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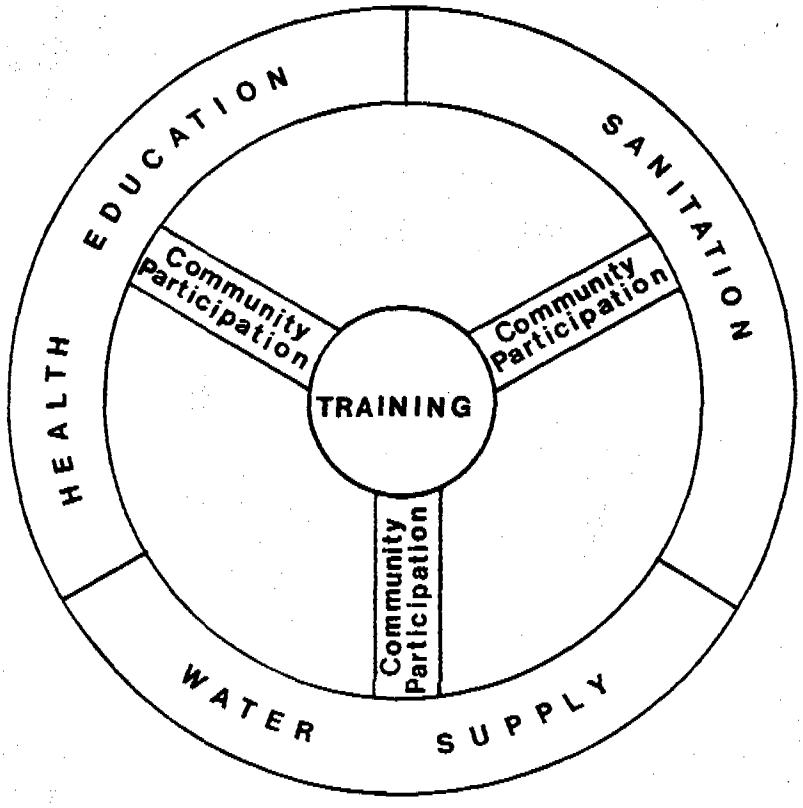

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June 1993

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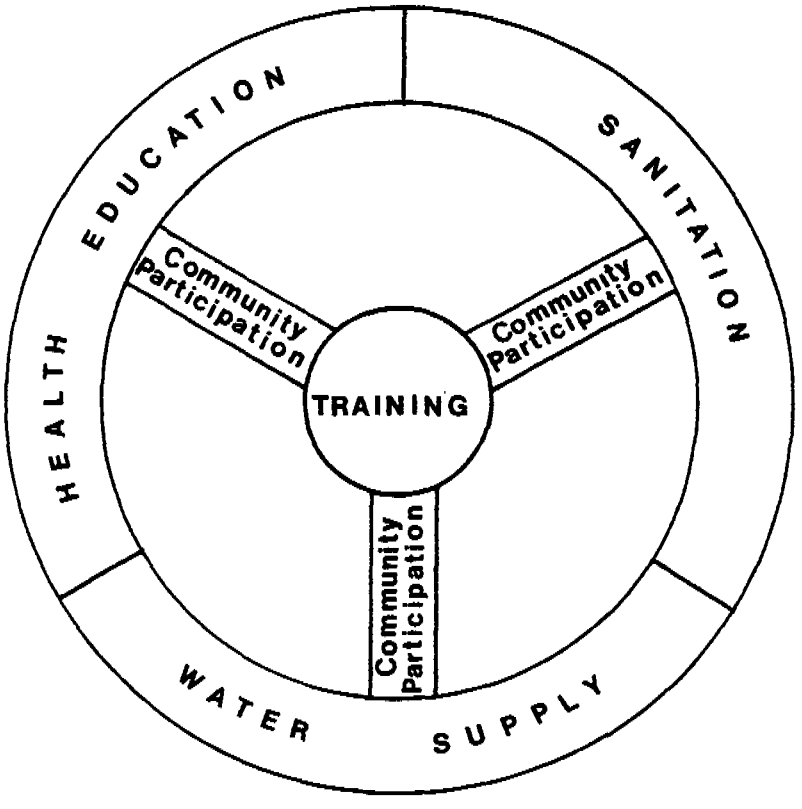

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PEOPLE AND WATER

SOCIAL ASPECTS OF COMMUNITY WATER SUPPLY AND SANITATION PROGRAMMES

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1. INTRODUCTION.

1.1 The importance of people.

Low-cost water and sanitation projects which require the participation of the community depend ultimately for their success on PEOPLE.

In self-help projects the participants are both the beneficiaries and the benefactors; they are the reason for the schemes and also the principal vehicle by which they can be realised. People, therefore, are central to the design of all WaterAid's projects.

This may seem self-evident but while the rhetoric of community involvement in projects has received wide exposure, detailed information on how it might be achieved has not been so readily available. Consequently, the "human element" in project design and implementation has often been neglected.

1.2 The purpose of this manual.

Failure to consider people properly shows up, usually, during project planning; consistently understated are:

- the interdependence of the various inputs to the programme, and
- the importance of socio-cultural factors.

This can result in difficulties during implementation and in only short-lived benefits to the community.

The purposes of this manual are:

- to give information and guidelines on these issues, and
- to suggest ways in which projects might be improved.

Much of its content is the direct result of the findings of the Cuddesdon Conference held in Oxfordshire during August 1990; this was WaterAid's first conference for those principally concerned with activities overseas.

1.3 Relationship between Water Supply and Community Development.

WaterAid's Ethos states :

> "Our particular interest is in villages and other poor communities where it can be anticipated that successful participation by those who benefit may lead to increased confidence and capacity similarly to meet other community needs."

Water supply projects can be more than just the means by which the health and quality of life of a community can be improved (although these remain primary goals).

Participation by communities and ownership of their own schemes can lead to projects becoming catalysts for social development; communities which play a leading role in meeting their needs for water, sanitation and health education will be better equipped thereby to meet other challenges.

1.4 Optimisation of change.

In one way or another all projects produce changes within communities.

Many of these will be intentional (e.g. the provision of structures for water supply) but there may also be ones which, unintentionally, affect profoundly the dynamics of community life (e.g. the "empowering" of certain villagers, previously powerless, such as the maintenance caretaker and the health educator).

Clearly, an awareness should be sought of all the effects of a project, not just the technical and health-related ones.

Changes caused by external forces are best assimilated by a community by maximising the involvement of the community itself so that local capabilities and resources are utilised fully, and developed further.

1.5 An integrated approach.

The experience of the last decade has shown that to extract the maximum benefit from a project it is necessary to adopt a multi-disciplinary and integrated approach.

Project planners need an understanding of the roles of the engineer, the social scientist, the anthropologist, the health educator and the trainer and must possess, or develop, the requisite skills to plan effectively in each of these disciplines.

1.6 The main components of a project. (The WaterAid Wheel)

The main components of development projects of the kind undertaken by WaterAid, and their inter-relationship, can be likened to a wheel.

At the centre, the hub of the wheel, is the component of

Training

which is common to all sectors of activity and without which nothing will work and the wheel will grind to a halt.

On the rim of the wheel are the three main sectors of activity, namely,

Water Supply,
Sanitation,
Health Education.

The spokes which connect them to the hub, through which the vital element of training is conveyed, are made of

Community Participation

and, unless these are strong, the wheel will collapse.

Around the circumference of the wheel are the benefits of

- improved health,
- better quality of life,
- increased self-reliance, and
- greater capacity for development.

For the wheel to roll and, as it gathers pace, to imprint these benefits on the path of the community, each component must be carefully planned and balanced so that their mutual support prevents any collapse and sustains the wheel in its onward progress.

1.7 Contents of this manual.

The task of writing any guide to planning is complicated by the diversity of cultures, ethnic groups and patterns of settlement and residence to be found in most developing countries. Each country programme, therefore, must select and adapt those guidelines which seem most appropriate for its needs.

The main components are given separate sections:

Community Participation.
- the background and the concepts.
- differing degrees of participation, and the benefits to be obtained.
- the need to maximise community participation, and ways to achieve this.
- the role of an agency's field staff.

Sanitation.
- excreta-related diseases and their prevention.
- the benefits of improved sanitation.
- motivation of people to build latrines, and the planning of suitable programmes.
- types of latrine; location, maintenance and coverage.

Health Education.
- its meaning and importance.
- the objectives, and planning, of health education programmes.
- whom to target.
- choosing and training the health worker.
- methods of communication.

Training.
- how opportunities are presented at each stage of implementation.
- the design, conduct and evaluation of training courses.

[Water Supply.
- not covered here, but the range of low-cost technologies which are available for water supply schemes is set out in WaterAid's Technical Manual.]

Additional sections are included which deal with :

Methods of gathering socio-cultural data.
- the importance of involving the community.
- reasons for gathering data.
- type of data to be collected.
- methods of gathering data.

Summaries of the key points in each Section.
- these pick out the key points in a way which can be used to augment the Index.

References.
- details of the publications referred to in the text.

Guidelines.

The community should need, and want, the scheme.

The desire for the project should be genuine and the community should have sufficient resources to maintain it.

Project workers should get to know the community.

Workers should get to know the community, and its leaders, and should help them to learn how to implement the scheme and to maintain it.

There should be a management committee for the project.

Workers should ensure that all groups are represented, in particular the women.

There should be community participation at all stages.

To achieve real community ownership, participation by the community is essential at all stages and should start as soon as possible.

The community should lead the projects.

In some cases this will require training to help strengthen local capabilities for financial control and project management.

"Top-down" approaches do not work.

People-based or "bottom-up" approaches are best.

Technology should be simple.

It should be within the grasp of the community to instal and to maintain the scheme.

Time scales should be flexible.

The time scales for projects should be flexible, to allow the community to work at its own pace, using methods appropriate to the area.

Cost recovery schemes should be considered.

Where feasible, cost recovery schemes should be considered in order to recover all or part of the capital cost of a project and, by so doing, to foster the community's sense of ownership.

2.1 Introduction.

This section discusses various aspects of community participation in development projects.

It gives the background to its adoption as the most suitable way of ensuring the success and sustainability of such projects.

It reviews the concepts which are involved, the various degrees of participation by the community and the ways in which these can be influenced and maximised, and summarises the benefits that can ensue.

It identifies the needs of a community and the stages of a project at which an outside agency can take part and discusses the role of an agency's field staff.

There are notes on the time scale of projects and the need to seek ways of evaluating the participation of the community.

2.2 Background.

In the 1950s and 60s it was assumed that by strengthening the capabilities of key institutions at national level the poorest people would eventually benefit, by a "trickle-down" process. This process failed, possibly because of poor co-ordination of inputs, inadequate infrastructure and widespread mismanagement of funds.

This led many agencies and governments to seek more appropriate ways of ensuring sustainable rural development. As a consequence, there has been widespread support for decentralised, "people-based" approaches, i.e. ones that work at the village level to create changes from below. Such approaches depend on the willingness of communities to assume some responsibility for their own development.

Quite early, it was recognised that approaches involving community participation had hidden benefits:

> In 1977, Pacey[1] wrote that they were "potential catalysts for social development".
>
> In 1978, a Task Force[2] on the harmonisation of rural developments reported that
>
> > "What gives real meaning to popular participation is the collective effort by the people concerned to pool their efforts and whatever other resources they decide to pool together, to attain objectives they set for themselves. In this regard participation is viewed as an active process in

which the participants take initiatives and action that is stimulated by their own thinking and deliberation and over which they can exert effective control. The idea of passive participation which only involves the people in actions that have been thought out by others and are controlled by others is unacceptable."

In 1980, at the start of the International Water Decade, UNDP[3] gave community participation as one of its key working guidelines :

> "Maximum participation by those who will benefit from the new system is central to the approach. Members of local communities are to be involved in all aspects of water / sanitation - from planning, construction and financing, to training, operation and maintenance."

2.3 Community Participation.

Participation by the community is a fundamental component of WaterAid's programmes; it is both the means whereby projects can be implemented and an essential ingredient if projects are to succeed and communities are to develop.

Whether or not a project can be sustained depends crucially on a community's willingness to take responsibility for the operation and maintenance of systems. This is known to depend on the extent to which people participate during the stages of planning and implementation, and ways in which this might be optimised are discussed below.

Social scientists have devoted much attention to the study of community participation. Most agree that while many programes pay lip-service to the concept, very few appreciate its full potential. Instead, community participation is often viewed, mistakenly, as some kind of "injection" which can be given to a programme at various points during the project cycle.

2.4 Concepts involved in Community Participation.

In discussing community participation it is useful to have a list of key concepts that describe the process and, with acknowledgements to Marsden and Oakley[4], some of these are listed below:

- Project work is a continuous process and therefore it is difficult to establish fixed, quantifiable parameters

- The approach is a "bottom-up" one; there is an absence of any pre-determined model and an emphasis on the spontaneous emergence of a relevant approach from below

- The principles involved are those of self reliance and the need to reduce the number of developments which are based upon dependence

- The basic unit of development is to work with discrete socio-economic groups

- Project activities are controlled by community groups

- It is important for the group to act collectively in tackling problems that emerge.

2.5 Degrees of Community Participation.

Writing in 1979 about water supply schemes, Howell[5] gave the following categories of participation:-

External Control
No participation at all by the community.

Low Participation
An outside agency initiates the project, provides assistance in design and construction, and material support. The community accepts the plan and owns and runs the supply.

Medium Participation.
The community initiates, constructs and runs the project but gets an outside agency to assist in planning and design and to provide material support.

High Participation.
As last, but without material support from an outside agency.

Usually, local conditions make it necessary for the majority of communities to receive material support. Most WaterAid programmes, therefore, are in the "Medium Participation" category although there is broad agreement that, wherever possible, they should aim towards "High Participation".

2.6 Benefits of Community Participation.

While recognising community participaton as a vehicle for the successful implementation of project work it is useful to focus, also, on some of the social gains arising from the process. It is these, after all, that are of vital significance to the long term development of a community.

2.6.1 Improved social cohesion.

It is implicit in the concept of community participation that it can involve the whole community; everyone can be involved regardless of their socio-economic, religious or tribal backgrounds. This, of itself, can have far-reaching and highly beneficial social consequences. In several cases, "joining forces" to meet common objectives has been seen to improve overall cohesion, which, in turn, has often been the springboard to further initiatives. Examples are:

- a UNESCO-funded programme in Pakistan which reported that "a new spirit of community endeavour has lead to other activities: health education, lane cleaning, literacy classes for women, (and) loan funds"

- a WaterAid programme which reported how, in one village, deep political divisions which had disrupted the community for many years were put aside so that a water and sanitation project could be tackled. The result: improved facilities, a notable reduction in internal friction and a commitment to improve village sanitation still further.

2.6.2 Utilisation of local knowledge

Writing in "Waterlines" in 1984, Roy[6] stated that where programmes maximise the use of local knowledge, skills and experience, commitment to projects and their long-term sustainability are likely to improve.

As described in Section 6, an early stage in this process involves "profiling" the existing capabilities of communities and making educational and training inputs to improve overall capabilities. Such efforts are vital to creating a real sense of community ownership of schemes.

2.6.3 Development of self-reliance.

One of the principal barriers to rural development is known to be a lack of self-confidence when dealing with outside agencies.

However, if a community has been involved in the planning, implementation and evaluation of a successful project its levels of confidence and self-reliance will invariably rise. Thus, when a community has been instrumental in the success of its own project, the overall prospects for the community are likely to improve.

It is worth noting that self-reliance is largely seen as a "state of mind"; one that depends principally on changes in popular perception about how effective development actually comes about.

2.7 Maximising a community's participation in a project.

2.7.1 Factors involved.

Essentially, participation is about villagers having the power and authority to control projects. Writing in 1984, Marsden and Oakley[7] suggested that this is most likely to occur when the following key conditions are met :

Maximum involvement.
When the group concerned is involved in all the basic aspects of project formulation, decision making and implementation and when the whole operational base of the project is organised with this principle in mind.

Minimum dependence.
When there is minimum dependence on outside materials and personnel.

Sustainability.
When projects are able to be sustained locally, in the sense of resources being available locally.

Next-step technology.
When the technology used is "next-step", i.e. not a technical advance which lies beyond the capabilities of the group.

2.7.2 Importance of Agency's field staff.

To a great extent, the level of community participation that is achieved will depend on the skills of an agency's field workers in organising, facilitating and teaching.

2.8 The needs of a community.

2.8.1 Identifying the needs.

The first input of a community into a project is, of course, the identification of improved water supply and/or sanitation as a need felt by the whole community. In programmes where villagers make an initial application for assistance (the preferred option), the likelihood is that this process has already occurred.

However, it is important to flush out villages which apply simply because WaterAid has a programme in the area. Unless a deeper level of motivation exists, it is unlikely that such communities will be able to make the necessary committment to complete a project.

It is necessary, therefore, to check at an early stage:

- that the need is genuine, i.e. that it is felt by the majority of the community and not just by a few influential members, and

- that a sufficiently stable village structure is in place to manage and complete the project (this is a particular problem in areas with large migrant populations).

At this stage, the role of the field worker is:

- to try to determine the needs of different sections of the community
- to reconcile these by discussions involving each group
- to anticipate any problems or conflicts which might occur later

2.8.2 Influencing the needs.

It is a common fallacy when discussing needs to assume that these cannot be changed through outside intervention. Studies have shown that needs are formed largely through experience and education.

Thus, where a village expresses a need for water (possibly for reasons of status and convenience) it will usually be possible, by health education inputs, to strengthen this need and, at the same time, to stimulate further health-centred needs. An obvious example would be when trying to introduce a sanitation programme in addition to a water supply scheme.

2.8.3 Other needs.

Occasionally, a community's principal need will prove not to be for improved water and sanitation facilities but for a project which lies outside WaterAid's remit.

In such a case the villagers could be put in touch, possibly, with extension agencies who could help or, better still, encouraged to tackle the project themselves without outside assistance.

Sometimes communities may give improved water and sanitation a low priority yet be suffering, very obviously, from acute community health problems. In such situations, it may be possible to interest the community in health education activities as a first step towards raising consciousness and stimulating interest in a water and sanitation project.

2.9 Stages of working with a community.

Once the needs of a community have been established (and due notice has been taken of the reservations expressed in Section 2.8 above) it is commonly accepted that there are four stages in the process of an agency guiding a community towards full participation. These are :

- getting to know the community
- setting up a management committee
- preparing the community to participate in the project
- implementing the project

2.9.1 Getting to know the community.

In sub-section 4.4.1 it is noted that people are most easily influenced by the opinions of their commonly accepted leaders (opinion leaders) and by the pressures which are exerted on them to conform to group norms of behaviour. It is necessary, therefore, to make contact with these individuals and groups and to get to know the extent of their influence.

Later, the success of a project is likely to depend on the ability of field workers to work closely with established groups and their leaders and so canvassing their views on a group-by-group basis is an important first step towards gaining the consensus that will allow the community to organise itself for action.

Local leaders can make an enormous contribution towards successful community participation. Their importance can be gauged from the following list of their potential activities, which is adapted from a publication in 1978 by the Peace Corps[8]. They can:

- bring people to meetings
- arrange for, and find, meeting places
- help to reach more people by telling others
- help people in the community to know you and to gain confidence in you
- give general information about the programme and help to interpret it to the people
- help to identify problems and resources in the community
- help to plan and organise programmes and community activities
- help to plan and organise any services which might be provided by the community
- give simple demonstrations
- conduct meetings
- lead youth groups and various individual projects
- interest others in becoming leaders
- help neighbours to learn skills
- share information with neighbours
- serve as an officer in an organisation or as chairman of a committee

2.9.2 Setting up a management committee.

2.9.2.1 Representation of groups.

Examples of established groups in communities include village elders, women, young farmers and mothers.

The objective is to form a small project management committee (e.g. a water committee) in which each significant group is represented, preferably by one of its opinion leaders. Formation of this committee is probably best done during a large village meeting in which all are invited to give their views and to vote.

The aim of the committee is to take charge of "in-village" project management duties, to set realistic objectives and to ensure that the village is sufficiently well organised and "harmonious" to be able to work effectively. In order to do this, several sub-committees may be necessary, e.g. for sanitation, health, feeding, lodging, maintenance, etc.

2.9.2.2 Representation of women.

It is particularly important that women are properly represented on project committees.

Research has shown that women, as the principal water managers and child rearers, are most aware of the potential benefits of improved facilities and that, for these reasons, they are likely to be the easiest group to motivate.

Often, women hold traditional responsibility for the location, upkeep and maintenance of water and sanitation facilities (duties that are often transferred to men with the arrival of external assistance projects). Where women do hold these time-honoured positions there is clearly a case for them to be represented on any new water committee.

In some societies women are well integrated into local socio-political structures and there exist traditional organisations and networks which can be involved directly in the planning of projects. In other societies, possibly ones where women have equivalent spheres of influence but remain segregated, women can be involved through separate meetings.

The importance of the role of women has been expressed eloquently in a publication by the International Red Cross[9], as follows:

> "Whatever the local situation, it should be understood that unless women are involved in ways which they themselves consider to be meaningful it is unlikely that long-term project goals will be met."

2.9.3 Preparing the community to participate in the project.

2.9.3.1 Training.

After the management committee has been formed it is often necessary to help its members to analyse and to structure their work so as to meet the various demands arising from, firstly, implementing the project and, later, sustaining it.

Thus educational and training inputs by field workers are necessary so that individual committee members have enough information to make informed decisions. These inputs might include, typically:

- construction techniques
- manpower management
- work scheduling
- health education
- maintenance tariffs
- book-keeping

2.9.3.2 Standard Agreements.

Once responsibilities have been agreed between the programme and the village, it is advisable to enter into a written agreement which clearly states each party's obligations.

Writing in the late 1970s, White[10] recommended that such agreements should cover:

- operations,
- division of responsibilities,
- timetabling,
- lines of communication for progress reports and problems, and
- implementation methods and their feasibility.

Cairncross et al[11] and Feachem et al[12] saw such an agreement as a model constitution for the water committee which could serve both as an "article of trust" and as a public notice in times of dispute.

Standard forms of agreement of this nature may also be studied to advantage by other villages interested in applying for support.

2.9.4 Implementing the project.

It is particularly important to have effective action during the early stages of implementation.

This sets the "tone" of activities which follow: where the results of action are observable early on, confidence and levels of participation will be high. Also, some villagers may be suspicious at first and will only commit themselves once the benefits of a project become visible.

> (An example of early action having a beneficial effect on the remainder of the project occurred in one WaterAid programme where community confidence was boosted by the careful timing of inputs of material and human resources. Here, generous stocks of pipes and cement were delivered early to the village, demonstrating thereby the genuineness of the programme's intent. The villagers, meanwhile, were engaged in excavating under their own supervision the trench for the main pipeline, an activity that required them to develop their own work schedules and practices.
>
> When the trench had been completed, technicians from the programme were sent to the village to work in accordance with these existing practices rather than to set up new ones. As a result, the community's power base was firmly established in the eyes of the technicians and a healthy, even-handed relationship existed for the remainder of the project.)

2.10 An Agency's field staff: its qualities and its role.

2.10.1 Role.

Usually, when a village applies for assistance it has a good idea of the required "end product" but not of the processes necessary to achieve it. This problem may be compounded by divisions within the community and by insuficient organisation to make the most of local resources.

It is important, therefore, that field workers act so as to provide the necessary stimulus for change. Thus a crude job description for a field worker might include:

- profiling and collecting data on a community
- raising community awareness of health and technical matters
- stimulating discussion between community groups
- helping these groups to draw conclusions
- helping groups to plan and to organise for action

Operationally, this role is very similar to that of a health educator and it is not uncommon for one programme member, or team, to cover both responsibilities.

2.10.2 Qualities.

One problem encountered frequently is the reluctance of field workers to adopt approaches which are sufficiently supportive and low-key.

Many see the empowering of "backward" villagers as personally threatening and react by adopting authoritative and patronising attitudes. For such people, education in the principles and importance of community participation is necessary (though, sadly, not a guarantee of change of outlook).

Clearly, much depends on the criteria used to select field workers in the first place. A list of desirable qualifications might well be dominated by personal qualities rather than by educational attainment. Such a list might include :

- Humility
- Commitment
- Sensitivity
- Self-confidence

That paragon of virtue, the ideal field worker, should also be able :

- to analyse and identify problems
- to communicate well (both verbally and in writing)
- to train people effectively

2.10.3 Methods of Communication

In Section 4 below, appropriate methods of communication to be used during group meetings are discussed in some detail. The main methods are summarised here:

The non-directive approach.
This seeks not to impose knowledge and ideas but to facilitate their creation

The dialogue-centred approach.
This seeks discussion of ideas on equal terms, not the direct communication of pre-determined ideas

Support by a Facilitator
This stresses the importance of the facilitator, whose role is to accompany the process and support it

Discussion in small groups.
This stresses the importance of small participation projects as a means of furthering group activities and encouraging participation.

2.11 Time scale.

In sub-section 2.4 above it was stated that effective community participation is seen as a process rather than a quantifiable input. Progress, therefore, depends usually on voluntary, spontaneous and gradual growth that cannot be pre-determined. Accordingly, a flexible approach is necessary regarding working methods and time scale.

There can be no universal model for projects. Each will proceed in its own way, at its own pace, and the programme must adapt to the community's capabilities rather than try to force rates of progress to meet the programme's targets.

It does not follow that project staff should assume a passive role. Negotiating to set mutually agreed targets and participating in problem solving should help communities to complete projects in acceptable times (sometimes earlier than expected).

2.12 Evaluation of participation.

There is a great need for programmes to attempt to evaluate community participation inputs but, as yet, few easily quantifiable indicators for this have been identified. As a result, judgement has been largely a subjective exercise based on description and interpretation.

This is not to say that attempts at evaluation are meaningless. Careful monitoring of decision making, labour and cash inputs, particularly when carried out for several similar projects, should yield useful data on the relative success of different approaches.

3. SANITATION

Guidelines.

Sanitation projects should seek to reduce the incidence of excreta-related diseases.

They should do so by introducing effective methods of disposal of excreta and other household wastes and by helping people to improve their practices of personal hygiene.

Sanitation should be one component of an integrated scheme.

The other two are water supply and health education.

The community should be closely involved.

From the earliest practicable moment, the community should take part in all aspects of the design and implementation of sanitation projects.

Programmes should comply with national or regional policies regarding sanitation.

In doing so, they should use the principles of community participation.

Sanitation projects should be planned to take account of existing perceptions, beliefs and practices.

Attention should also be given to the special needs of children.

Systems should be chosen for the right reasons.

The choice of system should take into account ability to pay, and the likelihood of sustained usage should be preferred to technical merit.

Priority should be given to individual households.

Facilities for schools and health centres may follow.

In rural communities, the aim should be for a high proportion of households to build and use latrines.

However, high figures for usage and maintenance are more important than high figures for coverage.

Before resources are committed to construction, a system for maintenance later should be in place.

If subsidies are given, the levels should be set carefully so as to ensure fair treatment within the community.

3.1 Introduction.

Sanitation comprises much more than the construction of latrines. According to Jon Lane[1] :

> "It encompasses all activities which improve hygiene in order to raise the quality of life and the health of the people. It therefore mainly involves educational work and proper methods for the safe disposal of excreta, wastewater, domestic, animal and industrial wastes."

In this manual, a smaller scope of work is discussed and in this section there are comments on scope and the setting of priorities.

Excreta-related diseases are listed and improvements in sanitation methods and practices are advocated as the best way to prevent disease.

Other benefits of improved sanitation are given and there is considerable discussion of how to motivate people to build latrines and to use them properly.

Examples are given of the many factors to be considered when planning sanitation schemes and there are sub-sections dealing with the choice of system, the different types of latrine, the siting of latrines and the need to ensure proper maintenance of them.

There are also notes on coverage and subsidies.

3.2 Excreta-related diseases and their prevention.

Half of the world's hospital beds are occupied by people with diseases caused by water in one of four main ways, namely:

Waterborne	- water contaminated by excreta can cause cholera, typhoid, dysentery, etc
Water-washed	- lack of water for washing can cause skin and eye diseases such as scabies and yaws or trachoma and conjunctivitis
Water-based	- parasitic worm infections, e.g. bilharzia
Water-related	- diseases transmitted by biting insects associated with water, e.g. malaria, river blindness

This section concentrates on excreta-related diseases, which are tabulated below.

Table of classification of excreta-related diseases[2]

Category	Disease	Type of pathogen	Dominant transmission routes	Major control
I Faeco-oral (non-bacterial)				
	Poliomyelitis	V		
	Hepatitis A	V		
	Rotavirus diarrhoea	V	Person-to-person	Provision of
	Amoebic dysentery	P	contact.	toilets.
	Giardiasis	P	Domestic	Improved
	Balantidiasis	P	contamination.	housing.
	Enterobiasis	H		Health
	Hymenolepiasis	H		education.
II Faeco-oral (bacterial)				
	Diarrhoeas and Dysenteries:			Provision of
	Campylobacter enteritis	B	Person-to-person	toilets. Domestic
	Cholera	B	contact.	water supply.
	E. coli diarrhoea	B	Domestic	Improved
	Salmonllosis	B	contamination.	housing.
	Shigellosis	B	Water	Treatment of
	Yersiniosis	B	contamination.	excreta
	Enteric fevers:		Crop	before land
	Typhoid	B	contamination.	application.
	Paratyphoid	B		Health education.
III Self-transmitted helminths				
	Ascariasis (roundworm)	H	Contamination of yard and ground	Provision of toilets with
	Trichuriasis	H	in common area	clean floors
	Hookworm	H	of defaecation.	Treatment of
	Stongyloidiasis	H	Crop contamination.	excreta before land application.
IV Beef and pork tapeworms			Yard contam.	Provision of
	Taeniasis	H	Field contam. Fodder contam.	toilets. Inspection of cooking and meat.
V Water-based helminths				
	Schistosomiasis	H		Provision of
	Clonorchiasis	H		toilets.
	Diphyllobothriasis	H	Water contam.	Treatment of
	Fasciolopsiasis	H		excreta before
	Paragonimiasis	H		discharge.
VI Excreta-related				Control of
	Filariasis (transmitted by Culex quinquefasciatus mosquitoes)	H		infected animals. Cooking.
	Infections in Categories I-V, esp I and II which may be transmitted by flies and cockroaches.		Insects breed in various faecally contaminated sites.	Identification & elimination of potential breeding sites. Use of mosquito netting.

[B=Bacterium, H=Helminth, V=Virus, P=Protozoon, M=Miscellaneous]

The table above classifies the various excreta-related diseases and lists the major measures for controlling them.

One of the most effective measures is the hygienic disposal of human excreta and other human generated wastes. The broad aim of most sanitation programmes is to achieve safe disposal of these human wastes.

In searching for the most effective means of improving sanitation, Feachem suggests that the keys to breaking the faeco-oral transmission of diarrhoea are:

- the proper disposal of excreta
- improved practices of personal hygiene
- the use of water in increased quantities

3.3 The benefits of sanitation.

A well designed sanitation programme can result in benefits in several areas:

3.3.1 Water Supply.

Good sanitation can protect local drinking water supplies.

3.3.2 Health benefits.

The principal benefits are improvements in the health of the community. Where good sanitation has been combined with improved water supplies, it has been shown[3] that the incidence of diarrhoea has fallen by 35-50%.

3.3.3 Social benefits.

Sometimes perceived more readily than improvements to health, these can include:

- more privacy
- time savings
- improved status
- better quality of life (e.g. fewer smells, fewer problems with flies and rats.)

3.3.4 Economic benefits.

In parts of Asia, for example, the re-use of excreta in agriculture or fish farming can provide an economic incentive for its better disposal.

3.4 Motivation of people to build latrines.

3.4.1 The problem.

This has many facets, for example:

Ignorance.

Many communities lack the background knowledge that links improved health with better disposal of excreta.

Inertia.
To quote Cairncross[4]:

> "disposal of excreta is part of the basic pattern of human behaviour and may not easily be modified."

Perversity.
In Malawi, Colonial statutes had required that each house-holder must build a latrine. After Independence, not to have a latrine was regarded as a symbol of cultural integrity.

Illogicality.
In El Salvador and Java, new latrines were rejected because they were not open to the sky[5].

3.4.2 Reluctance to use latrines.

Villagers who normally defecate in the countryside may be reluctant to use a latrine, particularly if it is dark, smelly and poorly maintained.

People require a reason or a motivation for using a new kind of latrine. In general, a desire for improved health is not the most likely source of motivation.

It is more likely that villagers will build latrines for convenience, privacy or status. It is difficult to introduce health education as a reason for building latrines, although some villagers may be persuaded to build them to reduce the nuisance of flies.

3.4.3 Awareness of the benefits of sanitation.

Only when people are fully aware of the benefits of sanitation will they be prepared to devote resources to it.

Given the natural reluctance of people to change their habits, it follows that if progress is to be made towards making them aware of the benefits of sanitation one must start from the viewpoint of the villager. It is essential that from the outset it should be appreciated that any new form of sanitation must be acceptable to the villager and be compatible with existing value systems.

3.4.4 Importance of Health Education.

Ways must be found to explain the benefits, both to health and to other areas, of sanitation and to raise the need to improve practices of hygiene.

This is the role of Health Education and, in planning sanitation programmes, it is essential to understand how vital it is, particularly in the case of communities which are poorly motivated.

Health education is the subject of Section 4; it
- creates awareness of the need for better sanitation
- provides the stimulus for changes in personal hygiene practices
- is the vehicle whereby programmes can both advocate and implement sanitation projects
- "should precede, and continue throughout and beyond, the sanitation project"

Children should be involved in health education activities.

3.4.5 Practical steps.

If done well, the process of health education will usually result in the community itself pressing for improved disposal of excreta. Two practical steps to take are:

(1) To carry out a social and cultural survey, and

(2) To involve the community fully in the design and implementation of the sanitation programme. (See 3.6.5)

These measures should reveal the socio-cultural, economic and other factors which need to be considered if the programme is to be successful and the latrines are to be used.

3.5 Planning.

3.5.1 Scope.

3.5.1.1 Priorities

As defined in the introduction to this section, sanitation covers too broad a scope for relatively short-term projects and it is necessary to help communities to set priorities, which should take into account the prevalence of disease, and its transmission.

In some countries, priorities may have been set already by national or regional policies, and these will need to be developed by a programme of health education.

At the Cuddesdon Conference it was felt that activities which merited high priority in a sanitation programme were:

(a) the construction and use of latrines, sullage and soakaways in individual households, schools and health centres, and

(b) particular attention, in sanitation and health education, to the needs of children.

Other activities may also be beneficial to health (e.g, in Nepal, street cleaning) but to suggest that a community should improve on too many fronts simply makes it probable that it will not advance on any.

3.5.1.2 Omission of sanitation.

Normally, there should be an integrated approach to projects, with water supply, sanitation and health education being given equal emphasis.

Circumstances, however, have been known to alter cases; there was an example in Tanzania where, on a project, it was thought that the need to reduce journey times for water was so acute that the sanitation component was omitted.

It is recommended that this isolated example should not be promoted to become a principle; there may be occasions when, for a variety of reasons, sanitation will lag behind water supply, but the health education component of a project should always advocate sanitation and prepare for its implementation, even if implementation has to be delayed.

3.5.2 Factors to be considered.

The planning of sanitation programmes must take into account many factors. These include:

3.5.2.1 Socio-cultural factors.

Existing perceptions, beliefs and practices must be considered. For example:

- in parts of Africa, mothers-in-law and sons-in-law may not use the same latrine

- in Islamic countries, backs must not be turned to Mecca when using latrines and public latrines for males and females must not be constructed in view of each other.

3.5.2.2 Economic factors.

The costs of latrines, and the levels of subsidies, must take into account the ability of individuals to pay.

- Sanitation may appear to be achieving good coverage, but may not be reaching the people who are poorest and who need it most.

3.5.2.3 Labour factors.

The capacity of the community to work should not be overloaded; this applies particularly to combined water and sanitation projects.

- In some countries (e.g. Sierra Leone) it may be possible to request a certain level of sanitation as a prerequisite to a water supply but in others (e.g. Nepal) this is not so.

- More latrines should not be constructed than can adequately be supervised and maintained.

3.5.2.4 Group factors.
Different groups may need to be approached in different ways. Examples of different groups are:

- people living in their own homes
- people living in rented accomodation
- landlords

3.5.2.5 Convenience factors.
This is a broad concept, and may include matters raised by the community after receiving health education. Typical aspects are:

- how much time is saved
- how the location of a facility affects its use
- how convenient facilities are at night

3.5.2.6 Technical factors.
These affect matters of design, siting and construction and are dealt with in sub-Sections 3.7, 3.8 and 3.9 and in WaterAid's Technical Handbook.

3.5.2.7 Management factors.
A community must be helped to organise itself to make the best use of its latrines. Provision needs to be made for their maintenance, repair and emptying.

3.5.2.8 Extension factors.
Initially, all sanitation programmes will require extension support to help with:

- implementation
- the provision of health education information
- the collection of recommendations for design improvements.

3.5.2.9 Children.
Children's faeces are more likely than those of adults to contain disease pathogens and so their disposal requires special attention.

A common complaint from communities is that latrines cause risks and difficulties for children. As a result, many continue to defecate in the surrounding compound or the countryside.

Special measures that can be taken to help children include:

- the use of special covers placed over the latrine's squat hole, to make it smaller and less frightening.

- the use if chamber pots, possibly made by a local potter. If these are emptied down the latrine, it can get children used to the idea of disposing of excreta in this way.

- construction, near the house, of a child's pit latrine which has a specially made floor slab with a smaller drop hole than usual. This latrine need not have a superstructure, thus avoiding any fear of dark and confined places.

- children's latrines built near communal ones for adults. These have been successful in Madras, India where children's latrines are divided into individual roofless compartments by a low wall such that a mother, standing on the other side, can bend down and assist.

3.6 Choice of System.

3.6.1 Technical range.

WaterAid's technical handbook sets out the range of systems which is available to meet a community's needs. However, the wealth of choice can confuse the issue so that programmes become technologically centred; for example, there can be a tendency to recommend the technically interesting VIP latrine.

Success can become measured in terms of the number of latrines constructed, rather than whether or not excreta is being disposed of effectively.

The likelihood of usage is a key factor in the choice of technology and this becomes more predictable if a community makes its own choice of structure from a range of possibilities.

3.6.2 Involvement of the community.

The disposal of excreta is a sensitive matter about which people have strong cultural preferences. It is imperative, therefore, to achieve the maximum involvement of the community in the design and implementation of any sanitation programme.

Solutions imposed from outside are unlikely to succeed. Often a modification to an existing practice, or type of latrine, may be easier to implement than some new item of technology.

3.6.2.1 Involvement in choice.

Involving the community in choosing its latrine system allows:

- local preferences to be aired
- discontent with existing designs to be expressed
- suggestions to be made for improvements

A community's choice can vary between extremes, for example:

- simplicity: simple dig and cover. (WaterAid, Uganda)
- improvement: concrete slab added to traditional pit latrine.
- sophistication: double VIP latrines. (WaterAid, Sierra Leone)

Within smaller communities, where provision is made on a family by family basis, the choice will vary within the community. In these circumstances, ability to pay will usually be the deciding factor and a range of structures should be offered, with subsidies set so that even the poorest villager can be suited.

For larger communities, where individual choice would not be practicable, knowledge of the socio-economic and cultural background of the community should allow suitable standard designs of latrine to be put forward for discussion and approval.

3.6.2.2 Involvement in testing.

Adeniyi[6] recommends that the community should also be involved in the testing of prototype latrines, possibly as part of health education and motivation.

In particular, women[7] can advise on whether or not latrines are suitable for children and on matters of cleaning and privacy.

Where villagers suggest modifications to design, these may be demonstrated (as is done in Sierra Leone) by using mud mock-ups made by the villagers themselves.

3.7 Common faults in design and construction.

For information on the detailed design of the various structures which are available, see Mara and Feachem [8] and other publications. This sub-section deals only with faults which can easily occur.

3.7.1 Design.

Examples of common faults of design are:

- Latrine slabs which are not designed to suit the squatting positions of the people who will use them. (See Foster[9] on local motor muscular patterns).
- Squat holes which are unnecessarily large.
- VIP latrine vent pipes which are too small in internal diameter.
- VIP latrine vent pipes which are too short.

3.7.2 Construction.

Great care must be taken to control the quality of construction work. Poor quality control can result in structures which

- do not work
- will not last long
- can be more dangerous to health than having no latrine at all
  (e.g. poorly functioning VIP latrines which become ideal breeding sites for flies).

3.8 Types of latrine.

3.8.1 Dry latrines.

3.8.1.1 Pit latrines.

These are the commonest, simplest and cheapest systems for sanitation.

Excreta is collected in a pit set below a squatting slab, or seat. Liquids soak into the ground and solids accumulate. When the pit is full to within 50cm of the cover slab it is filled in with earth and another pit is dug near it.

There are three grades of pit latrine:

(1) Basic pit latrine (e.g. mud plaster on timber lattice slab)

These make maximum use of local materials and therefore are cheap to construct. However, they offer no protection against hookworm. Also, unless construction is closely watched, they may not last long.

Not considered to be very satisfactory.

(2) Improved pit latrine (cement based slab)

These cost more but the slabs can be cleaned and therefore they can prevent hookworm. Also, they can be covered with lids which fit tightly.

Recommended as an alternative to the VIP latrine.

(3) Ventilated Improved Pit (VIP) latrine

VIP latrines have a vertical vent pipe, capped with a perforated screen. (for details, see WaterAid's Technical Handbook). They are usually expensive to construct (although fired clay, or cement plastered reeds, can be used for the vent pipes) and work on quite complicated principles which villagers can find difficult to understand.

Conventional pit latrines tend to be smelly, and can produce hundreds of flies a day which may then land on food or cooking utensils and spread disease. VIP latrines can reduce these disadvantages by

(a) venting the pit so as to produce a down draught through the squat hole and remove smells through the vent pipe, and

(b) providing a superstructure that is dark and a vent pipe that is screened. Flies are attracted instinctively to light, so they will go up the vent pipe rather than into the superstructure and will be trapped by the screen. Eventually they will die and fall down.

VIP latrines can be ineffective if:

(1) the screens are not working properly (usually because the wrong material has been used). The VIP latrine can then be a greater health risk than a covered pit.

(2) there is a high water table and mosquitoes breed in a flooded pit.

3.8.1.2 Twin pit latrines.

If there is not much room for re-digging pits, twin-pit latrines can be constructed. Each pit should be lined and should be large enough to last for at least two years before becoming full. When one pit is full, it is sealed, usually by covering with earth, and the other one is used. After another year the excreta in the first pit, now harmless, can be dug out and used as a fertiliser.

3.8.2 Wet latrines.

3.8.2.1 Pour flush latrines.

Pit latrines can be improved greatly by fitting a water seal, or U-bend, to the squatting pan. This prevents entirely the passage of flies, mosquitoes and odours.

If the pan is well designed, it can be flushed clean by hand, using as little as 1.5 litres of water. The small amounts of water that are used are enough to move the excreta a few metres down the pipe, so the pit need not be directly below the superstructure.

However, if a pour flush latrine is not flushed it can be much worse than having no latrine at all.

Currently, this type of latrine is more common in Asia than in Africa, but it may become successful in Africa in areas where water is also used for anal cleansing. Integrated water and sanitation projects may also result in pour flush latrines becoming more common.

3.9 Location of latrines.

Latrines should be sited so that they are:

- close enough to people's homes to be used regularly and to be properly maintained, and
- far enough away from water sources to avoid polluting them.

In general, latrines should be sited in dry, well-drained areas above the flood level. On level ground, recommended distances from water sources, for different soils, are:

- 15m (50 ft) for gravel and coarse sand
- 7.5m (25 ft) for fine sand, silt and clay areas, where some filtering of bacteria can take place.

Particular care should be taken where there are fissured rocks or limestone formations; in these conditions, pollution can be carried great distances, through channels, to the water supply.

3.10 Communal latrines.

Most sanitation programmes appear to be in favour of latrines being constructed on a family-by-family basis.

This approach does not help families who cannot afford a latrine, and has lead to the building of communal latrines. However, the location of these may be to the advantage of some sections of the community and to the disadvantage of others. If so, it is recommended that construction should start in the poorest areas of the community.

3.11 Maintenance of latrines.

Any type of latrine requires good maintenance and will become fouled and offensive without it. If this is allowed to happen, either the latrine will not be used or it will become a major health hazard itself.

One reason given for preferring family latrines to communal ones has been the very poor record of the latter as regards cleaning and maintenance. This has been particularly true of schools, where failure to carry out maintenance tasks (especially emptying the pits) has caused planners to hesitate to recommend such projects.

Before resources are committed to construction, it is advisable to make sure that a system has been set up for maintenance afterwards.

3.12 Coverage.

Government policy can result in construction.

In Mozambique, the government designated a certain weekend as national latrine building weekend. It worked; latrines were certainly built, but quality and usage were variable. In Zimbabwe, almost complete coverage has been achieved after a programme lasting nearly fifteen years.

However, focussing on figures of coverage can be misleading. Unless people appreciate the health benefits of their latrines, poor usage and maintenance are likely to follow. More important considerations are good quality construction, high usage and proper provision for maintenance.

WaterAid's experience has been that it is easier to achieve high coverage in small villages than in towns. Often, this is because the diversity of ethnic groups in large settlements can result in lack of social cohesion.

In such cases, it is usually necessary to rely on local council building regulations to enforce sanitation policy. This will be especially true for towns with large migrant populations living in rented accomodation.

3.13 Subsidies and Replicability.

3.13.1 Subsidies.

The question of whether or not the cost of sanitation facilities should be subsidised can provoke lively debate. Arguments are advanced for both views. Some examples are:

For:
- subsidies lead to higher coverage, which leads to improved health
- health benefits are spread more equitably in the community

Against:
- subsidies generate false demand
- subsidised projects are more difficult to sustain

In water supply projects, it can be argued that the use of subsidies is already well established, since communities are normally expected to pay only the costs of operation and maintenance. It is in sanitation projects that subsidies cause contention.

If subsidies are provided, the levels must be set carefully:

- If too high, the principles of community participation could be undermined.
- If too low, only the wealthy might benefit from the project (an inequitable result).

In the interests of equity, sliding scales of subsidy may be possible. These could be linked either to family income (based on a socio-economic survey) or to choice of technology. In the latter case, for example, the subsidy for an improved pit latrine might be higher than for a more socially desirable VIP latrine.

3.13.2 Replicability.

Replicability means the likelihood of other agencies, with similar resources, being able to support sanitation programmes in other areas.

Clearly, the cheaper the range of latrines available, the smaller need be the subsidies and the more likely it will be that replicability will be possible.

Sometimes, particularly where low-cost latrines have been developed, individual people may be prepared to build structures without subsidies. This would be a desirable outcome of a programme, unless it meant that only the wealthier members of the community would benefit.

4. HEALTH EDUCATION.

Guidelines.

Health education should be recognised as a specialist field.

Programmes should have a specialist health education coordinator, professionally qualified and, preferably, from the host country.

Health education should be part of projects from the start.

To have the best chance of being effective, it should be fully integrated with water and sanitation components. Ideally, health education should precede the sanitation component and should continue throughout it, and afterwards.

There should be community participation at all stages.

A "bottom-up" approach should be used.

Health workers should be chosen carefully, and trained.

If practicable, they should be members of the community.

Health education programmes should be set up, and developed, in association with local health services.

They should be tailored to fit the social and cultural background of the community.

Programmes should recognise that changes in people's behaviour, even though agreed by the community, will occur only if the right conditions exist (i.e. if "the enabling factors" are present).

4.1 Introduction.

4.1.1 The meaning and importance of health education.

Before progress can be made in planning health education programmes, answers are required to the basic questions:

What does Health Education mean?
Why is it important?

It means teaching people how to improve their health and, also, explaining the reason for the improvement. In other words, what to do and why to do it.

It is important because people's habits have a major effect on their health and research has shown that reductions in the incidence of disease occur most often when people change their patterns of behaviour as a result of improved practices of hygiene.

(Put more succinctly by Gillet[1] in 1985:

> "The rationale for health education lies in the importance of human behaviour in determining health"

and by Cairncross[2] in 1989:

> "most significant impacts on disease incidence stem from the behavioural changes which constitute hygiene improvements.")

4.1.2 The contents of this section.

If people are to be taught, or encouraged, or led to want, to make changes in their personal habits so as to improve their health there is a great deal of difficult work to be done by health educators and by health workers in the field. The section seeks to give them some guidelines on the following matters:

- What changes to make
- Which people to aim at
- What to do
- How to do it
- Who should do it
- Where to do it.

The section ends with some notes on the evaluation of health education.

4.2 Planning health education programmes.

In planning development programmes two vital principles must be recognised and the programme must be built around them. These are:

(1) the health education component must be integrated with the water and sanitation components, and

(2) the community must participate at all stages.

4.2.1 Integration.

In the past, there has been a regrettable tendency for planners to view health education as an isolated activity, unrelated to the other activities in a programme. Possible explanations for this are:

(a) The level of expertise in health education has been low.

- This has led to little influence being exerted at management level and to health education being given inferior status.

(b) There is often pressure to achieve a quick result, particularly one that is visible and can be quantified. (For example, pressure from the need to reduce intolerably long journey times for water)

- This has led to an emphasis on technical progress at the expense of progress in health education.

Modern thinking takes a different view. Hubley[3] pointed out in 1987 that health education needs to be seen as an important, integral part of an overall communications strategy. In this way, all inputs to a programme become mutually supportive, and increase in coherence.

In 1989, Cairncross[4] wrote that

> "access to water in quantity and improvements in hygiene may have a greater impact on diarrhoea than water quality and excreta disposal."

Thus community health education must take its place firmly as a major component in water supply and sanitation programmes.

4.2.2 Community participation.

Section 1 of this manual, the Introduction, stressed the importance of people and the essential need for the community to participate in a programme; Section 2 dealt with community participation in detail.

The principles expressed in those sections apply just as much to the approach to health education as they do to all other components in a programme. Villagers need to play a central role in the planning, implementation and evaluation of their health education, just as they did in ensuring the community ownwership and sustainability of their schemes.

For example, in areas where there is no local health service the participation of the community will be needed to obtain information about which diseases afflict them, and how they are spread. This is done by talking to villagers at a very early stage and assessing their descriptions of disease symptoms.

The management and implementation of health education requires a "bottom-up" approach. Or, put more elegantly by the Chinese:

"Go in search of your people;
Love them;
Learn from them;
Plan with them;
Serve them;
Begin with what they have;
Build on what they know.

"But of the best leaders
When their task is accomplished,
Their work is done,
The people all remark:
'We have done it ourselves.'"

Tao To Loa Tzuching

4.3 The objectives of Health Education.

4.3.1 Desirable objectives.

A list of desirable practices, divided among several fields of hygiene, is as follows:

Personal hygiene

Hand washing	- after latrine use - after handling infants' nappies - before preparing or eating food
Personal cleanliness	- regular bathing - regular laundering

Domestic hygiene

Clean storage of water
- use of clean vessels and covers
- use of clean cups to remove water from storage vessels
- prevention of contamination

Village hygiene

Clean surroundings
- disposal of household refuse
- disposal of waste water
- disposal of infant, adult and animal faeces

Some broader health issues may also be included:

Child health measures

Care of children
- breast feeding of infants
- early recognition of diarrhoea
- administration of oral rehydration therapy
- vaccination of infants

4.3.2 Realistic objectives.

On a visit to a project village it is probable that a wide range of undesirable hygiene practices would be visible to a careful observer. It would be unrealistic, however, to expect a community to agree to change its habits in all areas at once. If too much is attempted, nothing will be done.

4.3.2.1 Setting priorities for change.

To succeed, priorities must be set. It is important to choose behaviour patterns which, if changed, will make a direct improvement to health.

> (For example, little good would be done by recommending that drinking water should be boiled if it would later become contaminated in a dirty drinking vessel or if more infection was spread through dirty hands. The correct approach here would be first to get people to concentrate on using clean cups and on washing their hands.)

Priorities can best be set by an efficient local health service, if one exists in the area. The local primary health care officer should be able to define the most serious health problems in the area and to advise on the planning and implementation of a health educatuion programme.

If there is no effective local health service, the priorities will have to be set by the programme's planners. This requires knowledge of:

- which diseases are most widespread in the area
- how they are transmitted (epidemiology)
- local behavioural practices
- which practices contribute most to the spread of disease

The types of disease and their distribution can be estimated by carrying out a survey in the community at the pre-intervention stage and assessing the villagers' descriptions of disease symptoms. (See Section 6.)

4.3.2.2 The likelihood of change.

Setting priorities does not necessarily mean that changes will be made by the community. The priorities of health educators may differ from those of the community and good intentions can fail for reasons unconnected with health; for example, economic, social or cultural ones.

It is essential that the chosen objectives must be based on sound local knowledge and must have the support and participation of the community. Research[5] has shown that an innovation is more likely to be adopted if:

- it is simple to carry out
- it is compatible with the existing situation
- it can be tried out by the community
- it produces results which are observable in the short term and which provide perceived advantages over existing methods

4.3.2.3 The enabling factor.

Objectives must be realistic. To return to the example of water being boiled, there would be no point in advocating this if there was no firewood and no time to collect any, or if there were no vessels for boiling the water, or storing it.

Green and others[6] have called this "the enabling factor". Lack of enabling factors such as time, money, skills and tools can explain why a person may wish to change his behaviour, but still fail to do so.

4.4 Whom to target.

Influences on people's behaviour can be exerted outside the community at both national and district level.

At national level, Government policies in, say, agriculture or education, mass media productions and commercial advertising can all have an effect. Such inputs could be the targets of a national health education programme.

At district level, more effective implementation of programmes can be achieved by coordination with primary health care (PHC) units and with teams from other agencies. Often, PHC organisations are knowledgeable about public health impacts, village health committees and whether health education is taught in schools. Sometimes they also have power to enforce local bye-laws.

It is much more likely, however, that programmes will be aimed at community level.

4.4.1 Leaders of opinion.

Within all rural communities there are well-established patterns of informal communication and influence. People's behaviour is determined, mainly, by the pressures on them to conform which these patterns generate; pressures which may be exerted by family members, peers, religious heads and community leaders, etc.

Health educators work on the theory that if the leaders of opinion and the trend setters within a community can be persuaded to change their perceptions and practices, then the rest of the community will follow their example.

So that large target groups may be reached through traditional channels, educators seek out the opinion leaders from different categories, such as:

- village elders
- traditional birth attendants
- leaders of women's groups
- heads of households

Studying patterns of communication and influence in this way (social mapping) is difficult, but very worthwhile. It requires:

- a sound knowledge of anthropological techniques
- a firm determination to wait until survey data has been collected (see Section 6) before taking action
- a recognition that formal community leaders may not necessarily be respected leaders of opinion.

A case study.
In 1977 Rogers[7] showed that a mothers' club in a South Korean village failed because of a poor choice of leader. His survey, carried out before this leader was chosen, showed that none of the women acknowledged her as a potential source of advice. Therefore, when she was appointed leader, few were prepared to support the group.

NB. This case study might well be borne in mind during the selection of village specialists such as health wardens and maintenance caretakers.

4.4.2 Women and men.

Considerable health education inputs are often directed, quite rightly, at women.

As the principal water managers and child rearers, women have a central role in influencing changes of behaviour within the family, particularly among children.

A Case study.
In Tonga[8], two village education projects failed because the women had not been involved. The male village leaders had excluded them from planning and implementation, even though women had great influence and high status within the family.

Health education inputs should also be aimed at men.

Men have the same right as women to an increased understanding of the factors which affect their health and that of their families. They are responsible, also, for the implementation of many health measures, e.g. the construction of water supply schemes and latrines.

If men are neglected, they are in a position to undermine the education that is directed at women - they usually control a family's finances and its agricultural practices, both of which can have a direct bearing on personal hygiene and dietary practices.

If the best results are to be achieved, it is essential that the potential benefits of health education (including non-health ones such as comfort and privacy) are understood by everybody.

4.4.3 Children.

Children under ten are an important target group because they will drink any water that is available to them and are poor users of latrines.

The behaviour of children can best be influenced by their mothers, therefore health education should be directed at mothers rather than at schools.

4.4.4 Schools.

A finding published by the WHO[9] in 1977 suggested that a child's behaviour is formed largely in the pre-school period. Therefore new patterns of behaviour which are taught and practiced at school may never be used at home.

It follows that the success of health education in schools depends largely on the degree of cooperation which exists between the schools and the community. If there is good interaction, changes in behaviour are more likely to occur.

Examples of good interaction are:

- parent-teacher groups
- community-based projects
- school teaching packages which integrate learning with development activities, such as improving the village's environment; e.g. by identifying mosquito breeding sites.
- the inclusion of school health education in the local public health programmes.

There can be encouraging results when school teachers are actively supported in their health education efforts:

> A case study.
> In 1975, Dwivedi and others[10] showed that, in primary schools where a teacher was given a two week training course and supported by a local sanitary officer, the attitudes and practices of the children were two to three times better than in schools which followed the normal curriculum.

4.5 Choosing the health worker.

4.5.1 Choice by the Community.

The person who will become the health worker will normally be a member of the community and, once chosen, will receive training in the skills of health education. However, the health worker will usually be a woman and sometimes a woman will have so many family duties that it would not be practicable for her to take on the task of being a health worker.

In such cases, WaterAid's programme in Nepal is experimenting with employing a health worker from a different community; once trained, she is posted to the community where the project is located and is able to give her full attention to her work. So far, results have been very encouraging.

It is important that either the community should choose the health worker or it should agree fully with the agency's recommendation. Without guidance, communities often make poor choices, possibly for some of the following reasons:

Nepotism
A local leader may insist that one of his family is chosen as the health worker; members of the community defer to his authority

Perceptions of "education"
People often feel that "study" is for the young, and so choose a young person who may be too inexperienced and too irresponsible

Migration of the educated
Health workers who have more than a primary school education are likely to leave the village and get a better paid job in the town

Rushing the decision
Often, there is not enough critical discussion before a choice is made. Someone suggests a friend, someone else suggests another friend, and a vote is taken. Quite frequently, the winner will simply be the person first proposed.

The perceived low status of the post
If the position is thought of as a lowly one, this can result in less able candidates being proposed.

- This may be avoided by educational inputs which emphasise the importance of the post and by recommending that remuneration be comparable with that of maintenance caretakers in water supply schemes. If health workers receive less than their caretaker counterparts, they will be regarded less seriously by the community.

Although at first villagers are slow to trust the newly taught skills of a local person, experience[11] has shown that, in the long term, these are likely to assist in building people's confidence and self-reliance.

Before a community makes its choice it is recommended that it should first decide on the desired "profile" of its health worker. A check list of desirable qualities is given in the next sub-Section.

4.5.2 Profile of a health worker

The desirable qualities for a health worker were listed in 1982 by Werner and Bower[12], who recommended that a health worker should be a person who:

- is kind
- is responsible
- is honest
- shows good judgement
- has a mature personality
- is interested in health and community work
- is humble; feels equal to, not superior to, others
- will probably remain in the village (not move away)
- is accepted by and respected by all the people, or at least by the poor people
- has the full agreement and cooperation of his or her family
- can read and write (preferably)
- does not have more than a primary school education
- is eager to learn, open to new ideas
- is a good leader and organiser
- has healthy habits (does not smoke, does not drink too much)
- can draw, or is a good story teller
- works well with mothers, children and working people
- has a good record of taking part in or leading community activities
- has some experience in health care or healing (preferably)
- understands and respects people's beliefs and traditional practices
- identifies with and defends the interests of those in greatest need

4.5.3 Male or female?

Female

Although both men and women can make good health workers there is an increasing tendency to appoint women.

Women usually have little spare time. The "Status of Women in Nepal" (1988) reports that women work an average of 10.8 hours a day compared with men, who work 7.5 hours. Women account for

- 86% of all domestic activities,
- 64% of village work, and
- 62% of all agricultural activities.

Nevertheless, women are suitable as health workers because:

- women and children make up to 75% of the population
- their health needs are generally great
- other women usually prefer health workers to be women

- compared to men:
  - they have more experience of caring for children
  - they stay closer to the village; therefore they are more available when needed
  - they are usually more attuned to those who have least power and greatest needs; therefore they are better able to motivate people
  - they tend to be more responsible and hardworking

Male

However, there are points in favour of men; compared to women:

- they are the traditional leaders of communities; therefore they have much influence with heads of households
- they are more likely to initiate social change; e.g. by applying at district level for improved services

Some communities resolve the matter by choosing both a man and a woman, sometimes a married couple.

4.5.4 Traditional healers

Traditionally in rural communities, the responsibility for health lies with local healers, herbalists, bone setters and midwives.

These special leaders of opinion enjoy a number of advantages, namely:

- they already have the confidence of the community
- they have a strong grounding in traditional and spiritual forms of healing, upon which modern concepts can often be built
- they are often highly committed to serving their community

However, there are also disadvantages; many of them may:

- be too set in their ways to change
- use their influence merely to gain power over others

4.5.5 Handicapped persons

Some programmes have found that the best health workers are people with physical handicaps.

Being unable to do hard physical work, they may have more time to give to health work. Their own handicaps may also give them an understanding of the difficulties of others and a greater determination to help. In some ways, therefore, their weaknesses become strengths, and enhance their suitability for health work.

4.6 Training.

4.6.1 Location

Training can be carried out in either the village or a combined village/town setting; each location has advantages:

(1) In the village.

A village setting is best for training health workers and conducting community health education sessions, because:

- there are ready opportunities to relate subject matter to real life situations and experiences
- villagers can practice solving problems and carrying out health-related activities under realistic conditions

(2) Combined village/town.

Many WaterAid programmes use a combined in-village, in-town approach for training health workers and have found it to be beneficial because:

- exposing health workers to district centres and more formal training environments has been seen to boost their confidence and to improve their standing in the eyes of their community.

4.6.2 Approach

The educational approaches used for training health workers and for running community health sessions in villages should be much the same.

Each approach depends on how well those giving the training[13] understand and build on the concepts, ideas and practices which already exist, and the degree to which the training meets the needs of the participants, as seen by them.

As with all "community strengthening" approaches, involving the participants in the planning is beneficial. It can:

- help them to learn the skills of analysis, problem solving and organisation, and
- produce, thereby, greater commitment to learning.
- help to "de-mystify" the educational process, so that participants feel involved, and on equal terms, with those giving the training.

4.7 Methods of communication.

4.7.1 Discussions in small groups

A small group is the best setting for planning and for other activities in which the community participates. People respond well to situations:

- which encourage the development of personal relationships, and
- where it is implicit that they take part, and relate the issues being discussed to their own everyday lives

Health education requires people to modify their attitudes and behaviour. Since people's attitudes are often formed in the process of interacting with other people, it follows that group discussions backed up by practical exercises are likely to be effective methods of health education.

For this reason, many programmes make work in small groups (say, 12-15 people) their main method of education.

Discussion groups should be conducted in such a way:
- that each participant gets a chance to contribute and,
- that conclusions are reached

This requires special training, which should form part of courses run for training health workers.

Variety of method

Maintaining variety in the methods chosen for health education is the key to keeping people interested, over extended periods, in the material which is presented.

Often, group discussion is used to interpret, or "decode", plays, stories and proverbs presented within the group or broadcast on national radio.

Other techniques which maintain the element of participation are:

- demonstrations
- group projects
- role-plays
- competitions

It is helpful to repeat and reinforce messages by the use of several different methods.

4.7.2 House visits.

House visits are known to be less effective than group activities in promoting changes in behaviour. However, they are still worth making because:

- they can be very useful for monitoring people's practices of personal hygiene.
- they can present an opportunity for family-based discussion on problems in adopting new behaviours. (Local cultural norms will dictate whether or not this is acceptable.)

4.7.3 Mass media.

Newspapers, radio and television can be used to reach large numbers of people quickly, at relatively low cost.

However, there are disadvantages and, in general, the potential of such media to change people's health-related behaviour has been over-rated. Examples of disadvantages are:

- the impersonal nature of these methods of communication often means that the audience is passive and cannot provide feedback.

- the mass media approach requires its audience to be literate, to own a radio or television and to have an income above the average. Therefore it has been accused of widening "the knowledge gap" between high and low socio-economic groups

4.7.4 Local media.

Because of the shortcomings of the mass media, more attention is now being paid to traditional and locally produced methods of communication.

These have the advantage that they can be tailored to the needs of a particular cultural or ethnic group and thus gain greater local credibility.

4.7.4.1 Visual and oral

Most developing countries have rich visual and oral traditions of communication but it is only recently that these have been used to convey health-related information.

Because villagers are familiar with these ways of communication, they are more receptive to educational exercises which are built around them and are more likely to participate in them.

Health education programmes have had good results by means of stories, proverbs, plays, songs, dances and puppet shows, often presented by the villagers themselves.

4.7.4.2 Printed

Locally produced, picture-based material has great potential for health education. Examples are:

- flip charts
- posters
- booklets

A case study

WaterAid's Kenya programme found that developing printed (and other) material with the participation of the target audience was a valuable health education process in itself.

Booklets covering a range of locally relevant health messages were developed, pre-tested and revised until 80% comprehension levels were reached among villagers.

The associated costs were not thought to be out of proportion to the probable long-term benefits and the potential of these materials for use in schools was seen as considerable.

However, visual aids can go wrong. Differences in visual interpretation between westerners and villagers can lead to inappropriate visual aids being produced. This may be avoided by using local village artists, working in accordance with local visual traditions.

4.8 Characteristics of effective health education.

Writing in Waterlines in 1987, Hubley[14] stated that effective health education

- promotes actions which are realistic and feasible within the constraints faced by the community.
- builds on ideas, concepts and practices which people already have.
- repeats and reinforces information, over time, using different methods
- uses existing channels of communication such as songs, drama and story telling, and is adaptable.
- entertains the community, and attracts its attention
- uses clear, simple language with local expressions and emphasises short term benefits of action
- provides opportunities for dialogue and discussion to allow learner participation and feedback on understanding and implementation.
- uses demonstrations to show the benefits of adopting changed practices

4.9 Evaluation.

4.9.1 Reasons for evaluation

There are two important reasons for trying to evaluate the success, or failure, of health education programmes:

(1) to justify the resources which have been expended, by showing that they have had a beneficial effect

(2) to provide a mechanism for measuring the improvements caused by efforts, and resources, put into a programme (the programme inputs).

4.9.2 The process of evaluation.

The process of evaluation is to monitor people's understanding of health matters, their attitudes towards them and their behaviour, in order to see whether improvements occur in these areas as a result of the health education programme. These are the immediate objectives of health education.

The thinking behind this approach is as follows:

- Improvements in people's health are likely to occur if certain conditions in the community (or enabling factors) are improved

- These changes in conditions are likely to take place if there are certain changes in people's understanding, their attitudes and their behaviour

- The immediate objective of health education is to cause these changes in people's understanding, attitude and behaviour

- Therefore the likely improvement in health can be evaluated in terms of whether or not, and to what extent, these changes have occurred.

4.9.3 Evaluation by participants.

It is not easy to quantify the effect which a health education programme has had, or is having, and attempts made so far have been inconclusive. To date, most such attempts have been carried out by external teams.

It is far better for evaluation to be a continuous process, carried out by the people actually engaged in the health education programme. If such people are involved in assessment of their own work they are more likely to take notice of the findings, and to act on them.

4.9.3.1 By staff and health workers

Health teams often work alongside other teams, such as construction teams, who are visibly more productive. Because the health team can see no immediate quantifiable result of its efforts, it does not know its own worth, and morale can be low.

Therefore assessment by the health staff of their own work should be part of the health programme and should be planned from the start. Training in the techniques of evaluation will need to be given.

4.9.3.2 By the Community

If a community has played a part in planning and implementing a project, it is only right that it should help to determine whether or not objectives have been met.

Involving the community in the evaluation of the health education programme is likely:

- to overcome the common reluctance of villagers to express openly their views about the project
- to result in improved use and maintenance of an integrated system
- to result, therefore, in increased likelihood of long-term health benefits.

Suggestions:

- The yearly collection of evaluation data could be part of an on-going school project.
- Health committees could be trained for this purpose.
- Health committees could also be trained to participate in house-to-house surveys and record keeping

A case study.
One programme in Tonga (Fanamanu and Vaipulu, 1966) involved the community through weekly meetings at which observations of visible achievements were discussed.

4.9.4 What to evaluate.

The immediate objectives of health education are stated in 4.9.2 above. The choice of which indicators of progress towards these objectives should be monitored will depend largely on the time and specialist knowledge which is available.
Possible indicators, at various levels, are as follows:

At the simplest level:

- whether new facilities are working properly
- whether new facilities are accepted by their users

Indicators of possible changes in behaviour:

- if users are satisfied with new facilities
- if the maintenance of facilities is good
- if the community shows knowledge of health matters and of the health education programme

Most important, indicators of actual improvements in hygiene practices. These can be difficult to observe, but may be apparent from the more visible practices, such as:

- water use and water management
- hygiene at the water point
- practices in the kitchen
- baby care

Evaluation should also consider the working methods of the health education programme, and assess whether or not its teaching has been successful. Records should be kept of:

- what was taught
- by whom
- where, and to whom
- how

Techniques for carrying out evaluations of water and sanitation programmes are contained in an excellent World Bank publication, "Minimum Evaluation Procedures".

4.9.5 What to avoid.

Hubley[15] has produced a list of matters which constitute failures in the evaluation process. These are:

- failure to evaluate even at a simple level

- evaluations based only on measurement of effort and activity, and not on impact and change in the community

- failure to produce evidence that health education is effective and deserves funding

- reluctance to carry out evaluation of failures, to determine their exact causes and to learn from them

- demonstrating that change has taken place, but providing no evidence that it has been caused by the health education programme and not by other factors

- giving inadequate descriptions of programmes, thereby making it difficult for others to assess any special features of programme or community that might affect success and replicability

- not sharing with other health educators the evaluations of success or failure

- not providing opportunities (e.g. in a magazine, or at regular meeting places) for health educators to exchange experiences of their work and to discuss wider issues regarding the organisation and support of health education activities

- narrowly conceived concepts of research and evaluation which allow no opportunity for participation in the evaluation process by health workers or the community

5. TRAINING.

Guidelines.

It should be recognised that the need for training exists at many. possibly all, levels.

Everyone is a trainer, or a trainee, or both.

The implementation of programmes provides continual opportunities for people to learn.

Planners should seize the chance to make implementation a series of well thought out, integrated, training exercises.

Training courses should be carefully tailored to meet the needs of the trainees.

Extreme care should be taken that the needs of the prospective trainees have been correctly identified.

Training sessions should be informal and enjoyable.

Trainees should take an active part, rather than a passive one.

Training courses should be evaluated.

Evaluation should cover the training sessions, the course as a whole and the effect it has on later performance of work. Suitable indicators should be devised.

5.1 Introduction.

Among the the broader aims of developmemt programmes are that the agency's local partner and the villagers themselves should be enabled to increase their capacity to work and to develop their capabilities.

To achieve such development necessitates training. Training improves the knowledge, abilities and outlooks of people and increases their self-reliance.

This manual stresses that each component of a programme is part of an integrated whole; each of the four main components of Water Supply, Sanitation, Health Education and Community Participation requires the involvement of the fifth main component, Training.

Training, therefore, is an essential ingredient of all development programmes, if they are to be successful, and should be built in from the outset.

Each stage of the implementation of a programme provides opportunities for people to learn. If this important truth is recognised by the programme's planners, then the implementation of the various components of a project can be planned so that the whole thing becomes a series of carefully arranged, fully integrated training exercises.

This Section describes the range of training, the training process, the types of training, the design of training courses and the methods used for training. It concentrates on matters relevant to training courses, rather than on the constant opportunities for training, referred to in the previous paragraph, which occur during the implementation of programmes and which should not be missed.

There is a sub-Section on the evaluation of training.

5.2 The range of training.

Training covers a wide range of needs and activities, from the simple improvement of an artisan's skills, to a clearer understanding of how things work (intellectual ownership of the relevant technology), to imparting management skills to people.

Training is necessary at each level and stage of a development programme. Expressed broadly, its aims can be stated as:

- The acquisition of skills and knowledge leading to improved performance.

  (e.g.- improving the technical skills of local craftsmen
  - developing the ability of technicians to negotiate with village elders)

- The enhancement of the overall management capacity of local partner and community groups.

  (e.g.- helping a village community to manage its project budget)

- The creation of changes in attitude at the personal, group, community and local partner level.

  (e.g.- changing the attitudes of health workers towards villagers (and vice versa)

- The improvement of morale of the local partner and participating communities.

5.3 The training process.

Before training occurs, the need for it must be recognised. After training, the trainees will apply what they have learnt to their work and, later, there should be some evaluation of whether or not the training has been worthwhile.

The whole process was summarised by Hulme in 1990, as follows:

Before training
- Diagnosis of organisational problems, or underperformance
- Recognition of training as a cost-effective means of improving performance
- Identification of relevant individuals, or groups, for training
- Diagnosis of training needs

During training
- Selection of appropriate training (e.g. in-house, in-country or overseas)
- Running of course for motivated trainees
- Learning from the general experience of the activity

After training
- Trainees return to work station and implement acquired learning
- Trainees contribute to improved project performance
- Enhanced achievement of project objectives
- Beneficial ripple, and multiplier, effects to other individuals and groups
- Evaluation of the impact of training, so as to improve future training activities

5.4 Selection of type of training.

5.4.1 Categories available

As sources of training, the following are available:

In-service training:
- (a) on-the-job training
- (b) "in-house" courses

Academic courses:
- (a) In-country, (e.g. local technical college)
- (b) In country of an external donor (e.g. WEDC)
- (c) In a third country, (e.g. regional university)

Observation and study visits (e.g. to a programme in a neighbouring country)

Adviser-Counterpart relationships.

5.4.2 Modern preferences

In the past, vaque notions existed that training was generally a good thing, however it was carried out. Development-related training of project staff tended to be restricted to high level personnel and took the form of sending them to academic courses overseas.

> (The Overseas Development Administration pays for over 13,000 overseas students each year to attend courses in the UK).

This procedure has been criticised on the grounds that the scholarships involved have tended to be seen as:

> " a potential source of patronage and power (used) as a reward for length of service rather than a means by which improved project performance can be achieved."[1]

Nowadays, it is intended that training should improve job performance. It follows that its content, and context, should be appropriate and that there should be some evaluation of whether or not it has been successful.

Therefore there has been an increase in the demand for training courses to be "in-house" and "in-country" and for them to be followed by on-the-job training.

5.5 The design of training courses.

The design of a suitable training course requires the designer:

- to analyse what the trainee's **needs** are
- to decide the ultimate **aims** of the training course
- to set the immediate **objectives** of the training sessions

The needs

It is essential to find out the real needs of trainees. This can be done by analysing the needs, taking into account the job descriptions of the trainees, their direct experience of the work involved and their own perception of their needs.

This exercise must be carried out for individuals (or groups) at all levels in the project's structure - from counterpart engineers to members of village water committees.

The aims

The aims of the course are, broadly, what must be achieved to meet the needs. They can be decided correctly only if the needs are correctly identified. Each aim might be the subject of a group of training sessions.

The objectives

The objectives of the course are statements of what a trainee must have achieved at the end of each training session if he, or she, is to meet the aims. They are steps to be taken along the route to the aims.

An example

The relationship between needs, aims and objectives can be illustrated by considering the requirements of, say, a trainee who wishes to be able to maintain an Aquadev handpump for a deep well. In such a case:

The needs are:

- to be able to maintain the Aquadev handpump

The aims would include:

- (a) to provide the trainee with an understanding of the operating principles of the pump
- (b) to introduce the trainee to the concept of fault-finding and preventative maintenance
- (c) to provide an opportunity for the trainee to overhaul and install an Aquadev pump

The objectives for aim (a) would include:

- that the trainee will be able
  - to name all the component parts of the pump
  - to explain the function of the foot and piston valves
  - to identify and replace all excessively worn parts on an Aquadev pump

5.6 The multi-disciplinary content of training courses.

5.6.1 Effect of socio-cultural factors

It is seldom that training courses provide only technical training.

As stated in the introduction to this Section, and elsewhere, each component of a project is part of an integrated whole. It follows that account must be taken of the many socio-cultural factors which affect the success of programmes and the content of training courses has become increasingly broad-based and multi-disciplinary in nature.

5.6.2 Extract from the syllabus of a training course

How one component of a programme affects another can be seen from the following extract from the syllabus of a training course devised to meet the needs of project technicians on a WaterAid programme in Sierra Leone.

The problem	Heading of item in Syllabus	Training method
Trainees apprehensive about the idea of training	Team building	Tower building game to demonstrate need to work together, help each other and communicate effectively. Informal, enjoyable exercise.
Widespread difficulty observed in interpreting engineering drawings	Technical drawing	Group competitions to construct models from prepared drawings using Lego blocks. Sketching from models.
Technicians sceptical about the importance of health education team's work	Health Education	Presentation of plays, stories, demonstrations by health team. Emphasis on role technicians can play to impart health messages.
Site foremen failing to consult community before scheduling work	Community Participation	Lecture and small group discussions on community participation, high-lighting examples from the field.

Technicians failing to structure in-village training of maintenance caretakers	Maintenance	Site visit to poorly maintained facility. Small group discussions on maintenance tasks. Small group discussions on how to train caretakers, including record-keeping.

5.7 Training methods.

It is not possible to make a list of training methods because these should be tailor-made, and will vary according to the type of trainee and the subject matter.

However, some features should be common to all training methods and are listed below as desirable characteristics:

Trainees should take part
- They should assume some responsibility for their own training.
- They should be expected to offer their views and experiences, as a contribution to the course.

Informality
- There should be no formal lectures, of the type where the trainee has a passive, listening role.

Methods should not be threatening
- Many trainees, particularly villagers, will be unfamiliar with structured training courses and could easily be made to feel uncomfortable.

Language should be simple
- It should be appropriate to the type of trainee.
- Not all trainees will be able to read and write; if so, training sessions should not depend on them being able to do so.

Trainers should be supportive
- They should avoid being teacher-like, and should identify with the trainees.

Training should be enjoyable
- Methods which entertain as well as teach should be encouraged, such as role plays, dramas and stories.

Merit should be recognised
- Certificates for satisfactory attainment, or for attendance, should be considered.

Practical back-up
- Wherever possible, information-based training sessions should be followed by practical exercises that allow what has been learned to be put into practice.

Variety
- A wide variety of training methods should be used. to keep the interest of trainees and, if possible, to stimulate them.

Built-in checks
- Checks on whether or not trainees are learning should be built into each training session. These may range from simple question and answer periods to observation of tasks being performed.

5.8 Evaluation.

Evaluation of training can take place at several stages, namely:

- Evaluation of each training session
- Evaluation of the training course as a whole
- Evaluation of the effect of the training course on subsequent performance at work

Whilst evaluation of courses should certainly take place while they are being run, and after they have been run, it is important to remember that the real measure of the success of a course is whether or not it results in increased performance of work.

Courses need to be revised, therefore, not in the light of how the course appeared to go but in the light of what happens later in the field.

5.8.1 Evaluation of training sessions

At this level, evaluation takes place straight after the end of the training session. It considers:

Objectives:
- were they worthwhile?
- were they feasible?
- were they effectively written?

Content:
- was the subject matter
  - at the right level?
  - correctly organised and sequenced?
  - sufficiently backed up with practical exercises?

Teaching methods:
- were they appropriate?
- were they effectively used?
- were differences in the learning capacities of individuals taken into account?
- were trainees sufficiently motivated by the teaching?

Assessment:
- did trainees achieve the objectives?
- were the checks on learning valid and reliable?

5.8.2 Evaluation of the training course

Evaluation of the whole course should take place after the trainees have returned to their work places, and have had an opportunity to put into practice what they have learned.

Courses should be modified to take into account feed-back from the work place regarding the improvements, if any, in performance.

5.8.3 Evaluation of performance at work

Ample evidence exists to suggest that when training principles are suitably adapted to local conditions, improvements in performance will be marked, if not necessarily spectacular.

However, knowledge of how to register the actual effectiveness of training is not well advanced. Indicators need to be devised whereby improvements in performance can be measured, so that courses can be revised in the light of what success ex-trainees have in meeting them.

6. GATHERING SOCIO-CULTURAL DATA.

Guidelines.

In gathering information about a community, it is recommended that programmes should:

Involve the community from the start.

Explain the purpose of data collection and the use to which the information will be put.

Collect information in consultation with the community.

Whenever possible, use members of the community to gather the data.

Endeavour to make the collection of data the beginning of constant participation in the project by the community.

Gather only information that will be used.

Share the results of data collection with the community, and explain how each result helps the project.

Design survey questionnaires most carefully.

Feed back to the community the results of surveys.

Make survey data available to other agencies and to Government bodies.

6.1 Introduction.

"Data" means "facts given, from which others may be inferred."

Gathering such information about a community for whom a development programme is being considered makes it possible to plan the programme effectively and to evaluate it afterwards.

Sometimes, information will be available from local health and government offices (e.g. census and health statistics) but experience has shown that most information will need to be gathered by the programme's staff.

This Section lists the sort of information that is required, gives reasons why it is required and describes several ways of obtaining it. It stresses the necessity of involving the community in the process of gathering the information.

6.2 Community participation.

In most projects, the community itself will participate and the villagers will carry out most of the work. Their attitudes and abilities will play a major part in whether or not the project is a success.

It follows that the more information that can be gathered, before the project starts, about these attitudes and abilities, the better the project can be planned and the better will be its chances of success.

The manner in which information is gathered is important and there are two main dangers to avoid, namely:

- if information is gathered privately or furtively, and kept secret, the community may feel isolated from the project and may become suspicious of its motives

- because there is so much information to gather, there is a danger of spending so much time on preparatory activities that the community becomes impatient for progress.[1]

These dangers can be avoided by gathering data openly and in consultation with the community. This approach provides an early opportunity for project staff and villagers to establish harmony between them and to understand and appreciate each other's point of view.

A great deal of information is required, and it has to be obtained without over-taxing the good will of the community. Gathering it calls for sensitivity, dialogue and negotiation.

Guide-lines to follow are:

- Explain the purpose of data collection and the use to which the information will be put.
- Collect information in consultation with the community.
- Whenever possible, use members of the community to gather the data.
- Gather only information that will be used.
- Share the results of data collection with the community, and explain how each result helps the project.

6.3 Reasons for gathering data.

Data is required for three main purposes:

- The design and execution of projects
- The design of suitable health education support
- The evaluation of projects

These are treated separately, in the sub-Sections below.

6.3.1 Design and execution.

To design, implement, manage and maintain a project in an efficient manner, programme staff must take into account the following matters:

- the availability, locally, of expertise and materials
- the co-operation and support of community leaders
- the preferences and values of the community
- the traditional patterns of water use and disposal of excreta, and associated practices and beliefs

To gauge the extent, and relative importance, of each of these matters requires the collection of a wide range of data, both qualitative and quantitative.

6.3.2 Health education support.

Improvements in people's personal practices of hygiene will occur only if this aspect of the project is understood by them, and has their support.

This will depend largely on the effectiveness of the inputs to the programme regarding health education and motivation. These inputs will be the result of data gathered about:

- local beliefs and attitudes regarding water, sanitation and health
- traditional habits of water use and defecation
- current levels of knowledge in the community about the transmission of diseases

  (especially, the level of knowledge of community leaders and other influential people)

6.3.3 Evaluation.

To find out how successful a project has been, or is being, requires the study of data gathered about the following matters:

- whether or not water supply and sanitation facilities are working properly
- how much they are being used
- what provisions there are for operation and maintenance
- changes in practices of personal hygiene
- changes in health indicators
- time savings, and other indicators of quality of life

6.4 Type of data to be gathered.

Simpson-Hebert[2] has published information on the range of socio-cultural data that is useful for the purposes set out in sub-Section 6.3 above, and the following check list is adapted from his work.

(In brackets after each heading is the name of a suitable method of gathering the data; these methods are the subject of the next Section.)

Demography (Survey)

- population size, growth rate, mobility;
- household size and composition (special features such as women, heads of households, sharing, individual or family renters).

Health (Key-informant interviewing)

- major health problems in the community and relative importance of water/sanitation-related diseases;
- seasonal variations.

Occupation (Key-informant interviewing, survey)

- major occupations and approximate distribution;
- seasonality of employment.

Organisation and Participation (Key-informant interviewing)

- major local organisations and type of membership;
- community and family level leadership in decision making;
- major local political or social factions which might affect participation;
- extent of previous interest and participation in water/sanitation or other development activities;
- important characteristics that would determine the acceptability and influence of outsiders working on projects in the area.

Level of interest (Key-informant and open-ended interviewing)

- evidence of popular interest in improving water supply/latrines compared to other potential improvements in the community;
- evidence of leadership commitment to improvements.

Physical structures (Participant-observation, key-informant interviewing, survey)

- types of dwelling, their physical conditions and layout;
- types of building materials used;
- existing water supply and sanitation facilities;
- availability of space inside and outside dwellings.

Willingness and ability to pay (Key-informant interviewing, survey)

- ownership of land and house;
- income;
- expenditure patterns;
- borrowing and savings customs.

Water use patterns and practices (Participation-observation, key-informant interviewing)

- preferred sources of water (by purpose);
- quantity and uses;
- water-source-related activities (e.g. laundry, animal watering);
- possibilities for contamination of drinking water.

Defecation habits and associated practices, underlying beliefs, and attitudes (Participation-observation, open-ended and key-informant interviewing)

- existing practices (noting important differences between: castes; religions; men, women and children; different age groups);
- materials and practices used in cleansing and ablution (e.g. anal cleansing materials; prevalence of bathing in latrines);
- underlying causes of above;
- important taboos, beliefs, related to locations, sharing, etc;
- practices in latrine emptying and re-use of sludge ;
- general household cleanliness.

Availability locally of resources and technology (Participant-observation, key-informant interviewing)

- building materials;
- skilled and unskilled labour (noting seasonal variations);
- technology related inputs (such as water for pour-flush latrines).

Education activities and potential (Key-informant interviewing, survey)

- literacy level;
- access in area to mass media;
- coverage by field workers, volunteers;
- on-going formal or non-formal health education activities.

6.5 Methods of gathering data.

The main ways used by social scientists to gather data are called:

- Participant observation
- Key-informant interviewing
- Open-ended interviewing
- Survey
- Participatory rapid appraisal

Each follows a logical order of enquiry, such that the gathering of data moves from the qualitative to the quantitative. Usually, it is necessary to use a combination of methods to gather all the information that is needed.

6.5.1 Participant observation.

This is one of the commonest methods and requires a field worker to establish residence in the community before any project activities begin. His or her task is to observe and record the activities and events of everyday life, by:

- taking part in community life,
  (e.g.collecting water, fishing, building houses, etc)
- asking key people, and others, to give their views on the needs, capabilities, etc of the community
- keeping notes on what is seen, heard and felt about the subjects being studied
  (preferably in a systematic way, subject by subject)

The information gathered by this method gives the details of daily life that are needed by planners to design survey questionnaires.

If there is not time for someone to live in the community for a while, much information can be obtained by one-day "environmental sanitation walks". With this technique, field workers:

- observe conditions and practices in the village and in people's homes, and
- ask questions about water, sanitation and health conditions.

Care must be taken that the visit covers those periods, usually around dawn or dusk, when many environmental or sanitation activities take place (e.g. collecting water, defecating, disposing of refuse).

Beneficial side-effects

Having a field worker living in the community can also have beneficial effects later in a project. Relationships built up during the period of residence can help:

- to establish the credibility of the programme, and
- to create cordial working relations between villagers and project staff

6.5.2 Key-informant interviewing.

With this method, the people who are interviewed are those:

- who are particularly knowledgeable about matters which are important for the project, or
- who have considerable influence within the community (e.g. village chiefs and other leaders of opinion).

It is important to interview several key people from each of the different socio-cultural groups, since interviewing only one or two may give a distorted impression. (Also, it helps to establish the credibility of information if there are several sources to compare).

Research has shown that key-informants provide reliable information about:

- physical geography and public buildings
- institutions and institutional roles
- dates of important community events

They are less reliable in answering evaluative questions, such as "What size is the average household?", and about reporting their own daily behaviour. In such areas, cross-checking is recommended.

Key-informant interviewing is often combined with participant-observation to build up accurate profiles of communities.

Beneficial side-effects

As with participant-observation, key-informant interviewing can have beneficial side-effects. A good relationship with influential community members, established when interviewing them, can be very helpful later if such people hold key project management positions, and is likely to result in high levels of commitment.

6.5.3 Open-ended interviewing.

The methods of participation-observation (See 6.5.1) and key-informant interviewing (See 6.5.2) have the disadvantage that each depends on:

- the people who were interviewed being representative of the community, and

- correct interpretation of the information obtained by the field workers

These limitations can be overcome by conducting a survey, but it requires a great deal of background information to design a survey properly. This information can be gathered by the method of open-ended interviewing.

In open-ended interviews, the questions are generated by the respondents, not by the questioner (a technique known as heuristic elicitation). This means that the next question to be asked is based on the reply to the previous one.

Interviews of this type can be lengthy and discursive, but they have the advantage that villagers are less likely to give replies which simply state what they think the questioner is expecting. With skilful use, this method can produce data that is comprehensive and reliable.

An example of the method

Consider the promotion of a sanitation programme. Normally, questions might be:

- What type of latrine would you prefer?
- What local materials, cash and labour can be provided?
- Where should latrines be situated?

To the villager, these may not be the most important issues; what he considers these to be may be discovered by asking less specific questions, which allow the respondent to elaborate. For example:

- What are the relative attributes of each of the places presently used by the community for the disposal of excreta?

The reply to such a question might provide information not only on design, and site preferences, but also on other social considerations, such as who can share latrines or groups which might be reluctant to use latrines.

A case study.
In Uganda, WaterAid's programme has developed this method further, so that families and other target groups (school teachers, school children, women, village committees etc) take part in loosely guided interviews/discussions. For each target group, a different set of guideline topics is used. Interviewing is spread over a six-day period.

Questionnaires

This type of interview highlights the role of the villager, but needs to be structured if it is to cover the full range of topics on which information is needed. Suitable questionnaires have to be designed carefully, with a stage by stage approach.

An example of such an approach is:

- List the topics about which information is required.
- Design question sheets; translate them into the local language.
- Translate back again, using a third party to check for errors of translation.

- Get each interviewer to pre-test the questionnaire on at least two people similar to those in the target group.

- Revise the questionnaire if the pre-testing suggests that revision is necessary.

- Administer the questionnaire to at least thirty people, with some from each of the different user groups.

- Analyse, categorise, count and tabulate the results.

If there is not time for a full survey, open-ended questioning combined with observations and key-informant interviews can be used as the basis from which to start a project.

6.5.4 Surveys.

Surveys are versatile; they can be used:

- to collect demographic information
- to quantify observable data
  (e.g. non-functioning taps, frequency of diarrhoea incidents)
- to record attitudes, beliefs and values

They also have disadvantages; compared to the other methods, they:

- require more time
- are usually more expensive
- use pre-structured questions that limit the scope of enquiry

However, if properly designed they can produce useful and reliable results. If a large-scale survey is required, the results of open-ended questioning can be used to define the sub-categories of the survey form.

Scale of the survey

Surveys may involve all the community, or just a sample.

Whole surveys:

- these are good for introducing all the villagers to a project, but are suitable only for small communities with less than 200 households

Partial surveys, small community:

- if only some of a small community are interviewed, the remainder may feel ignored, or that their opinions do not count. This can cause loss of interest in the project, therefore it is advisable to make the extra effort to include everyone.

Partial surveys, large community:

- in large communities, it is usually impracticable to seek the views of every household, therefore sampling is necessary.

Sampling

Sampling techniques have several stages; a typical step-by-step approach is as follows:

1. Define the universe from which the sample is drawn.

   - usually using a method based on the number of households to be served

2. Number each household and use a random numbers table to select the required sample.

   - alternatively, select every nth household, where "n" depends on the percentage of the population to be included.

   (NB. It is usual to want to ensure that minority groups are adequately represented in the survey. The technique for this is called "stratified random sampling" and consists of subdividing the groups and sampling each one separately. In general, the smaller the group being sampled, the larger will have to be the total proportion of households included).

3. Design the questionnaire.

   - this requires planners to be clear about the kind of information they require and the use to which they will put each item of data.

   (NB. Special consideration should be given to collecting sensitive information, such as the amount of a family's income. To ask directly for details of income would be futile; other indicators of wealth must be sought, such as ownership of cattle, zinc-pan roofing, a bicycle, etc. Guidance about questioning (particularly about the cultural acceptability of some topics) should be sought from local staff or key-informants)

4. Pre-test the questionnaire. (See 6.5.3)

5. Conduct the survey.

6. Analyse the data; pass the results to the community.

Beneficial side-effects

When surveys are carried out skilfully they provide a valuable contribution to the education and motivation of the community:

- most people appreciate being asked for their opinion, particularly about forthcoming projects, and will generally increase their commitment to them as a result.
- when the results of data gathering are fed back to groups in the community, the interest of villagers is likely to increase. Often, such feedback stimulates discussion within the community which can provide a useful check on the accuracy of the data collected. (e.g. does the community agree with the findings?).

There is merit, too, in making data available to other agencies and to government bodies. In this way, much replication of effort can be avoided and national and regional bodies can be provided with data which may allow them to judge how well their own (often broader) targets are being achieved.

6.5.5 Participatory Rapid Appraisal.

Participatory Rapid Appraisal (PRA) is a technique which has been developed relatively recently but is regarded very favourably by WaterAid's programmes in Tanzania and Nepal, where it has been employed.

[Confusingly, it is sometimes called Rapid Rural Appraisal (RRA), or even Participatory Rapid Rural Appraisal (PRRA), but there is no reason why the techniques should be restricted to rural areas and the words "participatory" and "rapid" are the ones which best describe the process.]

The most important aspect is the participatory one. At the very beginning of a project, the information-gathering stage, the community is invited to assemble and to take an active, leading part in providing information.

Various techniques are used; for example:

Mapping

The technique which, perhaps, is best known is that of "mapping" a community. A member of the community, prompted and corrected by onlookers, draws a map of the area by scratching lines on a level piece of ground. The lines are supplemented with coloured powders and beans which are used to show ward boundaries, streams, wooded areas, existing paths, individual houses, the preferred positions for tapstands, and anything else which can conveniently be represented pictorially and which the community considers to be important.

Bar charts

Bars can be made by using sticks of different lengths, or by coloured powders. Seasonal calendars can be produced to represent time-related events such, for example, as:

- the availability of water in each of the last few years
- the walking time to water sources
- the waiting time at water sources
- progress made, in different years, in practices of personal hygiene (eg washing water containers before filling them, washing hands before eating, washing hands after visiting the latrine, etc)
- the varying incidence of diarrhoea throughout the year

Pie charts

Pie charts can be drawn which represent the community's opinion of the correct proportions to be applied to various matters, such as:

- the proportion of people who clean water containers
- the proportion of children afflicted with diarrhoea
- the type of vessel used for storing water (gagri, drum, bucket, etc)
- the methods used for cleaning water containers (ash, dried rice husks, mud, soap, etc)

An appraisal may take several days. Each day, members of the appraisal team gather information from different groups within the community and make a paper record of the diagrams which have been produced. Each evening, information is cross checked and any contradictions are brought to the attention of the relevant groups and revisions are agreed. At the end of the period, a presentation of the various results is made to the assembled community by going through the paper diagrams, so that no one is in doubt regarding the results of the appraisal.

Using such techniques, information can be gathered on most topics for which, otherwise, written questionnaires might be employed. It must be remembered, however, that information gathered by PRA methods is comparative, not quantitative.

Beneficial side-effects

An excellent feature of Paerticipatory Rapid Appraisal is that it involves the community at the outset of a project and helps the people to identify with it and to develop a sense of ownership. With projects such as the sinking of tube wells, where there is not much involvement of the people during the construction stage, this type of appraisal looks like being particularly helpful. Early involvement also avoids time-wasting disputes later regarding, for example, the positions of tapstands.

7. SUMMARY OF THE KEY POINTS IN EACH SECTION.

SECTION 2. COMMUNITY PARTICIPATION.

Community Participation

2.2 "Top-down" approaches do not work.
"People-based" or "bottom-up" approaches are best.

Community participation
- has hidden benefits
- is a potential catalyst for social development

2.3
- is a fundamental component of WaterAid's work
- is the means whereby projects are implemented
- is an important end in itself

Concepts in Community Participation.

2.4
- Continuous process
- "Bottom-up" approach
- Self-reliance
- Work with groups
- Activities controlled by groups
- Group acts collectively

Degrees of Community Participation.

2.5 Vary from "Low" to "High".
WaterAid's projects generally "Medium", i.e.:
- Community initiates, constructs and runs
- WaterAid plans and designs, provides material support.

Benefits of Community Participation.

2.6
- Improved social cohesion
- Increased self-reliance
- More likely that project will be sustained
- Probable increase in capacity, and appetite, for further projects
- Better prospects all round

Maximising Community Participation.

2.7
- Participation gives villagers power and authority to run projects.
- Level of participation is proportional to skills of field workers in organising, facilitating and teaching
- Best results occur when:
  - villagers are involved in all aspects
  - dependence on others is at a minimum
  - resources are available locally to sustain the project
  - the technology is simple, within grasp of villagers

A Community's needs.

2.8 - Must be felt by majority of villagers, not just by influential and vociferous minority.
- Beware of villages:
  (a) with superficial motivation
  (b) without requisite stability of structure to sustain a project
- Further needs can be generated, or encouraged, by education, e.g. add to water supply the wish to have improved sanitation

Working with a community.

2.9 - Get to know the community groups
- Get to know the group leaders
- Leaders can make an enormous contribution
- Set up a management committee
- Make sure all groups are represented
- Make particularly sure that women are represented
- Remember that, as principal water managers and child rearers, women:
  - are most aware of potential benefits of better facilities
  - are likely to be the easiest group to motivate
- Train the committee members so that they can:
  - make decisions
  - plan their work
  - meet the demands of implementation
  - sustain the project afterwards
- Sign written agreements with villagers, setting out their obligations regarding
  - construction
  - maintenance
- Exhibit such agreements, to inform and to encourage other communities
- When implementing projects, be aware that villagers may have a "Once bitten, twice shy" attitude, born of unfulfilled promises.
- Boost confidence by ensuring that action is visible early

Field Staff.

Tasks:

2.10 - gathering information on a community
- raising its awareness of health and technical matters

2.9 - getting to know the groups in a community
- getting to know the leaders
- canvassing opinion

2.10 - stimulating discussion between groups
- helping groups to be able to make decisions, to plan and to organise themselves

Abilities.

2.10 - to analyse and identify problems
- to communicate well
- to train people effectively

Qualities.

2.10 - Humility
- Commitment
- Sensitivity
- Self-confidence

Time scale.

2.11 - Programmes must be flexible
- Do not impose targets, be prepared to work at villagers' pace.

Evaluation of Participation.

2.12 - Desirable but, as yet, no quantifiable indicators
- Nevertheless, careful monitoring should yield useful data

SECTION 3. SANITATION.

Excreta-related diseases and their prevention.

3.2 Table of excreta-related diseases and list of major measures for controlling them.

Key to breaking faeco-oral transmission of diarrhoea:
- proper disposal of excreta
- improved personal hygiene
- increased consumption of water

The benefits of sanitation.

3.3 Water

Can protect local drinking water supplies.

Health

Improvements in the health of the community. (When combined with improved water supply, can reduce incidence of diarrhoea by 35-50%)

Social

More privacy.
Time savings.
Improved status.
Better quality of life (fewer smells, fewer problems with flies and rats).

Economic

Excreta can be re-used for fertiliser.

Motivation of people to build latrines.

3.4 Problem has many facets:
- ignorance
- inertia
- perversity
- illogicality

Reluctance to use latrines:
- reluctant if dark, smelly, or poorly maintained.
- people require a reason to use.
- difficult to advance health education as reason to build.
- more likely to build for convenience, privacy or status.

Awareness of benefits of sanitation:
- people prepared to devote resources only if aware of benefits.
- natural reluctance to change habits; therefore any new system must be:
  - acceptable to villager
  - compatible with existing value systems

Importance of health education:
Health education explains the benefits. It:
- creates awareness of need for better sanitation
- provides stimulus for change in personal habits
- is the vehicle for advocation and implementation of sanitation projects
- should start before, and continue through and beyond, the sanitation project.

Children should be involved.

Practical steps:
- carry out a social and cultural survey
- involve the community fully in design and implementation of sanitation programme.

Planning.

3.5 Priorities should be set, taking into account the prevalence of disease in the area and its transmisssion.

Activities meriting high priority:
- The construction and use of latrines, sullage and soakaways in individual households, schools and health centres.
- Particular attention, in sanitation and health education, to the needs of children.

Do not try to do too much at once.

Factors to be considered:

Socio-cultural
Existing perceptions, beliefs and practices must be considered.

Economic
Costs of latrines, and level of subsidies, must take into account ability to pay.

Labour
Capacity of community to work should not be overloaded.

Group
Different groups need to be approached in different ways.

Convenience
e.g. how convenient facilities are at night, and other matters raised by the community.

Technical
Matters of design, siting and construction. See sub-Sections 3.7, 3.8 and 3.9 and WaterAid's Technical Handbook.

Management
Community must organise itself, and make arrangements for maintenance, repair and emptying.

Extension
All sanitation programmes are likely to require support from outside agencies.

Children
Their faeces are more likely than those of adults to contain disease pathogens, therefore their disposal requires special attention. Special measures can include:

- use of special covers on squat hole
- use of chamber pots
- special latrine with smaller hole
- children's latrines near adult ones

Choice of system.

3.6 Range is set out in WaterAid's Technical Handbook.

Criterion for choice should be likelihood of use, rather than technical merit.

Likelihood of use increases if community itself chooses the type of structure.

Imperative to achieve maximum involvement of community in design and implementation.

Common faults in design and construction.

3.7 Latrine slabs not designed to suit the squatting positions of their users.

Squat holes unnecessarily large.

VIP latrine vent pipes too small in internal diameter and/or too short.

Poor control of quality of workmanship.

Types of latrine.

3.8 (1) Dry.

Pit latrines.

Commonest, simplest, cheapest. Excreta collected in pit. Liquids soak into ground, solids accumulate. When nearly full, filled in with earth and another pit dug. Three grades:

Basic: maximum use of local materials, therefore cheapest. No protection against hookworm.

Improved pit: concrete slab. Costs more but can be cleaned, therefore protects against hookworm.

Ventilated improved pit (VIP): Has vent pipe. Expensive. Down draught of air removes smells, up draught takes away flies. Difficult for villagers to understand.

Twin pit: Two pits, close together. First one sealed when full, second used. After year, excreta from first can be used as fertiliser.

(2) Wet.

Pour flush latrines.

Water seal, fitted to squatting pan, prevents passage of flies and odours. Can be flushed by hand with 1.5 litres of water. (But if not flushed, worse than no latrine).

Currently commoner in Asia than in Africa.

Location of latrines.

3.9 Latrines should be sited:

- close enough to people's homes to be used regularly and to be properly maintained.
- far enough away from water sources to avoid polluting them.
- in dry, well-drained areas above the flod plain.

Communal latrines.

3.10 Most programmes prefer latrines to be on family basis. However, inability of some families to pay has led to construction of communal latrines.

Location bound to suit some part of community better than another. Recommended build first in poorest area.

Maintenance of latrines.

3.11 All latrines require maintenance, and will become fouled and offensive without it.

Communal latrines, particularly those in schools, have poor record on maintenance. Therefore planners reluctant to recommend, prefer family ones.

Before commit resources to construction, ensure a maintenance system has been set up.

Coverage.

3.12 Easier to achieve high coverage in villages than in towns.

Coverage figures can be misleading. More important considerations are:

- good quality construction
- high usage
- proper provision for maintenance

Subsidies and Replicability.

3.13 Subsidisation is a contentious topic.

Arguments for:
- subsidies lead to higher coverage
- health benefits are spread more equitably in the community

Arguments against:
- subsidies generate false demand.
- subsidised projects are more difficult to sustain.

If subsidies provided, levels must be set carefully:

- if too high, principles of community participation could be undermined.
- if too low, only the wealthy might benefit.

Sliding scales may be possible.

Cheaper latrines mean less need for subsidy and more chance of replicability.

SECTION 4. HEALTH EDUCATION.

Planning health education programmes.

4.2 Two vital principles:

- health education must be integrated with water and sanitation
- community must participate at all stages

Possible explanations for health education being seen (wrongly) as an isolated activity:

- low level of expertise
- pressure to obtain a quick result

Improved hygiene and copious water may be more beneficial for diarrhoea than quality of water and good sanitation.

Health education is an important, integral part of water supply and sanitation programmes.

Villagers should play a central role in planning, implementing and evaluating health education.

Information about diseases can be obtained by talking to villagers at an early stage.

Objectives of health education.

4.3 Some desirable objectives:

Personal:
Washing hands after using latrine
" " " handling infants' nappies
" " before preparing or eating food
Regular bathing
Regular laundering

Domestic:
Using clean water vessels; covering them
Using clean cups to remove water from storage
Preventing contamination

Village
Disposing of household refuse
Disposing of waste water
Disposing of infant, adult and animal faeces

Child health
Breast feeding of infants
Early recognition of diarrhoea
Oral rehydration therapy
Vaccination of infants

Set priorities for objectives. (Consult local health service, if there is one). Choose ones which will have a direct effect on health.

An objective is more likely to succeed if:
- it is simple
- it is compatible with existing conditions
- it can be tried out by the community
- it produces visible results, quickly
- it looks to be better that existing practices

Objectives must be realistic.

Whom to target.

4.4 Leaders of opinion, e.g.
- village elders
- traditional birth attendants
- leaders of women's groups
- heads of households

(But take note that formal community leaders may not necessarily be respected leaders of opinion.)

Women - because, as water managers and child rearers, they are influential within the family

Men - because:
- they have the same rights as women
- they are responsible for implementation
- if ignored, they could undermine health education aimed at women

Children - because they will drink any available water, and are poor users of latrines

Schools - the degree of success will depend on whether or not there is good cooperation between school and community

Choosing the health worker.

4.5 Should be a member of the community.

Either the community should choose, or it should agree fully with the agency's recommendation.

Communities are poor choosers, because of:
- Nepotism
- Wrong perceptions of education

- Scarcity of suitable candidates
- Rushing the decision
- Position being seen as having low status

Desirable qualities for a health worker:
- Kind
- Responsible
- Honest
- Good judgement
- Mature personality
- Interested in health and community work
- Humble
- Will probably remain in the village
- Accepted and respected by the people
- Has agreement and cooperation of own family
- Can read and write
- Not more than a primary school education
- Eager to learn, open to new ideas
- Good leader and organiser
- Non-smoker, moderate drinker
- Can draw, or is good story teller
- Works well with mothers, children and working people
- Good record in community activities
- Some experience in health care or healing
- Respects people's beliefs and practices
- Sympathetic to those in greatest need

Health workers chosen from:

Women (more often than men).
- with children, make up 75% of population
- health needs generally greater than men's
- other women prefer women health workers
- compared to men:
    - more experience of children
    - stay closer to village, therefore more available
    - more attuned to those with least power and greatest needs
    - better motivators of people
    - more responsible and hardworking

Men (sometimes).
- are traditional leaders of communities
- have influence with heads of households
- are more likely to be able to initiate social change

Married couples.

Traditional healers:
- Local healers
- Herbalists
- Bone setters
- Midwives

Handicapped persons.

Training.

4.6 Can be carried out in village or combined village/town setting.

Village best for training health workers and conducting community health education sessions
- can relate to real life situations
- can practice under realistic conditions

Village/town can be beneficial, because:
- gives health workers experience of district centres
- boosts their confidence and standing in eyes of community

Trainers must understand, and build on, existing concepts, ideas and practices.

Beneficial to involve community at planning stage. This:
- helps them learn skills of analysis, problem solving and organisation
- produces, thereby, greater commitment to learning
- helps to "de-mystify" educational process
- makes participants feel equal to trainers

Methods of communication.

4.7 Discussion in small groups
- best setting for community participation
- people respond well if:
  - they can take part
  - personal relationships are fostered
  - the issues relate to everyday life

- discussion in groups of 12-15 people, plus practical exercises, is effective method of health education.

- in discussion, everyone should contribute and conclusions should be reached.

- methods should be varied, e.g.:
  - interpretation of plays, stories,etc
  - demonstrations
  - group projects
  - role-plays
  - competitions

House visits
- less effective than group activities.
- can be useful for monitoring personal hygiene practices
- can be opportunity for families to discuss any problems with new practices

Mass media

- newspapers, radio and TV can reach many people quickly and cheaply, but their influence on health-related behaviour is thought to be limited
- too impersonal; audience is passive, no feedback
- audience must be reasonably well-off to own radio or TV. Therefore mass media approach accused of widening gap between high and low income groups.

Local media

- can be tailored to needs of group
- much rich visual and oral tradition
- villagers familiar with medium, therefore receptive to educational themes
- good results obtained by means of stories, proverbs, plays, songs, dances and puppet shows, often presented by villagers.
- picture-based material has great potential
  e.g. - flip charts
  - posters
  - booklets

Characteristics of effective health education.

4.8 According to Hubley, effective health education

- promotes actions which are realistic
- builds on existing ideas, concepts and practices
- repeats information, using different methods
- uses existing channels of communication
- is adaptable
- entertains the community, attracts its attention
- uses clear, simple language and local expressions
- emphasises short-term benefits
- provides opportunities for learners to participate
- makes use of demonstrations

Evaluation.

4.9 Reasons for evaluation

- to justify resources expended
- to show beneficial effect
- to provide mechanism to measure improvements

The process of evaluation

- to monitor changes in people's:
  - understanding of health matters
  - attitudes towards them
  - behaviour

- because such changes lead to improved conditions, and improved conditions lead to improved health

Evaluation by participants
- monitoring by external teams inconclusive
- better for evaluation to be continuous process, carried out by the people engaged in the health education programme
- if people involved in assessment of their own efforts, more likely to take notice of the outcome

Health team
- can become dispirited by seeing no immediate result compared to, say, construction team
- involvement in evaluation helps them to know their own worth
- early planning and training required

Community involvement
- overcomes common reluctance of villagers to speak freely about a project
- results in improved use and maintenance of an integrated system
- results, therefore, in increased likelihood of long-term health benefits
- communities can help with collection of evaluation data

What to evaluate

Simple indicators:
- whether new facilities are working properly
- whether they are accepted by their owners

Indicators of possible change in behaviour:
- users are satisfied with new facilities
- maintenance of facilities is good
- community shows knowledge of health matters

Indicators of actual improvements in hygiene practices, which show up in:
- water use and water management
- hygiene at the water point
- practices in the kitchen
- baby care

Evaluation should also record:
- what was taught
- by whom
- where, and to whom
- how

For techniques, see World Bank publication: "Minimum Evaluation Procedures".

What to avoid:

- failure to evaluate even at a simple level
- evaluations based only on measurement of effort and activity, and not on impact and change in the community
- failure to produce evidence that health education is effective and deserves funding
- reluctance to carry out evaluation of failures
- demonstrating that change has taken place, but providing no evidence that it has been caused by the health education programme
- giving inadequate descriptions of programmes, thereby making it difficult for others to assess them
- not sharing with other health educators the evaluations of success or failure
- not providing opportunities for health educators to exchange experiences of their work
- not allowing opportunities for participation in the evaluation process by health workers or the community

SECTION 5. TRAINING.

Introduction.

5.1 Training improves the knowledge, abilities and outlooks of people and increases their self-reliance.

Implementation offers constant opportunities for people to learn.

Training is an essential ingredient of all development programmes

The range of training.

5.2 Broad aims of training:

- acquisition of skills and knowledge leading to improved performance
- enhancement of the overall management capacity of local partner and community groups
- creation of changes in attitude at personal, group, community and local partner levels
- improvement of morale of local partner and participating communities.

The training process.

5.3 Need for training must be recognised before training occurs.

Process has three stages:
- before training
- during training
- after training

Selection of type of training.

5.4 Sources:
- In-service training
- Academic courses
- Observation and study visits
- Adviser-Counterpart relationship

Modern preference is for "in-house", "in-country" training courses, followed by on-the-job training.

The design of training courses.

5.5 Design requires:
- analysis of needs of trainees
- decision on aims of the course
- setting of objectives for each session

The multi-disciplinary content of training courses.

5.6 Content seldom only technical.

Extract given from syllabus of course, showing that technical matters, health education and community participation are each involved.

Training methods.

5.7 Not possible to list, because should be tailor-made to suit circumstances.

Desirable features, common to all methods:
- trainees should take part
- informality
- non-threatening
- simple language
- supportive trainers
- enjoyable sessions
- merit recognised
- practical back-up
- variety
- built-in checks on learning

Evaluation.

5.8 Evaluation can be of:
- each training session
- the course as a whole
- the effect of the course on work performance

Real measure of success is not how well the course appeared to go, but whether or not it produced better results in the field.

SECTION 6. GATHERING SOCIO-CULTURAL DATA.

Introduction

6.1 "Data" means "facts given, from which others may be inferred".

Information may be available from local government offices, but will usually need to be gathered by programme staff.

Community participation

6.2 Involve the community in gathering data.

Explain purpose of data collection

Avoid
- gathering data furtively
- gathering data that will not be used
- spending so much time on preparatory work that community becomes impatient

Share results with community

Reasons for gathering data

6.3 Design and execution of projects

Information required regarding:
- availability of expertise and materials
- cooperation of community leaders
- preferences and values of community
- traditional practices and beliefs

Health education support

Information required regarding:
- local beliefs and attitudes
- traditional habits, water use/defecation
- level of knowledge re disease transmission

Evaluation

Information required regarding:
- whether facilities are working properly
- how much they are used
- provisions for operation and maintenance
- changes in personal hygiene practices
- changes in health indicators
- time savings, quality of life

Type of data to be collected

6.4 Check list of data headings, under following subjects:
- Demography
- Health
- Occupation
- Organisation and Participation
- Level of interest

- Physical structures
- Willingness and ability to pay
- Water use patterns and practices
- Defecation habits and asociated practices
- Availability locally of resources and technology
- Education activities and potential

Methods of gathering data

6.5 Participant observation:
- field worker living in the community and recording details of everyday life and asking questions
- helps to create cordial relationships

Key-informant interviewing:
- questioning people with particular knowledge or influence
- early rapport can be helpful later if people hold management posts

Open-ended interviewing:
- asking less specific questions; next question based on reply to previous one
- can produce franker and fuller information

Surveys:
- versatile
- require more time
- are more expensive
- type of questions limit scope of enquiry
- reliable results if properly designed
- large communities need sampling techniques

Participatory Rapid Appraisal:
- involves community at the start of a project
- the information gathered is known to everyone
- information is comparative, not quantitative
- takes time, but saves it later by avoiding disputes about, for example, tapstand positions

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