater can also be raised by windmill pumps where there is enough wind, an average wind speed of at least 3.5 meters per second; or by pumps using fuels such as diesel where enough people require water to make it economically worthwhile, and where people can afford to pay for the fuel.

Springs are groundwaters coming out of the ground naturally at the surface. This may happen at a natural hole or depression in the ground which is lower than the water table; or on a slope where the water is seen flowing out.
Advantages. Springs are safe and cheap sources of water if they are protected from contamination. This is very necessary with springs in holes because they are easily contaminated by surface run-off from the ground above them, or by dirt on the feet of those collecting water.

Springs can be captured and the water piped to local settlements. If the spring is at a higher level than the village, water flows in the pipes by gravity. This water is safe, convenient and cheap, depending on the length of the pipe. Gravity fed piped water from a spring is usually the best choice where there is a spring at a reasonable distance above the village.

Things to Do

Get groups of students to each visit one of these sources, and to look for the following facts.
- how safe is the water likely to be?
- how acceptable is it?
- what does it cost to install, maintain?
- does it provide water all the year round?
- how many people use it?
- can it be improved?
- how far do people walk to get water?

Back in the classroom, ask each group to report and put up a table of advantages and problems on the blackboard. Discuss whether all surface sources are "unsafe" and whether some are much worse than others.

5.2.3. The water and sanitation situation in the country

Give students information on the types of water supply system used in your country, both "improved" and "traditional" supplies.
Discuss regional differences in types of water supply, and try to give an estimate of the approximate number of people getting their supply from each type of system.
You might do this by making a table on the blackboard showing census population figures from each region; and then putting up numbers served with "improved" supplies from water agency statistics. Discuss whether the statistics tell you how many "improved" supplies are currently working. If not, is this information gap a serious problem? Then ask the trainees to think about how many rural people are using "traditional" supplies. Do the statistics give this information? How can people find out if not? You might subtract the number of people with improved supplies from the total population, and then, using the trainees' own regional experience, make "estimates" of numbers relying on each type of traditional supply.
The model (p. 90) gives a hypothetical example of what the finished table might look like.

WATER SUPPLY SYSTEM BY NATURAL REGION: Rural population only

Numbers of people served	"Improved" supplies	"Traditional" supplies
Coastal plain		
Drilled wells with diesel pumping and distribution net	40,000	
Tubewells with handpumps	80,000	
Dug wells with handpumps	5,000	
Open dug wells	50,000[1)]	300,000?
Dams and pumping	30,000	
Surface sources		200,000?
Springs	15,000[1)]	40,000?
	220,000	540,000
Central highlands		
Gravity piped to yard connections	310,000[2)]	
Gravity piped to standposts	55,000[3)]	
Hydraulic ram to standposts	25,000	
Springs	40,000	150,000?
Surface sources		1,250,000?
	430,000	1,400,000
Forest		
Rainwater catchment	1,300[4)]	6,000
Pumped, piped to standposts	3,000	
Surface sources		240,000
	4,300	246,000
Total	495,000	2,186,000

1) Protected with parapet (well) or box (spring)
2) Of which, 240,000 with chlorination
3) Of which, 43,000 with chlorination
4) Experimental roof catchment programme: 65 glass fibre tanks installed, each serving 4 houses with 5 persons per household. In forest area, rainfall permits use 10 months of year on average.

Then go on to make a list of the agencies involved in water supplies in your country. Give information on each agency.

For example:

Agency:	Community Development Department
Sphere of responsibility:	Only settlements below 2,500; improvements using mainly community resources, protected springs and wells
Total number of people served:	105,000
Number served by new supplies in past 5 years:	40,000
Number of supplies still working:	Not known. Probably 90% or more

5.2.4. The role which local people, including women, can play in planning

Introduce students to the wealth of relevant experience which the local people in the area where they will be working have to contribute to the joint effort of improving their water and sanitation facilities. This can best be done through examples which are realistic for the students. Such examples may best come from the area. The following examples should only be used if they are applicable or if you can adapt them so that they fit the conditions of your area (3).

When the improved supply is likely to be further from some houses than other unimproved sources of water, how much further can people be expected to go to get their drinking water from the improved supply? What can be done to make the improved supply more convenient? These are questions to be discussed in practical detail with the women who will be collecting the water. Sometimes it is assumed that people's failure to use an improved supply is a problem to be met with an education programme on the value of safe water for health. But in general people have a realistic appreciation of the value of the improved water supply for health, even though not in terms of all the specific diseases involved. But they have to balance this against a loss of time in going further for water: this is reasonable for women who have many other important tasks, and not an expression of laziness. They may prefer to go for water to a stream because they can bathe and wash clothes there. Will it be possible to enable them to do this at the improved source, or to locate improved sources near bathing placing so that drinking water can be brought home on the same journey? These are questions to discuss with the women in planning the supply.

Who will cooperate together to build and maintain facilities? Sometimes whose who do not know the local area assume that the "community" is the administrative "village" in the census or gazeteer. All those living in this locality are expected to make contributions and to work together on a project.

The reality may be, however, that the administrative village comprises two or more real villages, and these may have traditional rivalries, disputes over land etc. There may be a main village and a sub-village where people of a different origin, working as labourers and often regarded as socially inferior, live - this is the usual situation in India with its harijan sections. There may be, in Africa, villages composed of different clans acknowledging different clan leaders or chiefs. Planning projects in these localities must take the social realities into account, and this means discussing with people in each of the sub-villages or sections what cooperation is possible and whether separate provision is needed. Similarly, when piped projects covering a number of villages are planned and are to include participation by the different communities, this will be easier if the area includes villages which traditionally cooperate rather than, for instance, crossing the boundaries of traditional areas (in African countries where these remain important). Cooperation can also be easier than outsiders assume.

Local people will know their local sources of water and which can be tapped for an improved supply (whether springs or existing wells ever go dry; whether possible sites for pumps may be flooded). They will also know better than anybody what their requirements are. This is particularly important for sanitation facilities: there are far too many cases of latrines which have been built according to a design approved elsewhere, but which were not used because they were quite inappropriate in the local environment, for cultural reasons or often for simple practical ones such as the need to flush them with water that would have to be brought from too far away. Water supplies can also be inappropriate: too salty to drink, too hard to make enough lather to wash clothes, so discoloured (with iron) that it stains clothes. Taps or pumps can be too high or too heavy for children or even for some women to use. Local women will also know whether it is important to provide for washing of clothes or kitchen utensils, or for bathing children (openly) or themselves (in seclusion) at the public water point, where otherwise water would have to be carried back to the house for these purposes. In some projects the use of water at the supply point has been quite inappropriately forbidden, causing unnecessary extra work for women, or leading them to use contaminated water, when some discussion and perhaps better drainage would have solved the problem of dirty water around the tap or pump.

When communities are basically building their own water facilities, they can take into account their need to use water for productive as well as domestic purposes, perhaps combining provision for both needs where this is not so easy for a government agency with specific responsibility for domestic water. When some of the water is to be used for cattle or other productive purposes, there is a special need for the community to discuss all views on their requirements, and to agree upon a fair share of the costs and of the water.

In general, the community role in planning will often need to centre on how to arrange a fair sharing of costs and benefits. Community members are likely to be particularly sensitive to issues of fairness, and mobilisers must be equally sensitive. The whole community should be involved in deciding issues such as the principles on which contributions of all kinds are to be assessed; also in siting of public water points, since a pump or tap near one's house is a very unequal benefit compared to a pump or tap several hundred yards away.

Special attention needs to be paid to involving women in planning: as water providers for the household they have more detailed knowledge and their own point of view, but it can also be difficult to involve them because the local men do not expect it or even openly oppose it. Different situations call for different solutions but it is always important to take account of their views. The following is a list of issues on which the views and interests of women may differ from those of men. Some of them have been discussed above. The list can be referred to during the course of project planning in each community.

Participation of women in local planning:
a checklist of women-specific issues (3)

1. Do women and men have a felt need for the project? Does it have a different priority for women than for men? Do they have different needs and expectations of the project?

2. Do the current practices of water collection by women/girls/children have any implications for the project? Who will have more (or less) time available? In what ways can women make use of time gains? Will they be the ones to profit from any additional economic activities they may be able to carry out?

3. In terms of sanitation, including bathing facilities, what special or separate requirements of women need to be met?

4. Will female household heads be able to provide the household contributions in the same way as men?. Does special account need to be taken of the position of single, separated, or widowed women?

5. What forms of influence or control will women have over the continued and proper functioning of the project facilities?

6. Is the design acceptable to all types of user, including the old and very young, rich and poor?
   - access to water points, latrines, bathing or washing facilities
   - ease of physical use and upkeep
   - water quality: colour, taste, smell, hardness
   - conformity to cultural and behavioural patterns

7. If women need additional public facilities, e.g. for washing clothes or bathing, who will design, construct, maintain and manage them?

8. Is it possible that there will be conflicts between users over the sharing of facilities or access to them? (Groups who have not paid contributions? Cattle-owners? "Despised" social groups or those not regarded as full members of the community?) How can these be prevented?

9. Can women make productive use of water (kitchen garden watering, small animals, preparation of drinks for sale)? How can these best be combined with domestic water use? Is there a need to place limits or to make additional charges for extra water use?

6. Particular tasks

The following sections deal with some tasks which mobilisers may need to perform and which, therefore, may need to be covered in their training.

6.1. To gather information about a community for project allocation

When?

When a project in the community is being considered by the agency (project plan approach).

Why?

In a project plan approach, the information about a community may be used to decide whether to allocate a project to that community or not. This will be done when the decision is based on the suitability of the community for a supply of the type which the agency provides. For example, in most Latin American participatory programmes which provide piped supplies with household connections, mobilisers are sent to prospective communities to make an initial report on whether the community is technically and socially suited to that type of supply, e.g. whether the source is adequate and whether the people are willing and able to afford the levels of payment required for such a system.

On the other hand, this prior collection of information will not be required as a basis for allocation when the policy is full 100% coverage of an area (or full coverage of all communities within an area which agree to make a required contribution).

What?

Finding out information to judge the following questions:
- Is the project technically feasible, at an affordable cost? (This being a technical question, it will not be further discussed here).
- Is the project needed in view of the quality and accessibility of existing water supplies? Is it a priority case in relation to other communities which could alternatively be allocated a project? (Priority need assessment).
- Is the project wanted by the local population, to the extent that they will make the necessary contributions to construction and to administration and maintenance? (Social feasibility assessment).

How?

6.1.1. Priority need assesment

In some areas of the world where the quality of some existing water sources is most unhealthy, the main criterion to judge priority need will be an indicator of quality. For instance, in India the "problem villages" (those specified as having a priority need for a water improvement) are in many cases the villages in which cases of water-related diseases such as typhoid and cholera have occurred. (Other criteria applied in India are: (i) the village does not have an assured source of drinking water within 1,6 km (1 mile) and (ii) the water has excessive salinity, iron or fluorides).

In other areas, there is less difference between the quality of different traditional sources, and the main criterion will be the distance people have to go to get water. There are intermediate situations where both criteria should be taken into account.

Community mobilisers who are to be involved in collecting information for project allocation should be trained to collect the minimum information required to make an informed judgement according to the criteria which are important in the area where they will work, and they should be able to form an opinion themselves, not just relay data to headquarters.

We say "minimum" information because there is never any point in collecting more information than will actually be used. It is better to train a mobiliser to make a judgement of what information is required than to collect a large amount of mainly irrelevant data.

In terms of the quality of existing water sources, the mobiliser should be able to recognize which ones are likely to be more exposed to contamination. (S)he should also know which questions to ask about water-related diseases (guinea worm; schistosomiasis; typhoid; cholera - where these are present in the general area; perhaps also scabies; but not general diarrhoeal diseases because it will be too difficult to distinguish between communities on the degree of prevalence of diarrhoea).

A measurement may be made of the degree of contamination of existing water sources, by testing water samples through field methods not requiring laboratory conditions (4). However, this does require additional time and expertise, so it will only be justified if it is likely to make an important difference to the choice of priority communities. Agencies might experiment with testing of all existing sources in one small area, to judge the variability and hence the importance of this criterion. In such an experiment, each source should be tested several times in different seasons, to give an idea of the extent of seasonal and of random variation in quality from one measurement to another.

In terms of the accessibility of existing water sources, it will usually be enough for the mobiliser to make a rough estimate of the distance the average household has to go to collect water from existing sources, perhaps at two seasons of the year (the rainy season and the end of the dry season), and noting any need to climb up steep slopes or to wait in a queue.

Again, a more exact measurement is possible if it is required (if it will make an important difference to allocation decisions).

Some programmes try to get more accurate information by a survey of every household with a questionnaire asking how far the family has to go for water or the time taken. Often mobilisers ask the question "how much time does it take you each day to collect water?". However, it is difficult to ensure real accuracy by asking these questions. There is no guarantee that the family will know the distances or times at all well. Also if they have a shrewd idea that exaggerating will help convince the agency to select their community for a supply, they will tend to exaggerate.

Therefore, if the agency requires greater accuracy than a rough guesstimate, the best method may be to draw a map of the community, showing its water sources, the clusters of houses, and any steep slopes or the routes to more distant sources. If, using published maps or aerial photographs, the mobiliser can draw the map to show accurate distances ("to scale"), this is best; if not, (s)he can estimate one or two of the important distances shown on the map, such as the distance between a central cluster of houses and their water source. This will provide a rough comparison or "scale" for the rest of the map. (S)he could make the estimate simply by walking the distance at normal pace, and noting the number of paces. If you use this method, every mobiliser should individually find out the distance of their normal pace (step), say by walking over a measured 100 metres and counting their steps. With a map showing some typical distances, an estimate can be made of how far the average household has to go. The mobiliser could do this most exactly by making an estimate for each and every household in the community, adding them together, and dividing by the number of households.

Seasonal differences in the distance travelled for water may well be a complication. The mobiliser might do best to use the distances which apply for most of the year, or to use those which apply at the worst time, that is, the end of the dry season.

If you have to use time rather than distance, the mobilisers could make a typical journey for water carrying a load to a family. This will measure the time more exactly, and will also be showing willingness to help. Of course a male mobiliser will not be so efficient in carrying water!

6.1.2. Social feasibility

The mobiliser should be able to make a judgement of whether the community will be likely to fulfil its promises in respect of contributions to construction and (crucially) to operation and maintenance of the completed facility. This ability to judge will come largely with experience and the sharing of experience through discussions among mobilisers.

In the training course, the trainer can use any existing experience of the agency and can point out some of the factors which seem locally to be of importance, such as:

- whether there will be any problems over fairness: will all members of the community perceive the project as being fair to everyone, giving everyone an equal advantage, or will problems be created because some people see others as gaining an unfair advantage:
  - because they are closer to the facility;
  - because they use more water but pay the same

- problems over distrust of motives: if some members of the community are to handle finances, will others trust that they do so honestly? Are there conflicts (factional disputes) within the community?

- community funds for maintenance: in projects which require that the community will make payments (e.g. to a local person) for maintaining the facility from a community fund, does the community have or is it likely successfully to establish a sufficient fund?

- affordability: will members of the community be able to afford the contributions or tariffs they will need to pay? This is particularly relevant for projects envisaging that a high proportion of the population will take house connections, in areas of the world where many people cannot afford this level of service.

To estimate "capacity to pay", some agencies have found in practice that communities showing certain signs of affluence can afford the type of water supply which they offer. They may find out what other facilities or service exist in the community, for example: school, post office, shops of various types. Particularly where the population of the area lives in concentrated settlements (rather than dispersed over the countryside) one can range the settlements on a scale from those with few or no services of this kind to those with many of them. Those higher up the scale will have all the services possessed by those lower down, and some additional ones also. Therefore one will be able to place a community on this scale by asking about certain services, to judge its relative level. In a particular area one might find, for instance, that communities with at least one bank branch can afford household connections, or that it is enough to count the proportion of metal roofs to judge how well off a particular community is.

Other agencies use a questionnaire survey to find out levels of income. However, we do not recommend this procedure just to make allocation decisions, because it is difficult and time-consuming to gather income data which is reliable, and no such degree of accuracy is required for this purpose. Nor do we recommend a survey in which householders are asked what they will be willing to pay: their answers to a hypothetical question will not be reliable. However, without a household survey it may be possible to get information on typical lower incomes - the incomes of the ordinary members of the community if any group can be described as such. For instance, one might readily find out the level of local farm wages - but this will be less significant where few people work for wages or where paid work is only available less than half the time.

An example of a form to be filled in by a mobiliser, on questions of technical as well as social feasibility, is given below . It is taken from the schedule developed in Mexico by the Promotion Dept. of the Dirección General de Sistemas de Agua Potable y Alcantarillado en Centros Rurales (Directorate of Drinking Water and Sewerage Systems in Rural Centres) (5).

An example form with technical and social questions (5)

Date (of visit to community)

Promoter's name

Type of facility requested (water, sewerage; new, rehabilitation, extension)

Locality (popular name of the community)

Identification of locality (official name - often different)

Political category (designation which is according to size and importance)

Municipality (local authority area)

State (regional authority area)

1. Access to the locality from the nearest town or city

1.1 Name of town or city

1.2 Km. on paved road from that town

1.3 Km. on unpaved road from paved road

1.4 Km. on unmade road or path from unpaved road

2. Data on population and housing

2.1 Number of inhabitants: Men: Women: Children:

2.2 Number of families:

2.3 Number of houses:

2.4 Settlement compact or dispersed (% of each):
(for dispersed houses generally only standposts are provided, whereas compact settlements receive house connections)

3. Physical aspects

3.1 Topography: Plain Hilly Mountainous

3.2 Type of subsoil: Material for which a spade is used
Material for which spade and pickaxe are used
Material for which explosives are used

3.3 Materials available locally:

Sand: yes no Distance from the locality in km.:

Gravel: yes no Distance from the locality in km.:

Stone: yes no Distance from the locality in km.:

4. Hydrography

4.1 River?

4.2 Spring?

4.3 Shallow well?

4.4 Deep well?

4.5 Pond?

4.6 Other? (specify:)

Distance from the houses:

Difference in altitude: favourable: m.

downhill: m.

As many as possible of the feasible water sources should be included. In the case of springs, the promoter will measure the flow.

Description of work needed at water sources

Approximate cost:

Quality of water:

Who owns the water source? Name:

4.7 Rainy season: period from to .

Dry season: period from to .

4.8 Climate: Cold Temperate Hot

Continental (seasonally extreme)

5. Public Services

5.1 Is there an electricity supply in the locality?

5.2 If not, indicate the distance to the nearest transmission line:

- km.
- volts.

5.3 Other services (specify) (to be entered here are markets, schools, recreational centres, etc.):

6. Means of communication

6.1 Bus?

6.2. Train?

6.3 Air service?

6.4 Post?

6.5 Telegraph?

6.6. Telephone?

6.7 Radio?

7. Water

7.1 Is there an existing water service in the locality?

7.2 Number of household connections:

7.3 Number of public standposts:

7.4 Present state of the system: describe equipment and state of maintenance

7.5 Who operates the system?

7.6 Address of the operating organization:

7.7 Name of the administrator:

8. Sewerage

8.1 Is there an existing sewerage system?

8.2 If so, number of households served:

8.3 Is there a treatment system?

If so, describe it. Place of discharge:

8.4 If there is no sewerage system say whether the houses have

septic tanks? latrines?

9. Medical services

Is there a health centre? Health post? Social security clinic?

10. Economic aspects: predominant occupations:

11. Minimum wage: legal: real: (what is actually paid for a day's work)

12. Loans: have loans been taken:

a) from Government credit agencies?

b) from private banks?

c) from commercial firms?

Knowledge of loans permits the agency to know the capacity of the members of the community to make economic commitments. This is to help staff to set conditions for community contributions.

13. Sources of information for these data:

Name -	Position -
-	-
-	-
-	-

14. Opinion of the promoter concerning the community:

Both technical and social criteria should be applied, to give an opinion on the feasibility of the project. From the social point of view, an opinion should be given on the urgency with which the project is required, the economic capacity of the population, and their disposition to cooperate on the project.

Signature and rubber stamp of the local authority. This will be a proof that the promoter was indeed in the locality.

6.2. To introduce a project to a community

When? When the agency has selected the community for a project, subject to the community agreeing to the programme's conditions and perhaps also subject to final confirmation that the project is technically feasible.

What? To tell the community about the agency and the project, the conditions it would have to meet etc.

How? Topics to be covered in training include the following (addressed to the trainee)
Approach formal leaders first, to secure their cooperation and make sure they will not feel passed over. This may well mean approaching, first, leaders or representatives at a higher level: political and administrative personalities at district level, councillors or Members of Parliament or regional legislators representing the area; in many African countries the Chief of the area. You must judge, together with agency staff, how high you go in terms of the importance of the project.

Explain the project in detail to the formal leaders who live within the area covered by the project. If there are no formally recognised community leaders or representatives at this level, then to schoolteachers and those who, in your country, would be most likely to feel bypassed if not approached first. These might be priests, clan elders or others with a special interest in community affairs.

Ask the leaders in each community to call a general assembly to hear about the project. "Each community" means, in an area where houses are grouped in concentrated villages and hamlets, each village and hamlet separately. In an area where the houses are scattered about the countryside, "each community" means an area which local people identify as belonging to, and within which most people know one another. If there is no such traditional area, the community might be the area where children go to one primary school. If you hold only one meeting for a larger area, you might arouse resentment among those who live in the area to be covered by the project but not, as they see it, in the community where the meeting is held. Besides, smaller meetings are better because people can ask more questions and understand more about the proposed project.

Explain the project at the general assembly. Mention its advantages but do not stress only benefits or try to persuade people one-sidedly. If the project is really beneficial you should not need to sell it to the community. They will see the benefits clearly enough. If they remain doubtful this will probably be for one of the following reasons:

1) They may distrust the agency, fearing that it will not fulfil its promises: they might be left after doing a lot of work and perhaps collecting money, with a project that is never finished because the agency never delivers the materials etc. This is by far the commonest reason for hesitancy, and in many countries it is unfortunately all too frequently fully justified.

2) An influential part of the community may oppose the project on political grounds. People may not want to contribute to making a success of a project when they think that the credit for this success will go to a government party or a local political faction which they oppose.

3) They may distrust one another, each person fearing that the rest of the community will not fulfil its undertaking, and that the project will be abandoned half way through the work. Or they may fear that the community is "biting off more than it can chew", that when most people see how much work is required, they will give up.

4) They may mistrust the "big shots", powerful individuals inside or outside the community, fearing that they will take over whatever is built by the community for their own purposes: they might take over a water supply and supply water only to themselves. Unfortunately, again, in many countries this fear is often all too justified.

5) They, and particularly the poorer people, may fear that the cost will be too great for them. This may be either the cost of making contributions to construction (even in labour, because the poor may need to work every day to earn enough to live), or the cost of connection or of a water rate afterwards.

Therefore, do not spend much time talking about the advantages of safe water. Rather, aim to give an impression of sincerity by discussing as fully as possible how much work people will need to do to complete the project, giving the people present an opportunity to discuss whether they think this is too much or not. State, and make sure people fully understand, exactly what conditions the agency makes, particularly over payments, for example, connection charges or water tariffs which people will have to pay, and especially who will need to pay what for operation and maintenance of the supply.

If the problems mentioned, or others, appear to be present and there is not ready and general acceptance of the project, see the next section "To convince a community to participate in a water supply project", and where appropriate section 27 "To promote the construction and use of latrines".

6.3. To convince a community to participate in a water supply project

When? In a project plan approach, your agency decides that a particular community is an appropriate site for a supply of the type it offers. In many cases, there is no need to put any effort into convincing the community: the whole community is very ready or even anxious to participate already. But sometimes you need to do some motivational work.

What? To make sure that everyone in the community understands the conditions under which you are offering the project, appreciates the benefits it will bring and also any drawbacks, and that enough people are willing to participate.

How? The main method is simply to explain the project fully to all sections of the community, to listen carefully and sympathetically to any doubts people have, or reasons for not supporting the project, and to answer these honestly.

To carry on this dialogue, hold meetings:

a) with community authorities such as a council or development committee;
b) with the whole community at open general assemblies;
c) if women do not participate equally with men in open meetings, hold meetings with women's groups and/or call a general meeting of the women of the community (in extreme cases it may be necessary to call in a female mobiliser to contact the women);
d) in socially separate sections of the community, especially where there are significant ethnic, clan, or caste differences within the community and minority groups live in separate sections.

In a large community, general assemblies of the whole community will not be enough. Either the attendance will represent only a low proportion of all households and you will still have to explain the project to the others; or else the attendance will be so great that many people will feel inhibited about speaking, and in particular about raising their doubts.

Also, approach any persons who come to your notice as opinion leaders, persons of influence or power, or leaders of minorities, including political minorities. They may be losing candidates in recent elections, or any other leaders of factions of whom you become aware. All these people are likely to feel insulted if they are not individually approached. They may lead "their people" to oppose the project for one reason or another if they feel that way. Show them respect and ask them for their support; discuss with them in more detail how the project might be organised. See "To work with local leaders (including factional leaders)."

Factional disputes are one important reason why people do not always proceed even with projects which are clearly in everyone's interest. Another reason is a lack of confidence among the population that the project will in the end actually be built. This may be a lack of confidence in your agency, or in the other members of the community fulfilling their promises of contributions, or both. People may be afraid that they will be exploited: that they will work on the project, only to find that they are not among the beneficiaries.

The problem of lack of confidence in the agency is likely to exist where either (a) the agency is not known locally because it has not yet done any projects in the local area, or (b) local people have experience with the agency, but it has been negative: projects have been started but not finished, or have collapsed in disrepair, etc. In the first case, if the agency has successfully completed projects elsewhere, perhaps the most convincing thing would be to take some members of the community to see one or two completed projects, even if they are at some distance. Allow time for the visitors to talk informally to the existing beneficiaries. Otherwise, the best thing may simply to be patient and make a number of visits to explain the project, so conveying the impression that your agency does have real interest and will fulfil its promises.

Where people have past negative experience with the agency, you may have greater problems, but you can still restore confidence through conscientious work. You may well do best to ensure that the agency delivers on its promises before expecting the community to do so.

For example, bring pipes to the community before the community digs the trenches they are to be laid in. You will have to arrange with the community for satisfactory storage, so that for example PVC pipes are not left exposed to the sun.

Where there is doubt among some members of the community while others are keen to go ahead with the project, a judgement will have to be made whether to proceed with those who are keen. On one hand, once the doubters see people actually making progress, this may well be enough to convince them that the project was not all talk, and they may join the others. On the other hand, a project completed by only part of the population will give rise to disputes over rights to use it. The worst outcome would be the abandonment of a project once begun.

Often agencies assume that the best way to convince people of the need for a water supply project is to emphasise its benefits, and in particular to give talks on the health benefits. People even suggest sometimes, that in order to encourage people to "accept" a water supply, mobilisers should give health education which concentrates on the benefits of the protected supply. We do not agree, although we accept that health benefits are worth pointing out. We think that you should only emphasise health benefits in projects where they are the only benefits and where convenience is not also being improved. For example, those for the protecting of springs or wells. Otherwise, people will be well aware of the benefit of the new supply, but may have other doubts such as those mentioned above. Do not "oversell" the project: health benefits may not be as dramatic as agencies often promise.

A special problem: "dependence":

"Dependence": the community expects that the state will/should provide and maintain facilities free of cost, and is therefore unwilling to take on any part of the burden.

Possible reasons:
In many cases the government has in the past announced a policy of providing "free water": a free supply at public points (standposts or pumps), at least in rural areas. Often, this has been part of an overall bargain or understanding between the state and the rural population. It may be regarded as unfair to withdraw this promise.

In other cases, a different government agency may be providing "free" water supplies in other communities, and/or there may be a realistic possibility for the community to obtain its supply "free" by bringing political influences to bear.

What to do?
At community level: Explain the actual position to the community at a general assembly and other meetings: how realistic is it for them to expect that they will get more help. Show that the bargain offered is a reasonable one in current circumstances.

6.4. To avoid damaging rumours and suspicion about the project

When? In introducing a proposed project and at all stages, especially when you know that some people are doubtful about it.

What? Avoid the causes of misinformation and suspicion. These are secrecy, or insufficiently complete and well-understood information.

How? Make it clear in the first meeting about the project exactly what the community and its members are expected to contribute toward the project. Also what later obligations they will have for maintenance and operation or for paying tariffs. Explain fully the principles on which contributions are decided, and give an estimate of how much work will be required. For example, how many weeks if each household contributed one day's labour per week. At the meetings which follow repeat the statements and mention any changes in the estimates of, for example, how much work will be required.

When you discuss alternative solutions, be careful to explain the differences in labour requirements both for construction and maintenance. For example, composting latrines have much greater requirements in comparison with simple pit latrines while they also have great advantages. Always present costs as prominently as benefits: suspicion is caused largely by the feeling that the mobiliser is mentioning only benefits.

Sometimes construction will cause inconvenience or damage to people's property, for example in digging up land to lay pipes. Make this clear and discuss any proposals for compensating the individuals, limiting the damage etc.

If public institutions also stand to benefit from the water supply which community members build, people may suspect that this is the only real reason why the agency wants to build the supply. They may fear that the agency will never actually extend the supply to the community members, or that they will divert most of the water before it reaches them. Such fears have sometimes been well founded. Quite often sources or pipe widths are not enough to serve both growing institutions and a community. Make sure that there is no danger of this happening, e.g. through an appropriate design, and explain the situation fully.

In other cases, "ordinary" community members/the poorer majority may suspect that a powerful minority will take all the benefits of the project in one way or another. One task of the agency and the mobiliser is to ensure that in fact everyone benefits, and the mobiliser should explain in such a way that it is clear that the agency will in fact ensure that this happens.

Make sure that you are in touch with informal leaders of all sections, and with the public in general, sufficiently to hear rumours at an early stage, to be able to counter them.

Rumours are sometimes started by people who are, for personal reasons, opposed to the project. They cannot persuade others to oppose it on the same grounds as themselves, so they invent false reasons or exaggerate real doubts. To prevent this, try to make sure that there is no-one actually harmed by the project, and that there is no-one who is offended in the course of carrying it out. Then there will be no-one wanting to start any malicious rumours.

Rumours may also be started by factional leaders concerned with who gets the credit for the project. The question of factions is taken up in the next section "To work with local leaders."

A water supply project can damage the interests of people/groups who have profited from water scarcity. There may be water vendors, or a rope-maker who sells ropes for use in the existing wells. There may also be a powerful person in the community who has a private well and allows other, poorer, people to draw their water from it but requires, in return, political support or other services from them: they are under an obligation to him and it is in his interest to keep it that way.
We suggest that you try to think or find out about all the people who may have any kind of reason for not welcoming a project, and go to talk to them. Often this will be enough to secure their cooperation or to assure yourself that they were not feeling injured. You may be able to suggest that, say, a water vendor is employed on a project as operator, caretaker or otherwise.

Finally, avoid people being annoyed in the course of discussion of a project by having their suggestions contradicted, or getting the feeling that their help is not wanted. Discussions over the siting of facilities can easily cause disputes between people. Seek to keep a balance, if necessary by giving some support to a person who is being contradicted in a discussion, even when you think they are wrong. Otherwise an enemy of the project may be created, a possible source of negative rumours.

6.5. To work with local leaders (including factional leaders)

When? You will always have to build a relationship of some sort with local leaders of various types: here we discuss some of the problems. (We do not think that trainers need to describe theoretical social science concepts of leadership to trainees, though they might consider this in case of trainees with higher levels of formal education).

What? Choosing the right leaders to work closely with in mobilising for and implementing the project, or helping the community to choose them. For other dominant individuals, keeping a balance by not offending them but not allowing them to gain personal advantage or increased authority.

How? It is important to seek those people who will play the most active roles in the community in promoting and organising the project. Do not neglect this and try to do all the promoting and organising yourself! The kind of person to look for is the "active community member leader", those who live on similar economic level as the average (not a distinctly richer life-style), and who have, at least potentially, an active leadership role in the general interest. This is the most important quality, or as Werner and Bower (2) put it graphically:

IT IS ESSENTIAL THAT HEALTH WORKERS LEARN TO IDENTIFY AND WORK WITH THOSE FORMAL AND INFORMAL LEADERS IN THE COMMUNITY WHO HAVE A SINCERE DESIRE TO HELP IMPROVE THE QUALITY OF LIFE IN THE COMMUNITY.

In some areas, especially where factions are strong, and people tend to be sharply divided, you should try to find out about factional disputes and leaders at an early stage. You might even seek advice from other people on how to approach the various leaders in such a way as not to cause offence to any of them. Often, you may obtain such advice from other outsiders who know the community, such as priests or representatives of agencies which work in the community.
Normally, you will do best to try to keep on good terms with all factions and their leaders, and to represent the water project as "for the good of all" and above factions. Certainly, do not lightly fall into an identification with one faction. For instance, if one leader tells you early on that a certain person is a trouble-maker (or similar negative expression), do not just adopt this viewpoint, but be aware that the person so identified is probably the leader of an opposing faction. Try to get his support for the project without losing that of the first leader.

Sometimes, a faction leader may remain opposed to a project even when shown respect in the way suggested. This is most likely to be because he knows that the credit for the project will go to his opponents, or your agency itself may represent for him an opposing political force. For example, a local politician of an opposition party may take this view of a government agency identified with the party in government nationally. In this case, his supporters will be torn between their political/factional loyalties and their realisation that the water project is a good thing that the majority wants. Do not strengthen their political opposition by working only through and with their political opponents, i.e. the local branch of the government party. Try to encourage the idea that the project is not particularly an achievement of the dominant faction in power, perhaps by encouraging neutral people to be active in implementing it.

Sometimes the leaders of a community are so sharply divided into opposing factions that it is quite impossible to proceed in this way and bring people to work together.

The only alternatives then are to choose one faction to cooperate with, or to arrange an election. This decision must of course be approached very carefully, considering questions such as whether, if one faction is chosen, it will be able to carry through the project. If you call for an election under these highly politicised circumstances, it is particularly important to ensure that the arrangements for the election are fully democratic. You should make these arrangements clear to all in advance, and check that they are seen as fair by both sides. Election arrangements should be by direct voting of community members, not indirect voting for representatives of community organizations.

6.6. To work with committees

When? Both in the planning and implementation of projects, and in the (operation and) maintenance of facilities. One of the main questions is: should people form separate committees for special purposes? Water committees must have some relationship to existing community councils or committees. To what extent should you simply invite existing committees to extend their functions to the water or sanitation project?
When are separate sub-committees for particular aspects useful?

How? An agency adopting a project plan approach usually finds it most convenient to establish new committees for projects in every case, and to draw up uniform regulations under which the committees are to work. The committees do much of the organising and administrative work which needs to be done at the level of the individual project. But the agency keeps control of what is done through the regulations, and by making the mobiliser a member of every committee. For example, in Colombia, the INS regulations give the mobiliser veto powers over all decisions of the committee. This control enables the agency to supervise a large number of projects with a small manpower, but it does of course greatly lessen the degree to which the community can participate in the making of decisions.

In piped water supply projects, the area covered by a single project is often greater than one real community. There may be a need for a hierarchy of committees for the project, with one committee for each community, a higher one for each branch line, and an overall committee for the whole of a large project. The higher committees may be composed of representatives from each of the lower ones. If a project covering say two or three real communities decides only to have one project committee, you must take care that all the communities are happy that this committee reaches fair decisions.

Agencies often assume for administrative convenience that "the community" or even "the village" is identical with a local government unit. However, usually such units cover an area larger than the one to which people have a real feeling of commitment and loyalty. Usually things go better if committees represent the "real" (small) communities with which people identify.

Sometimes, particularly for optimum community participation in maintenance, the best way is to form separate committees or users' groups for each standpost in a piped supply system with standposts, that is, a "tap committee." Or for each well or borehole in a project which constructs more than one well per community, that is, a "pump committee".

Only those people using a particular standpost or handpump are personally interested in its maintenance. But this depends also, of course, on how well organised the wider community is.

Agencies working with a project plan approach often also find it convenient to form one committee for planning and construction, and then dissolve it when the project is put into service. They replace this committee with a new committee for administration and maintenance - but usually many of the same individual members continue to serve.

Agencies using a community development or a mass campaign approach are much more likely to work with pre-existing committees of various types rather than to set up separate ones. The community developers see the point of the exercise more as a strengthening of community capacity for development. The mass campaign workers see it as using local government and party institutions and committees for mobilisation for development.

Existing councils, committees, and village authorities are of widely varying types in different countries. Many African and some other countries still have "traditional" councils with chiefs and headmen, more or less integrated into the structure of modern government. One important point to note about "traditional" authorities is that you need to be sensitive and observant concerning their real influence. This varies from area to area and it also depends on the individual person in positions such as that of chief. As a mobiliser, you should avoid antagonising traditional authorities or neglecting the support which they might be able to give. But you must also observe whether they do in reality have as much power as may at first sight appear. There may be a big difference between public face (people will not challenge them in public) and real power (nevertheless people will not actually do what they say).

Elected councils, that is, local government authorities at village or small town level, very often cover areas which are made up of more than one real community. When this is the case, these councils are often rather remote from most ordinary people. Then the participation of such a local authority in a project cannot be considered as a form of community participation because the majority of people are not directly involved. Of course, where such bodies exist you need to liaise closely with them. They may be in the best position to pay for certain aspects of a project, such as the employment of a caretaker. In most countries, however, they have insufficient administrative and financial capacity to manage water projects. There may of course be a case for providing support to enhance this capacity.

Another problem is that elected bodies are often over-politicised bodies, in which party and factional differences obstruct development work. Benefits may be given according to political support or other personal criteria. The emphasis may be on the elected representatives gaining credit and votes from persuading the authorities to provide facilities such as water supplies to people, and not upon people working together to help build them.

Usually, however, you will be dealing with projects in communities smaller than the level for which councils are elected. At this level you may well find village development committees.

In many countries these are established in all communities as a part of government's development policy. They are concerned with the kind of project which you will be promoting, so one question is: under what circumstances is it appropriate that they should play the main direct role in organising the water and/or sanitation project, and when will you do best to start a new committee?

Are the village development committees highly active? The more active an existing committee is in similar development work, the more likely is that it will actively pursue the new project, unless perhaps it is already over-burdened.
However, even if the committee is inactive, this may simply be because there has been little stimulus to do anything. If you provide the stimulus, the committee may become highly active again. In very small communities, inactivity is perhaps most often to be explained in this way. Also, in small communities the development committee members are most likely to be leaders of the type needed: that is, ordinary community members who are active in the general interest.

In larger communities, inactivity of an existing development committee is more likely to be because of disputes and factionalism. Moreover, in a larger community it is more likely that development committees will be more like elected councils in the negative ways mentioned. People will be on them to gain prestige and exercise power. They will perhaps be less inclined to spend time on the detailed work of mobilising for and organising a water or sanitation project. In particular, they may think it beneath them to discuss the essential elements of health education campaigns in relation to water and sanitation - how do existing habits lead to faecal-oral transmission of disease? If an existing development committee is made up of senior and prestigious men who will not want to discuss such things, then it is probably best to suggest the formation of a new committee for the project. People may see this as a rival to the existing development committee. One simple solution would be formally to make the "water committee" a sub-committee of the general development committee, but with a majority of active people from outside the development committee co-opted onto it.

There may already be a Health Committee, and this could take on the functions of a Water Committee also. People will see this as particularly appropriate if your agency is part of or linked to the Ministry of Health, and if the health committees have been established under a Primary Health Care policy. You should normally include any village health workers as members, perhaps co-opted members, of a Water Committee.

Otherwise, the types of person you should look for and encourage to stand for election to a Water (or Sanitation) Committee are those who are active and public-spirited, and in the case of some members at least, with qualities of leadership. They should not be too dignified to do manual or petty organising jobs, or to discuss the details of, for instance, how mothers clean up their children. This last point, the need to discuss realistically what all people in the community do in relation to the prevention of disease, underlines the desirability that the committee should include women. This might be at least two women, one older and one younger. You may have to make a special effort to ensure that they speak during meetings and are listened to.

Ideally people should select their committees but in most communities you can reasonably avoid contested elections. You can encourage those whom you think most suitable to stand, and accommodate the one or two others who may also be interested. Special problems arise where communities are sharply divided socially. If a disadvantaged group lives in a special section of the community, then it will probably be best to propose that people elect the committee members separately by each section (ward).

Following the formation of the main committee, you may sometimes find it convenient to form sub-committees for particular purposes during planning and construction, e.g.:

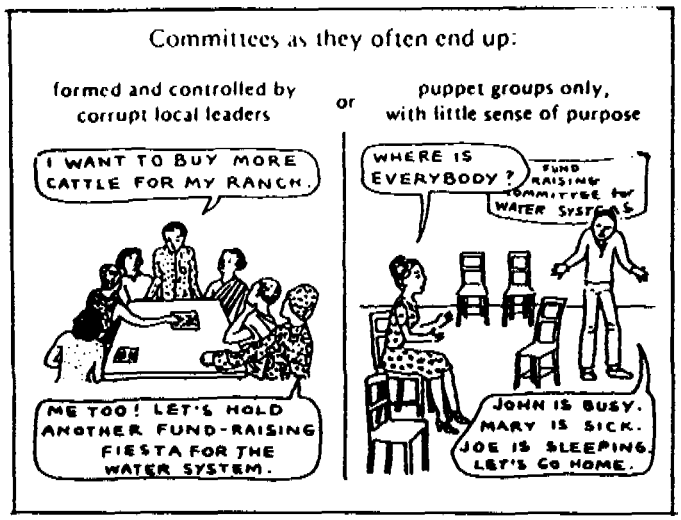
- a promotion sub-committee, to mobilise and inform people on objectives;
- a social sub-committee, to liaise with other organised groups in the community, arrange festivities, raffles, etc.;
- a health education sub-committee, to discuss in greater detail what changes in health-related behaviour are required and how to promote them;
- a planning committee, to keep records and make sure things which need to be done are done on schedule.

Water committee tasks cover everything that needs to be done. But many agencies find it useful to make a list of the tasks to remind the members of their responsibilities. You must also explain these at some length before elections and emphasize that they are expected to serve in often mundane ways and will not receive any privileges.

Werner and Bower (2) make the following suggestions about organising committees:

SUGGESTIONS FOR AN EFFECTIVE HEALTH COMMITTEE

- Select an active, just committee in a way that is acceptable to the community, yet with strong representation from the poor.
- Meet regularly.
- Talk to each member personally before each meeting to be sure they come.
- Include some kind of fun or excitement in the meetings (perhaps filmstrips or role plays related to an activity the committee is planning).
- Plan activities with specific objectives Plan enough details so that everyone knows what he or she is expected to do, and when. Post a written plan of action listing the responsibilities, people, and dates the group has agreed upon.
- Have someone check to see that each person completes what is planned or gets the help he needs.
- Plan enough activities to keep everyone interested and active--but not so many that the committee will not have time to carry them out.
- Replace inactive members quickly.



6.7. To organise meetings in communities

When? In promoting a project, from an early stage until final agreement on all arrangements made, and later when problems come up or progress needs to be revised.

What? This section applies to any meeting, including general assemblies (meetings of the whole population), open meetings of subgroups of the population, or meetings of representative groups/committees. More specific points on committees and on general assemblies are in following sections.
Aim to have all members of the community, or as many as possible and from all sections and both sexes, participating in the discussions concerning the project. To achieve this, organize general meetings and small group meetings in various sections. Small groups create a climate in which all those who have doubts can raise them, and everybody's questions can be clarified. You can arrange small groups in different geographical parts of the community, down to sections of a street, perhaps separately by sex, and also through community voluntary groups such as church groups. Note how each member of a group is participating and encourage everyone to do so.

How? Notify the people you plan to meet a few days before the meeting, and keep to the time notified. Avoid the situation where people turn up for a meeting but you or other agency staff do not, or you arrive only hours later. You can do this by thinking realistically in advance about when you or other staff will actually be likely to arrive in the community. If there is a doubt then be prepared to wait yourself rather than keeping people waiting. In many rural areas, you will do best to notify people that you will arrive on a certain morning or afternoon, so that they are available to be called when you do arrive.

Make sure you know the names of leaders who will be present, and are aware of their formal position and status in the community.

Make a list of points which you want to have discussed, but be open to other points being raised.

Ensure that any new relevant information, which the people attending the meeting might not know, is on the list. Prepare to give this information or to ask a committee member or suitable person to do so. If you have papers which give details of this information, bring them with you in case you need them to answer questions.

If you have to give a technical or financial explanation, do it very carefully and slowly so that everyone can follow. Use a blackboard to help explanations by giving rough drawings and write up all financial figures which are mentioned. You must make sure that everyone understands all financial dealings: very often people who do not understand suspect that they are being cheated. You may find it difficult to realise that people are not understanding, because the meaning of the financial concepts is very familiar to you: but most people are not so familiar with them, and may need very clear and repeated explanation. So make sure that people do understand by encouraging questions. If all the people sit silent and accept the figures, this may indicate that they do not understand but feel shy about saying so because your manner assumes they should have understood.
Arrange the furniture in the meeting room in a way that encourages dialogue and discussion. Except where it would cause offence to local dignitaries, avoid the situation where the leaders of the meeting are singled out by having a platform or table, or where they have seats or benches while most people have to sit on the floor. As far as possible, arrange a round-table or round-floor discussion. Do not think that you have special dignity to uphold: sit like the other people, on the floor if that is where they sit. This encourages genuine dialogue and the expression of people's real opinions (trainers: apply the same principle to the arrangement of training sessions).

Speak clearly and forcefully. If you are a woman, you will probably have been brought up to be hesitant and retiring in formal situations, and you may have a tendency to speak too softly in meetings, or not feel like speaking at all. This, of course, is no good and you must practice speaking out, in training.

Last but most important of all: in meetings, listen attentively and sympathetically to what people say. Do not contradict it unless you have no choice, and never do so flatly in a way that will cause offence. This may even lead the offended person to sabotage the project.

Do not think that when you disagree with something that is said, it is enough to provide an immediate answer: probably you will not have fully convinced the person who spoke, or others with a similar view. If you do disagree, think carefully whether there may not be some truth in what they say, and in any case bear in mind that it is an opinion held.

6.8. To conduct dialogue with individuals and small groups (face-to-face communication)

When? At all stages of mobilisation and implementation of projects, in addition to formal meetings. With leaders and those actively organising aspects of the work. With "ordinary" community members whenever informal occasions arise and give the opportunity for sounding out opinions and encouraging people. If you are not staying overnight in the community, then at least relax some of the time with people, try to get to know people informally from all sections of the community. Just being in places frequented by ordinary members of the community for social relaxation, and especially in places frequented by underprivileged groups, can be an important statement of one's attitude towards them.

What? Discussion with individuals or small groups of people, ranging from more formal discussions exclusively about the project to informal chats in which the project is mentioned casually.

How? Engage in real dialogue. This is when both you and the other person or people talk, and each listens with interest and attention to the points made by the other. Avoid giving an impression of superiority, which will inhibit dialogue and the expression of people's real opinions.

You may have a purpose in mind other than keeping in touch with certain people or groups: for example, to exchange news to do with the project or to motivate a person to take a certain action. Then you need to think in advance about what you need to say.

Try to judge if replies are sincere or not where, for instance, you are encouraging or asking someone to do something. Try also to interpret replies in the sense of deciding what are important points and what are not important.

Recognise and act upon signs of impatience, such as looking at a watch: bring up any remaining essential point quickly, and take leave courteously.

Do not chide people for not doing enough or even, in general, for not doing what they promised. Be very understanding and accept the excuses they give: from their point of view they may be very valid reasons. Outsiders too often put all failures down to laziness, when there is a quite different true reason: for instance, a feeling of awkwardness about doing something, to do with social relationships within the community. Organizing things usually involves making requests of others; but it can be awkward to make a request of a person when one does not have the appropriate kind of relationship to him/her. If you imply, even jokingly, that people are lazy they will certainly resent it. There is always a better reason for not doing something!

6.9. To work with a General Assembly (of users or of the whole community)

When? Call a General Assembly early on in the promotion of a project; and again, at least whenever there is a need for the maximum authority of the community to take a decision, in particular the decision to go ahead with the project. In smaller communities, more frequent general assemblies may be an appropriate way of keeping most people involved in planning a project. After project completion, a project which involves community administration of accounts should have a General Assembly periodically, perhaps "every 6 months or whenever one is called by the committee, by the agency, or by 10% of users" as is stated by INS regulations in Colombia.

What? Lay down the rights of the General Assembly if there is any doubt. Normally the Assembly should be the maximum authority to which the Water (or Sanitation) Committee is responsible, and within which the committees are elected and need to be re-elected after a certain period of time. There may be a need to establish a minimum quorum and a procedure to follow if a quorum is not met, e.g. to meet again in a week's time.

How? The General Assembly is the final authority on the community side in most countries. (In some, traditional chiefs and/or party committees are the final source of authority). Prepare well before asking a general assembly to take a final decision, for example the final decision to go ahead with a project. Do this only when the project has been well discussed and many people or groups have taken favourable positions. In practice, the General Aseembly decision to undertake the project will be an act in which the whole community commits or compromises itself, creating a feeling of obligation to see the project through.

In very small communities, however, the general assembly may be a very much more informal affair, to be called frequently and to take on directly some of the functions which in a larger community would belong to a committee. This is especially the case in remote communities, where most people are more likely to turn up frequently for open meetings.

A special problem:
low attendance at general assembly called in a community

Possible reasons:
- Many people did not get to hear about it;
- They were not interested in the proposed project as they understood it;
- An influential person or group opposes the project and other people do not want to offend them by supporting it;
- There are too many meetings: people are getting fed up with them;
- Everybody was attending a different social event.

Possible remedies:

- If a town crier or loudspeaker van is used to announce meetings, one problem is that those who are not in the village (say, they are working at their fields) don't hear. Another possible method is to distribute written notices to schoolchildren to take home, or it may be enough just to ask the children verbally to tell their parents. Approach the schoolteachers and ask for their help. There are many other ways of announcing meetings: find out how people inform one another of events in the community and how you can take advantage of these ways.
- Find out if people, before the meeting, have formed a mistaken impression about the proposed project. Find out also if there are people who express negative attitudes to the project, which may be based on real drawbacks it has, or on personal rivalries with those organising it locally. To find out, ask in private those whom you have got to know well enough to get an honest answer. If the problem seems to be mainly one of misinformation about the project, try to correct it by talking informally with groups of people, then call another assembly to explain fully. If the problem is political or factional, see the remarks under "To convince a community to participate in a water supply project".
- Ask in advance in the community about what day will be suitable to have a general assembly, bearing in mind other events and the days in the week when people like to do other things (work or leisure). Try to be sensitive to people's interest in meetings and avoid imposing them on people - it is not a good basis for a meeting if people only go along to oblige you.

6.10. To make a census and community map

When? Before designing a water supply for a community (other than protection of existing water sources). For piped supplies, the map is essential for design, and you should also use the map in discussion of location of any standposts. For new wells, you need to site them in relation to the houses in such a way that nobody has to go farther to a well than to any contaminated source of water. If this is at times inevitable, then as few households as possible should be in this position at any season of the year. It is also important that not too many people should be dependent on one well, particularly a well with a handpump which will have a limited capacity. The formation of long queues and delays will wipe out the advantages of providing a supply in terms of time and convenience, and this will cause people to turn to polluted sources.

What? A census is, at minimum, a list of the households and the number of people in each household. This gives an accurate population figure for those who will be using the facilities which the agency intends to build. A community map should show all the houses which will depend on the water supply, even if they are outside the named "community". The map should show water sources currently used, and, where applicable and not too distant, the water source to be used for a new supply. It should show roads and paths, schools and public buildings, also large obstacles which people will have to walk round, such as precipitate hills or fenced-off areas. Of course, for technical design purposes, particularly for piped supplies, you will need maps with additional features and accuracy.

How? Take any existing maps or aerial photographs as the basis. Such maps may be available, for instance, from malaria services, which have undertaken house-spraying. But you should bring all maps up to date and correct them by consultation on site with members of the local community. Prepare new maps with their help. You might do this best with schoolteachers and senior school pupils. In a large community people will not be able to remember and locate all households, and you should draw and correct maps separately in sections of the community, in areas where perhaps 20 or 30 families live. At the same time you should obtain accurate lists of households and the numbers or names of their individual members. Pay attention to asking about people beyond the boundaries of the community, or who are not regarded socially as part of the community, but who will want to use the water or other facilities. This includes seasonal labourers and nomadic herdsmen. It is important to make sure disputes will not arise over their use of the water.

6.11. To acquire land and other rights for community facilities

When? In cases where it is necessary to acquire property rights to land or water sources, you must do this as soon as the agency has decided to help the community construct the facility. In some cases, there may be no problem for the agency, since the land is community land. If people are to construct anything on land which belongs to a particular owner, however, you will need to acquire land for either the community or the agency/state. This is done in order to avoid disputes over rights, and in particular, to avoid the situations whereby the landowner tries to charge people for fetching water, where one "owning" social group tries to treat the water as its own property and to keep out another group, or where people are made to feel a sense of obligation towards the "owners", to be met in some other way such as political support.

How? Sometimes you may think it simpler to use land which is already community owned, or which is regarded as neutral by different social groups living in different sections of the community. However, where this has the result of siting water points (standposts or wells) in a location which is inconvenient for many people, the objectives of providing water may be largely defeated. You would do better usually to choose the location which is appropriate for fetching water, and then make sure it is publicly owned and is regarded as accessible to all. (If this is impossible, as it sometimes is in South Asia, you may have to provide two separate water points for different social groups.)

One way of acquiring land is through gift by the owner, and in many rural communities owners will be public-spirited enough to donate their land or water rights without expecting anything in return. In El Salvador, the promoter carries forms to be filled in as deeds of gift, formally worded:

"Hon. Minister of Public Health and Social Welfare, San Salvador: I,_____, being of age and by occupation_____ with residence at _____, in the municipality of ____ with personal identity card No. _____, cordially state: That I wish to donate to the State and Government of El Salvador, in the Branch of Public Health and Social Welfare, a portion of land in which there is a (spring, well, etc.), which is to be separated from another of larger size which is described as follows_____ (3 lines for description). The land offered I wish to be used for the construction of _____, which will be done by the Department of Rural Water Supply of the Directorate of Health, for the drinking water supply of Cantón _____ in the Municipality of_____, Department of_____.

I understand that through this present instrument I am authorising the above-mentioned Directorate to carry out the works needed, and free transit for those who execute the work ..." (6).

Similarly, you may obtain written authorisations for crossing land to lay and then to maintain pipes.

But it is necessary to be careful with all gifts, to be sure that the person who donates land etc. does not later assume special rights to the water or other benefit. Where this is possible, it will be better for the community to purchase the land.

A greater problem may exist where landowners wish to charge for their land, and particularly where they try to extract a high price (higher than the value of the land for other purposes). In some countries, there is a need for compulsory purchase mechanisms, but these cases are beyond the scope of the mobiliser.

In other cases it may be the community itself which purchases the land from a community member. According to the legal and social conventions in each country, the mobiliser should learn and practice how to arrange this.

A special problem: Ownership of water source

The water source belongs to another community or to an individual who has another use for it, or people have customery rights to a stream originating in the spring to be tapped.

What to do?

Seek a fair and equitable solution which all affected parties are satisfied with.

How?

In the early stages of planning, invite affected parties to a meeting or series of meetings (representatives of the community/ies to benefit from the supply, representatives of the community where the source is located, individuals or groups who own/use source for irrigation etc.). Help them to negotiate a satisfactory agreement. This might involve sharing the water or, if there is not enough, compensating those who have been able to use it in the past for irrigation etc.

Do not support any solution which leaves some people with a legitimate grievance. They will probably sabotage the project.

6.12. To involve schools and schoolteachers in a project

When? From an early stage of promotion work in any community with schools.

Why? There are almost always many ways in which schools can help. Schools are often the major focus of community activities related to the improvement of community conditions. Schoolteachers are often potentially influential supporters of improvements in water supply or sanitation. Schoolchildren may be a source of information about the community; they may help in communication with their families, and may be organised to give other kinds of help. They will also be users of the water and sanitation facilities, so they should be involved to ensure they use them well.

How? Contact the schools early on in promotion work in the community. Treat techers with respect and as influential people, ask their opinion about how to organise the project, and openly or indirectly ask for their support, except in the case of junior assistant teachers or those who do not reside in the community and express little interest in its affairs. Request the use of school halls or classrooms to hold meetings. The school normally has the advantage of being a politically neutral place (unless a teacher is associated with one faction). Announcements of meetings etc. can be made by asking the schoolchildren to tell their parents.

Occasionally people may regard an active schoolteacher with some misgivings, perhaps because as a better-educated outsider he or she behaves in a superior manner, or tries to take charge too much of development activity. You should not become identified with such a teacher, nor rely too much on teachers from outside the village, but work directly with the village people.

Another thing to be careful about is that schoolteachers are often primarily interested in improvements for the school and for the teacher's house which often stands alongside the school. Sometimes facilities such as taps or sanitary facilities which are supposed to be for the school are in reality of most benefit to the teachers who live there. Many agencies have a policy of providing facilities such as flush toilets at schools even in villages where people's houses have neither any kind of latrine nor a household connection. Here it might be more appropriate to instal in the school a type of latrine which could be used as a model by the parents for their own houses - say, a ventilated improved pit latrine. So, although you should condider extra facilities for the school, such as taps, showers, or sanitary units, you may question whether they should be outside the technical range or standard of luxury available to people in the community. There may also be a question over who should pay: perhaps the educational authorities rather than the water agency. Sometimes there is a problem in favouring a school with a subsidised facility when the catchment area of the school is not exactly the same as that of the water project. Here, for instance, those whose children go to different schools feel hard done by that they will not receive an equal benefit. You might be able to work just with the parents' association of a particular school, so that they collect money or do the manual labour (perhaps with the children) for an improvement at the school.

You may also involve schoolchildren actively in the community water or sanitation project. They might take part in the physical work of construction: this should be linked to teaching on health education, so that it is seen as putting the theory into practice. The mobiliser should help the teachers to give lessons on health, sanitation, and water to each of the school classes. In El Salvador, physical education classes are used during the period of construction of a water supply in the community, for carrying materials (sand, stone, wood, etc.) to the construction site.

You may also involve the school in the preparation of the census and community map, and in helping with other survey work. Consult teachers and emphasise the two objectives of obtaining the necessary data and of practical learning by the pupils.

School teachers may also take an active part in the organisation of sporting, cultural, and social events which help to raise funds for the project. These mark stages in its completion and so help to keep up community morale and enthusiasm, and/or provide a way of putting across health education through entertainment. In the last case, for instance, the teachers might help their pupils to write and present a short play or puppet show with a theme related to water and sanitation.

6.13. To deal with the special problems of the poor in promoting a water project

When? At the planning stage in a community, wherever it is expected that all members of the community must make contributions or pay tariffs and for the poor these represent a big financial burden; or where there is a danger that poor or low-status groups will be excluded from access to the supply by the dominant group in the community.

What? To find a way in which the poor can also benefit from the project, and do not constitute a group which is opposed or apathetic toward its implementation.

How? First ensure that the water supply technology (in terms of cost per household served) and subsidy conditions (cost charged to the households) are not too expensive but are within the capacity of the great majority of the population to pay willingly. (Some rural projects in Africa and Asia intended mainly for household connections have found that less than a third of the population are using them: the rest cannot afford this level of service).

Ensure that people can spread payments out over a sufficiently long period. For example, if connection charges are high you may be able to convert them to a loan to be repaid with monthly tariffs over ten years or more. Then poor families are not confronted with single payments or short-term debts which they cannot afford to pay.

Study possible flexible approaches to the fulfilment of labour contributions, so that those who need to work every day to earn a living do not miss out on labour contributions. You may be able to arrange for them to make up their contribution in a slack time of year when they do not have other work; or for another family member such as a woman or an older but not fully grown-up boy to make the labour contribution. The community should make special exemptions to normal rules with the approval of the agency.

These should be limited to cases where the community recognises that certain families have special difficulties.

If all these and similar ideas are insufficient, you may have to discuss with the community the exemption of a few particularly poor families from payments or other types of contributions. The important thing then is to ensure that it is indeed only the small minority of particularly poor families who are proposed for or receive these special advantages. It should not be the friends of certain leaders nor a larger number of people so that the financial arrangements break down.

Sometimes you may use an alternative approach to the whole question: setting a table of contributions or water tariffs which is proportional to wealth or income. This might be measured, for instance, by the sale of cash crops to a buying agency, or according to the standard of housing:

Sale of cash crops: in communities where the major cash income is from crops which are sold through a single cooperative or state buying agency, it might be agreed by the community that the community contribution to the capital cost of a project will be met by a levy of a certain percentage (say 5%) of all receipts of community members for sales in a given year. The better-off who sell more will therefore pay proportionately to their income.

Standard of housing: in larger villages or small towns where income differences are considerable, differential tariffs can be based on an assessment of the quality and size of the house. In one community in Colombia, for instance, "a survey was carried out on the type of construction and the area of each building, with the object of classifying them into categories for the determination of the differential household quota (tariff) and the price of the connection. The basic household quota which gives a right to 12 cubic metres a month varies from 130 to 280 pesos (four different prices according to the assessment of house value); it is further increased by 30% for commercial or industrial use, while above that consumption level a charge of 25 pesos a month for each additional cubic metre is made in all categories" (7).

In areas where communities are divided not just as between richer and poorer families, but into definite ethnic or social groups of different status, especially caste and harijan ("outcaste") groups in South Asia or similar dominant and "despised" groups elsewhere, the problem is typiclly even greater. You will have to make sure that the low-status group gets the service even though village authorities are reluctant to extend it to them, but without spoiling your relationship with the village authorities and the higher-status group in general. This will be easier if there is clear backing from the agency and government for a non-discriminatory approach, so that you can assume it without question.

6.14. To charge for (or prohibit) use of water for economic purposes

When? A problem can arise whenever it is physically possible to use the water supply for economic purposes: watering cattle, making beer for sale, or in small industries.

What? The problem is that it is unfair when all community members make an equal contribution or effort to the construction and maintenance of a water supply, but certain individuals gain a much greater benefit because they use the water in much larger quantities for profit. Usually these individuals are among the better-off members of the community.

How? When there is not enough water available to allow its use for economic purposes but only for domestic ones, it is clear that the correct step is to prohibit economic uses.
The agency may have to be firm about this and even be prepared to take influential people to court.

If the water available is sufficient, there remains the question of equity. For piped supplies, we suggest the use of a water meter and the charging of the full economic price for the water used. For example, if a small industry uses 50% of the water produced by a small local scheme, it should be charged tariffs such as to recoup 50% of the total real cost of the scheme. Or, where water is used for watering cattle, charges should be made according the number of cattle watered.

Training
Methods Case studies
Visit to community with this problem
Calculation of full economic price of water
Role plays dealing with hostile water users

6.15. To consult people about additional facilities

When? When a water supply is being planned with the community

What? To discuss facilities such as showers, toilets, and clothes-washing basins or slabs, or sanitary units incorporating several of these; or bathing ponds.

How? When thinking about public facilities, the main question is who will bear the additional cost? In some African countries, agencies responsible for large-scale projects have decided that they cannot provide additional facilities, even washing-slabs, free, because this would take resources which would lower their ability to provide water to other communities. Agencies could give communities the opportunity to pay for or construct such facilities themselves. They could help with cement etc., perhaps acquired from a third source such as local government.

The need for additional facilities should be discussed in particular with the women: it will be they who might need or prefer to bathe themselves or their children, and/or to wash clothes or kitchen utensils, close to a public water point rather than at home when doing so at home would mean carrying additional water or constructing private bath-houses etc. for which they may not have the space or the cash.

There may be a conflict of interest between women and men, in that women would have to carry the water for bathing (incl. for men to bathe) at home, whereas it might be the men who would have to pay for additional public facilities. It might be difficult to solve such conflicts, but at least it is necessary to bring women into the planning and design of additional facilities.

Community toilets (communal latrines) present special problems which we discuss in section 27.

In projects where household connections are installed, the mobiliser should be able to give people detailed advice on how to construct individual showers, wash basins and flush toilets, and pay special attention to the disposal of waste water from these.

In areas where schistosomiasis (bilharzia) is a health problem, the disease is likely to be spread largely because children or adults bathe or wash clothes in contaminated rivers, ponds or lakes. A water project by itself is unlikely to be enough to change these habits entirely. A discussion on alternatives with the community is needed. One alternative might be to create special bathing places (ponds) which will be kept free of snails, as an additional facility within the water project.

6.16. <u>To sign formal agreements for the project</u>

When? Agencies adopting a project plan approach and giving substantial assistance to a community will usually wish to have a formal contract of agreement with the community before proceeding with a project. This contract spells out the obligations which the community and the agency are taking on. In the case of projects where the participation of individual households in construction work will give the household a right to a house connection, agencies usually also wish to have a formal contract with each individual household. They require that these agreements are signed by a certain number of households before proceeding with the project. This may be a minimum percentage of all households in the community.

What? The agency draws up agreement forms to be filled in for the particular project and household.

When piped schemes cover more than one community, all the communities will need to sign the agreement before proceeding with the project. Only communities situated at the end of the line can be omitted without causing difficulties. These agreements should specify the work to be contributed by each community on the main line and intake.

How? The agreement forms are adapted to the circumstances of the particular community, and a draft agreement is drawn up, in consultation with the Water Committee and village authorities. The draft agreement is approved by the agency and the community authorities and general assembly. It is then signed by the community representatives, that is whoever is entitled to do so in the local law and practice.

Some of the areas which the agreement covers are: for construction, community responsibilities to provide labour, materials, transport, perhaps land, storage and guarding of material and equipment; for maintenance, community responsibilities for keeping surroundings of facilities tidy, for preventive maintenance, for reporting faults, for carrying out or paying for repairs; all financial responsibilities; and (also very important) the obligations of the agency in construction and in maintenance. For instance, in El Salvador, the contract provides for legal redress if the agency fails to complete the project as well as if the community fails in its responsibilities.

6.17. To organise voluntary labour to construct a community facility

When? For all work requiring unskilled labour. For water supplies, unskilled labour will be required for most types of supply, though the amount required varies very much from one type to another. Trench-digging is the typical activity requiring large amounts of voluntary labour. Projects which use powered machinery to drill boreholes or tubewells with no distribution system require little or no unskilled labour. One Malawi programme requires that the community receiving such boreholes with handpumps contribute their labour to the work in other communities where unskilled labour is required.

Why? "To begin with, the use of community voluntary labour is an important aid in the containment of project costs. Second, the laborers involved in the construction of various parts of the system acquire valuable applied experience that will be enormously useful later on, when the village needs to repair or expand their water system. Third, there will generally be many other development institutions at work in the area whose programmes depend on the availability of voluntary community labour. To pay community members for their labour on their water system would establish an unfortunate precedent and frustrate the efforts of these other institutions as they attempt to muster the labour contribution on which their valuable programmes depend. Finally, and perhaps the most significantly, the requirement of voluntary labour communicates the important message that community improvements are the responsibility of all the members of the community, and thus sets a valuable precedent for the organization of voluntary labor for subsequent community improvements" (8).

How? A good arrangement when much work has to be done is to divide households randomly into 6 groups when work is done on 6 days in a week. Then one group works every Monday, the second every Tuesday, and so on, with each household sending one person. This way, the working groups are small enough for the paid supervisor to manage easily. Also, the group is very well aware of anyone who has not turned up, especially if they are asked to dig a certain length of trench in a day. Then anyone not attending directly increases the workload of the others, and this should give rise to strong group pressures for everyone to turn up for work.

Some programmes, notably large projects with household connections in Latin America, record the work done by each household, which has to fulfil its whole quota of work-days in order to qualify for a household connection. If not, the household has to pay for the connection at a price higher, sometimes much higher, than the value of the work-days in terms of local real prices for labour.

Some of these programmes give receipts for each work-day and people even buy and sell them within the community. Often such programmes permit households to fulfill their labour obligation by hiring labourers to do the work for them. When this is done on a large scale, some of the advantages of voluntary labour are reduced or lost. But in certain types of communities, notably where there are big social differences, this may be the only feasible way to organise communal labour.

Wherever each household contributes labour to a project, the programme and local people must decide whether this has to be a man or whether women or children from a certain age are acceptable. Bear in mind that there are families where no healthy adult man is available, or where he is forced by poverty to seek paid employment elsewhere. Even if people decide that an adult man should represent each family, they may agree to make exceptions for specific families which are accepted as being in these difficult circumstances. In Malawi, the community is asked to decide also whether to exempt old or handicapped people altogether - those who cannot work. In some parts of the world people say that the whole difficulty of mobilising communities to improve their water supply is that the men do the voluntary work, whereas it is the women who will benefit from a more convenient water supply. They say that men are not interested in doing the work for the women. In one or two cases, it is reported that women have started to do the work and have shamed their menfolk into joining in. Perhaps you will find men less motivated than women in this way. Normally, we hope, you will find it enough to call on the men to make the lives of their wives and sisters easier. But the last resort may be to work with the women (or women's groups) and to organize the communal labor among them first. Programmes should time voluntary work to avoid clashing with seasonal labour requirements for farming, or on plantations or in seasonal industries employing local people. In some very seasonal parts of the world, such as the Sahelian countries of West Africa, this means that the entire work on water supplies takes place during one half of the year only. Where the slack agricultural season is not so marked, you should still avoid communal labour during periods of peak requirements for work in the field. People should dig wells during the dry season, and they should dig the last few feet of the well when the groundwater level is lowest, at the end of the dry season. Happily, this requirement usually fits in well with the slack period in agriculture. Also, people are most interested in improving their water supplies when these are at their worst.

Think in advance about all the possible uses of unskilled labour, for example, for the collection of local materials such as sand, gravel, stone and timber, and for porterage of all materials, especially to places where lorries cannot go. Or for the cleaning of paths for vehicles, as well as for digging and for unskilled construction tasks.

Organization might be through the Water or Project Committee, or through a special sub-committee for the formation of work teams.
There is a need to keep to a sustainable rhythm of work. Avoid the situation where everyone turns up at the beginning full of enthusiasm, but fewer and fewer come as the novelty wears off. Some programmes do like to have everybody out working on the first day to generate a festive atmosphere, but there is the danger that you cannot organize such large numbers for useful work. If you are going to do this, plan the work in great detail the day before and arrange that everyone has a precise job to do and tool to do it with.

Make sure that the arrival of equipment, materials etc. from the agency is well coordinated with the progress of the work being done by the community. Nothing is more discouraging to a community than to see the trenches it has dug months before cave in during the rains because the pipes still have not arrived. If there is any doubt, you might do well to hold up the work until the pipes arrive.

Programmes may also teach community members to do semi-skilled jobs, for example, helping with surveys, digging wells and various construction jobs. Agencies mainly concerned with getting facilities built as quickly and cheaply as possible will probably do little of this training. But the more seriously agencies take the other purposes of community participation, the more the agency will look for opportunities to improve skills and local capacities both for repairing the facility and for other similar jobs.

6.18. To arrange a ceremonial inauguration

When? Whenever a facility is completed and ready for use, if the local people expect it.

Why? People usually expect a ceremony and it makes people feel that their effort is recognised. People may put a higher value upon the facility after the ceremony leading to better upkeep. Also, it provides a special opportunity to talk to people about the correct use and the need for maintenance of the facility.

How? Through the Water (or Sanitation) Committee or social sub-committee. They will invite the school and organised groups in the community to play a part. They might put on some type of performance, perhaps carrying a health education message, though entertainment is the main purpose.

A decision is needed on who will pay for food, drinks, etc. The committee will also have to decide whom to invite from outside the community. It is important that the ceremony gives due recognition to the community's own effort. Avoid the situation where outsiders such as politicians make speeches which imply that the facility is a gift from the authorities. Any plaques or notices should make it clear that the facility has been completed "by the people of xxx with help from...", not that it is the work of the agency. In some places it is necessary to avoid the situation that certain (local rich) people pay for the ceremony and then assume ownership rights over the facility.

Where the community will legally own the facility, part of the inaugural ceremony may mark this fact. For instance, a formal transfer may take place. But do not expect that this will in itself lead to any difference in the fulfilment of community obligations in maintenance.

The demonstration of the correct way to use taps, handpumps etc. and an explanation of the rules concerning use and maintenance can be part of the inaugural ceremonies. In Malawi, this is done separately at each standpost which is completed and put into service, with the future users of that one standpost holding a minor celebration (see also the discussion of forming a tap users' committee, in section 6.21 "To arrange for community participation in maintenance: water supply system with public standposts").

An invitation to neighbouring communities for their residents to come and attend inauguration ceremonies can be a way of spreading interest in the type of water or sanitation project just successfully completed.

6.19. To arrange for community participation in maintenance: water supply system with household connections

When? You should discuss the proposals for maintenance first with the community in the earliest stages of planning: the community must know what responsibilities it is taking on. You can then make the actual arrangements together as the construction is being completed.

What? A community water board or committee administrates the operation and maintenance of its water system, with supervision and support from the agency. (This is the pattern used by government agencies in a number of countries in Latin America.)

How? Shortly before the completion of the project, call a general assembly of the community or of users. Remind the assembly of the responsibilities for maintenance, both their obligations and those of the agency, as you agreed at the planning stage. Call for the election of a committee to include a president, secretary, treasurer and other members. Establish the term of office, conditions for re-election etc. in advance, and also the method of voting. Where the area covered by the project includes several communities, it will probably be best to have representatives separately voted onto the committee from each community.

The committee or "water board" will have the full responsibility for operating and maintaining the system, though it will receive support from the agency. You, as the mobiliser, will provide that support. The arrangement might be that you are an ex-officio member of the committee of each water project in your area.

To carry out its responsibilities, the water board will collect a water tariff from each household with a connection. In most countries, this will have legal implications and in some, special legislation will be required.

The water board will purchase fuel (if required) and other materials (such as bleach); and employ on a part-time basis those required to carry out operation and maintenance tasks. Usually this will be a plumber or operator, and perhaps a watchman/assistant. The treasurer of the committee may also receive some small remuneration for the work of collecting the tariffs, keeping the books etc., especially where this work is considerable. One of the great advantages of community participation in maintenance, in many countries, is that a community committee can pay the operator on part-time rates which are related to local incomes for agricultural labour. The agency on the other hand, might have been obliged to pay full-time civil service rates for less than full-time work, at a cost beyond the limits of many recurrent budgets.
You should attend the first few meetings of each water board, and thereafter attend meetings at least every few months to make sure the committee is continuing to function without problems. You should also attend when the committee makes its reports to the general assembly of the community/users. But do not take charge and treat the committee as merely the agent of the water agency and yourself; allow it to make decisions for itself.

It is not enough simply to hope that a health committee will function effectively. Both the health worker and the program leaders need to give the committee encouragement, advice, and organizational help. But it is important that they **provide support without taking charge!** This requires skill, understanding, and patience.

Role playing about how to work with a health committee should be part of the health worker's training.

Similarly, encourage the treasurer and other officers to make their own reports to the general assembly: do not take over these functions but merely assist. For example by clarifying points which may appear unclear to some participants.

Usually, with this type of technology, the agency will impose the condition that part of the cost of construction will be provided in the form of a loan to be repaid by the users over a number of years. This is usually between ten and twenty, at a low interest rate. Another part is usually covered by a grant from the agency and/or a third party; while voluntary labour in construction accounts for the rest. You must add the repayment of the loan to recurrent costs in order to calculate the amount that people must raise by the tariffs. You must add an additional amount to provide for repairs, and possibly also to finance extensions. Since you cannot predict exactly what will be needed for these purposes, one option is to recommend that the committee err if anything on the side of over-estimating the amount needed. This may encourage further community development, because any surplus can be used for other community purposes. It is important, of course, to ensure that these are really community purposes and not projects in the interests of only a section of the community. But we see no reason to restrict them to water and sanitation, as some agencies insist. Such a restriction diminishes community responsibility and autonomy.

The Colombian agency Instituto Nacional de Salud has published a book of regulations for the water boards it supervises (14). and other Latin American agencies also impose detailed guidelines. But policies can also be more flexible.

It is (as Agua del Pueblo points out) essential that the funds be kept and managed locally, either in a bank in the nearest town or in the hands of the locally-chosen treasurer, not forwarded to the agency. This would entirely defeat the purposes of increasing self-sufficiency, providing funds for prompt repairs, and developing local institutions. Ensuring that households do pay their water rates, and especially that they pay them on time, may be a problem. Ultimately the threat of cutting off the connection must be used. Agua del Pueblo has successful experience of recommending that the committees warn delinquent families three times and then either cut off that family or refer the case to the municipal authorities. It is the possibility of cutting off the individual supply, in the last resort, which makes the collection of the funds usually effective in the case of systems with household connections.

6.20. To arrange for community participation in maintenance: piped systems with mix of household connections and standposts

When? As for systems with household connections only (previous section), proposals should be discussed with the community from the earliest planning stage.

What? Two solutions are possible:
1) Standpost supplies are free, and maintenance costs are met by those with household connections and/or by outside subsidy;
2) Standposts are "group connections", and tariffs charged on those families who belong to the group using one standpost.

How? If solution (1) is adopted, the procedures can be very similar to those outlined in the previous section. However, it is likely to be difficult to find an adequate way of representing the interests of standpost users. If the water board is formed exclusively or mainly of those with household connections, they will have a strong economic interest in encouraging others to take house connections (or if there is an agency subsidy for standposts, the agency will have this interest). This situation can easily lead to pressure being placed on poorer people to take connections even when they cannot afford it. The pressure may take the form of removal of the standposts or cutting off the water to them.

You should try to ensure sufficient representation of standpost users on the water board so that this does not happen against their will. For instance, the water board might consist of an equal number of members elected by those with household connections, and of members elected by standpost users. Or where 80% of the population have household connections and 20% use standposts, a water board of 5 members might have one place reserved for a representative of standpost users. Otherwise, or in some cases even with such a board, you may have to check and ensure that those who cannot afford to pay are not being forced to take a connection.

If solution (2) is adopted, group connections should be provided for small groups of households: small enough that they all know one another well and will be able to organise among themselves easily to collect the share of the tariff from each member family. This is likely to be easiest with groups of four to ten families, not many more.

If the group connections are metered, each group will have to decide how to share out the cost in proportion to each family's use of the water, taking into account animals which are watered, use of water for kitchen gardens, etc.

6.21. To arrange for community participation in maintenance: water supply system with public standposts

Standpost systems not requiring fuel for pumping

When? In gravity piped supply systems, or those using hydraulic rams or windmills (no expenditure required on fuel for pumping).

What? A community committee, or on a larger project a hierarchy of committees, forms the core of a repair team and calls on other community members to help with repairs when large numbers are needed. The water agency provides backup support, at a cost the agency should find affordable even from a low recurrent budget.

How? Organise a meeting of all the users or future users of each tap, including all the women and preferably also many of the men of the households. The best time to do this is when the tap is first put into service. The meeting will then also be a small celebration. At the meeting, explain any regulations and discuss the correct use of the tap. Discuss how the surroundings will be kept clean, preferably by all women doing any necessary cleaning or tidying up. Organise also the formation of a tap users' committee, which will ensure the good upkeep of the tap, its surrounds, and the connection to the rest of the line. Provide a member of the tap users' committee with washers and explain how and when to change these. The agency should provide washers free as a preventive measure. Explain the policy of the agency with respect to paying for new taps when a tap needs to be replaced. For instance, the policy in Malawi is that the tap users have to pay for a new one, which they can buy either from the agency or from a private shop. The money is collected from each household. Similarly, if the standpost is damaged through vandalism, e.g. drunks, the tap users also have to pay, but not for other replacements or damage elsewhere in the system. Maintenance will perhaps work best if one member of the tap users' committee is a woman who lives nearby and can exercise some vigilance over use and misuse of the tap.

At the level of the whole community or branch line, a higher-level village water committee should be formed. This will function as the core of the repair team whenever repairs are required. It will be able to call on other community members to give voluntary labour to help with repairs when more people are needed. Maintenance will work best if both women and men are members of this committee and are given the necessary training in carrying out repairs to the branch line. On completion of construction you should leave those spares most likely to be needed with the village water committees. You should be able to provide other spares, free, from the agency when required. The members of the water committee should carry out inspections of the line, and, on a small system, the intake etc. on a regular basis and after heavy rains etc. You should train them in what to look for and what to do. But the work involved should only be occasional and there should be no need for any remuneration.

On larger systems involving more than one community or branch line, a system-level water committee should be formed, to be responsible for the main line and intake. This committee might be formed by representatives of each of the community or branch line committees. But they should also have links with political and, where they are important, traditional authorities of the area.

You will then be able to call upon the support of these authorities if members neglect their responsibilities. Their function includes to organise labour for repairs on the main line, fairly from each community. Where the intake is several miles from the nearest inhabited area, there may be problems in keeping an eye on it, cleaning it, changing the mesh when needed, etc. This is because the work is made more burdensome by the time spent in walking to it. You may still be able to organise this in a voluntary way, by a rotation system among committee members perhaps, but otherwise you may have to employ a part-time caretaker. The agency may have to pay this person, since it may be difficult to find an appropriate way for the community to collect the small but regular sum involved.

You will have to train committee members and caretakers in their functions. Whenever possible, train them by showing them what is done in communities/projects where the system is already working.
Supervision of the maintenance (inspection of all parts of the system) should take place by a regular schedule and may be part of your job as mobiliser, or may be that of a separate maintenance officer. In Malawi, one project assistant covers all types of maintenance supervision for an area with a population of 40,000 users, working with committees more or less in the way described. Other countries, especially where the population is less densely crowded together and distances are greater, will probably need rather more.

Note that the work done by committee members and repair teams is voluntary and unpaid. This means that it is important that the work required is fairly small and occasional. Do not expect the village water committee to organise tap committees and preventive maintenance, at least not unaided: take the lead in forming tap committees yourself.

Standpost systems requiring fuel for pumping

When? Before introducing such a project, explore first the possibility of an agency outside the community taking on the responsibility of paying for fuel: particularly a local authority. Only if this is not possible, explore possibilities for arranging it within the community and get agreement before starting the project. Consider also the possibility of group connections (See section 20).

What? A community committee (water board) makes a regular collection of funds from each household to cover operation and maintenance costs, including fuel purchase (or these may be partially subsidised by agency or government).

How? As we have stated in chapter II, section 3.3., projects which have attempted to collect funds for fuel for pumping have often met with failure where they do not have the sanction of withdrawing an individual household's water supply (as they do in a system with household connections). That is why we recommend extreme caution before adopting such a system at all, or constructing projects which will depend on community collections for fuel purchase. Too often, it will simply prove impossible to collect the money.

If the funds must be collected within the community, then you will have to try to organise it through a community committee (water board) similar to the recommendation for systems with household connections (section 6.19). The only difference is that the committee and its treasurer will have to collect money from every household without being able to exclude the householders from use of the standpost.

This has a better chance of working where:

a) The community is fairly close-knit (everyone knows everyone else) and cohesive (everyone feels solidarity with everyone else, and they identify strongly as a community), or where there is a very strong headman or chief who can enforce his decisions on everyone else.

b) The amount of money required from each household is a relatively small proportion of their income, even in the case of the poorest households - less than say 3% - and there are no equally convenient (but polluted) sources of water.

c) The system of collection works smoothly (see section 6.23 "To solve the problem of a lack of accounting skills in villages", P. 136) and people trust the integrity of committee members. They will be likely to trust them better if they understand and can audit, formally or informally, the accounts.

6.22. To arrange for community participation in maintenance: handpump programmes

When? When your agency provides handpumps for a large number of communities in an area.

What? A community member, a volunteer or someone remunerated in a small way by the rest of the community, carries out regular preventive maintenance tasks, checks the pump and reports faults which (s)he cannot put right. Then either (1) a mechanic is called to carry out repairs: the mechanic covers an area where there are perhaps about 50 handpumps, and is paid for the work done, by the community; while perhaps the agency also employs a district maintenance team, sent out only to those jobs which the mechanic cannot handle; or else (2) the agency directly employs the staff who carry out intermediate-level repairs as well as bigger jobs.

How? You must explain the village responsibilities for maintenance, and in particular the need to provide for it financially (raise the sums required) particularly carefully to a village assembly before the agency commits itself to providing the handpump(s) to the village, and the village must agree formally to take on these responsibilities (e.g. sign a contract). You will have to judge whether the community is in fact likely to keep its commitment, and not present a document for signature unless you are reasonably sure it will. As proof of a community's ability to raise money for this purpose, some programmes require that an initial sum be raised before any handpump is provided (e.g. an amount sufficient to cover average expenses in the first year of operation, which the community should put into a special bank account).

The organisation of payments of this kind will probably be easiest in communities which already have some form of "corporate" organisation, i.e. where the community already has authorities, elected or generally supported by the population, who hold community funds and use them for other purposes, developmental or even just ceremonial. The contract can then be made with these community authorities. Otherwise, a second possibility is to hold a general assembly and propose the election of a water committee entitled to raise the money needed in the customary way (a levy on each household or each adult, either at regular intervals or whenever sums are needed for repairs).

In some areas, however, even this might not work very well. It assumes a degree of community cohesion and solidarity which does not exist everywhere. In particular, if there are several handpumps in one community, people may not be willing to organise collections or give contributions towards repairs of pumps which they do not themselves use. In such areas, a third possibility is to organise separate pump users' committees for each handpump. Hold a meeting open to all those who will want to use the particular handpump. There may be a problem if those living in the immediate area where the pump is located try to exclude others and claim the pump is "theirs". Equally, all those wanting to use the pump must share in the responsibilities for its upkeep. This has the advantage that the work of preventive maintenance and checking, to be done by one of the users of the particular pump, will not be very onerous since (s)he will be looking after only one pump, and (s)he will probably be willing to do it without any remuneration. This is particularly likely to be true if a woman is chosen, a regular user of the pump - but there may be difficulties in choosing women since it goes against the expectation that men do mechanical jobs.

Incidentally, we are not aware of any programmes which organise separate pump users' committees for each handpump. Agencies tend to assume that they should work with a whole community. But there are a large number of cases in which this has not proved successful. Often agencies then assume that what is needed is more education on the benefits of good water, to make communities more conscious of the value of maintaining their pumps. We think that this will have little effect in many communities where the problem is not that people do not see the benefits of good water but that they are not sufficiently united as a community. You may be able to draw them to work together more in the common interest of the community, but you will not be able to work miracles. In some cases, then, we think it is better simply to work with each group which does have a clear common interest - in the continued operation of their own particular pump. They may, in fact, constitute a more real community: a group of people who have more contact with one another and know one another better, with more mutual ties and obligations, so that someone who does a voluntary job will have the feeling that it is being appreciated by the others.

In larger communities or those with more than one handpump, it often happens that one or two men are chosen as handpump caretakers and initially agree to do the job as volunteers: they are given a brief training and a toolkit. However, after some time, when the job is no longer new and interesting, when they do not feel they are getting much in return for the work, they either stop doing it or they ask for money to continue, but neither the agency nor the community is willing to pay them.

You should take account of the kinds of voluntary work which people do perform on a regular basis in your area, and make a realistic assessment of what can normally be expected. Do not make arrangements where this is exceeded, even if initially people appear willing to accept: in particular, do not make such arrangements where the community representatives merely assure you they will find someone to volunteer.

There are often also problems with community promises to remunerate a member to carry out part-time or occasional work, unless the community committee responsible for making the payments is also receiving regular sums of money which cover these payments. Thus, there is little problem where there are household connections and charges are made in circumstances where water can be cut off (see earlier section). There are no problems where an agency of government or local authority makes payments to communities to cover the employment of, say, a village health worker - a village health worker might or might not have time to look after pumps in addition to other duties. There may be no problems where the community has other regular income from, perhaps, running a produce buying agency (for marketing the local cash crops) or a retail shop. But there tend to be problems where the community has to rely on raising, say, a monthly levy from each household to pay the "volunteer", or where the arrangement is for the community to compensate the person by doing communal work on his field. You may find you will have to spend much of your time chasing up committees and village authorities to make the payments or to organise the communal labour which they have promised, on behalf of aggrieved pump caretakers. Or, more likely, the payments will not be made and the work will then simply not be done. Therefore, be very cautious before recommending or agreeing to this kind of proposal in the first place. It may be better to follow the course mentioned earlier and set up separate pump users' committees, each with its own volunteer.

Training will have to be organised for each caretaker, whether a volunteer or remunerated. You may be able to give this training yourself, or your role may be limited to arranging their attendance at a place where the training will be given by a technician. It would be an advantage to train additional persons, ideally one replacement for each caretaker. If the "area mechanic" is used in a 3-tier system of maintenance, the mechanic may also be employed to train the pump caretakers in his area.

This 3-tier system of maintenance with an independent artisan ("area mechanic") as the intermediate level has the advantage when, as is often the case, agencies do not have sufficient budgetary resources to sustain a maintenance organisation capable of responding quickly and effectively to all the calls upon it. Recurrent budgets are often small, and there may also be particular difficulties with transport. The area mechanic will have his own transport, often a bicycle. He will live within fairly easy reach of all the pumps in his area. He will probably do other mechanical work, such as repairing bicycles or farm equipment (10).

The collection of funds for repairs done by the mechanic may be either by a regular levy (perhaps monthly, or at each harvest), or by a special collection when each repair is needed.

Do not expect too much of a caretaker, particularly a volunteer. Do not expect, for instance, that (s)he will also carry out health education. The type of person often chosen to be a caretaker is not the type who will be comfortable telling other people what they should do, apart from correct use of the pump. If there is a pump users' committee, it may be best to get a different member, perhaps a mature woman living near the pump, to exercise vigilance over pump use and abuse (e.g. by children).

The caretaker should feel (s)he is working for the community and its committee (village authorities, water committee, or pump users' committee), and not for the water agency. Therefore, do not directly order the caretaker to do things in the manner of a superior in an organisation: bring in the committee when there is a problem. Especially in the case of volunteers, since it will be the end of any volunteer spirit if they feel they are working unacknowledged for the organisation.

Friendly rivalry between communities might be used as an aid to good maintenance: encourage people to show off clean and tidy wells and pumps: a local competition for the best might be organised.

When a caretaker is not doing the job properly (you may find out about it when you hear belatedly of a pump out of order, from someone else), arrange a meeting of the committee (community water committee or pump users' committee) and try to understand the (real) reasons. If necessary, suggest that a different person take over the job, and arrange for any training required. If it happens very often, it may be that the system adopted by your agency was over-optimistic: if you can think of a better system, suggest it to your supervisors!

6.23. To solve the lack of accounting skills in villages

When? When people must pay or contributions are assessed according to a system which it is not easy for community members to handle.

How? Adopt a simple system and provide training to the committee members in its use. One such system is described by Finau and Finau (11): it was adopted in the programme of the Ministry of Health, Kingdom of Tonga, after difficulties had arisen with poor management of funds due to lack of accounting skill. This had led to non-payment of rates and to a breakdown of the operation and maintenance system. A first attempt at changing the accounting system had failed: it had proved too cumbersome, with a high number of entries of small amounts. This is how Finau and Finau describe the system which was finally adopted successfully:

A simpler system was therefore proposed, and at the same time the responsibilities of treasurer and secretary were more clearly defined, the treasurer was described as "a keeper of all financial records, not a keeper of cash". The secretary's duty was to fill in the receipt book, giving reason for payment, the amount, and the date. The receipts were numbered and made out in duplicate, with one copy for the ratepayer and one for the treasurer. In this book a record of all income was kept.

A register of ratepayers was kept with columns for each month. The number of the receipt was entered under the appropriate month after payment was made.

The third book contained two columns for income and expenditure. Income and itemised payments were entered before each monthly meeting of the water committee. The total under each column could then be easily compared at the meeting.

A course was organized to teach the new accounting method to participants from 33 villages, divided into five groups. Two of the participants left the course voluntarily because their literacy level was below that required.

The participants were provided with free receipt books, registers, and balance books. They were asked to provide actual data from their own villages for the exercises. Redefining the roles of the treasurer and secretary took most of the first day of the two-day course. Those who were not good at arithmetic were persuaded to use students in the village. An additional feature was the emphasis on auditing by villagers other than the committee members.

On follow-up three months later all villages were still using the system. Some villages had changed their treasurers but the water superindendent and the immediate past treasurer were able to teach the system to the incoming one.

6.24. To help a community decide what improvements to make: in general (non-directive approach)

When? Your agency encourages a non-directive approach.

What? You help the community define its priority needs and take action on them, not necessarily in water or sanitation (for specific water or sanitation approaches, see separate sections).

How? You help the community to 'move from' feeling dissatisfied with things as they are to taking some action to change things in some way for the better.
Such an action results from a thinking process. People begin to think about why they are dissatisfied, they become aware of certain needs and may eventually define them as specific wants. In many cases, people will already recognise specific wants. At this stage, they may decide to take some action. They then have to decide on what action to take, how to organise themselves to take it, and when, where and how to take it.

Whether people achieve a result satisfactory to themselves depends partly on whether they have persisted through all the stages of thinking, planning and acting; partly on whether at each stage they have thought effectively enough to reach really appropriate decisions; and partly whether outside help in terms of advice, materials and technical skills was adequate.

The mobiliser has two tasks in this process.

You aim to provide stimulus in so far as it is needed, to get people thinking and to go on thinking until they reach some definite conclusions.

For example, people may be worried about the number of children who suffer and even die from diarrhoea in the community. But they may not believe that they can do anything about this situation.

You can help them to understand what causes diarrhoea, where the main sources of diarrhoea are likely to be in their community and alternative ways of reducing the problem.

You also aim to show people what are feasible and practical solutions, perhaps going beyond what they have been considering, and perhaps introducing ideas which are more relevant to their problems than the solutions they have been thinking of.
For example, people may believe that they need a health centre in the village to solve their health problems.

You may know that this is not possible, certainly in the immediate future, but you help them to conclude that there are nevertheless things that they can do for themselves, for instance to prevent children from dying of diarrhoea. They can give the children rehydration mixture themselves (see chapter VII section 2.8 and Appendix). They can also improve their water supply, sanitation and hygiene practices. You stimulate them to discuss alternative solutions to their problems.

What can you do to stimulate and ensure sound thinking? T.R. Batten discusses this at length in several of his books on training for community development, and we base the rest of this section on his work.
Batten lists the following as the conditions which favour sound thinking:

1. that the members have a very clearly defined and agreed purpose which they genuinely want to achieve together;
2. that they want to utilize to the full whatever knowledge and experience each and every member of the group may have which may in any way be relevant to the achievement of the purpose of the group;
3. that they have between them enough knowledge and experience, once it has been pooled and thoroughly considered, on which to reach sound decisions in relation to the purpose of the group; or, alternatively,
4. that they have enough knowledge and experience to know that they have not got enough, and therefore find ways of getting more by seeking it outside the group;
5. that they can subordinate their individual or factional interests to their common purpose for the group, and hence put forward and consider every idea and suggestion objectively on its merits in relation to this common purpose, rather than each subjectively supporting his own idea because he made it;
6. that they are sufficiently skilled to think together, with or without a chairman, in a logical and orderly way in relation to their purpose.

The members of a group may find themselves arguing at cross purposes because they have not defined their purposes clearly enough, or because not everyone accepts them. If they lack some of the facts they need to know they may make a faulty decision. If they do not think in a logical, orderly way, they may not discuss all the points adequately, or see them properly in relation to their purposes.
You can help by asking questions which encourage people to think more logically and thoroughly for themselves. You may intervene in the discussion for a number of reasons, as Batten says:

1. to make sure that the members of the group really are agreed about what they are aiming to discuss:

Members of a group may sometimes agree on a common purpose only because it is stated so generally that each is able to interpret it according to his own idea of what it is intended to be. If these interpretations differ, the members may find themselves at cross purposes in discussion and this may lead to confusion. If you think that such differences exist, you will try to bring them into the open by asking for some clarification of the purpose, or by stating it in more specific terms and asking if this is what the members mean. As they answer this question the members will incidentally define their purpose more specifically for themselves.

2. to ensure that they consider several possibilities instead of only one:
   By pushing his own idea a dominant member may inhibit other members from putting forward some different ideas of their own with the result that only the one idea is discussed.
   You may try to prevent this happening by asking, when one idea has been put forward, whether there are any others which might also be discussed. This creates an opportunity for the less pushful members to suggest alternative ideas so that every idea is noted. The merits and demerits of each idea can then be discussed in turn. You may ask your question not only at the beginning of a discussion but at any subsequent stage when there may be alternatives to consider.
3. to keep discussion focused on one item at a time:
   Even when the members of a group have listed the possible alternatives, and are discussing one of them, they may stray from it without realizing that they have. You may then intervene to draw attention to the fact. You will not try to influence the members to return to their original point. They may decide to continue with one and abandon the other; or continue with one and return to the other later.
4. to ensure that the members of the group base their thinking on facts rather than on their assumptions about facts:
   Members of a group may discuss and decide an issue on the basis of their assumptions about facts rather than on the basis of facts they have tested for themselves. This is particularly likely to happen when the members of a group are planning a project intended to meet the needs of people other than themselves. They may then assume they know what people want without ever checking the truth of their assumption with the people they are planning for. Thus when members of a group make statements about what other people want, or are prepared to do, you may ask a question designed to encourage members to consider whether these are merely assumptions or whether they are based on ascertained facts: and if the former, how they can best ascertain the facts.
5. to ensure that the members of the group are aware of factors they need to take into account:
   If members of a group are either inexperienced or immature, it is very likely that they may fail to take some long-term considerations into account. For instance, they may plan to provide themselves or others with some amenity without really considering just how, when they have got it, they will use it and maintain it. You can be of great value to the members of a group if, by asking questions of the kind, 'Have you thought about how....?' you draw their attention to points they need to discuss but would not have thought of themselves.

6. from time to time to help members assess what progress they have made and what still remains for them to do:
   Many non-directive motivators work with small groups which have no chairman and which do not follow formal committee procedures. In such groups the members may sometimes ramble on in discussion without any clear idea of what progress they have made so far or of what still remains for them to do. When this happens, you can often help by asking if you are right in thinking that such and such points have now been cleared and such and such decisions taken, but that members are still not agreed on this point and that, and are these the points they now need to discuss? Whether the members then agree with your summary or modify it, you will have succeeded in your purpose of helping to focus discussion more definitely on the areas of disagreement that remain.

Apart from helping to structure and enlarge the scope of discussion in the ways outlined above, you can also help to improve communication and understanding between members in a more general way. Thus you can:

1. help to clarify, when necessary, an unclear statement made by any member of the group:
   When people say something in a group, they do not always manage to convey to the other members exactly what they mean. This can lead to the members talking at cross purposes even about something on which they are really agreed. If you sense that this may happen, you can often help by restating more precisely the purport of what you think the member meant, and asking if this is what he or she meant to convey, e.g. 'I'm sorry, but I'm not quite sure I've got your point clear. Is it ....?' The member who made the contribution originally will then either agree that this is what (s)he meant, or say again more clearly and specifically just what (s)he had meant. Either way, the risk of misunderstanding will have been greatly reduced.
2. help to reduce unproductive argument between members:
   Members of a group may get so involved in arguing against each other - each for his own point of view - that they are liable to forget their overall purpose of reaching the best decision as a group. You can sometimes help them to realize this by suggesting that they may best serve their purpose for the group if they concentrate on listing and assessing the merits and demerits of both viewpoints instead of arguing for one viewpoint and against the other.

Although it may appear at first sight that your structuring and facilitating role is very similar to that of a chairman in a group, it is important to note that it differs in several important respects. Unlike a chairman, you are not a member of the group, exercise no authority over it, make no decisions for it, and are not directly responsible for implementing any decisions the members of the group may make. Thus you are much less involved than a chairman in the actual content of a discussion, and correspondingly freer to concentrate as a neutral on your role of facilitating more thorough, systematic, and objective thinking and discussion by the members of the group. Even if they try to involve you further, as they may well do by asking you for your opinion when they differ among themselves, you will try to avoid giving it. Instead, you will return their question by restating for their further consideration all the points that have already been made for and against each of the alternatives they are considering, together with any further points which you think they might usefully consider.

As far as you can you will also try to keep yourself uninvolved by addressing any remarks you make to the whole group rather than to a single member.

Because as a non-directive motivator you neither have nor seek power, you can only work in a way acceptable to the group. This is an additional reason, if one were needed, why you do not give your opinions, for by supporting one view you are likely to please some members of the group and alienate others, whereas you aim to work acceptably with them all. So you limit yourself to asking questions which help people to think. Even these you have to choose and time with care, for if you intervene too often this may also cause offence. In the end, therefore, much depends on your sensitivity to the atmosphere and feeling in the group, as well as on your skills in framing and asking questions in a wholly acceptable way (12).

6.25. To help a community to decide what improvements to make: in hygiene and sanitation (participatory health education)

When? As the first stage of a health education/sanitation component of a project. This should preferably start at the beginning of a water project with which it is linked.

What? A series of discussions with a group or committee of community members, to examine how hygiene-related diseases are likely to be spread in the community and what might be done to prevent them; then community meetings to agree upon changes in practices and the construction of facilities. Finally, action upon these decisions. Thus, there are 3 steps:

1. The first step in any community is to determine which changes to try to make, both in physical facilities and in the behaviour of people - changes at community, household, or individual level. In a participatory health education process, this "policy-making" should be carried out by members of the community (in small communities, perhaps the whole population), with your support and technical advice as mobiliser. It should be an informed choice, not a matter of your persuading the community members to accept the agency's proposals.

2. The second step is to decide how to go about making the changes which have been agreed: how to construct facilities to meet the needs of the whole population, and how to persuade the whole population to adopt the changes in behaviour which have been agreed. These "planning" decisions should again be carried out by the community or its representatives (formal or informal) with your support and advice. If you cannot get a response from community members to take these decisions jointly - if you are expected as an "expert" to take them alone - it is unlikely there will be much response from the rest of the community to carry out your advice, especially when you are not there to explain why.
3. The third step is the actual attempt to get the changes made: physical facilities constructed and behaviour changes adopted by as close as possible to 100% of the population. In most cases it will be best to start with only two or three most desirable and feasible changes and to campaign for 100% diffusion of these changes among the whole community, otherwise the sense of a community effort will be replaced by that of individual teaching.

Individual teaching methods have proven inadequate in sanitation education, and anyway the nature of the transmission of sanitation-related disease in a community is such that each member is fully protected only when all are protected: 100% coverage for the most vital improvements is desirable from everybody's point of view.

How? Gather together a group of people with whom it is appropriate and useful to discuss the details of current practices in hygiene and sanitation, and how people might be persuaded to change them. Since this is usually a taboo subject - an indelicate topic which people do not much like to discuss or are embarrassed about - you will have to be careful what group to gather. In some communities, it might be an existing committee, or the water committee which you may be organising for the purpose of a water project. But if these consist of senior influential men, especially in a larger community, they may consider it beneath their dignity to discuss things like how people wash their hands. Try to gather a group of people who will willingly do so, and who between them will have experience and are reasonably representative of the people. If possible the group should contain some young, middle-aged, and some older people, and both women and men. If is not feasible to have both men and women in the same group, work with two separate groups, one of each sex. In some places, things may go best if such a group is formally elected as a health or water committee, or as a sub-committee of an existing development or health committee. In other places, you may do best just to work with an informal group of interested people. If there is a schoolteacher who shows interest (s)he should be brought into the group: so should any village health worker or indigenous practitioner of any form of medicine (traditional doctor).

Arrange and attend a series of meetings of the group. Do not expect them to work without your assistance.

Explain that you cannot just tell them what changes in behaviour or sanitation they ought to tell everyone to make, because the problems of disease are different in each community. It is necessary to examine closely what might be causing problems in their particular village. To do this you will have to discuss things in detail with them, because they are the experts on their own community, while you can only tell them in general about how it is possible for diseases to spread.

The main danger at this stage is that you will be cast into the role of an expert, there to tell everybody in the community what is the best thing for them to do. Do not try to do that but introduce topics to the committee, inform the members on the biological facts as far as you know them, and discuss some possible things that you know about which have been done in other places.

Short summaries of the relevant facts concerning some of the more important water-related diseases and their prevention are presented in the Appendix. Use these summaries for diseases and conditions which are a problem in the area where you are working.

Start a detailed discussion of how diseases may be spread in the community by asking people to talk about how excreta disposal and cleaning practices may be inadequate. Gradually, as a contribution to the discussion, bring in relevant points (see Appendix Table). Over a series of meetings, ask the group to decide upon a small number of priority changes they would try to persuade everyone to adopt. This can be done by listing possible changes on a blackboard. Put up suggestions made by community members and make additional ones if you think that some important ones are being left out. It is in the detailed discussion of which of these changes are most important and most feasible (easy or at least possible to carry out) that you can bring in the kind of scientific knowledge summarized in the Appendix).

Do not allow the group to conclude simply that everything should be changed - all the suggestions adopted together. This will undoubtedly be unrealistic: not everyone will do it. Get the group to discuss why not everyone will do it. Get the group to discuss why people don't do these things already. Ask which things would make most difference and which things people would find easiest to do - these should be the priorities to recommend.

Follow the same procedure with those other hygiene-related diseases, mentioned in the Appendix, which are prevalent in the area where you are working. (In the preparation of national/project training materials, those diseases not found in the area should be omitted.) Again ask the group to recommend just one or two particularly important changes for everyone in the community to make. When this process is complete, and the group has prepared a final short list of recommended changes, arrange for these to be discussed by the whole community. The aim is for the community to make enthusiastially a commitment to change - perhaps first in just one respect, maybe two.

Ask the group to discuss the best way of presenting their recommendations to the rest of the community. There may need to be some informal discussion among the community, before it is brought up at a general assembly. The group may also arrange meetings or other events to popularise the recommendations.

The general assembly of the community should then be asked to choose which among the short list of recommendations it will commit itself to. This should be by a resolution, adopted in such a way that all the people feel that they are committing themselves. The goal, then, is adoption by all the population.

One problem type of change is the construction and use of household latrines. If this is suggested, the group should also discuss in detail which type of latrine. See section 27, "To promote the construction and use of latrines".

A special problem:
Social divisions and participatory health education

Sometimes the community consists of a privileged or better-off section and an underprivileged section, to such an extent that it is not realistic to expect the whole community to make a commitment to change health practices and then carry it out. Or there may simply be two or more real "communities" in the same locality, different religions or ethnic groups.

Then you will probably find it best to work separately with each of the real "communities" or social groups. Since by definition underprivileged sections need more attention, it may be best to work mainly or exclusively with them.

It is easy to fall into a pattern of providing health education mainly to the better-off people who need it least. Meetings which are called for everybody may be attended only by those who are not busy working or those who can afford a presentable dress to come in. It is easy to recommend improvements in sanitation, kitchen hygiene etc. which cost money, less easy to work out with poorer people how they might be able to do something about the problem without spending money. Or you may simply be expected to talk to the people of higher social standing; this may be their expectation and that of the underprivileged too, so that it is requires an effort to remember that it is the underprivileged whose needs are most pressing.

6.26. To mobilise communities to improve their own water supplies

When? When your agency is not offering extensive help with a new water supply, so the community will have to make the improvement largely by its own efforts
And:
An improvement is necessary: start with the communities where it is most necessary. For example, where wells or pools are used without any protection, where guinea worm is prevalent, or where people have to go furthest for the worst water
And:
Provided that an improvement is feasible, within the resources available to the community and the help that your agency is able to provide.

What? Get the community interested in making an improvement, deciding what exactly to do, and organising itself to do it.

How? Think if possible of the area where similar conditions apply and eventually mobilising similar self-improvements by communities throughout this area. Then your agency (or perhaps several agencies acting together) may be able to organise a campaign on a large scale, and get a lot done in a short time.

Usually some material help (e.g. cement) is useful or indeed required. This is because you can quite easily mobilise people to make labour contributions but not to collect money to buy such inputs, which communities expect outside agencies to provide as their minimum contribution. So one of the first steps is to consider what material help your agency may be able to give, and to ensure that it will be available when required. (This is, unfortunately, a big difficulty for some agencies, particularly some community development departments, unable to get sufficient budgetary allocations for minor materials).

In the first (or only) community in an area where the unsatisfactory conditions exist which you think people should change, you will need to devote some considerable time for an in-depth discussion with the community of what you could do together and how you could organise it. Then, if the first community successfully makes an improvement and is pleased with it, you and the community will have learnt much, you will know what you can do, and you can bring people from other similar communities to the first, to see and discuss it.

This situation may already exist. There may be cases of local improvements which people have made in the past in the area, and you want to extend these to communities which have not yet made them. But in this case, you would probably do well to check as far as possible whether the specific improvement and the way people did it are the best that you could do. Although you might be able to ask experts their opinion, for example visitors or programme engineers, the most important way of doing this would be to visit several communities which have carried out these improvements and ask what problems they have with them. In other words, make maximum use of existing local experience, good and bad.

In the first community:

- arrange for frequent visits or a stay of a few days in the community. This allows time to get to know people and discuss informally with a variety of people in the community what they see as their problems; what they think the community working together to solve problems might do; what might prevent people working together; and more specifically, what people see as health problems and water problems: whether people see anything wrong with the existing water supply.

- Explain the limits of what material help your agency can give from the beginning (say, perhaps, a few bags of cement to protect a well).

- Gather a group to work with more closely, as described in the previous section "To help a community decide what improvements to make in hygiene and sanitation," Pp. 141-144.

- Hold a number of group discussions with this group, as health education in the field of water and sanitation. Explore with them the possible causes of poor health in the community, what actions the community might take as a community or as individuals to improve their health, or their economic position and well-being in general. If there are particular problems unrelated to water and sanitation which everybody wants to tackle first, you may be able to help with these. Then it would be inappropriate to insist on water or latrines.

Otherwise, if the group is responsive to the idea of improvements in water and sanitation, explore with them in detail what they can do.

- Consider with them the various technical possibilities for improving water supplies (see below, 6.26.1), asking which might be the best solution given the needs and the resources available. Encourage the group to make a recommendation to the community as a whole. Make sure that this is informally discussed by the rest of the community.

- If and when there appears to be wide agreement on an improvement, arrange with formal leaders for the holding of appropriate formal meetings (e.g. village council, development committee). If there is no disagreement here, then arrange with them for the holding of a general assembly to discuss and formally commit the community to the plan. (In some small communities, there may be no need to have separate council meeting and assembly: simply an open meeting).

- Encourage community to agree upon a detailed who-does-what plan which is regarded by all as fair and reasonable. Encourage active persons to take on practical organising tasks. Normally, keep in the background giving help and encouragement, but not directly organising others, or there will be nothing done when you are not there. You might find that in communities of equals, no one person is able, or feels able, to put himself forward as an organiser for fear of being criticised. Or a community member may find it difficult to confront a neighbour who has not turned up for work or not done something he promised to do. You will have to consider whether to intervene in such cases to do these things yourself. You may find this the easiest way of getting things done, and people may be grateful to have an outsider doing them. On the other hand, you may think they'll never get anywhere if they have to depend on outsiders like that. Also if you do it insensitively, people may resent your actions.

In a subsequent community:
You will be able to shorten the above procedure, and to adapt it according to what you have learnt.
In particular, you will now be able to show the new community what has been done by the previous one(s). Of course things go best if they live close by and often visit the previously successful community, and so have plenty of opportunity to discuss the project informally. The next best thing is to arrange a visit, say by the group or committee of the new village with whom you are working, so that at least they can see for themselves what has been done and talk to the people who did it. At the very least you should bring to the new community someone who was involved in doing the work in a previous community, who is a local person and an "expert with his hands". This person can help you demonstrate the details of what was done.

For example, in one project in Tanzania the following achievements are reported (14):
"In some villages where an outside water project has not been planned, the discussions and organization sparked off village self improvements. These include:
- clearing traditional wells of vegetation and rubbish;
- digging of drainage channels and protecting wells with a mound;
- promotion of longhandled scoops;
- deepening wells and making burnt-brick parapets;
- use river bed wells for filtered drinking water;
- training village oxen for communal water collection in the dry season;
- financing of dams and obtaining technical assistance in construction;
- organization of (and contribution) to an extension of a mission water supply.

There are however some villages relying on rivers with a rocky stream bed where no project is planned and no improvements could be made by the villages themselves. Here, other solutions (one village itself suggested household water filters from local materials, as the women make pots) must be identified."

In this project, there were 20 villages where no outside water project had been planned. Community mobilisers paid 4 visits to each village, the first one lasting 7 days, the follow-up visits 2 to 3 days each. The intervals between visits were 9-18 weeks. Almost all villages were also visited once by the supervisor.

During the first week, the community mobiliser evaluated the existing water and sanitation situation, including the participation of the population in any water supply activities. He or she then reported the findings to a general assembly. Here they were discussed, and a village action plan was drawn up to enhance village self-reliance. Usually a village water sub-committee was elected during the meeting. Where rural health staff were present they were also actively involved in the meeting and the planning and implementation of village action. Extension workers, teachers, and local party workers/administrative staff were also often involved.

Some technical possibilities

Information should be presented to the trainees on each of the types of improvement which may be possible in the area where they will be working. Relevant practical skills should also be developed (13).

These may include:
- Spring catchment (hillside and bottom springs);
- Well protection:
  lining, parapet; windlass and other better-protected methods of drawing water;

- Rainwater ground catchment, small dams, sand dams;
- Rainwater roof catchment:
  making of containers such as large ferrocement jars; or your agency may be able to supply appropriate containers such as fibreglass tanks for communal installation. Trainees should be given guidance on the *minimum* rainfall requirements which need to be taken into consideration;
- Hoses to bring water from small springs or streams;
- Simple bamboo pipes for the same purpose (with frequent renewal: methods of preserving bamboo for long-term use as pipes are beyond the village level of technology);
- Simple treatment: household sand filters; chlorination of wells or of water in household containers.

6.27. To promote the construction and use of latrines

When? When it has been decided that a latrine programme or campaign should be undertaken in the community. Preferably, this should be a decision agreed by the community after a process of consultation such as that outlined in section 25 ("To help a community decide what improvements to make in hygiene and sanitation").

What? A campaign with the objective that a high percentage (100% if possible) of the households should have, use, and maintain in a satisfactory condition their own household latrines. And that these latrines should be used for the disposal of all human excreta: that of babies should be thrown into them; young children's special needs should also be catered for. Communal latrines are discussed too: their disadvantages generally outweigh any advantages. (Here we discuss as usual only social and organisational aspects. Trainees should also be taught the technical and manual skills they will need (15).

How? Motivating people to build latrines is, of course, a matter of encouraging them (see task analysis sheet in chapter III, 3.3.) to see latrines as worth the effort and related expense; and worth the possible disadvantages such as the space the latrine will take up if the house-site is small, or the difficulty of avoiding foul smells or of confining vermin such as cockroaches inside the latrine.

This does not just mean emphasising positive aspects such as improved health, convenience, privacy, or prestige. It also means looking together with the community at the questions of cost and the drawbacks that are likely. A solution to the problems is much more likely to be found if you discuss them in detail with the community, than if you try to think of them by yourself.

One of the main problems is that the best designs of latrine tend to be expensive for the poorer people in many communities, so that it is only a better-off minority that installs one.
Many agencies or governments offer subsidies in the form of materials provided free or at a subsidised price, e.g.:
- cement (say, 2 bags for one VIP latrine);
- squatting plates or seats;
- pour-flush toilet bowls with water seal.

This can indeed bring the latrine within the range where more people can afford it, and encourage people to take advantage of a special opportunity. However, there will still be other expenses which it may be difficult for some people to afford; subsidies are usually made available only for a particular design so that the programme has little flexibility to respond to people's preference for a different design; and, as with most subsidised items, they are likely to be in short supply, and it may be difficult to motivate anyone to install a latrine until they get the subsidised item.

It will be best if the agency has the flexibility to subsidise its own design worked out with the communities where it operates, and suitable for the poorer households within these communities. You will not need, of course, to have a different design in each community, but perhaps different designs for each area where the geographical features, the culture, and/or the economic level is different. Among the features of design which different communities or households may have different opinions on are:

- cost (can they afford the cost of, for example, a VIP latrine?)
- combined use of latrine as bath-house
- size of superstructure (space available)
- squatting or sitting and size of seat; material of seat (e.g. wood for warmth)
- pour-flush water-seal? (requires more care; bringing water; means abandoning certain anal cleansing materials; if water is available people may want flush toilets)
- privacy (where to locate latrine? door down to ground? - but there are other considerations such as snakes)
- attractiveness
- reliability against weakening by termites
- hole size (reliability against children falling in)
- composting latrine (do they need the compost? if they need compost but are still reluctant, are they unconvinced the material will be harmless, or are the reasons more deeply embedded in culture and impossible to change?)
- latrine sharing arrangements (most commonly there will be one latrine for each household, but special discussion may be required if space limitations mean that it may be desirable for two or more neighbouring households to share a latrine; or in larger compounds where a latrine may be shared between a number of related households; or in special cultural environments where it may be regarded as shameful for certain relatives or for the two sexes to share one latrine, even within the same family; wherever latrines are shared by more than one household, special care is needed over making clear arrangements to share responsibility for cleaning and maintenance).

If there are any other objections to latrines it may also be possible to meet them with a different design. For instance, people may say they prefer the open air because it is more pleasant; this can be taken to refer to the smelliness and the small space available in a latrine, and you can put the idea forward of a vent-pipe to get rid of the smell and/or a larger superstructure for the extra space. This may well mean that the cost then becomes too high, and sometimes the problem cannot be solved; but under some circumstances it will be possible to find a design which can be agreed on (16).

If people are fertilising their fields by defecating there directly, it may be possible to recommend a composting type of latrine so that they do not lose the value of the fertilization. If people are worried about the pests associated with latrines, it may be possible to find ways to seal the latrine so that these pests cannot get out. The mobiliser should be able to call on more experienced technical personnel in the agency to help deal with such problems.

Sometimes a demonstration latrine is installed in one household free in order to encourage others to build the same type of latrine. If this is the policy of the agency, consider asking the community to agree that everyone will join in doing the manual work of building the demonstration latrine: this will show everybody effectively what needs to be done, and it is also to be hoped that it will build up a positive attitude. But who should be the beneficiary? The community should decide, but you can suggest that they choose a family which is particularly in need of the help: perhaps a household with no able-bodied man, unable to afford the expense of building a latrine for itself. Otherwise, the lucky family could be decided by lot. If, on the other hand, a demonstration latrine is built at the house of a chief or community leader, other people may be left with the impression that such facilities are good for high-status people but are not for themselves (Therefore it is not recommended agencies to reinforce inequalities within communities by suggesting that community members should work without payment for chieft or leaders. Sometimes it may be necessary to go along with such situations, but often community members are not enthusiastic about doing such work). Another possibility is to site demonstration latrines at public buildings or schools; but they should be of the types which people can build for household use.

Before launching a latrine programme in a new area (new in terms of having different cultural patterns from where you have worked already), make sure you know who will actually do the digging (men or women, all householders for themselves or will the better-off employ others?). What season of the year will be best for the campaign? If materials are to be provided, make sure thay arrive at the right time of year and that their arrival is coordinated with the digging.

There is a particular need to consult women about latrine siting and about the design points mentioned above. It is also most important to discuss with women the disposal of the faeces of babies and young children. There is very little point in having a latrine which is used by adults and older children, but young children continue to defecate around the yard where they also play. But on the other hand it is no good either to tell mothers to clean up after their children or not to allow them to play on the ground. It is a matter of discussing the problems with the women, showing that you realise there may be real difficulties (e.g. that they do have other things to do, that the children must play on the ground around the house) and working out solutions with them.

In most places it will be much better to have separate latrines for each household, but in a few situations this is difficult and communal latrines can be considered. By "communal" latrines we mean those open to all people in a community (not just shared between a few neighbours or by an extended family in a compound), and used every day by community members (as distinct from a "public" latrine for travellers). They may be considered in particular in areas where houses are very closely crowded together so that people do not have room at the house-site for a latrine. There are also areas (e.g. Ghana) where they have become a common solution even in villages where there is no problem of space at house-sites. They may have advantages such as needing less total work in construction than individual latrines for every house, and also in the fact that everyone is working together and this may encourage a communal approach to other problems. However, the great disadvantage is that cleaning and maintenance may well be neglected because it is not anyone's responsibility. Perhaps if you have an active committee they may be able to solve this problem by organising a good system of cleaning and maintenance; but in many countries it will be difficult to find people willing to do this work, either as volunteers (e.g. members of user households sharing the work, or schoolteachers organising pupils) or as part-time employment.

In some towns of South Asia communal latrines have been working well where full-time operators are employed. A charge is made for the use of the latrine (usually the smallest coin; children may be exempted), and for the use of bathing facilities which are also available. The charges go to the attendant, so his income depends on the number using the latrine, and he has the incentive to keep it in good order.

In some cases these communal latrines are managed by a local voluntary agency within the community, assisted by an external voluntary agency which has also helped to fund the construction: it cannot be expected that charges will meet construction as well as maintenance and particularly operation costs where an operator is employed full-time. In fact, they will generally only be sufficient to meet the cost of employing the operator in those densely-crowded towns where most people have neither their own household latrines nor fields they can go to.

A final word on the arguments to be used to motivate people to have and to use latrines: it is sometimes said that the main reason people build latrines is prestige, and that one should therefore make use of this argument to motivate people. But only some people - the better-off who can afford it - are usually much concerned with prestige in the sense of showing off new acquisitions. There is even a danger that people will build latrines to show them off, but will not use them. In any case, we think that in the long run it pays to build up people's confidence in one's sincerity by being honest about the reasons one thinks they should install latrines or make other changes: hence we recommend emphasising the health arguments while referring also to convenience and privacy. Certainly the practice of some officials to require people to build latrines, or to bring strong pressure on them, should not be followed; for one reason, they may not use them or may neglect them as soon as the official has gone; and they will not like to be treated in that way. Some projects have been more successful with making their help with building a water supply conditional on everyone building latrines first; but if your agency's policy is to do this, make sure that poorer people are not being forced to spend more than they can afford on building their latrines.

If you are staying for any length of time in a community, you can build your own latrine as a type of demonstration. Indeed, if you are living in the community you cannot expect to convince others to have a latrine unless you have one yourself.

Notes

(1) The information which should be looked up rather than memorised will be primarly technical (for mobilisers who will be involved in technical aspects, including construction of latrines) and medical - concerned with the prevention and simple treatment of water and sanitation-related diseases, for those who will be involved in health education. For the latter, the Appendix provides information which can be selectively used in the preparation of manuals.

(2) Werner D., and Bower B.: Helping Health Workers Learn. Hesperian Foundation, Palo Alto (1982).

(3) This draws in particular from the Chapter "Women as Planners and Acceptors" prepared by Christine van Wijk-Sijbesma of IRC for a forthcoming report on the role of women in water supply and sanitation. We are grateful for the opportunity to use it in this context.

(4) A test which is simple and independent of temperature control, is described by Manya, K.S., Maurya, M.S. and Rao, K.M in: "A simple field test for the detection of faecal pollution in drinking water", Bulletin of the World Health Organization Vol. 60, No. 5, 1982, Pp. 797-801.

(5) Consideraciones prácticas para la promoción de sistemas de agua potable y alcantarillado (Practical considerations for the promotion of water and sewerage systems), SAHOP, Mexico (1982). Other Latin American agencies have prepared similar schedules.

(6) Ventura Rivas, José Luis et al: Manual de Promoción para Sistemas de Agua Potable y Letrinización en el Medio Rural (Promotion manual for water supply systems and latrine programmes in the rural environment), El Salvador, Ministerio de Salud Pública y Asistencia Social, Departamento de Acueductos Rurales. San Salvador, 1980. Annex No. 6.

(7) Espitia, Guillermo and B. Ortega: "Experiencias con el proyecto de filtración lenta en Colombia" (experiences with the slow sand filtration project in Colombia), in IRC: Informe del seminario internacional sobre filtración lenta de arena para abastecimiento público de agua en países en desarrollo, Neiva, Julio 13-16, 1982: IRC Bulletin No. 18 (1983), P. 67.

(8) Agua del Pueblo: Sector Analysis and Programme Planning Document for Environmental Sanitation in Highland Guatemala, 1980. Pp.114-5

(9) Instituto Nacional para Programas Especiales de Salud (now Instituto Nacional de Salud), División de Saneamiento Básico Rural: Reglamentos de Juntas Administradoras de Acueductos y Alcantarillados (Regulations for Administrative Boards of Water Supply and Sewerage Systems), Bogota, (1974; 75 pp.).

(10) Programme leaders may also consider the system adopted in Rajasthan, India, where an area Hand Pump Mechanic carries out all repairs to the India Mark II pumps, from the smallest to the largest. He is a semi-literate village youth given 3 months' training and provided with a full set of tools which he purchases by repaying a loan. He is paid by the State authorities: Rs. 100 (c. $10) per year for each handpump he looks after, plus an allowance for spares. He needs a certificate from the village headman that he has kept the pumps in good order. With 36 to 40 handpumps to look after, it is part-time employment. See Roy, S.: "One-tier system: the Tilonia approach to hand-pump maintenance", Waterlines Vol 2 No. 3 (Jan. 1984), Pp. 13-16.

(11) Finau, Salesi and Finau, Sitaleki, A.: "Better accounting improves water supply", World Health Forum, Vol. 4 (1983), Pp. 169-170.

(12) Batten, T.R.: The Non-directive Approach in Group and Community Work, Oxford University Press, London, (1967).
See also Batten: Training for Community Development: a critical study of method. Oxford University Press, London, (1962).

(13) WASH has published training manuals for some of these: Wash Technical Paper Reports Nos. 25/26/27/28: A Workshop Design for Latrine Construction/Handpump Installation and Maintenance/Rainwater Roof Catchment Systems/Spring Capping. June 1984/June 1984/June/1984 and September 1984. Water and Sanitation for Health (WASH), Washington.

(14) PMO/IRC Project for the Development of a Community Participation Component in the Tanzanian Rural Water Supply Programme: Summary of activities and results of the project since the preliminary report. Paper presented at the Interministerial Meeting on Community Participation in the Tanzanian Rural Water Supply Programme, Morogoro, 19-20 December 1983.

(15) See for an appropriate guide: WASH guide on Latrine Construction (1983), in the series Water and Sanitation for Health (WASH), Washington. Or: van Nostrand, John and James G. Wilson: Rural Ventilated Improved Pit Latrines: A Field Manual for Botswana. Washington, World Bank: TAG Technical Note No. 8 (1983).

(16) Inexpensive vent pipes can be made from mainly local materials, e.g. a mat of reeds rolled up and plastered with cement mortar. This and two other possibilities are described in: Ryan, Beverley and Duncan Mara: Ventilated Improved Pit Latrines: Vent Pipe Design Guidelines. Washington: World Bank, TAG Technical Note No. 6 (1983), Annex 1.

22. On this point, we also do not think agencies should reinforce inequalities within communities by suggesting that community members should work without payment for chiefs or leaders. Sometimes it may be necessary to go along with such situations, but we suspect that often the community members are not so enthusiastic about doing such work as it may appear to outsiders.

VII TEACHING METHODS AND APPROACHES

This chapter discusses how trainers can help their students to learn the facts, the skills, and the attitudes they will need to display if they are to gain people's confidence so that they can motivate them successfully.
Section 1, "The role of the teacher", introduces the need for an adult learning approach which encourages the trainees to take an active part, to think for themselves, to relate their learning to what they already know from experience (keeping language simple), and to take part in friendly constructive criticism and thus learn from one another.
Section 2, "How to teach knowledge", points out that students can acquire knowledge from other sources than the teaching itself, and should be encouraged and shown how to do so. The rest of the section gives hints and advice on the presentation of facts in teaching: planning and giving a lecture, using visual aids and handouts.

In "How to teach skills", (section 3) the need for supervised practice of all skills is stressed. Most attention is then given to role-playing as a method of teaching human relations skills, and some sample role plays are presented.

Next, the case discussion method is described: a method which applies all the principles outlined in "the role of the teacher" to the teaching of human relations skills. It may be the main method used in in-service or refresher courses, while also part of the pre-service training. Cases are developed, preferably from the experience of the programme; these are presented for discussion by the trainees first in sub-groups; the sub-groups' observations are then discussed by all; the trainer assists by structuring the discussion, clarifying and summarizing. Cases illustrate mistakes mobilisers can make in working with the community, and the discussion of cases builds human relations skills.

The method of small group projects is then briefly described, and the section ends with a discussion of how to solve some of the problems which arise in giving trainees job experience.

The final section concerns "How to teach attitudes". Attitudes such as a conscientious dedication to the goals of the programme and a respect for the abilities of community members are essential for successful community motivation. These attitudes are shaped by the whole social environment. The section discusses how they can nevertheless be influenced. It is pointed out that new attitudes need to be reinforced by the agency in all its work. Lastly, the question is put whether mobilisers should disturb cultural beliefs they think scientifically wrong, or use them. This is related to the openness toward different opinions which is important in the influencing of attitudes.

This chapter discusses how trainers can help their students to learn skills, attitudes and facts.

1. THE ROLE OF THE TEACHER

In the old way of teaching, teachers tell students as much information as possible, passing on the teachers' knowledge. Some teachers still feel that they must do all the talking while the students listen. But if students do not learn, the teacher is talking, not teaching. Now we have learnt that students learn much better if they are actively involved in learning themselves. The teacher acts as a helper, providing students with work experiences, discussion questions or reading suggestions. In this chapter we describe active methods of teaching skills, attitudes and facts. We recommend that you try those you have not used before or adapt them to suit your trainees.
You may have to make an extra effort to use these methods because it is easier for you to give familiar lectures, and easier for the students to sit and listen to you. Students will find it much harder to learn actively and may complain at first. You should explain the advantages of the new methods and give students confidence in their ability to learn from their own experience. Explain that they already have experience of life and knowledge which can be built upon.
When you train mobilisers, your teaching methods are particularly important because your students will copy them when they work in the community. If you teach people to follow, not to explore; to memorise, not to think, they will not be able to help the community to define their problems and make decisions.

1.1. Caring

One thing which encourages students to make more effort is the belief that teachers care about the students. The way that you behave as a teacher shows whether you care or not.
You can show caring by:
- arriving for teaching sessions on time;
- preparing thoroughly for teaching sessions;
- talking to students to find out what their interests and ambitions are;
- asking students to comment on the teaching sessions so that the sessions can be improved;
- requiring students to do work of a high standard.

You can help to motivate your students to learn by making your teaching interesting, easy to learn and relevant to the students' work. This helps students to realise that you care about their success.
There are some general rules for good teaching, but you, the teacher, have to apply these rules to your students, your subject and your training programme. You have to be imaginative, and to take the trouble to get feedback from your students and care about their success.

1.2. Active learning

When you teach, do you:
- ask students to answer questions?
- ask students to apply information in solving problems?
- arrange for students to practise thinking and practical skills?

Experiments show that students learn best when they are given some activity to do.
As the Chinese proverb says:

If I hear I forget
If I see I remember
If I do I understand

Activities should make students use information, not just repeat it. Possible activities include answering questions, explaining an idea to the class, role plays, projects, writing notes, or reading from a manual.

Exercise

Imagine you are teaching students how to explain to a group of farmers the ways that hookworm can spread from one person to another. Which of the following activities would you choose to do after your introduction and why do you think the activities you choose would be most useful?

A. Get the students to copy your diagram of the life history of hookworm from the blackboard to their notebooks.

B. Get the students to read a section of a manual on communication techniques, and then write down the advantages and disadvantages of 5 different methods.

C. Divide into small groups and ask one member of each group to explain to the others about hookworms as if (s)he were the mobilizer and the others were the farmers. Discuss the good and bad points of each presentation (role play), and try to agree on the best approach.

D. Discuss students' experience of local knowledge, attitudes and practices in relation to hookworm prevention and treatment.

E. Get the students to write in their own words the correct way to explain about hookworms to local people.

F. Take the students to visit a community and involve people in looking for the main ways that hookworms spread in their community.

All the activities are better than no activities at all, but some are more useful than others.
A is only copying rather than doing something with the information.
B might be useful, but students will learn more by trying out the different methods and discovering their pros and cons for themselves.
C is very valuable because students learn together from experience the best approach, and gain skill in doing it.
D helps students to think about the view-point of the farmers.

E will not help students to find out for themselves the best way, or how to adapt to different situations. The teacher defines the "correct" way and the students repeat his or her opinion.
F would be valuable if students have a good supervisor or some experience and the training programme had already established rapport with the village people. If not, the project could go badly wrong because people were offended by the approach of the inexperienced trainees.

Of course, you would not use all of these activities in one lesson. You would choose those which you can organise and which will help your students to learn best.

Don't just talk - make your students do the work. Think of as many activities as you can which will draw ideas out of students and help them to learn from their own experience.

These two stories are taken from Werner and Bower (1982) (2). (The first was adapted from Abbatt, F. (1980) (1).

APPROPRIATE AND INAPPROPRIATE TEACHING: TWO STORIES *

In addition to role plays, you may want to use stories to help students and other instructors see the value of the new teaching methods. Telling stories often takes less preparation than role plays, and if the stories are imaginary or from another area, no one will be blamed for the mistakes that are described. Here are 2 stories comparing different teaching approaches and their results.

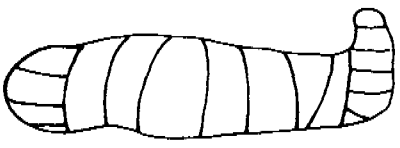
STORY 1 *

A health worker named Sophie completed her training and passed all the exams at the end of the course. Then she went back to her village. It was a long journey because the village was far away. When Sophie arrived everybody was pleased to see her again. Her mother was especially pleased and proud that her daughter had done so well.

After the first greetings, Sophie's mother said, "It's good that you're back, because your baby cousin is ill with diarrhea and doesn't look well at all. Do you think you could help?"

Sophie went to see the baby and realized that he was badly dehydrated. She thought the baby should go to a health center, but the journey was too long. So she thought about what she had been taught. She could remember the anatomy of the gastro-intestinal tract, and all about electrolyte balance. And she remembered that a mixture of salt and sugar in water would help. But she could not remember how much sugar and how much salt to put in the water.

Sophie was very worried that the amounts would be wrong. She did not know whether to send for help or to guess how much to use. She thought that the baby was so sick she would have to do something. In the end, she made up the sugar and salt solution in the wrong proportions, and the baby died.



Moral of the story: Some training courses spend too much time on detailed facts, many of which have little importance. As a result, the most important things are not learned well. The most important facts are those needed for solving common problems in the community.

STORY 2

In a short training program for village health workers, students decided that one of the most serious problems in their villages was diarrhea in children. They learned that the main danger with diarrhea is dehydration. They discussed *Oral Rehydration Solution*, and agreed that teaching mothers and children how to make and use it should be one of their first responsibilities.

"It won't be easy," said one of the students, herself a mother. "People don't understand funny words like *oral, rehydration,* or *solution.*" So the group decided it would be better to speak of *Special Drink*—even among themselves, so they would not be tempted to use fancy words in their villages.

"What if the mothers put in too much salt?" asked a student whose uncle was a doctor. "Wouldn't that be dangerous?"

"Yes," said the instructor. "We need to find ways of teaching that will help parents and children remember the right amounts. How do people remember things best in your villages?"

"We all remember songs," said one of the health workers. "People are always singing and learning new ones. We remember every word!"

So the group decided to write a song about diarrhea and Special Drink. They all worked on it together. But they got into an argument over what to call the baby's *stool.* For most people, a stool was something to sit on.

Nobody understood words like *feces* and *excrement.* The word *shit* some people considered dirty. "But it's the word everyone understands—even children," argued one health worker. "Especially children!" said the mother. Finally they agreed that *shit* was the most appropriate word—at least in their area.

Several months later, after the course was over and the students were back in their villages, one of the health workers, named Rosa, was met in the street by a mother. The mother gave her 7 eggs wrapped in a leaf.

"Thank you," said Rosa with surprise. "But why . . .?"

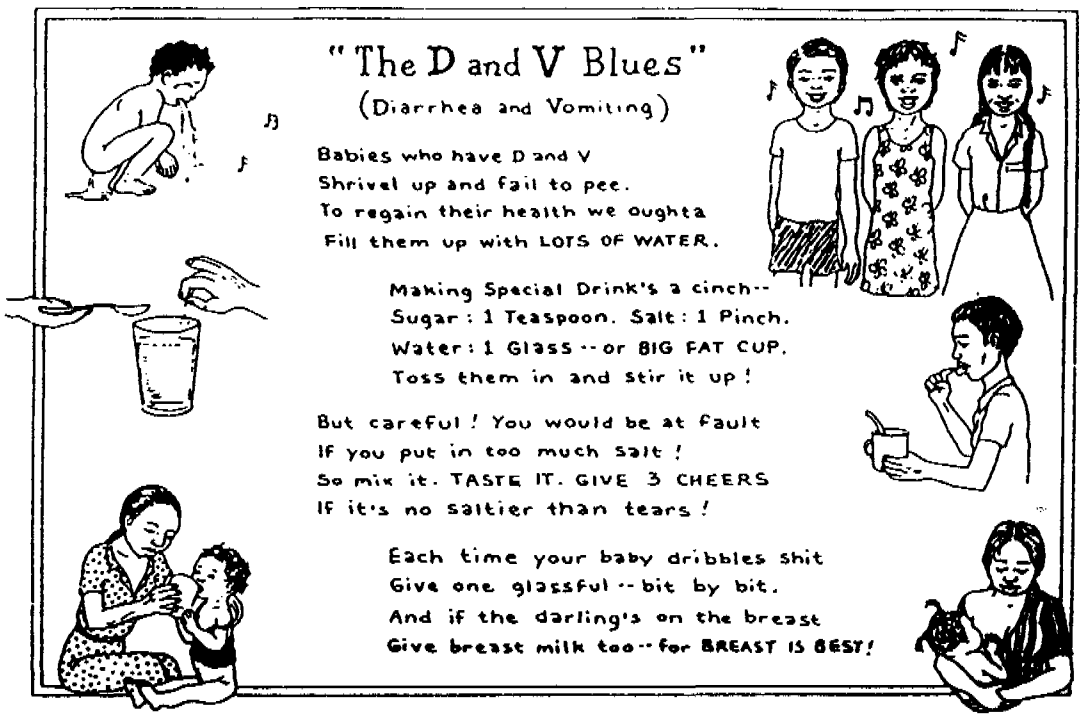
"You saved my baby's life!" said the mother, hugging the health worker so hard she broke 3 eggs.

"But I didn't even see your baby!" said Rosa.

She hugged the health worker so hard she broke 3 eggs!

"I know," said the mother. "You see, my baby had diarrhea, but the river was flooded so I couldn't bring him to the health post. He was all shriveled up and couldn't pee. He was dying and I didn't know what to do! Then I remembered a song you had taught the children in school. My daughter's always singing it. So I made up the Special Drink, tasted it, and gave it to my baby, just like the song says. And he got well!"

Moral of the story: Training gives better results if it keeps language simple, focuses on what is most important, and uses learning methods people are used to and enjoy.



1.3. Giving and getting feedback

Feedback enables students and teachers to know how well they are doing and to improve on their performance.
Often feedback only goes one way, the teacher tells the students what they are doing well, what they are doing poorly and how they can improve. But teachers also need feedback on their methods and approaches because if they are not teaching well, the students cannot learn well.

You can give feedback to students in several ways. Formal exams are often used, but these often ask students to remember facts, not use them. It is better to make activities and feedback a normal part of teaching and learning. Students can assess themselves, each other and the teacher as they learn.

Example

The class acts as the audience when a student practises using a flannelgraph to teach about roundworm transmission. When the student has finished, the teacher and members of the group make the following comments:

"That was interesting, you used the whole of the flannelboard so the pictures were easy to see".

"I liked the way you told the story and moved the pictures".

"You should have involved us more. You could have asked us what we think, or invited us to put up the pictures and talk about them".

The teacher and students are giving constructive criticism. They praise what the student does well, and help her to see how she could do the job better.

In the same way, teachers can ask students to comment on how they liked the class, what they learned and how it might be better. At first students will find it hard to criticise the teacher, but if you show that you really welcome friendly criticism, the students will become good evaluators.

2. HOW TO TEACH KNOWLEDGE (1)

2.1. How important is knowledge?

Obviously all community motivators must have some knowledge in order to do their job. For example, a community motivator must know how much salt and sugar to use in rehydration mixture. The motivator who can give this simple advice may save lives and will gain people's confidence by showing informed concern. He does not need to know the chemical formula of salt and sugar, nor the complex mechanism by which they pass through the gut wall.

So some facts are very important and some are not at all useful. This means that the teacher must choose which facts to teach. Ask yourself, what would students do poorly if I left this out?

Important facts may be important in different ways and they should be taught in different ways.

Take as an example the training of a group of community motivators who will be responsible for running a programme to introduce VIP latrines. The course may include the following (and more, of course):

A. How to reinforce the slab;

B. How to explain the advantages of the latrine to households;

C. The history of its development and adoption in the country;

D. The dimensions of the latrine and ventilation pipe.

A is an essential fact. The teacher must make sure that all students remember it; and that they can actually make a reinforced slab.

B is also important - but it is more important that students can do the explaining rather than writing down the facts. They must be tested on the skill, not the facts.

C How the latrine was developed and spread may make the lesson more interesting. But do let your students realise that this is only background information. It does not need to be remembered, nor should it be part of any exam.

D The dimensions of the latrine may be difficult to remember. In this case the facts should be recorded in a manual, or a notebook for students to keep.
The teacher must make sure that the facts are recorded accurately and that the students will look them up (i.e. that they get used to this method of working).

2.2. Where should students get the facts from?

Many teachers see their job as handing on facts that they know to the students. The teacher talks and the students listen and make notes. But there are many other ways of learning facts more actively, and helping students to learn how to look for facts themselves in order to solve problems as they go about their work.

Incidentally, the reason why many trainers and programmes assume that trainees must have a certain level of literacy (e.g. completed primary school) is that it is absolutely required for the method of teaching in which the students make notes which are to be their "job manual". But with other methods of teaching as we recommend, trainees with lower levels of literacy or none at all can be taught, though it will certainly take longer and require more imagination, and some tasks of the job will have to be handled by the supervisor rather than the mobiliser.

The ability to look for facts for oneself will be more valuable than merely memorising facts for an exam.

- Students can learn to take relevant facts from manuals, textbooks, film strips and posters.
- Another source of information is the real world. Students have experiences of village life which they can share. They may know how water gets contaminated and how factions divide communities without being told. Send students out to collect information in the community. This will be more real than the facts spoken by the teacher. The information means much more and is learnt better. And the trainees will get used to finding things out from the community, which they will need to do when on the job and when experts and supervisors are not there to answer questions.

2.3. Planning the topics of a lecture

When you have decided that some facts need to be taught you must plan the teaching session in which they will be taught.

A useful way of doing this is to start with the task. Then decide on the main items which must be covered. For example your task might be the control of the malarial mosquito. Some of the themes you will want to cover are:

- sites where the larvae can be found;
- methods of eliminating these sites
- methods of preventing mosquitoes using these sites
- etc. etc.

When you have decided on these themes, they should be put into a sensible order (you cannot talk about preventing mosquitoes getting to the sites, until you know what the sites are).

Then think through each theme to decide how much detail is needed. What facts must be remembered, what facts will add to the interest, what facts should be recorded for reference.

2.4. Giving a lecture

There are many ways of giving a lecture. The advice given below describes just a pattern. You will want to vary this and develop your own method.

However this does give a basic guide which you can follow and improve.

1. Get the students' attention.
   You can do this by explaining why the lecture is important to the students. Or tell a story which shows why the topic is important. Maybe you can ask what they already know about the topic or why they think it is important.

2. Give a summary.
   Explain what is going to be covered. This helps the students understand how each part of the lecture is related.

3. Test how much students already know.
   Make sure that all students really do know any facts which you are going to use. For example, if the students need to know some simple mathematics to understand a point, check that they do know it.

4. Present the facts and information.
   You may tell the students the facts, or
   - use handouts
   - ask students to read a part of a book
   - ask one of the students to describe the facts
   - use audio visual aids
   - show models, equipment or actual examples

5. Set some activity.
   This activity should make the students use the facts they have just learnt. This is a very important part of teaching.

   For example you can ask individual students or groups of students "What would you do if ... "or "How would you ....?" Another kind of activity is simply to write notes or fill in gaps of a handout.

6. Summaries.
   Repeat the main points which you want students to remember.

7. Test.
   Check whether the important points have been learnt.

8. Set an exercise to do after the lecture.
   You may ask students to prepare for the next session by reading, doing some specific work in the community, or by revising what has been learnt previously.

   You may think that this is not the kind of lecture that you used to go to when you were a student. This does not matter. A lecture should involve the students in doing things. Just listening is a poor and slow way of learning.

2.5. How to speak in the lecture

You should not spend the whole time talking. But when you are talking there are some points to remember.

1. Do you speak loud enough?
   Often teachers speak to the students at the front. The ones at the back simply cannot hear and so cannot learn. If you are not sure whether you can be heard, ask a friend to sit at the back and tell you.

2. Do you speak clearly?
   The volume may be loud enough, but you may speak unclearly. You should make sure that the words are clear and that you speak to the audience. Do not look down at notes or talk facing the board.

3. Do you use simple words?
   Make sure that the language you use us simple enough for the students. This is especially important when the students may come from communities where different languages are spoken.

4. Do you sound as though you are interested?
   Some teachers speak in a flat, monotonous voice. They sound bored and their students soon become bored. Vary your voice and try to show that you are enthusiastic and interested.

5) Do you check that you have been understood?
   Ask questions occasionally so that you can judge by the answers whether the students have understood you. It is best if these questions can relate what has been said to the students' earlier knowledge or views, or ask the students to build further on what you have said (e.g. a question like "How do you think one could do that?") But if you cannot think of such questions, then you can just ask a student to explain the point you have made in his or her own words.

2.6. Clarity

Students must be able to hear what you say and read what you write. Ask an observer to sit at the back of the class and tell you whether (s)he can hear and see clearly. Can you read your own writing on the blackboard? Do you use a clear pattern or order when you write on the blackboard?

Students may not clearly understand the words you use, particularly if you have had a longer education.
You should deliberately try to talk in the same way your students talk. Then your students will teach people in the community in the same way. Visual aids also help to make your lesson clearer.

2.7. Visual aids

Some of the ideas and facts in your lecture will be best explained by drawing a diagram or a picture. Then you use a visual aid. These are:

- blackboard
- charts
- flannelboard
- overhead projector
- slide or film strip projector
- film (movie)
- photograph
- etc.

For health education, in particular, there are many pre-prepared visual aids available, though they may not be appropriate for your country or project. In the field of mobilization for water and sanitation, however, there is not much pre-prepared material available internationally. You will have to prepare visual aids for yourself. When you do this you should:

1. Keep diagrams as simple as possible - unnecessary detail only confuses the students.

2. Make sure all lettering can be read by all the audience. (This is very obvious but is often not done). This point applies especially when you are writing on a blackboard.

"Make sure all lettering can be read by ALL the audience."

(Abbatt, F.R., 1980)

3. Talk about each diagram to make sure that all symbols are understood. This is especially important when you use graphs or cross-sections.

2.8. Using handouts in lectures

Handouts are one way of adding to lectures. They can be used in two main ways.

- A guide to taking notes.
- A permanent record of the facts.

Of course, one handout may be useful in both ways, but often there will be an emphasis on one area.

Look at the example of a handout.

Example 1: A handout for students to take notes on.

Malaria

Signs and symptoms? .....
Treatment? .....
How is malaria transmitted? .....

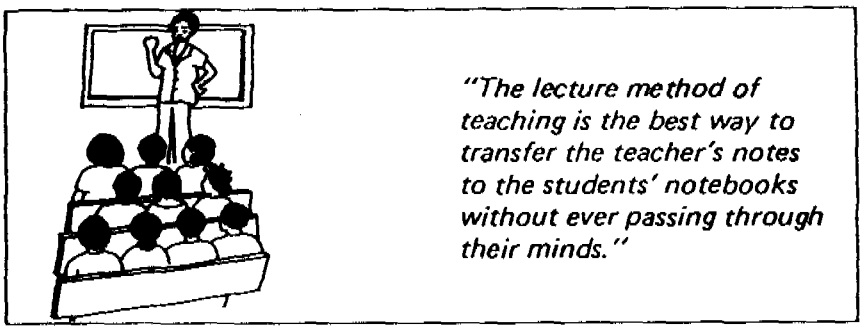
Where can larvae be found? .....

How can people eliminate these sites? .....

How can people prevent mosquitoes from biting them? .....

This very simple handout helps to make the lesson a bit more active, and so helps learning.

Notice that the handout gives a structure to the lesson. It will help to remind the teacher of the main points. Using this framework he could start off by asking students, "who has had malaria?" Then ask them about what it was like - the symptoms. And so on. As each stage is completed the students would fill in the main points on their handout.



"The lecture method of teaching is the best way to transfer the teacher's notes to the students' notebooks without ever passing through their minds."

Avoid this!

Example 2: A handout which is a record of the facts

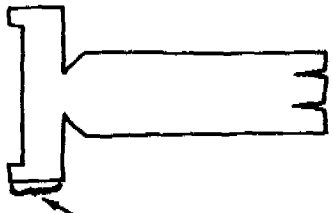
Teaching how to make measuring spoons

for oral rehydration mixture (2)

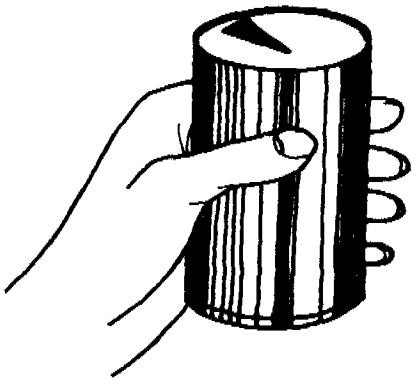
A WAY TO MAKE MEASURING SPOONS FOR PREPARING SPECIAL DRINK

Children can make measuring spoons from many things. But it is important that they measure roughly the right amounts of sugar and salt.

Here is one way to make spoons, using things that have been thrown away.



1. Cut a juice or beer can to this shape. (It is easy with scissors.)



Make this part as wide as a pencil is thick.

2. Wrap this part tightly around a pencil.

3. In the middle of a bottle cap make a small cut.

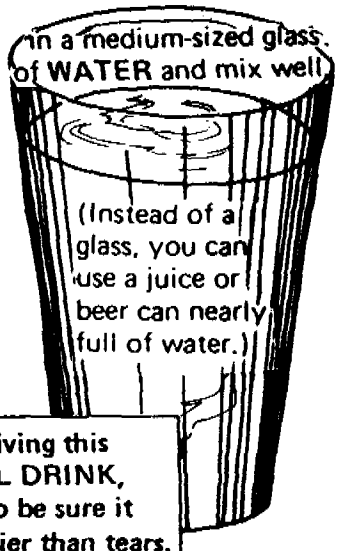
4. Join the pieces and bend over the tabs.

Give the child 1 glass of SPECIAL DRINK for each time he makes diarrhea.

HOW TO MAKE SPECIAL DRINK

Put 1 heaping bottle cap of **SUGAR** and 1 little spoon of **SALT**

in a medium-sized glass of WATER and mix well.



(Instead of a glass, you can use a juice or beer can nearly full of water.)

Before giving this SPECIAL DRINK, taste it to be sure it is no saltier than tears.

Instructions can be given as a handout for students to follow when the teacher describes or demonstrates the skill. Students can keep the handout for reference when they practice or use the skill later.

3. HOW TO TEACH SKILLS

3.1. What skills do mobilisers need?

The best way of seeing what skills the mobilisers will need is to analyse the tasks they will have to perform (Ch.III, section 3.2). They will probably need manual skills (to build a latrine, repair a handpump), some skills which might be called "clerical", such as making a community map or handling accounts; and they will need skills in the broader area of human relations including communicating with people and helping them to solve their problems and make decisions, passing on the knowledge and skills they have acquired and motivating people to take action.

These skills involve much more than remembering facts, or remembering or writing down what the trainer has said.

All students must practise the skill, and they need feedback on how well they are performing it.

In the case of manual and clerical skills, it will probably be sufficient to show the trainees how the task is done, explaining difficulties, and give sufficient opportunity for supervised practice. We turn, therefore, to methods which can be used to teach human relations skills.

3.2. Role-playing and performance of skits (short plays)

Human relations skills are particularly difficult to teach. There are fewer definite rules to follow. Role-playing enables students to have supervised practice in communication skills and working with people. In role-playing the students act out different parts as if they were in a play showing a problem situation.

Role-playing will only work well if the players can identify themselves with the roles and purposes of the people they are acting, and can interact naturally and appropriately in the given situation. They will do this if they accept the role-playing as useful to their purpose, and are really involved in solving the problem. The role play should be realistic for them: a situation which they can see that they might actually have to deal with.

The easiest way to achieve this is to first discuss a problem situation, asking trainees to suggest how the mobiliser could solve the problem (3). They can then use role-playing to test out the different suggestions, and to develop the skill of working with people to put them into effect. This effect is assessed from the reaction of the other role players to the approach of the mobiliser. The group also gain more insight into how it feels to be in other people's situations, and why people tend to react to various forms of behaviour in the way that they do. Role playing puts people in touch with their feelings and the subconscious assumptions behind their behaviour, by helping them to compare them with those of others.

The trainer has several important functions in role-playing.

1. Timing.
   Suggest role-playing when students cannot decide on the merits of different approaches by discussion only, or after you have described a skill, but not in sufficient detail. Students will then see the relevance of the role play.

2. Allocating roles.
   The trainee who suggests a certain approach should play the role of the mobiliser; other trainees then volunteer for the other roles. You need enough space for the players to act in the middle of the room, with observers around the edge. Don't force shy trainees to take part until they are ready. Keep the situation light-hearted, and reassure trainees that the purpose is not to test them, but to practise skills and learn from each other how to solve problems.

3. Briefing the role-players.
   The situation is defined from the discussion of the problem. The trainer helps trainees to think themselves into their roles by asking them:
   - why are you present in the situations?
   - what do you hope the outcome will be?
   - how do you feel towards the others who are in it with you?
   - how do you regard the presence of the mobiliser?

   This will help trainees to define their own roles, and act naturally. They are asked to react to what the worker actually does and says in the role play, not to their ideas of him or her during the discussion.

4. Getting results assessed.
   The role play then starts. Observers are asked to note what they like about the mobiliser's behaviour, and what they don't like. Would they have used different information or a different approach and manner? The trainer stops the role play when he thinks that the mobiliser has done enough to have an effect, good or bad, on those he is working with. This might be after 5 or 10 minutes.

The trainer then asks:
- the mobiliser what he has been hoping to achieve and whether he feels he has been succeeding;
- the other role-players in turn, what effect the worker has had on them;
- the observers for any other comments.

If the replies indicate that the mobiliser has so far succeeded the trainer will ask why. When the group has agreed on this, the role-players may continue with the same situation or a different one, and another person may take the mobiliser's role.
If the mobiliser seems not to have had the right effect, the group discusses the reasons for this. If the failure was due to insufficient skill, suggestions for improvement are made, and the situation is role-played again, perhaps using a different person as the mobiliser. This is continued until people are satisfied with the approach. If the group decides that the situation is wrong, they can role-play a different situation taken from an alternative approach.

For example, in the case described below (situation 1), trainees may feel that the mobiliser should not have attempted to criticise the mother directly in front of the grandmother. (S)he should rather have brought out the problem in a drama or puppet show to a group of men, women and children, so that none felt personally criticised, and men might become motivated to improve the water supply.

5. Supporting the "mobiliser" who fails.

The trainee who fails will feel that (s)he lacks some skill, particularly when the group criticises him or her. Often the keenest and most skillful people volunteer to play the mobiliser's role, and they are then criticised by less skillful members. The trainer can help by saying:

- it is easier to sit back and criticise than to do the role play;
- people who volunteer learn much more than those who don't;
- the next person to volunteer will be greatly helped by learning from the mistakes of the first.

Of course, students should have experience of communicating with real people, not only practise role plays. Role-playing should not be done with groups larger than 25 people because everyone should join in the discussion.

Trainers will find it useful to collect a file of successful role plays to use on pre-service and in-service training courses. Here is an example of a role play file card.

Example of a role play file card

ROLE PLAY
Estimated time
SUBJECT: Health education

OBJECTIVES:
To help students understand the need for participation in health education.

ACTORS:
Mobiliser
Husband
Wife
Child

PREPARATION:
1. Set up the house.
2. Make a pile of rubbish outside the house

PRESENTATION:
- Mobiliser visits the house. Sees the rubbish and dirt. Tells the family that he will take them to court to pay a big fine if they don't clean up the rubbish by next week.
- Family clean up the rubbish.
- Mobiliser returns, and says that any time he visits them and finds rubbish he will take them to court.
- He does not come back for some time.
- The family start throwing rubbish out the back again.
- Mobiliser returns.
- The family shout at him to go away, and that they will fight him if he tries to enter their house.

QUESTIONS FOR GROUP DISCUSSION (ask students to think about questions)

- Why did the mobiliser behave as he did? How did he feel?
- How did the people feel? Why did they behave as they
- did?
- Why didn't the family follow the mobiliser's instructions?
- Why did they do as they were told at first, and then defy the mobiliser later?
- What should the mobiliser have done?
- Supposing they had continued to throw the rubbish outside even then?
- What have we learnt from this role play?

Some examples

Situation 1

A community mobiliser visits a family in a village. The toddler has diarrhoea on the floor of the house. The mother puts some sand on it, sweeps it up and throws it outside the door. She does not wash her hands or the floor or broom. The mobiliser decides to explain how children's faeces, particularly diarrhoea, is dangerous because if anyone gets even a little bit in their mouths, they will get diarrhoea too. He says she must bury the shit and wash her hands, the floor and the broom.

The mother is prepared to believe this, but complains that she hasn't got enough water to do all this washing, and no soap either. The grandmother says that she believes that the shit of young children is harmless unless you can see worms in it, which could be used by an evil wisher to harm the child.
What should the mobiliser do now? Did he or she do the right thing in the first place, in explaining what the mother should do?

First, ask students what the mobiliser should do. Then ask them to act out different approaches, with students playing the role of grandmother, mother and mobiliser. Encourage approaches in which the grandmother and mother show knowledge and reason, and the mobiliser appreciates their views. For instance, the grandmother knows that worms are harmful: the mobiliser can agree and go on to discuss worm eggs which cannot be seen but can grow into worms.

Situation 2

A mobiliser was worried because so many children in a village were suffering from diarrhoea even though new latrines had been installed. She called a meeting and talked about diarrhoea. She said that it was caused by germs from shit getting into children's stomachs through their mouths. This happened when people didn't use the latrine, and when they did not wash their hands after using the latrine. She talked about the symptoms and dangers of diarrhoea, and asked everyone to use the new latrines. After about three months, the mobiliser returned and saw that there were still excreta in the bushes around the houses, and the health worker had seen many cases of diarrhoea. She was worried because she had given the correct information to the villagers and yet they had not followed it. She went to discuss this with the village leaders.
They told her many things:
They said that people believed that diarrhoea in children came from coldness, teething and new foods. All small children have diarrhoea before they are mature. Nobody gave children dirt to eat. Also, although adults liked using the latrines if they were near them in the daytime, people were afraid to go there at night, and children were afraid of falling in. There was no water in the latrines so people could not easily wash their hands.

After a role play of this situation, trainees can discuss how the mobiliser could have done better.

Situation 3

This is a "skit" rather than a "role play": there is less room for the people playing the roles to improvise or create their own approach. But it can be used in a similar way, with a similar discussion afterwards.
One day a mobiliser came to see a group of farmers. He sat and listened to their problems for a while. The farmers complained of feeling weak and tired. The mobiliser looked under their eyelids, at their tongues and nails, and saw that they were very pale. He suspected that they had hookworm.
First, he asked the farmers what they thought caused their problem. Some said overwork. Others said that the weather was too hot. Some thought they had some sort of stomach sickness. One said that a jealous farmer had put magic on them to make them sick. The mobiliser asked what the farmers had been doing to solve the problem.

One said his wife was making him eat more. Another went to sleep early. Several had purchased stomach medicine and tonics. The mobiliser asked if any of these actions has cured the problem. All the farmers said "no". But some said they had asked a local healer, who had recommended them to collect certain leaves including cocoyam and cassava leaves, and to use them in a soup. This did seem to help them feel stronger.

Next the farmers ask the mobiliser if he could help them. He said he would try, but first he needed to know some things. Did the farmers wear anything on their feet when they went to the farm. "No", they said. Shoes are too expensive and hot. How did they defecate if they needed to while on the farm?
The farmers said that they eased themselved anywhere near the farm where they were not seen.

The mobiliser said "Thank you. Your answers give me some idea about the problem. Do you know that small worms can get inside people?" A few had seen worms in their stools sometimes. The worms must have got in somehow.

"There are different worms that have different ways of entering the body" said the mobiliser. "When inside, some eat food in the gut, while others eat blood, making people weak. One worm called HOOKWORM causes a lot of trouble to farmers because it is in the soil. After burrowing into a person's bare foot, it moves to the gut where it HOOKS on and drinks blood. The worms are not seen in the shit, but their eggs go into the soil when a person with hookworm shits outside. They hatch into baby worms and bite other people with bare feet.

The farmers were not sure about this. Why did they always feel weak in the hot weather when they had to work hard?
The mobiliser said that the hookworms grow best in hot rainy weather, and the farmers are more likely to walk on them. The biting worms cause the stomach-ache he said. The farmers began to accept these ideas, and to talk about what they could do. They wanted a cure for this sickness, so the mobiliser gave them the name of a medicine they could buy from the drugstore. He then asked "Now what can you do to prevent hookworm?"

One farmer answered "wear shoes". The other complained "Too expensive and hot". Another said "Sandals are cheaper, we can buy the plastic ones from the market." Everyone agreed. Another farmer said, "what about making a deep hole with our hoes, and burying our shit." The others agreed that would keep the hookworm away from feet. The mobiliser congratulated the farmer whose wise wife had given him more to eat. He said that the green vegetables and beans would help to make their blood red again. In fact they had the same vitamin as the medicine from the drugstore and so did the cocoyam and cassava leaves recommended by the healer; maybe the other herbs also had some other good effects he did not know about.

The farmers reminded each other to wear sandals and bury their stools. Some of them made a special point of eating more beans and green vegetables, and drinking leaf soup: they said they felt much better.

Why did this mobiliser succeed where the others did not? What can you learn from this skit?

3.2.1. Performance of skits to motivate community action

Skits have sometimes been used as part of a process to get a whole of people thinking and taking action to meet their needs. They are short plays which will be varied for each performance, especially if this will help to involve the audience by making local references to amuse them.

In Ghana, such skits were used to involve the people of Okorase in the town's development. To help with the skits, health programme leaders invited a popular cultural group that often performs at local ceremonies. First the group would stage skits about one or two particular problems and their possible solutions. The following description of these events (somewhat shortened and simplified) is from an article by Larry Frankel (4).

The cultural group members (with help from the project) purchased food and palm wine to entertain their guests. Then they invited the chief, his elders, and other members of the community to attend the "one-day school". After the traditional ceremonies and welcoming speeches, they gave the entire morning to small group discussions of the town's problems and their possible solutions. Each group had a discussion leader whose job was to see that everyone participated freely so that the "big men" didn't dominate.

Before stopping for lunch, each small group was asked to choose a single problem, one that they considered serious but also solvable by the people's own efforts. The small groups then joined together to choose one or two problems and propose realistic solutions.

After lunch all the people were excused, except the cultural group members. Everyone thanked the chief and elders for their attendance and their help in trying to make the improvements a reality.

The cultural group spent the afternoon preparing and practising two skits. They wanted to show as dramatically and humorously as possible why each problem was important and what could be done about it. In the evening, the chief had the "gong gong" beater call the entire town to a free show. The skits were performed, along with drumming, singing, and dancing.

One of the two skits in Okorase focused on the lack of latrines:
A big shot from Accra (the capital) returns to visit his birthplace, Okorase. He has come to donate a large sum of money to the town development committee. Feeling nature's call, he seeks a place to relieve himself. When he finds only bushes, he becomes increasingly uncomfortable. His distress amuses several villagers, who wonder aloud why the bush is no longer good enough for him.
The desperation of the actor playing the big shot had the people in the audience laughing until they cried.

Finally, the big shot flees Okorase without donating any money. Later, each of the people who laughed at him falls ill with some sort of sickness carried in human faeces. So now the villagers become interested in trying a suggested solution: using low-cost water-seal toilets to keep flies off the stools.

As a result of this skit and the discussion that followed, a local member volunteered to be trained in the construction of toilet bowls. Cement was donated by the People's Educational Association (a private Ghanaian agency). Soon a profitable local industry was started, making water-seal bowls for Okorase and surrounding villages.

3.3. Discussion cases

The discussion of cases helps trainees to develop human relations skills by studying a detailed, specific and concrete example of a problem. A "case" is an actual example of a mobiliser encountering a problem in the field. It describes:

- the purpose of the mobiliser;
- the situation (s)he had to deal with;
- the way (s)he tried to deal with it;
- the result of his or her efforts;
- why (s)he was dissatisfied with the results.

You can also leave cases open. Then the case describes a problem situation and you ask trainees to discuss how they would deal with it. Or a case may describe two alternative approaches to solving a problem and trainees discuss the advantages and disadvantages of each approach.

The case discussion method is most fully developed and explained by T.R. Batten in his book The Human Factor in Community Work (5). An example of a case given by Batten is the following:

AN OUTLINE SUMMARY OF POINTS DISCUSSED DURING A TWO-AND-A-HALF HOUR'S DISCUSSION OF A CASE BY A GROUP OF COMMUNITY DEVELOPMENT WORKERS IN AN OVERSEAS COUNTRY

(It was their first experience of case-study method.)

THE CASE

A newly formed village development committee invited a community development worker to its first business meeting. He was warmly greeted but he soon became very dissatisfied with the conduct of the meeting. Nearly every member of the committee seemed to have his own pet scheme: the store-keeper wanted a postal agency, the schoolmistress a playground for the children, and someone else a new lay-out for the village market. As the Chairman had no idea of how to control the meeting, nobody spoke to the Chair, several people argued different points at the same time, and no progress was made.

At last the worker felt he had to intervene. Luckily he was sitting next to the Chairman, so he pointed out what was happening and suggested that he (the Chairman) should call the members to order and ask them to address their remarks to him instead of arguing among themselves as most of them were doing.

Well, the Chairman then tried several times to call the members to order but without much effect. Meanwhile, time was getting on and the worker realized that he would soon have to be going. The best thing he could do under the circumstances, he thought, was to explain this to the Chairman, offer to come out again for the next meeting and show him how a meeting ought to be run. Accordingly, he made his apologies to the Chairman and put forward his suggestions as tactfully as he could. To his delight everyone seemed to think it a good idea and he came away feeling that there was now a real chance that things would go better next time.

However, a few days later he received a polite letter asking him not to come back until the members had had a few more meetings and got more experience, as they did not wish to waste too much of his time. This made him realize that they did not want him, but he still did not understand why. Could you have helped him?

NOTES OF POINTS CONTRIBUTED AND DISCUSSED

A. *Diagnosis* (Points recorded from sub-group reports.)

1. *The worker's attitude*
   (*a*) He was conceited although he didn't realize it.
   (*b*) He was too directive in his approach.
   (*c*) He expected too high a standard. (?)
2. *What he did wrong*
   (*a*) He did not plan the meeting in advance with the Chairman. (?)
   (*b*) When he intervened the first time, he criticized the Chairman and the members.
   (*c*) When he spoke the second time
      i. he implied that he had more important things to do elsewhere; and
      ii. again implied criticism of the Chairman and members.

   Note. Although he appears to have assumed that he was skilled and they weren't, all he achieved was to get himself shut out.

B. *Implications* (From the blackboard summary of Approaches.)

Approach I	*Approach II*	*Approach III*
Before the meeting		
Brief Chairman in how to conduct it		
At the meeting		
Ask permission to speak	Ask permission to speak	Ask permission to speak
Summarize what had been said so far	Suggest a tea-break	Suggest that ideas should be
	Use the tea-break to suggest to the Chairman that ideas should be	i. listed ii. discussed in turn iii. put in order of priority
	i. listed ii. discussed in turn iii. put in order of priority (Leave initiative with him)	

C. *Notes of discussion of points from the approaches*

Approach I: Preliminary briefing of Chairman

This was quickly dismissed as impracticable because

i. even if the worker arrived early, he could never be sure that he would have sufficient time with the Chairman on his own; and
ii. it would be presumptuous of the worker to start advising the Chairman how to conduct the meeting when he had only just met him.

Members did, however, think that the worker should arrive early as it would give him a chance of getting to know the Chairman and at least some of the members before the meeting started.

Approach I: 'Summarize what had been said so far'

This was quickly dismissed as quite inadequate, even by the sub-group which had suggested it.

Approach II: 'The Tea-Break'

The pros and cons of this idea were discussed at some length because members liked the idea of the worker working through the Chairman and keeping in the background himself. They abandoned it in the end, however, because

i. they thought it would be presumptuous of the worker, who was the only stranger present, to suggest a tea-break; and
ii. anyway he could not be sure, during a tea-break, of getting enough time with the Chairman on his own.

Approach III

This left only Approach III. The trainer then suggested that this approach might be role-played to see just how the worker could have implemented it without arousing the resentment either of the Chairman or the members. The first two attempts failed by general consent, though each for a different reason. The third attempt was considered successful. In this attempt the 'worker', after getting the Chairman's permission to speak

i. started by complimenting the members of the committee on their keenness and public spirit as evidenced by the number of useful projects they were considering;
ii. continued by explaining just what he could do to help once they had decided what they were going to do;
iii. suggested that every idea should be listed in writing so as to ensure that none would be lost sight of;
iv. suggested that each should be separately discussed in order to ascertain just how much effort and sacrifice each would entail, and which would appeal to the largest number of their village people; and finally
v. suggested that with the help he hoped to be able to provide, they might, over a period, be able to complete not one but several projects.

D. *General conclusions the members reached at the end of their study of the case*

If one gives advice

1. to give it without referring to any shortcomings of the people to whom one gives it. Any suggestion of criticism should be avoided. It is better to start by complimenting them on some good point and link one's suggestion to that;
2. to frame it in such a way that the people will clearly see how it can help them to do what *they* want to do. (e.g. the people in this case did not want to be taught how to conduct a meeting: they wanted to choose a project and then get on with it. Thus from their point of view the 'worker's' suggestions in Approach III were much more helpful than those of the worker in the original case. Incidentally, they were also likely to be more effective in improving the conduct of the meeting.)

(1) *Recording discussion points*

It is very important that the trainer should have enough blackboard or other suitable space for recording the points made in sub-group or full-group discussions. Such recording provides every member of the group with visual evidence of points already discussed and agreed; of what is currently being discussed; and of what remains to be discussed. Thus it has an important influence in helping to promote the development of structure.

It also helps in another way. People tend to be much more meticulous in framing what they say when it is liable to be recorded for all to see and comment on, and this helps to avoid misunderstandings creeping in later on.

One large blackboard rarely provides enough space. Even with two, the trainer may still need to be economical in his use of space.

(2) *Sub-groups*

Small sub-groups are invaluable as a means of promoting a rapid exchange and listing of ideas, and for actively involving more members more frequently in contributing to discussion. But members should be discouraged from making their sub-groups centres of prolonged discussion. This will keep members out of the full group for too long and then it can hinder, rather than help, the progress of the overall discussion.

THE TRAINER'S STRUCTURING FUNCTIONS DURING DISCUSSION OF A CASE

1. Testing the case for acceptability by asking
   - (*a*) what did the worker do and with what result? (Get the story clear.)
   - (*b*) did he fail, and if so in what respect? (Compare initial and end situations.)
   - (*c*) does the case present a problem of the kind we ourselves meet?
   - (*d*) could the worker have solved it if he had had more skill?
2. Getting the case diagnosed by
   - (*a*) getting members in sub-groups to list points which may help to explain why the worker failed;
   - (*b*) in the full group getting the sub-groups' points on the blackboard by
     - i. taking one point from each sub-group in turn;
     - ii. checking each point with the other sub-groups;
     - iii. getting it acceptably stated on the board;
     - iv. adding a question mark if it is not agreed by all;
   - (*c*) summing up the diagnosis in terms of (i) inappropriate attitudes and (ii) lack of skill.
3. Getting implications investigated in terms of *what* the worker should have done and *how* he should have done it by
   - (*a*) getting members in sub-groups to suggest a better *approach*, listing in order from the beginning of the case
     - i. exactly what he should have done;
     - ii. where; and
     - iii. with whom;
   - (*b*) putting *one* approach on the board at a time. (One sub-group may have more than one approach. Several sub-groups may have the same approach.)
   - (*c*) when all approaches have been listed, getting any basic differences and similarities between them noted;
   - (*d*) getting each approach discussed in the light of the alternative suggestions;
   - (*e*) testing by role-playing where this would be helpful.
4. Getting conclusions stated by asking what, if any, are suggested by the group's study of the case.

Using cases, trainees are forced to think realistically about what a worker like themselves actually did in a situation, about the result, and about just what (s)he might alternatively have done to achieve a more satisfactory result. The discussion of cases is such an important teaching method in human relations training that it is worth while spending time obtaining, selecting and editing cases carefully.

Where can trainers obtain cases from?

Members of groups on in-service training courses are the best providers of cases. Ask each trainer to write a short descriptive account of what (s)he did and with what result in some specific situation in which (s)he encountered a problem which (s)he did not feel able to cope with satisfactorily.

Analyse each of the cases with the trainees to see if it meets the following requirements:
- that it leaves no room for doubt about the identity of the person who encountered the problem;
- that the problem it presents is one that quite commonly occurs and one that workers find difficult to cope with;
- that it states quite specifically what the worker did and with what result;
- that (s)he might have succeeded if (s)he had more skill.

Edit cases which do not meet these requirements until they do, or if this is impossible, scrap them. Edit out any unnecessary details. Delete any hint of criticism of the worker concerned, or trainees will not identify with him. Edit cases according to the training group which will use them.
Trainees will identify with the worker if (s)he tackles a situation in much the same way as the members of the training group would normally have done themselves and with much the same unsatisfactory result. They then become thoroughly involved in the process of pooling their ideas and experience in order to understand just why the "worker" failed and just how (s)he (and by implication also themselves) could have done better.

You can build up a stock of potentially suitable cases in this way. You can use them with the training group which provided them, and also with pre-service trainees who do not have enough experience to provide cases.

You may find that a case is strengthened by rewriting it as if the worker is telling his own story, or from the viewpoint of the person who was seen by the worker as the cause of his problem. After editing, test the case by using it with a training group. Do any further editing and use the case with another group. If it is satisfactory, add it to your permanent stock of cases. You might make one or two particularly good cases into a film or slide series.

Here is a case which may need revision to conform to the requirements listed above.

The community health nurses meeting
Twenty three community health nurses were gathered for their quarterly meeting with the district public health nurse, their immediate superior.

She was late arriving so the nurses discussed among themselves what they wanted to say to her. One began "in fact our work is difficult now. These mothers are working all the hours that God gives in the market and on the farm, and even that does not bring in enough to eat. They must leave the small children at home, often not well cared for, although the older sisters do their best. When I do my home visits, I find only a daycare centre with no adult supervisor!" Another agreed "How can you tell them about how to feed their children, or wash their hands properly. How they insult you!: 'You give us the soap and the food then, little girl, and where are your children then?' Even their gardens, thieves come and take the cassava while it's still small."

"Yes", said another, "and now there's no free food, they won't even come to the clinic. What's the point of having your child weighed if you can do nothing about it?" The nurses became quite heated as they defined their problems more clearly, and resolved to tell these things to the supervisor.
At last the district public health nurse pulled up, and stepped out of her car. She was an imposing woman, dressed in a white uniform, a belt around her broad waist. After greeting everyone, she invited the nurses to bring any problems. One began, with less confidence than before, to explain what difficulties they faced. Others added points in polite, subdued voices. When they had finished, the supervisor had this to say: "Well, girls, we all know that times are hard in this country now. But you can still do your work if your approach to the mothers is right. You must be friendly and helpful and then they will welcome your advice. I remember when I used to make home visits in this town; I was well known by everyone, and people welcomed me in their houses. You girls today don't have the same dedication to your work, the same concern for your mothers. Have you forgotten what you learnt on your training course about how to approach mothers?"
She continued for a while in this way, and then suggested that they should liven their meetings up by inviting the local headteacher or pastor to speak, instead of depressing themselves with all these problems.

The nurses looked resigned, their earlier passionate concern for their work drained away. They began to request new uniforms and bags.

The trainer's role in discussing cases

(S)he must remain neutral throughout. His or her job is to get the different viewpoints of members discussed in the group by the members and not to argue for or against any viewpoint. (S)he does this by:

1. Not expressing his or her own opinions, or asking loaded questions ("Don't you think that...?") or taking sides when members disagree;
2. Helping members to reach agreement on what to discuss and not assuming agreement without testing to ensure that it is genuine;
3. Helping members to keep to the point they have decided to discuss, e.g. when discussion wanders, to say so and ask whether members want to return to their original line or consciously choose the new one;
4. Helping each and every member to participate in discussion. (This involves finding acceptable ways of bringing in silent members when they appear to wish to speak, and of preventing the most eager speakers from unduly dominating the discussion);
5. Clarifying what is being discussed by:
   (a) ensuring that members are agreed about just what precisely they are discussing;
   (b) helping a member to clarify his contribution if for any reason it seems unclear;
   (c) indicating any major differences of viewpoint that exist within the group (as these become apparent) and encouraging members to investigate why they differ rather than argue against each other in favour of their respective viewpoints.
6. Summarizing briefly at appropriate times to indicate whatever progress has been made in discussion so far and what areas of disagreement still remain.
7. Providing relevant information (not opinion), if (s)he has it, when the members lack all the relevant information they need.

By structuring discussion in this way the trainer also promotes objectivity. (S)he helps the group to work in a logical and orderly pattern and to produce facts in support of their opinions. When arguments arise, members try to find out why they differ. The participants are now actively training themselves.

3.4. Projects

Projects are an important part of longer courses. In a project the student, or a group of 3 or 4 students, is asked to attempt a specific task. For example, the students might be asked to find out what seem to be the main routes that diarrhoea is transmitted in a community; or they might be asked to diagnose the exact nature of people's water problems in a village - the different sources, their degree of pollution, which sources are used for what at different seasons, how far women walk to fetch water and their satisfaction with the supply.

This experience will help students to learn how to gather facts, talk to people, analyse and report information, and think about alternative ways to solve the problems. The skills learnt will depend on the project.

Projects can provide very valuable learning experience if the teacher is enthusiastic, gives enough help, and does not have more than about 40 students in the class. The teacher must give help and encouragement without doing all the work.

At the end of the project, students should report to the whole class so that everyone benefits from their experience. This takes time.
Even in short workshops, small group "projects" to be completed in one or two hours can also be used. In this case the group would not be going out to collect information, but would for example prepare a report on how a particular situation presented to them could be tackled (according to the principles which have been discussed).

3.5. Job experience

Probably the most useful practice a student can have is to actually do the job. Students must be guided carefully until they become competent to do the job alone.

Students can join qualified mobilisers, engineers or health educators for periods of attachment. Ideally, one or two students would work with a senior mobiliser to see how the job is done. Gradually, the senior worker asks the student to do more and more of the work. All the time the supervisor must make sure that the student is frequently told what (s)he is doing well, what (s)he is doing badly, and how (s)he can improve the bad points.
Although job attachments are widely used, they are not always well used. A number of problems may arise:

- Too many students work with one supervisor (or mobiliser already doing the job). One or two people practice skills, while the others are bored and learn little. Numbers of students accompanying the mobiliser may affect his or her relationship with the community.

- The supervisor/mobiliser spends too much time demonstrating and talking, and students do not get the practice they need.

- The supervisor gives an informal theoretical lecture rather than enabling students to practice.

- The supervisor/mobiliser is not motivated to help the students learn. (S)he thinks they are disturbing normal work, and expects them to be quiet and not interrupt things.

- The supervisor/mobiliser uses the students to carry out unpleasant or boring tasks, freeing him or her from the trouble.

- Students are not guided, but merely copy the good and bad practices of other workers.

These problems may arise because the supervisor does not know how to help students learn, or because (s)he does not receive enough appreciation for doing this extra task.
Guiding students in human relations skills poses special problems. The skills are hard to define and explain, and the personal qualities of supervisor and student will influence the style of relating to the community and solving problems.
Despite these problems, job experience can be a powerful method of helping students to learn. It is worth putting a lot of effort into arranging for students to work with qualified staff, and helping these staff to guide the students well.

Ways to improve job experience

- Select senior mobilisers carefully for the role of supervisor.
- Give supervisors guidelines on the tasks, skills and attitudes required from the student, and how the supervisor can help students to learn. Hold short training sessions for supervisors.
- Give incentives for good supervision. For example, hold regular meetings with supervisors to discuss students' progress, and inform them of final assessments.
  Recognize the supervisors' contribution to the course by increasing their status, or pay.
- Write the time and resources needed for proper supervision into the project plan. For example, adjust the targets for supervisors.

4. HOW TO TEACH ATTITUDES

What is an attitude? (1) Think about a community mobiliser in a village. He knows all about the need to involve the community in planning their water supply. But when he is working by himself, he simply tells people what to do. The way that he actually behaves depends on his attitudes. He may just assume that the only thing to do is to tell people, because his attitude to those people is that they are ignorant and don't know how to act in their own best interests. This is an attitude often found among those who have a certain amount of education. One of the main goals of training mobilisers must be to change or replace such attitudes which will probably be found among many of the trainees.

Equally essential is to ensure conscientious attitudes towards the job: it is useless to employ community mobilisers who are unwilling to endure a bit of discomfort to get to a village or in staying there - overnight or as long as necessary - successful mobilisers must be willing to put up with discomfort not just because they are afraid of their supervisor and want to keep their job, but because they want to see the community get its water, improve its health and well-being. Those who have such attitutes to the community and its welfare will usually not even think of a long trek to a village or a hard bed, local food etc. as discomfort at all, but as good exercise and hospitality.

These are the attitudes which have to be found throughout the training course and in the programme as a whole. In Latin America they are referred to as "mística" (mystique) but they are not really so mysterious. More then anything else, they depend on the attitudes of the programme leaders.

4.1. Are attitudes important?

The attitutes of community mobilisers towards their work, and the people that they work with, will greatly influence the success of the programme. They must respect and communicate well with all types of people including leaders, women and poor people. They must have the motivation and patience to take the time required to share information with the community. Community mobilisers who work in isolated places or with little supervision will be strongly tempted not to work very hard or to take the easy way out of problems unless they have an attitude of concern for those without safe water supplies.

4.2. How attitudes are formed

Students have formed many attitudes before they start training. Attitudes can grow and develop during training, but they are far more easily strengthened than changed. Teachers should look for the seeds of good attitudes, for example, concern for the poor and treating people as equals, when they select trainees (Chapter IV). Students' attitudes are shaped by events before, during and after training over which the teacher has no control. Students acquire attitudes from family, friends, the media and the behaviour of people around them. The teacher provides one influence amongst many, so it is important that this influence is as strong and helpful as possible.

If the training course succeeds in turning out students with the right attitudes, these attitudes must still be continuously strengthened and supported in the community mobiliser's life and work.

Teachers can easily make a list of skills to be learnt, and measure whether students have learnt these skills; for example, building a latrine. It is more difficult to make a list of attitudes to be learnt and to measure changes in attitudes; for example, respect for rural people. However, it is very important to think carefully about what changes in attitudes are needed, and how to teach them.

Students' attitudes will have been formed in their past social environment and this social environment will continue to influence them.

But many of these attitudes which trainees bring to the course will be "received" attitudes, formed not so much through direct experience as by hearing other people express them. This is an advantage, because experience is a powerful teacher and if the training (and the work itself) provides experience that calls into question the previous attitudes, while the trainers provide an appropriate interpretation of this experience, then new attitudes may be formed. However, it must be expected that some people will not change their inappropriate attitudes even in the light of experience - particularly, perhaps, some of the better educated, who will feel that they have their own well-formed view and will be more self-confident in retaining it.

Providing experience and interpreting it is not, however, the only way of trying to affect attitudes. One may think of the following methods (1):

1. Providing information
2. Providing examples or models
3. Providing direct experience
4. Providing opportunities for discussion
5. Role playing exercises
6. Peer support.

By "peer support" is meant the influence which trainees will have on one another, and the advantage which can be taken of this powerful influence. The trainer can use some trainees as models for others (but subtly, not always singling some people out for praise). The trainer can also structure principals so that trainees learn manual skills from one another: this helps the training of attitudes in the same way. In general, the trainer can create an open learning environment in which knowledge and skills are shared: then appropriate attitudes will tend to be shared also, and this sharing will continue outside formal sessions.

4.3. Providing information to shape attitudes

Information is not always enough to shape attitudes, but it may help (1). Teachers must show how the facts are relevant to the attitude. Facts may appeal to the reason in students.
For example, if you want to show that rural people make sensible decisions on the use of their scarce resources, you might discuss a health education programme where people resisted advice to boil their drinking water. You might mention:

- the cost of fuel in terms of cash or time, energy and back trouble;
- income in different groups, showing that those with less money have little to spare for fuel or need the time to earn more;
- use of time for productive and domestic work and child care;
- the effect of deforestation on food production;
- the likely benefits of this action when diarrhoea germs continue to spread by other routes.

Students can then discuss whether people were right to resist the advice.

Sometimes a more emotional presentation of facts may be effective in changing attitudes, for example, a film or story about one mother's life in a village may provide a more intense learning experience.

Information is more likely to change attitudes if the students collect it themselves. For example, students might visit a village with an improved water supply to find out what women and children have to say about it. The difference between what is said in class and what is said in the village will give them a more realistic attitude to water projects.

4.4. Providing examples or models to shape attitudes

For many students, teachers provide powerful models and students will copy their behaviour (1). If teachers are respectful and courteous to village people, and talk about them with understanding, students will tend to behave in the same way. Everything the teacher does should set a good example.
Teachers must carefully and frequently examine their own teaching habits, both in the methods they use, and how they relate to students.

For example, if community mobilisers are to help villagers to discuss problems and choose their own courses of action, teachers must give the mobilisers similar opportunities during training.

How teachers teach depends very much on how they feel about their students. If they respect their students' ideas, and encourage them to question their authority and to think for themselves, then they will gain attitudes and skills for helping people to meet their biggest needs. If teachers fail to respect their students, or make them memorise lessons without encouraging them to question and think, the students will make poor teachers and bossy leaders.

To set a good example to their students, teachers need to:

- Treat students as equals;
- Respect their ideas and build on their experiences;
- Make it clear that they do not have all the answers;
- Welcome criticism, questioning, initiative and trust;
- Invite cooperation; encourage helping those who are behind;
- Defend the interests of those in greatest need.

To set a good example, teachers might begin by telling about a personal work experience that changed their way of looking at things. The story brings out practical problems, and encourages students to add their own experiences.

Werner and Bower (1982) (2) use the following story:

A true story: THE IMPORTANCE OF NOT KNOWING IT ALL

A teacher of village health workers who had a college degree was working as a volunteer in the mountains of western Mexico. One day he arrived at a small village on muleback. A father approached him and asked if he could heal his son. The health worker followed the father to his hut.

The boy, whose name was Pepe, was sitting on the floor. His legs were crippled by polio *(infantile paralysis)*. The disease had struck him as a baby. Now he was 13 years old. Pepe smiled and reached up a friendly hand.

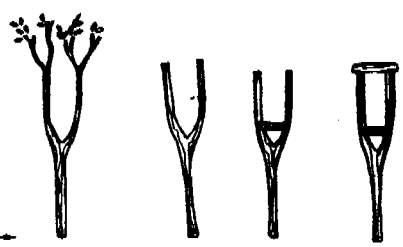
The health worker examined the boy. "Have you ever tried to walk with crutches?" he asked. Pepe shook his head.

"We live so far away from the city," his father explained apologetically.

"Then why don't we try to make some crutches?" asked the health worker.

The next morning the health worker got up at dawn. He borrowed a *machete* (long curved knife) and went into the forest. He hunted until he found two forked branches.

He took the branches back to the home of the crippled boy and began to make them into crutches, like this. →



The father came up and the health worker showed him the crutches he was making. The father examined them for a moment and said, "They won't work!"

The health worker frowned. "Wait and see!" he said.

When both crutches were finished, they showed them to Pepe, who was eager to try them out. His father lifted him into a standing position and the health worker placed the crutches under the boy's arms.

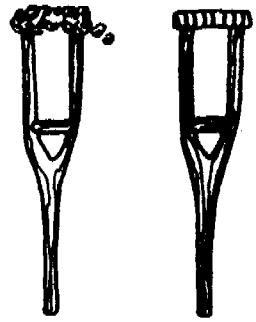
But as soon as Pepe tried to put his weight on the crutches, they doubled and broke.

"I tried to tell you they wouldn't work," said the father. "It's the wrong kind of tree. Wood's weak as water! But now I see what you have in mind. I'll go cut some branches of *jutamo*. Wood's tough as iron, but light! Don't want the crutches to be too heavy."

He took the *machete* and trotted into the forest. Fifteen minutes later he was back with two forked sticks of *jutamo*. At once he set about making the crutches, his strong hands working rapidly. The health worker and Pepe assisted him.

When the new crutches were finished, Pepe's father tested them by putting his full weight on them. They held him easily, yet were lightweight. Next the boy tried them. He had trouble balancing at first, but soon was able to hold himself upright. By afternoon, he was actually walking with the crutches. But they rubbed him under the arms.

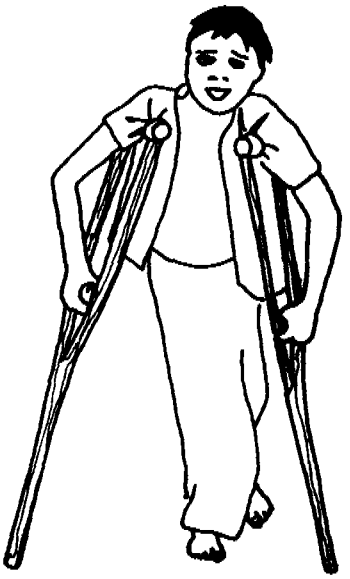
"I have an idea," said Pepe's father. He went across the clearing to a *pochote*, or wild kapok tree, and picked several of the large, ripe fruits. He gathered the downy cotton from the pods, and put a soft cushion of kapok onto the top crosspiece of each crutch. Then he wrapped the kapok in place with strips of cloth. Pepe tried the crutches again and found them comfortable.



"Gosh, Dad, you really fixed them great!" cried the boy, smiling at his father with pride. "Look how well I can walk now!" He bounded about the dusty patio on his new crutches.

"I'm proud of you, son!" said his father, smiling too.

As the health worker was saddling his mule to leave, the whole family came to say good-bye.



"I can't thank you enough," said the father. "It's so wonderful to see my son able to walk upright. I don't know why I never thought of making crutches before . . ."

"It's I who must thank you," said the health worker. "You have taught me a great deal."

As the health worker rode down the trail he smiled to himself. "How foolish of me," he thought, "not to have asked the father's advice in the first place. He knows the trees better than I do. And he is a better craftsman.

"But how fortunate it is that the crutches that I made broke. The idea for making the crutches was mine, and the father felt bad for not having thought of it himself. When my crutches broke, he made much better ones. That made us equal again!"

So the health worker learned many things from the father of the crippled boy—things that he had never learned in college. He learned what kind of wood is best for making crutches. But he also learned how important it is to use the skills and knowledge of the local people—important because a better job can be done, and because it helps maintain people's dignity. People feel more equal when each learns from the other.

It was a lesson the health worker will always remember. I know. I was the health worker.

David Werner

4.5. Providing experiences to shape attitudes

Throughout the training, students will have experiences which will shape attitudes (1). Teachers should provide as much direct experience as possible.

For example, if your local hospital admits many children with diarrhoea, and they are treated with oral fluids, trainees could see the effects of dehydration on these children and observe the improvement after oral rehydration.

If there is guinea worm in the area, students could see the disability caused by guinea worm and talk to sufferers about the effects of the disease on their food supply because they cannot work so hard.

Trainees could spend a day with a community mobiliser who has a good relationship with village families. They could talk with village people about their reasons for doing things in the way that they do.

Each student might adopt one or more families in a nearby community, and visit them over the course period at different seasons. They might adopt one better-off and one poorer family. On the visits, they can converse with the family about their problems with health, water, sanitation and hygiene. They can observe how people do things, for example cleaning up a toddler.

If they get to know the family well, they may be able to have a go at doing things themselves without causing embarrassment or offence.

4.6. Providing discussion to shape attitudes

Discussion in small groups of from four to eight people allows students to share experiences and influence each other (1). The process of putting ideas into words and seeing the reactions of other students can be a powerful way of bringing about attitude change. Teachers should encourage quieter students to talk, and control over-talkative ones. They should only rarely give their own opinions or guide the discussion.
Such groups can also meet without a teacher. This allows for smaller groups and more discussion. The teacher can help by providing some written guidance, and appointing one student to report the discussion to the whole class.

Trainees can be given cases which describe a problem, and asked to discuss what the mobiliser could and should do about the problem.

For example:

A TRUE STORY: FIDELINA CAN'T GET WATER

In San Felipe, the water supply is by yard connections only and about 20% of the houses do not have a connection. The connections were made free of charge to those who gave the 57 days of labour required (one day per week for more than a year) to build the system. That was four years ago. But those who did not get their connections then have now to pay a rather high price for them, more than the current value of 57 days' labour (about 100 days in fact). They are given 2 years to pay this amount, in instalments. Thus the monthly payment required is the equivalent of about 4 days' labour. The water tariff, on the other hand, is low - less than 1/3 of a day's labour per month. This is enough to cover operation and maintenance and also the repayment over 15 years of some 40% of the capital cost (of the rest of the capital cost, some 20% was accounted for by the labour of those who received connections, the rest being a state subsidy).

Out of the 20% who do not have connections, some already had their houses at the time of the construction of the supply, but could not or did not take part. Others have new houses, some of these being young men who worked on the construction for their parents' house connection but have now got married and built their own houses.

Out of the 20%, there are also some who can now afford a connection (most of these are making requests and will be connected); some who hope to be able to afford a connection quite soon; and also some for whom the amount is too great.

One of these is Fidelina, a mother of 6 children whose existing water situation is particularly bad. She has to go down a steep slope, muddy and slippery in the rainy weather, to get her water from a "well" which is simply a dirty shallow hollow in the ground at the bottom of the valley. When this dries up in the summer, she goes a few yards further to a stagnant pool - but this could well be polluted from a latrine not far away on the opposite side of the valley. Her younger children have skin diseases.

At the time the water supply was constructed Fidelina did not have a husband to give the labour contribution. The father of her youngest children, who is living with her now, was then only visiting and his parents persuaded him that his duty was to their household so he should not do it for Fidelina. Her own oldest son was still 14 when the work started, and he was not accepted on the grounds that a mere boy cannot do a full man's work (i.e. make an equal contribution); the agency also has the rule that boys under 15 cannot be accepted: it is said that children just play around and do not get on with the work. For exceptional cases, the rules do allow women to be accepted - they generally do lighter jobs, not digging - but Fidelina could not even ask, because shortly before the work started she had slipped and fallen on the slope while carrying water, and had broken her arm.

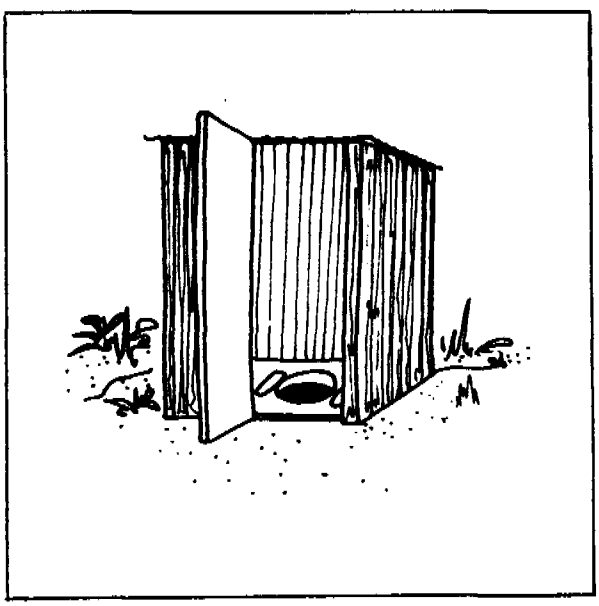
Several of her neighbours are sympathetic towards Fidelina and would like to help her to get a water connection. The agency rules prohibit the community water board from waiving or reducing the charge for a connection, whatever the circumstances - this is thought necessary to prevent favouritism by board members or the breakdown of the financing system. The only possibility, suggested by the local schoolteacher, is that the community club together and collect half the cost of the connection, while Fidelina would have to find the other half. She is doubtful if she could do even this - and looking at her house and children, it is difficult to see where she could save on other expenditures.

What solutions do you see for Fidelina?
What could she or her present husband do? What should her neighbours do? Is there any way in which the agency's rules or procedures should be changed? What would you, as a mobiliser, suggest?
Why did the situation arise in the first place?
Where does the fault, if any, lie?

These questions are specific enough to start the discussion, and give it some structure. But they also allow students to express different opinions and so begin to form or change their attitudes.

The presentation of opposing viewpoints is another way of starting a discussion. For example, a story might be presented as a conversation between two villagers or a role play (6).

SAMPLE STORY: "Crap" Which is Right?



A man from Lam Trang said:

"The people in Lam Glap are grubby. They aren't concerned with sanitation, they don't take care of their health. Just take a look! See for yourself. They don't use latrines, they just defecate anywhere they please. 'I do it where I do it,' they say. 'In the garden. in the ditch . . . yeah, wherever I feel like it.' There's crap all over the place.

Doesn't human waste scattered all around cause infections and disease? Not to mention the smell! And then, if anybody gets sick, they say that the evil spirits have come. Spirits! It's the spirits that get the blame . . . and then they're all worked up trying to chase the spirits away. And it's awful to have to walk around looking at crap and people crapping all the time. I'll bet the spirits like to look at it though! You have to feel sorry for people in Lam Glap."

A man from Lam Glap replied:

"Hey, people from Lam Trang should watch their tongues! Act like they know everything, talking about things they don't understand as if they were the cleanest people in the world.

Think about it! They're the dirty ones, and they waste a lot of money on it besides. They keep their crap in their houses! They make these special crap houses or crap rooms just to keep the stuff in. Probably costs a bundle too, just for keeping crap! Who wants to do something like that?

Nah, it's better to throw the stuff away, like in a ditch or a stream. It dissolves and is carried away. Or in a pond, to feed the fish. Or in the field. The worms eat it and it's good for the soil. Or maybe dogs or chickens eat it. At any rate, it goes away. And buffalo and cows and goats and chickens are all crapping everywhere anyway, aren't they? I suppose folks in Lam Trang are going to build special houses for that too once they have the money.

Think about it . . . they go to all that trouble and expense just to keep their shit around. Doesn't our way make more sense? Just let nature take care of it, and it goes away . . ."

Design and story by Ibrahim Yunus, used in Indonesia.

(from: Save the Children Fund, U.S.A.: Bridging the Gap (1982))

Discussion questions after the story might be:
- Which viewpoint do you agree with? Why?
- What do you do in your own village?
- What is the best way of dealing with the problem? Why?

A discussion of this story should keep trainees to see that villagers may have sensible arguments for their behaviour. If the trainees do not arrive at this point themselves, the teacher should bring it out. The story of Crap can also be used to stimulate discussion in the village.

The attitude questionnaire makes a series of statements and asks people to indicate whether they agree, disagree or have no views on the statement. The answers can be kept secret so that no one feels shy to give their opinion.

This provides the basis for a discussion on reasons for different opinions.

4.7. Analyzing the causes of sickness

Another way of getting trainees to think about the problems of rural people in a new way, and thereby to develop new attitudes, is by encouraging them to ask the question "why?" in relation to what the rural people do, or say, or in relation to what happens to them. To show them that they should not in general be satisfied that one simple answer to the question why is a complete explanation, but that people's problems are related to one another in various ways, the following method can be used.

A story is told, and then used as a way of getting the trainees to ask "why" repeatedly: this should lead them to broaden their perceptions about the courses of illness.
It is adapted from Werner and Bower's Helping Health Workers Learn (2).

One of the weaknesses of modern medicine is that it has led people to look at illness in terms of singel causes. On the death certificate, the doctor writes at the cause of death "typhoid" or "polio" or "tuberculosis" or "measles". He thinks of the cause of death in terms of particular "disease agent" - in these cases, either bacteria or virus.

However, not all people who are ill. We know that many persons infected with typhoid bacteria never develop signs of the disease. Relatively few persons infected by the TB bacillus develop tuberculosis. And while measles is a mild disease in European children, it is a major killer in Africa.

Different persons have different explanations for illness.

A good way to start a discussion of causes of illness is to consider local beliefs and compare them with the explanations of doctors, educators, sanitary officers, social reformers, and others.

If we look at which persons become ill or die from diseases like tuberculosis, measles, diarrhoea, and pneumonia, we find that many of them are poorly nourished. We must also consider "poor nutrition" or "poor sanitation" as part of the cause of illness and death. But people usually do not eat poorly or live in unclean surroundings by choice. So poverty must also be included as an underlying cause of many illnesses. And so must the causes of poverty.

It is essential that mobilisers learn to look at illnesses and related problems in terms of their different causes: medical, physical, and human.

For this purpose you can use a story that takes place in your own area. Perhaps your students can analyze the events leading to the death of someone they knew.

Another option is to tell the Story of Hawa to your group or invite trainees to take turns reading it aloud, a paragraph at a time. Ask everyone to listen carefully and to try to notice all the factors that may have contributed to the girl's death.

THE STORY OF HAWA

Consider Hawa, a one and a half year old girl who died of diarrhoea. Hawa lived with her family in a village called Temboki, 11 km by dirt road from the town of Borku.

Hawa was still taking breast milk, but her mother was also teaching her to eat the millet porridge with leafy vegetable soup. She seemed to get sick often, particularly in the farming season when mosquitoes buzzed around the compound, and the heavy rain washed mud and dirt everywhere. Then she refused to eat, only wanting to suck the breast. She was becoming thin.

The town has a health centre staffed by a doctor and several nurses. They rarely reached Temboki, because they could not get petrol for their vehicle, or spare parts.

The nurses tried to teach mothers to make a sugar and salt mixture in case a child got diarrhoea. They showed the mothers exactly how to make up the mixture, and explained why the salt and sugar were important. One day Hawa's mother heard this talk at the Health Centre. She listened carefully and tasted the drink.

The last dry season a community mobiliser for the water agency visited Temboki and showed people how to build a parapet around their wells, and how to build a latrine.

Hawa's father was very interested and went to get the cement offered by the agency. When he got there he was told that the cement was finished. Village people queuing up were muttering that it had gone to build a bungalow for the local politician.

Hawa's father tried to build a latrine using only mud, but the slab was not strong enough and no-one dared to use it. It was the rainy season and everyone watched the sky anxiously. Hawa's mother was waiting early in the morning to begin the day's weeding. The harvest must be good this year because the granaries were almost empty. They were eating only one cooked meal a day now. She was so busy with the farming, that she had little time to cook or clean the house as she should. She often left Hawa at home with her six year old sister when she went to the farm. The heat and dampness made it difficult to keep good fresh food in the house while she was out.

She rarely used groundnuts or beans now because they had sold them all to pay off their debts to a rich farmer who lent them grain last year at a high interest rate.

Her husband had gone to try to get some fertiliser. But she was very worried about Hawa. She had started having diarrhoea. Hawa's mother remembered the advice of the nurse, but she did not have any sugar, and their rock salt was very hard. She did not know how to measure out a pinch of it. So she could not make the special drink. She took her to the village midwife who was a neighbour of hers. The midwife recommended a herbal tea, and she tried to give this tea but she could see that Hawa spluttered most of it back out of her mouth so she didn't think it could be very effective, and stopped.

She made the child comfortable with her older sister, and went to do the weeding. How she worked, bending down to dig out the weeds with her hoe. She set off for home when the sun was high. Hawa seemed to be worse. She was weak and her eyes did not close properly. She would have to wait for her husband to come home before she could decide what to do.

He came home angry because he had arrived too late to get the fertiliser. He was afraid for Hawa, and blamed his wife for not giving her an enema just because the nurses had advised against it. He carried Hawa to the midwife, who said that since she wasn't getting any better with the herbal tea, they should take her to the Health Centre.

Hawa's father remembered a child who had been saved by having a needle in his arm at the health centre. He decided to begin the journey to Borku at once. But it took 4 hours to walk there, and Hawa died in his arms before they could treat her.

What caused Hawa's death?

This is a key question to start discussion after reading or telling the story. The question can be approached in many ways. Here is one possibility.

THE QUESTION GAME: "BUT WHY...?

To help the group recognise the complex chain of causes that led to Hawa's death, play the game, "But Why...?" Everyone tries to point out different causes. Each time an answer is given, ask the question "But why...?" This way, everyone keeps looking for still other causes. If the group examines only one area of causes, but others exist, the discussion leader may need to go back to earlier questions, and rephrase them so that the group explores in new directions.

For the STORY OF HAWA the "but why...?" question game might develop like this:

Q What caused Hawa's illness?
A Germs.

Q But why did the germs attack Hawa?
A Because she was thin.

Q But why was she thin?
A Because she got sick often, they ate only once a day.

Q But why was she sick often?
A Because she had frequent fever from malaria and the dirt she played in had germs from excreta in it, and made her sick.

Q But why?
A Because the mosquitoes gave her malaria.
Because they don't have latrines or clean water.

Q But why don't they have latrines?
A Because the cement ran out.

Q But why did it run out?
A Because the village is far; and perhaps a politician took it.

Q Why else was Hawa often sick?
A Because there is no village health worker or mobile clinic

Q But why?
A Because the Health Centre has no transport.

Q But why?
A Because there is no petrol or spare parts.

Q But why could Hawa's mother not treat her?
A Because she did not have sugar.

Q But why?
A Because the nurse had not looked to see what mother could actually do in their situation.

Q But why?
A Because the nurse was trained in the only training school, and had not learnt how to solve local problems.

Let's go back for a minute

Q Why did the family only eat once a day?
A Because food was getting short in the granaries.

Q But why?
A Because they couldn't get fertiliser.

Q But why?
A Because they live far away from the agricultural centre.

Q Why else did Hawa only eat once a day?
A Because her mother was busy, and she was looked after by her sister.

A long discussion might follow at any of these points. For example, on why rural areas get so little of the national resources.

Biological, physical, and social causes of illness

To analyze the causes of ill health and how they are related, it may help to group them as follows:

- Biological: a living organism, much as a virus, bacterium, parasite, or fungus.
- Physical: some condition in the physical environment, such lack of sufficient water, or poor soils.
- Social: human factors - the way people relate to or treat each other. These social causes can be divided into 3 sub-groups:
  - cultural: having to do with people's attitudes, customs, beliefs, and education (traditional education and modern schooling).
  - economic: having to do with money, land, and resources - who has them and who does not.
  - political: having to do with power - who controls whom and how.

Ask the discussion group to list the various causes of a particular illness in columns under the headings biological, physical, and social. For example:

VARIOUS CAUSES OF HAWA'S DEATH

	Biological	Physical	Social (cultural (C) economic (E) political (P))
1.	Diarrhoea germs	1. Distance from health centre	1. Mother too poor to buy sugar (E)
2.	Germs in drinking water	2. Poor roads and transport	2. No cement left (PE)
3.	Germs around house and surroundings from human faeces	3. Hot damp climate 4. Heavy rains 5. Poor soils 6. Type of salt in area 7. Unreliable rainfall	3. No petrol or spare parts for health centre vehicle (E)
4.	Low immunity because of malnutrition		4. One meal a day (E)
5.	Vulnerable age weaning period		5. Mother very busy no time to cook, clean and care for Hawa (E)
6.	Germs in food grow quickly in heat		6. Rarely use groundnuts and beans (E)
7.	Dehydration		7. Teaching of special drink not adapted to situation (C)
8.	Mosquitoes carrying malaria		8. Mother can't act without father's permission (C)
9.	Poor appetite		9. No fertiliser (EP)

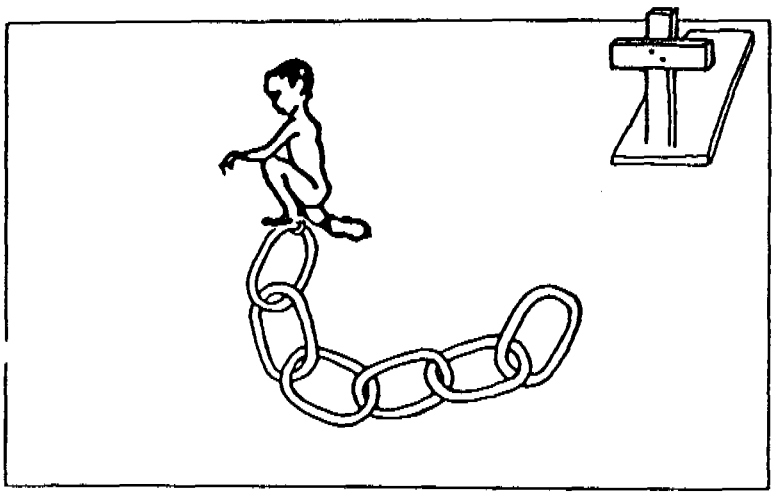
As the students draw up the list, they will soon realize that social causes usually lie behind and are more numerous than the biological and physical causes. It is very important that the group recognize and discuss these social causes, because....

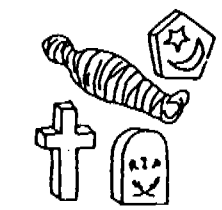
- the social causes are often ignored or overlooked by professionals and authorities, and
- only after the underlying social causes of ill health have been dealt with, can there be a lasting improvement in the health of the poor.

To help the group get a better idea of the chain or network of causes that lead to illness and death, an actual chain can be formed. Each time another cause is mentioned, a new link is added to the chain.

Draw the chain on a blackboard or a large sheet of paper. Or cut out cardboard links, and drawings of Hawa and a grave. These can be hung on a wall or fixed for use on a flannel-board.

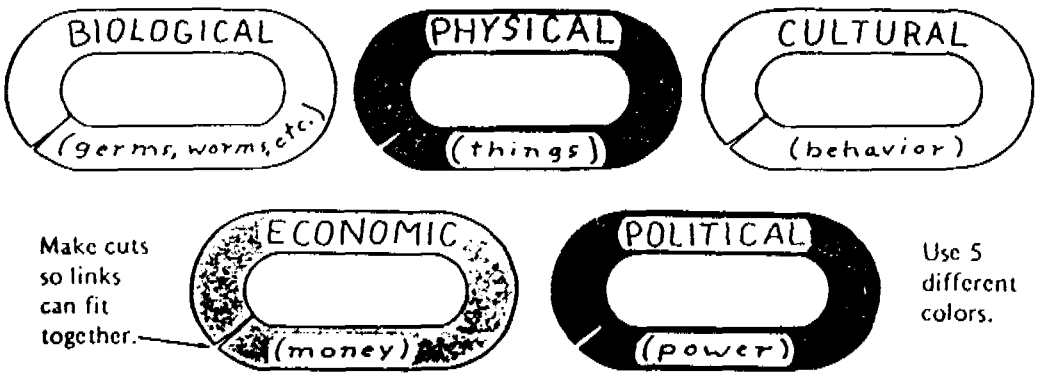
The "chain of causes" leading to Hawa's death from diarrhoea might begin something like this:





Be sure to use the symbol for the grave or death that is understood in your area.

You can use 5 different colors of links to represent the 5 kinds of causes. Students can help make cardboard or flannel links themselves.



The group can form the "chain of causes" as they play the game "But Why..?" or as a review afterward. Give each student a few links. The, each time a new cause is mentioned, everyone considers whether it is biological, physical, cultural, economic, or political. (Look for simpler terms people already use. For example, for cultrural, economic, and political you might simply speak of caused related to beliefs, money, and power.) Whoever has the right link for a particular cause, comes forward and adds the link to the chain.

Link by link the chain grows until it reaches the grave.

These teaching aids are useful early in a training course. They help increase the workers' awareness about the different causes of health problems and the way they relate to each other. However, the aids can also be used by workers to teach groups in their communities.

When playing the "chain of causes" game with persons who cannot read, use local symbols on the links instead of (or as well as) words. Be sure to use symbols the people in your area will understand.

But what can we do?

After analysing the causes of Hawa's death, the next step is to ask the question "What can we do?" It is often easier for people to think of possibilities and discuss them openly if they first consider what other people might do. So ask:

"What could the people of Temboki do to help prevent the death of other children like Hawa?" Members of the discussion groups may have a wide range of suggestions, some more realistic than others:

"Arrange someone from the village trained as a health worker."

"Start a cooperative so that people can escape the high interest rates of the grain lender, and store their own fertiliser."

"Organise the community to insist that the water agency fulfils its promise of cement."

"Hold a workshop to change the way that nurses teach about the special drink."

"Start day-care centres for small children in the rainy season."

"Use herbicides instead of having women weeding."

"Develop a safe convenience food for young children which older sisters can use."

"Train the young child-minders to care for young children better."

"Buy a lorry so that the village always has its own transport."

In some places, villagers may not be ready to make many suggestions. Or they may make only "well-behaved" suggestions such as "Talk to the water mobiliser and see if he would be willing to get us some cement."

Any suggestions that poor people organise, insist on their rights or resist the abuses of those in power may seem strange or fearful to them.

Even in places where more and more people are awakening to their own possibilities, most of the poor still feel there is very little they can do to change their situation.

This story of Hawa is adapted from THE STORY OF LUIS used in the Ajoya programme in Mexico (2).

4.8. Role-playing to influence attitudes

Attitudes are very important in communications with people. If you respect people you listen to them and treat them in a different way.

Attitudes to people will often be improved if you understand the other person's point of view. So, one way of teaching attitudes is to give students an idea of how it feels to be asked about their defecation habits or scolded by the health inspector:

How would you feel
if a stranger
asked you this question?

A role play can be developed on this theme - by the trainer and trainees working together, or perhaps by the trainees alone.

4.9. How to measure changes in attitudes

Changes in attitudes are more difficult to measure than changes in skills.
If we explain to students the need to treat villagers with respect, how can we measure a change in attitudes?
There are several ways of doing this:

- observe how students behave towards village people during field work;
- listen to how they talk about village people in discussions and class work;
- give students written work which tells you how they view village people.

4.10. The need to support new attitudes

Students may change their attitudes during the course, but find the new attitude difficult to keep in their working lives. The new attitudes must be strengthened and supported by superiors and colleagues at work. If senior staff and longer-employed mobilisers do not have an egalitarian attitude towards rural people, the newly trained mobilisers will probably quickly slip into a superior attitude themselves, whatever they might have learnt on the course.

The community mobiliser needs rewards for good attitudes, especially in approval from others. (S)he needs to feel that the approach is being followed consistently by the agency (s)he works for. If the agency does not allow sufficient time for community participation in planning, the mobiliser may feel that working extra hard to get the community involved and make up for this will not be appreciated, even if (s)he has been taught the need for this and supported by superiors and colleagues at work.

Frequent refresher courses and supportive supervision help to strengthen new attitudes. Students are reminded of the right attitudes, and discussions about common problems with a group of fellow community mobilisers give people courage to keep on the right path.

4.11. Magic, status or science?

Some mobilisers feel that they should go along with people's beliefs, even if they do not believe in them, in order to persuade people to do what they think they should do. You may also feel that it is disrespectful to show that you personally do not agree with local people's ideas on the cause of a disease, or the need to avoid offending local spirits.
We believe that it is looking down on people to pretend that you agree with their ideas when you do not. It shows more respect to give your view honestly and to help them to understand your reasons for this view. Also, if people do things, not because they understand the scientific reason why this will benefit their health, but for a different reason, they may not do all that they need to do correctly. For example, if people build latrines for status reasons, but do not use them, their health will not improve. Invite trainees to discuss the following story:

In one area of Kenya, people believe that babies are born with worms, and all children therefore have worms in their stomachs. They believe that these worms are harmless unless they go out in the child's faeces and get picked up by a witch who wants to harm the child. The witch can do this by pointing the worm at the child, or grinding it up and putting it in the child's food. Only then do worms make children sick. The health workers have used the following story to persuade people to build latrines or cover their faeces.

"Once there was a woman called Yaa whose young son Kofi had many worms in his stomach. Yaa thought that this was normal, but she was worried that a woman called Nufa, whom she had quarrelled with, wanted to harm her child.

"She tried to make sure that Nufa never knew where to find Kofi's faeces by throwing it in different places by the river. But one day, she believed that Nufa must have followed her and managed to get hold of a worm, and taken it to the witch. The next day Kofi had very bad stomach pains and had to go to the hospital for medicine to get rid of a big ball of worms in his stomach. Yaa become more afraid of Nufa than ever.

Then, a community mobiliser visited the village. He said that if people buried their children's stools, or better skill, put them in a deep latrine, no-one would know where they were or be able to get hold of a particular child's faeces. Then they could stop worrying about evil-wishers. He offered to help people to build latrines. People were pleased that he understood their problem so well, and many built latrines."

Questions for discussion

- In what ways does the story told by the health workers help people gain greater understanding and learn healthier practices?
- In what ways does the story mislead people or block their understanding of important causes of disease?
- Which is more likely to help people to gain control of the events that affect their health and lives, a magical, or a scientific understanding of causes and results?
- What are some problems that might result from the fact that the story makes it seem like keeping the worms away from the witch, rather than cleanliness, is the key to preventing diarrhoea? Can you retell the story in a way you think is better?
- Was this the best way to go about solving the problem of worms?
- Is it always right to assume that latrines are the best solution for the disposal of excreta and to persuade people to build them, using the locally most persuasive arguments, e.g. status, privacy? Or discuss other possibilities such as digging a shallow hole each time one goes to defecate?
- What is the best way of earning the trust of community members?
- What is the best way of ensuring that the solutions recommended and adopted by the community are the ones which will work and be to everyone's liking and within their economic means?

There are no correct answers to these questions. Trainees should be encouraged to realize that many things are only a matter of opinion which may be more or less well informed, and that they can develop their own opinions rather than relying on teachers to have all the right answers. At least we think they should be. What do you think?

Notes

(1) Much of section 2 is taken, slightly adapted, from Abbatt, F.R. Teaching for Better Learning: A Guide for teachers of primary health care staff, WHO, Geneva (1980). This source has also influenced the framework for Ch. VII as a whole and the sections on teaching of skills and attitudes.

(2) Werner D., and Bower B.: Helping Health Workers Learn, Hesperian Foundation, Palo Alto (1982), P. 24-21.

(3) Role playing can follow the discussion of cases (see section 3.3).This is recommended by Batten, whose presentation of role-playing has been used as the basis for this section. Batten, T.R.: Training for Community Development: a critical study of method, Oxford University Press, London (1962).

(4) Frankel, Larry: "Small-small catch monkey: non-formal education and public health in Ghana", World Education Reports (April 1981).
In some countries, perhaps, this role play would not be acceptable or conclusions might be drawn opposite to those intended. It is always necessary to be careful in adapting material from a different cultural environment.

(5) Batten, T.R.: The Human Factor in Community Work. Oxford University Press, London (1965).

(6) The following sample story is taken from: Save the Children Fund (USA): Bridging the Gap: A participatory approach to health and nutrition education, Westport, Connecticut (1982), P.38.

VIII CONCLUSION: ATTITUDES AND SUPPORT REQUIRED

Most of what has been said in previous chapters has assumed that human and social problems are found at community level, while the agency is in a position to be able to solve these problems by training community motivators for increased community participation. In reality, the agency will have its own social environment in which staff members have different attitudes and opinions, and will exist in a public and political environment which imposes constraints on what it can do.

In this final chapter we shall discuss what attitudes must prevail among professionals, politicians, and the public if participatory approaches are to be adopted and successfully implemented.

In a way the answers are simple. Before adopting participatory approaches, policy-makers will look at whether they are likely to be cost-effective in quantifiable terms, i.e., lead to overall cost savings or bring measurable benefits at low additional cost. They may also be concerned with the less obvious costs of adopting the approach: the complications it might introduce in administration, the senior staff time taken up.

Where services are provided to households (with house or yard connections) in urban areas, community participation in the forms discussed here is unnecessary: people will prefer to pay for these services than to be involved in their construction or maintenance. In some richer rural areas perhaps the same applies. But in most rural areas people will prefer to make available some of their time and labour rather than cash. And wherever the users do not pay a tariff for service (i.e. generally where is no household connection) community involvement will be necessary to ensure adequate maintenance. It is perhaps this argument concerning maintenance which is likely to be most convincing for many administrators of water and sanitation programmes.

Maintenance can be organised without community involvement but only given sufficient resources, and maintenance budgets in particular tend to be under-funded. Community participation can be regarded as a way of ensuring adequate maintenance without over-stretching this budget, but not as a way of devolving all responsibility for maintenance on to the community. In addition, and depending on the technology involved, savings may be made on capital construction costs.

As for the second part of the earlier question, what attitudes must prevail if participatory approaches are to be successfully implemented, the short answer is again very simple: willingness to appreciate the point of view of the ordinary person in the community. Some of the important problems of rural water and sanitation programmes could be avoided by programme leaders going out more often into the villages and talking things over with an open mind toward what local people tell them. In fact, none of what is said in these guidelines, about the need to train personnel specifically for mobilisation work for example, should be taken as meaning that programme leaders can leave direct contact with local communities to specialist staff: they should still make time to go sometimes to see for themselves. Neither questionnaires filled in by local staff and analysed at head office, nor formal visits for inauguration ceremonies, are any substitute for talking over problems with local people.

Similarly, other problems might be avoided by giving some thought to social and cultural factors at the planning stage, even if these were handled without the full community mobilisation programme which we outline here.

1. Requirements for any fully participatory programme

However, our premise is that full community participation is to be sought. This will require more than just openness to take account of social and cultural factors and listen to the views of local people. Whatever the approach taken, it will require from the professionals and policy-makers involved:

> A critical attitude toward the adequacy of existing programmes for providing water and sanitation facilities to people with little involvement on their part.

In most countries, existing programmes will be unable to provide all the rural population with water and sanitation facilities within a short period. One response to this inadequacy is to hope or press for more funds to be made available so that existing programmes can be expanded. But a policy of increased community participation requires a rethinking of the methods of existing programmes. There must be a willingness to examine these programmes to see if a better way is possible. It goes without saying that there must also be a genuine commitment to the improvement of the well-being of the people.

> A recognition that the mobilisation of the community is a valuable means to improve well-being, and that it requires a special organised effort.

Sometimes the agency staff or policy-makers first agree that resources could be saved by the community contributing labour, or materials or cash, to project construction, or that maintenance problems could be much reduced if the community were to accept responsibility for maintenance; but they assume it is enough to instruct technical personnel simply to ask the community through its leaders to make these contributions, or enough to hand over ownership of a facility formally to the community, perhaps providing some tools and training in maintenance to community volunteers. What is likely to happen in that case is that the community contributions are so badly coordinated with agency inputs that construction is delayed and perhaps made more expensive than if paid labour had been used; or volunteer caretakers cease after a time to do any work - and maintenance is worse than if alternative arrangements had been made, e.g. for occasional visits by agency staff. After negative experiences like this, some professionals are understandably dismissive or unconvinced about community participation.

What is needed is a realistic appreciation that community mobilisation is not easy and will not solve all problems, but that if effort is put into making it work, it is very much worth while.

> Recognition that this special organised effort implies planning, and it requires training of the personnel who will be involved.

These tasks must be considered of some importance by top decision-makers. The point need not be elaborated here: it is elaborated in this document as a whole.

Willingness to make financial provision for the mobilisation work including the training of mobilisers.

Financial provision for mobilisation should normally be a profitable investment, as well as bringing other benefits which cannot be measured in economic terms. When people are mobilised to construct simple facilities using largely their own resources, it is self-evidently an inexpensive way of meeting needs. The people involved are investing labour, the resource they have in abundance, for a high return in future convenience and health, time savings etc. The agency investment in mobilisation and other help, for these community projects which would not have happened otherwise, is clearly highly cost-effective and productive. When it is a question of comparing agency projects built with and without community participation, there may be some short-term savings on capital cost to the agency, but the main economic gain will generally be from improved maintenance and longer life of the facilities, i.e. lower life-cycle costs. Thus the financial attitude required is that a long-term view must be taken. Future gains which cannot be forecast exactly must be regarded as important, even when current budgets are constrained.

Fortunately the investment required in setting up a mobilisation effort which starts small and expands as experience is acquired, is not very large. The financial problem in many cases is, however, that though it is an investment it cannot be taken entirely from an investment or development budget, because costs are largely in the form of wages and salaries, and permanent or potentially permanent jobs and positions are created. Thus there needs to be a willingness at the relevant policy-making level to approve the additional posts. In countries where external aid provides a substantial proportion of development funds - but cannot, of course, provide for payment of salaries on an indefinite basis - there may be a real difficulty in finding funds. Ways can sometimes be found around the difficulty: avoiding the creation of new posts by using existing personnel (with retraining), or at lower levels by using temporary labour categories to employ mobilisers: or setting up a programme with initial funding guaranteed only for a limited term.

Recognition that rural people ideas and energies which can be very useful in the joint enterprise.

Much of what was said in earlier chapters, particularly Ch. VII in the section "How to teach attitudes", emphasises the need to overcome the prejudice which may exist among trainees that the main obstacle to progress in rural areas is the ignorance or conservatism of rural people. It is a widespread attitude which frequently leads to a failure to take account of valid comments which the local people may try to make on a programme. It is an attitude which may be held by professionals and policy-makers also, though perhaps it tends to be most intense among persons with only a medium level of formal education (at higher levels a more sophisticated view may be presented by educators, and a higher-status person may no longer have a psychological need to emphasise what separates him/her from the rural people).

It is important for programme planners to recognise the value of rural people's experience, knowledge of their own situation, and ideas on how a project should be carried out in their area. It means structuring mobilisation programmes around discussion and dialogue as recommended in these guidelines, not just around "promotion" of pre-determined solutions or one-way education.

A realistic to the limitations of communities as organisations for action.

A "community" may just be a locality where a number of individual families live: they will probably have more contacts and informal relationships among themselves than they have with outsiders; they will probably also have some interests in common, including an interest in a good water supply. But they will also have individual interests which may be conflicting, particularly where there are big social or ethnic differences or some are landowners while others work for them. These different interests may be concealed, especially where some people or groups hold the power in the community - there may be resentment, but nothing to be gained by expressing it. It follows that even where organisations are established such as village councils or development committees, they cannot be expected simply to decide what to do and then do it, as easily as individuals sometimes do when something is in their interest to do. That is why outside mobilisers are often needed. It is also why it is not reasonable to expect that community development can normally be entirely self-generating and autonomous, or that the best results will necessarily be achieved when communities are entirely in control of the process - and the funds.

These attitudes are required among the professionals and policy-makers involved in setting up any type of mobilisation programme for water and sanitation. Some understanding and sympathy for them will also be required on the part of other professional colleagues and policy-makers.

2. Requirements for particular approaches

For the particular types of mobilisation programme mentioned in earlier chapters, however, we may add the following more detailed points:

2.1 Project plan approach

Importance needs to be given by engineers and administrators to the social side of the agency's work.

In most water supply and/or sanitation agencies, the staff in charge of the programme and regional and district level will be engineers or other professionals or administrators without training in social science: mobilisers may be responsible to them or there may be dual responsibility; alternatively, there may be a separate mobilisation section or department with which the area engineer must coordinate. In either case it is essential that the engineer (or other person in charge at regional level) should appreciate the importance of mobilisation. Otherwise the personnel and resources may be used for other purposes which seem more urgent, the personnel may become discouraged and little work done. Typically, it is over the need for mobilisers to have transport to their villages that difficulties arise when there is insufficient support.

One possibility is to ensure that mobilisers are independent of the regional transport pool by, for instance, giving them a loan to buy their own motor-cycles (or bicycles, horses, etc. according to local circumstances). But in any case the attitude of regional officers must be supportive.

Target-setting and reporting, along with the attitude of politicians and the public toward the performance of water and sanitation agencies, should be based on the goal of continuous service to as close as possible to 100% of the population, to be achieved with their involvement.

Currently, target-setting, reported progress, and the associated attitudes are often in terms of new projects completed by the agency. Sometimes the higher and more capital-intensive the technology the greater the political approval given, despite the fact that it means that capital and energies have been tied up in providing facilities to a relatively few people. Or a local politician may put pressure on an agency to provide a facility to a community, with no effort or involvement on the community's part and/or despite the fact that more people could have been served at lower cost elsewhere.

In many cases there is some control of these distortions through the setting of targets and reporting of achievements in terms of the proportion of the population served, so that there is an incentive to press for projects which are cost-effective in terms of the per capita cost of new projects. But even in these cases it is usually only the initial capital cost which is taken into account, so that the effective planning question is "how can we serve the maximum number of people with the money we have for capital expenditure?". Maintenance costs and total lifetime costs are not taken into account: this, combined with the inadequate provision for maintenance, means that far too many projects break down far too quickly and require replacement or major repair (sometimes this can be paid for from a capital or development budget, or an aid budget).

The proposed alternative is that the water or sanitation agency's performance should be judged in terms of the number of people who can be confirmed as currently receiving the service, as a percentage of the population for whom the agency is responsible. The entire population of the country should be clearly identified as being the responsibility of one or another agency as far as water and sanitation are concerned, and the present number actually served by these agencies accurately assessed - not assumed to be served because at some time a project was completed which was supposed to serve them. Progress will be gauged in terms of improvement from year to year in the percentage actually served, given accurate re-assessments of the operational state of existing systems. This would encourage a greater emphasis on maintenance, as well as repair and rehabilitation; it will also favour community involvement as a means to ensure better maintenance. And it will favour technical solutions whose lifetime costs rather than initial capital costs are lowest.

Understanding of the need for team spirit to work with the community, among agency staff.

When it is a question only of technical tasks, the performance of agency staff might be kept up to the required standard just by adequate supervision and control within the agency.

However, where it is a question of working with the community, there is greater need for high morale and dedication at all levels: the tasks are not so easily specified and it is not so easy to see if they have been correctly performed. Attempts at administrative control through reporting of, for example, the number of visits paid to villages or number of meetings called, are inadequate because it is what is done during the visit or what is said at the meeting that is important. In fact, there can be too much emphasis on controls of this sort: what is required is the cultivation of a sense of responsibility on the part of the mobilisers, and this implies giving them the feeling that they are trusted not to need close control.

Therefore, at policy-making level in the agency, there must be an understanding of the need to create this dedicated team spirit. Otherwise it might be made difficult or impossible by decisions taken on normal administrative grounds. There is also a need to preserve teams from disruption which might be caused by repostings or the appointment to supervisory positions of people who do not have the interest and commitment required.

2.2 Mass Campaign Approach

Wholehearted support at the highest political level will make all the difference to what can be achieved by this approach to mobilisation.

When the political leadership has the support on the population, it can lead them in development efforts using mainly their own resources.

In order to use this potential in the field of water and sanitation, what is required is that the political leadership see the opportunities it presents, rather than seeing it only as an administrative responsibility of specialised agencies.

Campaigns require endorsement and perhaps active campaigning on the part of politicians; and they require organising efforts on the part of the local administration at regional and district level; in one-party states, the efforts also of the ruling party and the mass organisations affiliated with it.

The public attitude must be favourable at least in terms of approving the purposes for which they are to be mobilised.

The success of a mobilisation campaign depends on the enthusiasm which can be built up or harnessed for it. At some times and places the political circumstances will be particularly favourable for popular mobilisation, at other times and places perhaps less so. If the rural population comes to perceive calls for self-help as unfair given the taxes they pay and the subsidies for services in urban areas, there may be reluctance to make the efforts asked. Also, if efforts have been made in the past but have failed (especially if they have failed bacause expected inputs by government agencies have not materialised). In these cases people are likely to look much more closely at the balance of their effort with expected benefits for them: if the benefits are clear and outweigh the efforts required, mobilisation can still be successful.

A Mass Campaign is easier if a network of local organisations for mobilisation is already established.

Many countries already have development committees or community improvement associations established in every village; in one-party states, it may be the local committee of the party which performs a similar mobilising function. Some countries have carried this further with the whole population mobilised in small neighbourhood groups ("block committees"). While these do not guarantee the success of a mobilisation campaign, and too much emphasis can be placed on organisation while too little attention is paid to the prevailing public attitudes as mentioned above, nevertheless such forms of organisation clearly make mobilisation easier to carry out.

2.3. Community development with a non-directive approach

Community Development agencies need adequate status and funding.

The greatest direct constraint limiting the work being done by community development agencies with a non-directive approach is that their funding is small. This is particularly true of a number of African countries where Community Development departments were more significant in the late colonial and early independence periods (including "Animation Rurale" services in Francophone countries). Elsewhere, as in India, the community development organisation has become effectively part of the local government structure, and does not use a non-directive approach.

The low funding for community development very likely reflects the attitude which saw the efforts of the subsistence sector in agriculture as marginal to development: industrialisation and large-scale or commercial agriculture were seen as central. There has been, of course, a substantial shift in these attitudes in recent years, toward a new emphasis on productive growth in small-scale agriculture and labour-intensive crafts; this is also reflected in the growing interest in community participation. However, it has not yet led in many countries to a reinvigoration of Community Development agencies.

One problem is that external aid funding for these agencies tends to be small compared with the funding to other development-related ministries and departments. This is largely because community development does not require capital funds with a large foreign exchange component for spending on specific identifiable "projects", but recurrent funding for staff and operational expenditure, in order to help and encourage people to create their own capital.

Thus, greater funding for community development with a non-directive approach would require changes in attitude among national policy-makers at the level at which budgetary allocations are made, and among donors and recipients in respect of the allocation of aid funds. Funds could be assigned to enable community development agencies to work with local communities on the improvement of traditional water sources, and on simple new types of supply, as well as on sanitation.

This is particularly relevant where water and sanitation agencies cannot be expected to cover all communities within a short period.

This kind of approach to funding water and sanitation through community development need not be limited to Community Development departments as such. It could include other agencies adopting or able to adopt a non-directive approach to development: Departments of Adult Education, Non-formal Education etc.; of Rural Development; projects and agencies for the development of specific, perhaps "backward", regions and districts.

> To adopt a non-directive approach, it is of course necessary that policy-making in the agency accords with this approach.

In general Community Development (and Adult Education) agencies will be open to a non-directive approach: it is implicit in their philosophy and training. However, when funds are made available for specific purposes, there are naturally pressures to ensure that these purposes are fulfilled, and that may mean pressures toward a more routine directive approach. The attitude needs to be that people in general already know what is in their best interest, but require some help to accomplish it.

BIBLIOGRAPHY

A. Annotated bibliography

Annotated list of the works which may be considered for use in planning and training for community motivation in water and sanitation. They are in general the same as have been most useful in the preparation of this document. Like this document, however, they should all be used selectively as sources of ideas rather than relied on for answers.

- Abbatt, F.R. (1980).
  Teaching for better learning: a guide for teachers of primary health care staff.
  Geneva, World Health Organization, p. 137.

  A manual of teaching methods for training auxiliary health staff. It provides information on:
  a) how to ensure that a course is relevant to the task which the trainees will have to carry out;
  b) how to teach students what they need to know and evaluate the effectiveness of their learning, with limited resources;
  c) how to develop and test teaching/learning materials to serve as course texts and sources of reference.

- American Home Economics Association, International Family Planning Project (1977).
  Working with villagers.
  Washington D.C., American Home Economics Association.

  Although this document does not deal specifically with water supplies or sanitation, it gives useful material on the principles of adult education, how to utilise effective teaching techniques and media, and how to plan teaching sessions.

  Comprises:
  - prototype lessons
  - trainers' manual: training units, media labs
  - media resource book
  - skills exercises
  - line drawings
  - recipes for making teaching tools and materials

- Batten, T.R. (1962).
  Training for community development: a critical study of method.
  London, Oxford University Press.

  This book addresses two major training needs:
  a) to develop in field workers a satisfactory level of skill in working with people;
  b) to provide effective orientation training for all the adminstrators, departmental officers, and village leaders whose interest and cooperation are needed to ensure success. The book describes methods and techniques evolved for dealing with these two training problems. They were developed on courses for community development workers at the Institute of Education of London University.

- Batten, T.R. (1965).
  The Human Factor in Community Work.
  London, Oxford University Press.

  This book contains 37 case studies of problems faced by community workers from countries around the world. Problems are grouped under headings, e.g.: - meeting requests for help;
  - working with groups;
  - introducing improvements;
  all of which are very relevant to mobilisers for water supplies and sanitation. Each case is analysed to clarify why the worker had problems and how he might have increased his chance of success. The method of analysis by discussion of cases among a group of trainees is fully presented: it is a particularly useful training method.

- Batten, T.R. (1967).
  The non-directive approach in group and community work.
  London, Oxford University Press.

  The author describes the "directive" and "non-directive" approaches to working with communities, and persuasively illustrates the advantages of the non-directive approach. He gives detailed suggestions on how to work non-directively with groups and committees; how to provide training in the non-directive approach; and how to train the trainers.

- Boot, Marieke (1984).
  Making the links: guidelines for hygiene education in community water supply and sanitation.
  The Hague, International Reference Centre for Community Water Supply and Sanitation.

  These health education guidelines are intended for use by mobilisers in water and sanitation programmes. They draw from a number of other health education guides and materials. They can also be said to complement the Appendix of the present document by showing a way in which the ideas of disease transmission can be presented in the community.

- Glennie, Colin (1982).
  A model for the development of a self-help water supply program.
  (TAG working paper no. 1), Washington, D.C., The World Bank, Technology Adivisory Group.

  Brief and to the point, this presents a model for a programme in which community participation mainly takes the form of labour contributions; the mobiliser is a "field assistant" who also does semi-skilled technical work. Though it is not stated, the model is based on the Malawi programme with which the author worked: see next item, of which this one may be regarded as a shorter version - there is no need to get both.

- Glennie, Colin (1983).
  Village Water Supply in the Decade: lessons from field experience.
  Chichester, Wiley, p. 152

Glennie describes the Malawi rural piped water supply programme while drawing conclusions for what should be done in all rural water programmes. It is full of perceptive observations, for instance the distinction made between "institutionalised demand" - requests for projects from community committees and representatives - and "genuine popular demand" on the part of the whole population, best stimulated when they see another project being successfully constructed nearby.

The main emphasis is on the need for slow learning from experience: a programme should first find out in a few pilot projects what methods are appropriate, then pass through a consolidation phase in which routine procedures are developed, and then a cautious and gradual expansion phase.

- Save the Children (1982).
  Bridging the gap: a participatory approach to health and nutrition education.
  Westport, Conn., Save the Children, p. 103

  This manual gives useful material on how to organise short training courses for educators who will work in villages. It encourages and uses a participatory approach. A number of sample games, shows, stories etc. are presented.

- Werner, David and Bower, Bill (1982).
  Helping health workers learn: a book of methods, aids, and ideas for instructors at the village level.
  Palo Alto, Ca., Hesperian Foundation. p. 632

  A highly entertaining and readable manual for training village health workers - or rather for helping them to learn: the emphasis throughout is on treating them as intelligent adults who can integrate new ideas with their existing experience. The new ideas must be expressed in words the students understand, not in the jargon of the professional. Students are encouraged to question everything they hear, and there are methods for helping students to figure things out for themselves. Political issues are raised sensitively. It can be most directly used by water and sanitation programmes:
  (1) for the training of mobilisers who are drawn from the local population, and have a low level of formal education;
  (2) for ideas on health education in the community;
  (3) for exposing trainers to ideas which they may find disturbing (e.g. because they question authority) but in a very sympathetic and attractive way. The line drawings which illustrate the text throughout are a delight, and we have used a number of them in the present document.

- White, Alastair (1981).
  Community participation in water and sanitation: concepts, strategies and methods.
  (Technical paper series, no. 17), The Hague, International Reference Centre for Community Water Supply and Sanitation, p. 108.

This is an earlier book by one of the present authors. It discusses the different types of participatory programme in terms of the degree of community involvement, from consultation to full self-reliance. The intention is to help programme leaders choose their strategy of mobilisation on a well-founded basis. A chapter on Community Education and Behaviour Change provides a background in the findings of social psychology for the approach to health education which we take in the present document.

- Whyte, Anne V.T. (ed.) (1982).
The Colombian field manuals and training guides for the promotion of community participation in water and sanitation schemes: a translated and edited version in English of the materials prepared by the National Institute of Health, Ministry of Public Health, Colombia.
The Hague, International Reference Centre for Community Water Supply and Sanitation. p. 125.

  This presents a set of training materials for water programme mobilisers, in greater detail than is available in any other source in English. The programme of the Colombian National Institute of Health is one of the longer-established participatory programmes in Latin America, and has developed a full set of materials for the training of mobilisers and of regulations and norms for their work in the communities. The publication consists of extracts from these, introduced and set in context by the editor.

  In addition to the Colombian materials, we have also found those from similar programmes in El Salvador and Mexico of particular use in the preparation of the present document, but they are available only in Spanish, and are therefore included only in the general bibliography below.

- Whyte, Anne V.T. (1983).
Guidelines for planning community participation in water supply and sanitation projects.
(unpublished document ETS/83.8 originally IRC draft for WHO), Geneva, World Health Organization, p. 60.

  Following a brief introduction, this presents checklists of options and points to consider in the planning of participatory projects.

- Wijk-Sijbesma, Christine van (1981).
Participation and education in community water supply and sanitation programmes: a literature review.
(Technical paper series, no. 12), The Hague, International Reference Centre for Community Water Supply and Sanitation, p. 222.

  This is the only full literature review in the field. It is a well balanced presentation, set in the context of the practical steps which need to be taken in establishing a participatory programme, of every significant point which had been made by those writing about the topic, in publications of all types. It includes many brief references to ideas and suggestions for things to do.

This document considers all the aspects which should be taken into account if maximum health benefits are to be achieved through water and sanitation projects. A weighting procedure is proposed, with scores given for characteristics of communities in which projects are contemplated.

B. Special bibliography

Simple manuals on appropriate technical solutions

- Abela, M.T. (undated).
  Supplying water to villages.
  (Children in the Tropics, no. 126), Paris, International Children's Centre.

- Burrowes, Robert and Mayer, Joseph (1981).
  Small water project training module: course description, course outline and lesson plans (for small gravity piped schemes).
  Sana'a, Yemen, American Save the Children.

- Edwards, Daniel, Keller, Kent and Yohalem, David (1984).
  A workshop design for rainwater roof catchment systems: a training guide.
  (WASH technical report, no. 27).

- Gormley, Wilma, Goff, David and Johnson, Carl (1984).
  A workshop design for spring capping: a training guide.
  (WASH technical report no. 28).

- GRET.
  Fichiers Techniques series, in French, on appropriate technology in all areas, including water and sanitation. Paris, Groupe de Recherche sur les Techniques Rurales.

- Kalbermatten, John M., Julius, DeAnne S., and Gunnerson, Charles G. (1980).
  A sanitation field manual.
  (Appropriate technology for water supply and sanitation, vol. 11), Washington D.C., World Bank

- LeClere M., and Sherer, K. (1984).
  A workshop design for latrine construction: a training guide.
  (WASH technical report, no. 25), Arlington, Va., Water and Sanitation for Health Project.

- Liebler C., Pashkevich A. (1984).
  A workshop design for handpump installation and maintenance: a training guide.
  (WASH technical report, no. 26).

- Morgan, Peter R. and Mara, Duncan D. (1982).
  Ventilated improved pit latrines: recent developments in Zimbabwe.
  (Technology Advisory Group working paper, no. 2), Washington D.C., World Bank, p. 41.

- Van Nostrand, John, and Wilson, James G. (1983).
  The ventilated improved double-pit latrine: a construction manual for Botswana.
  (TAG technical note, no. 3), Washington D.C., World Bank, p. 47.

- Ryan, Beverley A. and Mara, Duncan D. (1983).
  Ventilated improved pit latrines: Vent pipe design guidelines.
  (TAG technical note no. 6), Washington D.C., World Bank, p. 16.

- WASH (1984).
  Guides for trainers in rural water supply and sanitation.
  Arlington, Va., WASH (USAID Water and Sanitation for Health Project):

- Winblad, Uno and Kilama, Wen (1980).
  Sanitation without water.
  Stockholm, SIDA, p. 65-119.

C. General bibliography

- Abbatt, F.R. (1980).
  Teaching for better learning: a guide for teachers of primary health care staff.
  Geneva, World Health Organization, p. 137.

- Abdullah, Tahrunessa A., and Zeidenstein, Sondra A. (1982).
  Village women in Bangladesh: prospects for change.
  (Women in development series, no. 4), Oxford, Pergamon.

- Abela, M.T. (undated).
  Supplying water to villages.
  (Children in the tropics, no. 126), Paris, International Children's Centre.

- Agua del Pueblo (1981).
  Prospecto para un curso de adiestramiento de técnicos en acueductos rurales (Prospectus for the training course of technicians in rural water supply).
  Guatemala, Agua del Pueblo, p. 6.

- Agua del Pueblo (1980).
  Sector analysis and program planning document for environmental sanitation activities in highland Guatemala: final report for USAID.
  Guatemala, Agua del Pueblo, p. 181.

- American Home Economics Association, International Family Planning Project (1977).
  Working with villagers.
  Washington D.C., American Home Economics Association.

- Ansell, Christine and Burrowes, Robert (1981).
  Training manual in elementary hygiene/sanitation and its instruction.
  Sana'a, Yemen, American Save the Children.

- Batten, T.R. (1957).
  Communities and their development: an introductory study with special reference to the tropics.
  London, Oxford University Press.

- Batten, T.R. (1962).
  Training for community development: a critical study of method.
  London, Oxford University Press.

- Batten, T.R. (1965).
  The human factor in community work.
  London, Oxford University Press.

- Batten, T.R. (1967).
  The non-directive approach in group and community work.
  London, Oxford University Press.

- Belloncle, Guy (1979).
  Le chemin des villages: formation des hommes et développement rural en Afrique (The way to the villages: training of men and rural development in Africa).
  Paris, Harmattan and ACCT.

- Benjamin Paul, D., and Demarest William, J. (1982).
Citizen participation overplanned: the case of a health program in the Guatemalan community of San Pedro la Laguna.
paper for 1982 meeting of American Anthropological Association.

- Bennett, Mick, and Wakeford, Richard (1983).
Selecting students for training in health care: a practical guide to improve selection procedures.
(WHO offset publication no. 74), Geneva, WHO, p. 38.

- Boot, Marieke T. (1984).
Making the links: guidelines for hygiene education in community water supply and sanitation.
The Hague, International Reference Centre for Community Water Supply and Sanitation.

- Bryne, Hilary (1983).
Clean water in Kola.
Waterlines, vol. 1, no. 3. p. 21-23.

- Buckles, Patricia K., Karp, Andrew W. and Clemens, Bruce W. (undated).
The training and utilization of rural water technicians in Guatemala.
St. Louis, Missouri, Agua del Pueblo.

- Burrowes, Robert and Mayer, Joseph (1981).
Small water project training module: course description, course outline and lesson plans.
Sana'a, Yemen, American Save the Children.

- Clarke, Lorna (1982).
Training field workers in rural sanitation.
Pakistan, UNICEF, p. 32.

- Cochrane, G. (1970).
"The administration of Wagina resettlement scheme".
Human Organization.

- Coulson, Andrew (ed.) (1979).
African socialism in practice: the Tanzanian experience.
Nottingham, Spokesman.

- Cox, Stephen, and Sheldon, Annis (1982).
Community participation in rural water supply.
Grassroots Development, vol. 6, no. 1.

- Denys, Rik (1974).
Eau potable: information pour l'animation d'une population rurale.
Kananga, Kasayi Occid., Zaïre; Heverlee, Belgium, Projet de Développement communautaire, Internationale Bouworde, p. 18

- Dirección General de Servicios de Salud, División de Saneamiento Ambiental (1981).
Programa de saneamiento ambiental (Environmental sanitation programme - manual).
Guatemala, Dirección General de Servicios de Salud.

- Elmendorf, Mary (1981).
Women, water and the decade.
(WASH technical report, no. 6), Washington D.C., World Bank.

- Elmendorf, Mary, and Isely, Raymond (1982).
Role of women in water supply and sanitation.
World Health Forum, vol. 3, no. 2, p. 227-230.

- Environnement Africain (1977).
Une pédagogie possible pour l'autopromotion paysanne: l'approche du GRAAP.
(Études et recherches, no. 77), Dakar, Senegal, Environnement Africain, p. 24.

- Environnement Africain (1977).
Amélioration de l'eau et l'assainissement d'un quartier: propositions pratiques.
(Supplément, série relais technologique), Dakar, Senegal, Environnement Africain, p. 20.

- Espitia, Guillermo, and Ortega, B. (1982).
Experiencias con el proyecto de filtración lenta en Colombia (Experiences with the slow sand filtration project in Colombia). In IRC, Informe del seminario internacional sobre filtración lenta de arena para abastecimiento público de agua en países en desarrollo, Neiva, Julio 13-16, 1982.
(Bulletin no. 18), IRC, The Hague.

- Fals Borda, O., Vío, F., et al (1981).
Investigación participativa y praxis rural (Participatory research and rural action).
Lima, Peru, Ed. Mosca Azul.

- Feacham, Richard G, (1980).
Community participation in appropriate water supply and sanitation technologies: the mythology for the decade.
Paper presented to The Royal Society, Nov. 1979.
Proceedings of The Royal Society, London, B209, p. 15-29.

- Feacham, Richard G. (1981).
Environmental and behavioural approaches to diarrheal disease control, in Home et al (eds.), Acute enteric infections in children. Amsterdam, Elsevier/North-Holland Biomedical Press, p. 289-294.

- Feachem, Richard et al (1981).
Health aspects of excreta and sullage management: a state-of-the-art review.
(Esp. Appendix II, Uncritical summary of some literature on the impact of improved excreta disposal)
(Appropriate technology for water supply and sanitation, vol. 3), Washington D.C., World Bank.

- Frankel, Larry (1981).
Small-small catch monkey: Non-formal education and public health in Ghana.
World Education Reports.

- Gallardo, Leonel (1982).
Método de reflexión-acción (o método de cinco pasos) aplicado en la planificación y desarrollo de proyectos comunitarios de atención primaria de salud (unidad de estudio para personas que tienen responsabilidades educativas en las comunidades). (Method of reflexion-action or five-step method applied to the planning and development of community PHC projects: study unit for persons who have educational responsibilities in communities).
Guatemala, Instituto de Nutrición de Centro América y Panamá (INCAP), Unidad de Educación Alimentaria Nutricional, p. 24.

- Graham, Cecil (1979).
Public education: a training manual.
Caribbean Basin Water Management Project (author is area supervisor, Dominica Central Water Authority).
p. 52 plus annexes.

- GRET.
Fichiers Techniques series, in French, on appropriate technology in all areas, including water and sanitation.
Paris, Groupe de Recherche sur les Techniques Rurales.

- Hall, Budd (1975).
Participation and education in Tanzania.
(IDS discussion paper, no. 86), Brighton, Institute of Development Studies.

- Harnar, Ruth, Zelmer, A.C.L., and Amy, E. (1983).
A manual of learning exercises, for use in health training programs in India.
New Delhi, Voluntary Health Association of India.

- Instituto Nacional para Programas Especiales de Salud (now Instituto Nacional de Salud), División de Saneamiento Básico Rural (1974).
Manual de educación sanitaria (Manual of health education), Bogotá.

- INS, División de Saneamiento Básico Rural (1975).
Manual de procedimientos en promoción comunitaria para el programa nacional de saneamiento básico (Manual of procedures in community mobilisation for the national programme of basic santation - including water supply), Bogota.

- INS, División de Saneamiento Básico Rural (1974).
Reglamentos de juntas administradoras de acueductor y alcantarillados (Regulations for administrative boards of water supply and sewerage systems).
Bogotá, INS, p. 75.

- Institute of Resource Assessment, University of Dar es Salaam and Centre for Development Research (1982).
Water master plans for Iringa, Ruvuma and Mbeya regions.
Vol. 13: Socio-economic studies, Dar es Salaam.

- Institute for Housing Studies (BIE) (1982).
Guidelines for the production of technical manuals for low literacy levels.
Rotterdam, Institute for Housing Studies (BIE), p. 43.

- International Reference Centre for Community Water Supply and Sanitation (1982).
Rural water supply development: the Buba-Tombali water project.
Rijswijk, International Reference Centre for Community Water Supply and Sanitation.

- Isely, Raymond B. (1978).
Assainissement des sources d'eau par des moyens locaux: une contribution à la recherche d'une technologie appropriée.
Annales Soc. Belge Méd. Trop., no. 58, p. 149-156.

- Kalbermatten, John M., Julius, DeAnne S., and Gunnerson, Charles G. (1980).
A sanitation field manual.
(Appropriate technology for water supply and sanitation, vol. 11), Washington D.C., World Bank.

- Klein, Josephine (1961).
Working with groups: the social psychology of discussion and decision.
London, Hutchinson.

- Le Zan (1972).
Rural health service at Hamlet level.
Vietnamese Studies, no. 34, p. 27-57.

- López Orozco, Orlando (1976).
Capacitación continuada en desarrollo de la comunidad para promotores de saneamiento básico rural (In service training in community development for mobilisers in basic rural sanitation).
Bogotá.

- López Orozco, Orlando and, Pérez Perdomo, H. (1980).
Programa de capacitatión de juntas administradoras de acueductos y alcantarillados rurales (Programme of training for administrative boards of water supply and sewerage systems).
Bogotá.

- López Orozco, Orlando (1983).
Educación y capacitación para la participación de la comunidad en el programa de abastecimiento de agua potable y saneamiento rural de Colombia (Education and training for community participation in the Colombian programme for rural water supply and sanitation). Simposio Regional sobre Recursos Humanos para el Decentio Internacional del Agua Potable y del Saneamiento Ambiental, 26-30 de Julio de 1982.
Washington, D.C. PAHO.

- McBean, George, Kaggwa, N., and Bugembe, J. (1980).
Illustrations for development.
Nairobi, Afrolit Society, p. 69.

- McMichael, Joan K., (ed.) (1976).
Health in the third world: studies from Vietnam.
Nottingham, Spokesman.

- Ministerio de Salud Pública y Bienestar Social, Servicio Nacional de Saneamiento Ambiental (1982).
Programa de entrenamiento de personal (Progamme for the training of personnel).
Paraguay, p. 28.

- Ministerio de Salud Pública, Instituto Ecuatoriano de Obras Sanitarias, Departamento de Promoción (1975).
Guía didáctica sobre aspectos de saneamiento rural (Didactic guide on aspects of rural sanitation).
Quito, Ecuador, Instituto Ecuatoriano de Obras Sanitarias, p. 90.

- Ministerio de Salud Pública, Instituto Ecuatoriano de Obras Sanitarias, Departamento de Promoción y Educación (1977).
Manual de saneamiento ambiental (Manual of environmental sanitation).
Vol. II, Desarrollo de la Comunidad.
Quito, Ecuador, Ministerio de Salud Pública, Instituto Ecuatoriano de Obras Sanitarias, p. 411-753.

- Ministerio de Salud y Comité de Defensa Sandinista (1980-82).
Manual de orientación popular en las jornadas de trabajo colectivo en salud (Manual of popular orientation on the days of collective health work - various materials on malaria control, immunisation etc), Managua, Ministerio de Salud y Comité de Defensa Sandinista.

- Morgan, Peter R., and Mara, Duncan D. (1982).
Ventilated improved pit latrines: recent developments in Zimbabwe.
(TAG working paper, no. 2), Washington, D.C., World Bank, p. 44.

- Morley, David, Rohde, Jon and Williams, Glen (eds.) (1983).
Practising health for all.
Oxford, Oxford University Press.

- Muller, Frits (1982).
The myth of primary health care: case studies from Peru.
Ideas and Action, no. 145 (special issue on rural health) p. 7-12
Republished as a Contrasts in community participation: case studies from Peru, in D. Morley et al, Practising health for all.
Oxford, Oxford University Press, 1983, p. 190-207.

- Mukhopadhyay, Maitrayee (1983).
Human development through primary health care: case studies from India.
in D. Morley et al, Practising health for all.
Oxford, Oxford University Press, p. 138.

- Nimpuno, Krisno et al (1981).
Documentation on low-cost sanitation.
Bangkok, Asian Institute of Technology, Human Settlements Division, p. 99.

- Oendo, Ayuka (1983).
Water, health and the community in Kibwezi.
Nairobi, AMREF, p. 34.

- O'Kelly, Elizabeth (1973).
Aid and self-help.
London & Tonbridge, Charles Knight, p. 57.

- O'Kelly, Elizabeth (1981).
Water and sanitation for all.
London, Associated country women of the world.

- Office of the President and Cabinet, Department of Lands, Valuation and Water, Rural Water Section (1977).
Handbook for the training of project assistants (mimeo and revisions).
Lilongwe, Department of Lands, Valuation and Water.

- Office of the President and Cabinet, Department of Lands, Valuation and Water, Rural Water Section (1982).
Refresher course programmes for supervisors (mimeo).
Lilongwe, Department of Lands, Valuation and Water.

- Pestelos, N.M. (1981).
Rural water supply and sanitation in the context of people-based development.
paper presented at the UNICEF regional workshop on people, water supply and sanitation, Ubol Ratchathanee, Thailand, p. 34.

- Philip, Lois.
One day with Hafeeza in the Maldives.
World Health.

- Pisharoti, K.A. (1975).
Guide to the integration of health education in environmental health programmes.
Geneva, WHO, p. 81.

- Ploeg, J.D. van der 1979.
A activaçao social dentro do quadro do abastecimento de agua rural do projecto de agua em Buba e Tombali (mobilization within the context of rural water supply in the Buba and Tombali water project).
Bissau, Direcçao International de Ajuda Técnica; Netherlands Ministry of Foreign Affairs.

- Ploeg, J.D. van der, and Wijk-Sijbesma, C. van (1980).
Community participation in the rural well construction programme of Guiné Bissau.
Auqa, no. 9/10, p. 21-23.

- Prime Minister's Office/International Reference Centre for Community Water Supply and Sanitation; PMO/IRC project for the development of a community participation component in the Tanzanian rural water supply programme (1983). 28 pp. PMO, Dodoma, IRC, The Hague.

- Prime Minister's Office/International Reference Centre for Community Water Supply and Sanitation, PMO/IRC project for the development of a community participation component in the Tanzanian rural water supply programme (1983).
Procedure for village participation in rural water supply, health education and sanitation: step by step programme for handpump well projects.
Prime Minister's Office/Internation Reference Centre for Community Water Supply and Sanitation; PMO/IRC project for the development of a community participation component in the Tanzanian rural water supply programme, p. 20.

- Roy, S. (1984).
One-tier system: the Tilonia approach to hand-pump maintenance.
Waterlines, vol. 2, no. 3 p., 13-16.

- Ryan, Beverley A., and Mara, Duncan D. (1983).
Ventilated improved pit latrines: vent pipe design guidelines.
(TAG technical note, no. 6), Washington, D.C., World Bank, p. 16.

- Secretaría de Asentamientos Humanos y Obras Públicas, Dirección General de Sistemas de Agua Potable y Alcantarillado en Centros Urbanos, Plan National de Adiestramiento para el Subsector Agua Potable y Alcantarillado (1982).
Promoción de las obras de agua potable en el medio rural (Promotion of water supply schemes in the rural environment).
Mexico City, Secretaría de Asentamientos Humanos y Obras Públicas, p. 227.

- Secretaría de Asentamientos Humanos y Obras Públicas, Dirección General de Sistemas de Agua Potable y Alcantarillado en Centros Urbanos, Plan Nacional de Adiestramiento para el Subsector Agua Potable y Alcantarillado (1982).
Consideraciones prácticas para la promoción de sistemas de agua potable y alcantarillado (Practical considerations for the promotion of water supply and sewerage systems).
Mexico City, p. 74.

- Secretaría de Asentamientos Humanos y Obras Públicas, Dirección General de Sistemas de Agua Potable y Alcantarillado en Centros Urbanos, Plan Nacional de Adiestramiento para el Subsector Agua Potable y Alcantarillado (undated).
Didactic materials for use in villages: comic strips, games etc.
Mexico City, Secretaría de Asentamientos Humanos y Obras Públicas.

- Save the Children (1982).
Bridging the gap: a participatory approach to health and nutrition education.
Westport, Conn., Save the Children, p. 103.

- Scotney, Norman (1976).
Health education.
Nairobi, AMREF, p. 141.

- Stein, J. (1977).
Water: life or death.
Washington, D.C., International Institute for Environment and Development.

- U. Min Swe et al. (Birma), and UNICEF (1979-1980).
Report of project support communications intervention scheme, in search for the village level structures.
Rangoon, Department of Health; UNICEF, p. 24.

- UNICEF (1978).
Keep your village clean: a handbook for community workers.
New Delhi, UNICEF, p. 5.

- UNICEF East Asia and Pakistan Regional Office (1981).
The report of the regional water and sanitation workshop, Ubol Ratchathanee,
Thailand, 12th-20th January 1981.
Bangkok, UNICEF/EAPRO, p. 152.

- UNICEF (1984).
The UNICEF-assisted Imo State rural drinking water and sanitation project: description and analysis of the project and its health impact evaluation. (A report submitted to the UNICEF 1984 Executive Board), UNICEF.

- UNICEF-WHO Joint Committee on Health Policy (1979).
UNICEF-WHO joint study on water supply and sanitation components of primary health care.
Geneva, UNICEF and WHO, p. 38.

- Van Nostrand, John and Wilson, James G. (1983).
The ventilated improved double-pit latrine: a construction manual for Botswana.
(TAG technical note, no. 3), Washington, D.C., World Bank, p. 47.

- Vargas González, William et al (1972).
Manual of procedures for the rural health assistant.
esp. p. 73-79 on environmental health.
San José: Ministerio de Salud and Geneva, WHO.

- Ventura Rivas, José Luis et al (1980).
Manual de promoción de comunidades para sistemas de agua potable y letrinización en el medio rural (Promotion manual for water supply systems and latrine programmes in the rural environment).
Ministerio de Salud Pública y Asistencia Social, Departamento de Acueductos Rurales, San Salvador, El Salvador, p. 116 plus annexes.

- WASH (1984).
Guides for trainers in rural water supply and sanitation.
Arlington, Va., WASH (USAID Water and Sanitation for Health Project).

- Were, Miriam, K. (1978).
Organization and management of community-based health care.
Nairobi, Ministry of Health (Kenya); UNICEF, National Pilot Project on Community-Based Health Care, p. 149.

- Werner, David (1978).
Where there is no doctor.
Palo Alto, Cal., Hesperian Foundation.

- Werner, David and Bower, Bill (1982).
Helping health workers learn: a book of methods, aids, and ideas for instructors at the village level.
Palo Alto, Cal., Hesperian Foundation, ca. p. 632.

- White, Alastair (1981).
Community participation in water and sanitation: concepts, strategies and methods.
(Technical paper series, no. 17), The Hague, Netherlands, International Reference Centre for Community Water Supply and Sanitation, p. 180.

- White, G.F., Bradley, D., and White, A.U. (1972).
Drawers of water: domestic water use in East Africa.
Chicago & London, University of Chicago Press.

- Whyte, Anne V.T. (ed.) (1982).
The Colombian field manuals and training guides for the promotion of community participation in water and sanitation schemes: a translated and edited version in English of the materials prepared by the National Institute of Health, Ministry of Public Health, Colombia.
The Hague, Netherlands, International Reference Centre for Community Water Supply and Sanitation, p. 125.

- Wijk-Sijbesma, C. van (1979).
Participation and education in community water supply and sanitation programmes: a bibliography.
(Bulletin no. 13), The Hague, Netherlands, International Reference Centre for Community Water Supply and Sanitation.

- Wijk-Sijbesma, C. van (1981).
Participation and education in community water supply and sanitation programmes: a literature review.
(Technical paper series, no. 12), The Hague, Netherlands, International Reference Centre for Community Water Supply and Sanitation, p. 122.

- Williams, Glen and Satoto (1980).
Socio-political constraints on primary health care: a case study from Java.
Development Dialogue, Uppsala, no. 1, p.85-101.

- Winblad, Uno and Kilama, Wen (1980).
Sanitation without water.
Stockholm, SIDA.

- World Bank, Transportation, Water and Telecommunications Department.
Appropriate technology for water supply and sanitation. (series of publications).
Washington D.C., World Bank.

- WHO, Director General, and UNICEF, Executive Director (1978).
Primary health care.
Geneva, WHO, New York, UNICEF.

- WHO (1980).
The primary health worker.
(esp. ch. 2: suggested techniques for making learning/teaching useful, realistic and effective, p. 288-311), Geneva, WHO.

- WHO (1983).
Maximising benefits to health: an appraisal methodology for water supply and sanitation projects.
(unpublished document ETS/83.7), Geneva, WHO, p. 45.

- WHO, and AFRO (1982).
Project for strengthening health delivery systems in West and Central Africa: training course for village health workers, course outline and other materials.
Brazzaville, WHO/AFRO.

- WHO, Health Education Unit (±1982).
Health education for primary health care.
(draft prepared under contract by the Department of Preventive and Social Medicine, College of Medicine).
University of Ibadan, Nigeria) p. 300.
WHO, Geneva.

- WHO (1981).
Health education methods and materials in primary health care.
Appropriate technology for health newsletter, no. 10, Geneva, WHO, p. 24.

APPENDIX: WATER BORNE DISEASES

Community motivators and the people they serve will have many reasons to support water and sanitation activities. One of these is a clearer understanding of how water and sanitation practices are related to community and family health. While it is not intended to present a full discussion of water and sanitation education in this document, a few references can be useful.

The table by McJunkin which follows contains a useful classification and description of waterborne diseases. It is followed by a brief list of annotated references containing more detailed information on disease causation and prevention.*

Table 2-1. Waterborne Diseases[1]

Microbiological Sources

Disease or Syndrome[3]	*Fecal-Oral Pathways*[2]
Amoebic Dysentery (Amebiasis)	Epidemics mainly by water, endemic spread by water, food, and hand-to-mouth contact. Resistant to chlorination.
Ascariasis (Giant roundworm)	Usually soil-borne but also waterborne on occasion.
Bacillary Dysentery (Shigellosis)	Also by food and milk, flies, and direct contact.
Balantidial Dysentery (Balantidiasis)	Epidemics mainly by water. Endemic spread by water, food, and flies.
Campylobacter enteritis	Only recently recognized as important cause of pediatric diarrhea.
Cholera (Classical and El Tor)	Classical waterborne disease, now pandemic. High fatality in untreated cases.
Coccidiosis	Rare, mild.
Diarrheas (Including Weanling Diarrheas and Gastroenteritis)	Clinical syndromes of varied etiology, generally unidentified, especially in LDCs, where frequently listed as the leading causes of death. Primarily fecal-oral.
E. coli (Enteroinvasive, Enteropathogenic, and Enterotoxic)	Growing understanding of role in diarrhea of children and of travelers.
Enteric viruses	Many are pathogenic. Role not well understood. May cause diseases of central nervous system.
Giardiasis	Receiving increasing attention. Resistant to chlorination.
Hepatitis A. virus	Several transmission routes including fecal-oral. 30,000 cases in 1955-56 New Delhi outbreak.
Hookworm and strongylodiasis	Normally larvae in soil penetrate bare skin, usually of foot. May also be transmitted water.
Hydatid Disease (Echinococcosis)	Transmitted by ingestion of infective eggs in water and food contaminated by dog feces.
Non-cholera Vibrios	Increasingly recognized as a cause of diarrheal disease.
Norwalk virus infection	Apparently a significant cause of diarrhea.
Paratyphoid Fever	Direct or indirect contact with feces or urine of patient or carrier. Indirect spread usually through food, esp. milk and shellfish, and, occasionally, through water supplies.
Poliomyelitis	Waterborne transmission has been observed but is rare.
Rotavirus infection	Newly identified agent of infantile diarrhea. Probably fecal-oral.
Salmonellosis	An acute gastroenteric, infectious disease usually spread by fecally contaminated fo Waterborne epidemics are known, e.g., 15,000 cases in Riverside, California, in 196 from contamination of a public water supply.
Schistosomiasis	Waterborne transmission occurs, but skin penetration the major portal of entry.
Travelers' Diarrhea	Often due to one of many serotypes of *E. coli* bacteria.
Trichuriasis (Whipworm)	Usually soil-borne but also waterborne on occasion.
Typhoid Fever	Spread through contaminated water and food. Urinary carriers frequent in *S. hemat bium* areas.
Yersinosis	Worldwide but rarely recognized.

[1]Transmitted by ingestion of contaminated drinking water.
[2]In some fecal-oral diseases, the pathogens may also be found in urine (e.g., typhoid) and vomitus (e.g., cholera).
[3]Diseases of major importance are italicized.

Source: McJunkin, F. E., Water and Human Health, National Demonstration Water Project, for USAID, July, 1982.

Table 2-1. (Continued)

Other Pathways

Disease or Syndrome	*Remarks*
Anthrax	Transmission by drinking water dubious although cited by various authors.
Brucellosis	Documented but probably very rare.
Cysticercosis (Bladder Worms)	Ingestion of eggs in food or water. Larval infection with *T. solium*. Other transmission routes. A serious disease.
Gongylonemiasis (Scutate Threadworm)	Rare. Ingestion of water containing larvae from disintegrated insect hosts.
Guinea Worm Disease (Dracontiasis)	Complex transmission route with intermediate vector (*Cyclops*). *Not* fecal-oral. Found only in LDCs and transmitted only by water.
Leeches (Hirudiniasis)	Infestation by young aquatic leeches.
Leptospirosis (Weil's Disease)	A zoonosis. Transmission more often by skin contact with contaminated water.
Liver Fluke Disease (Clonorchiasis, *et al.*)	Occasional ingestion of drinking water containing metacercariae from decomposed fish. Most infections from eating raw fish.
Melioidosis	Rare. Southeast Asia.
Sparganosis	Ingestion of water containing *Cyclops* infected with certain cestode larvae. Other transmission routes.
Tularemia	Ingestion of untreated water from watersheds when infection prevails among wild animals, esp. rabbits, is one of several transmission mechanisms.

Chemical and Other Sources

Source	*Disease or Syndrome*	*Remarks*
Metals	Toxicoses	Intake of metals in drinking water, food, and air from both natural sources and human activities. These include arsenic, cadmium, copper, chromium, lead, mercury, selenium, vanadium, zinc, *et al.* Can be important on a local basis, e.g., arsenic in parts of Argentina.
Organic Chemicals	Toxicoses Cancers Mutations Birth Defects	Intake of certain chemicals, esp. certain synthetic organic chemicals, including some pesticides. Also some trihalomethane byproducts of chlorination are suspect carcinogens. Not now a high priority problem in LDCs.
Radionuclides	Cancers	Natural and man-made radioactivity. Now now a high priority in LDCs.
"Hardness"	*Cardiovascular Disease*	Some epidemiological evidence indicates an inverse correlation of cardiovascular diseases with hardness of drinking water.
Others	Fluorosis	Damage to teeth and bones resulting from long-term ingestion of high concentrations of naturally occurring fluorides.
	Methemoglobinemia	Serious, sometimes fatal poisoning of infants following ingestion of well waters containing nitrates (NO_3) at concentrations higher than 45 milligrams/liter.
	Endemic Goiter	Iodine-deficient water or water containing goitrogens.
	Asbestosis and Mesothelioma	Asbestos in lungs known to cause cancer. Fate in gastrointestinal tract unknown.
	Hypertension	Sodium-restricted diets necessary for parts of population.