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London, England.

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Communications Support for Sanitation Programmes:

A Guide to Issues, Methods

and

Implementation Procedures.

*now called*  
*Social aspects of Sanitation Programmes:*  
*Issues, methods and implementation procedures*

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*Oct. 1982*

*as of Aug. '82 still unpublished.*

Piers Cross  
Consultant Sociologist

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## SUMMARY

This report is a guide to educational and sociological activities, defined as 'communications support', in low-cost sanitation development in developing countries. The report reviews major sociological and educational issues, defines communications support activities, and presents a guide to methods and procedures in their implementation. The guide is intended for engineers and other professionals in sanitation development, and social scientists and health educators entering the sector.

Discussion and background notes are presented on the following issues: cultural factors affecting sanitation development; promotional and educational strategies; behavioural aspects of the transmission of excreta-related diseases; structure and functions of local-level management of latrines; and the skills and disciplinary background required in communications support.

Communication support activities include: data collection; designing and implementing sanitation promotion and user education campaigns; managing community-project liaison; establishing suitable local-level management structures; assisting in sociological aspects of technical design; monitoring project activities and community response; evaluation; and facilitating communication between the technical team, extension workers and the community.

Methods in data collection, sanitation promotion and user education, and monitoring are discussed listing factors to be considered in planning these activities and recommending preferred methods. A typical implementation plan is presented illustrating the role of communications support components.

PART I

INTRODUCTION

Part I defines communications support and describes the objectives, structure and literature sources of the report.



Photograph No 1 : One variety of the Zimbabwe Ventilated Improved Pit Latrine. Zimbabwe VIP options have been developed with a close regard for the social soundness of the technology, and their development is a model of socio-technical design. Particular attention was paid to the acceptability of the design in rural Zimbabwe, to local hygienic practices, and to affordability. The cheapest option retains all the public health benefits of ventilation and other aspects of the design and yet costs under US\$5.



1. What is Communications Support?

Sanitation<sup>1/</sup> planning is a complex undertaking requiring skills and experience in decision-making and implementation from several disciplines. The water and sanitation planning manuals published by the World Bank (see for example (Grover (1982)) recommend that the skills needed for full programme development include:

- engineering;
- economics;
- financial analysis;
- regional development;
- public health;
- institutional analysis;
- human behaviour;                    )
- education;                            ) "communications support"
- communications.                    )

This report primarily concerns the latter 3 categories<sup>2/</sup>. Together they form an awkward array of issues drawn from 2 established disciplines: sociology (including social anthropology) and health education. The issues have proved difficult to classify and sanitation planners commonly refer to them as 'software' issues, as opposed to 'hardware' issues which are typically well-defined engineering, economic or epidemiological problems which can be addressed by a specific specialized discipline.

The term 'communications support'<sup>3/</sup> is used in this report to refer to the sociological and educational activities, i.e. the 'software' activities, of sanitation programme planning and implementation. The prominent activities include assessing social and behavioural factors affecting sanitation development and promoting social and behavioural changes necessary to achieve programme objectives.

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1/ In this report sanitation means an hygienic form of human excreta disposal. Sanitation technology refers to low-cost (non-sewered) systems except where specifically stated.

2/ But including an analysis of local-level institutions.

3/ The usage follows (and extends) that adopted in the Technology Advisory Group literature. See Perrett (1982).

# CHILDREN'S FAECES ARE DANGEROUS!

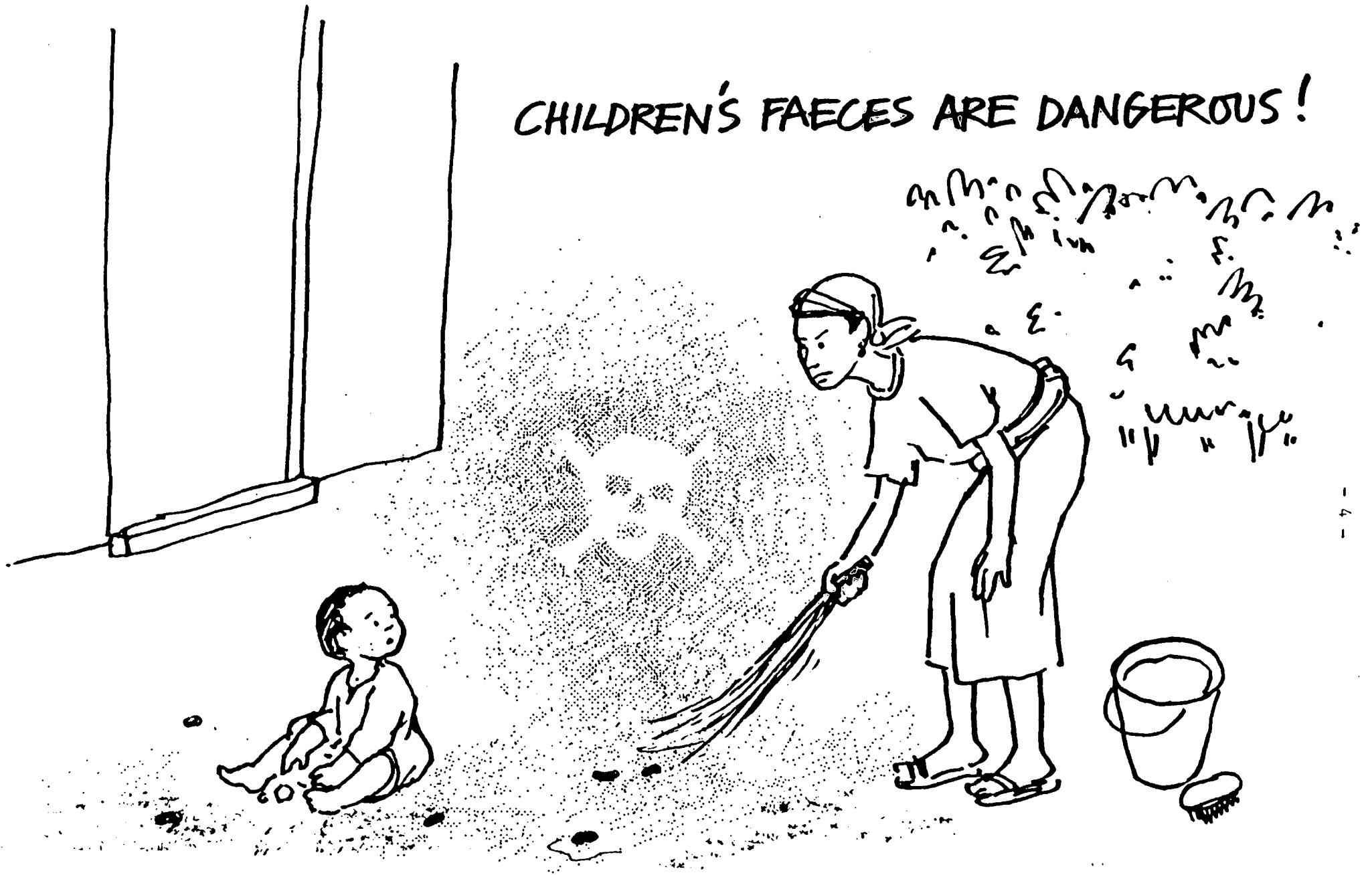


Illustration No 1 : A common belief in many cultures is that the faeces of small children are less harmful than those of adults. An educational focus with wide application and of considerable importance in the control of diarrhoeal and other excreta-related diseases among under-5s is the message that children's stools are dangerous.

2. Objectives of the Report

The aim of this report is to provide a guide to the function and methods in communications support in sanitation development. Specific objectives are:

- (a) To review the principal social and cultural factors which affect excreta disposal and the promotion of sanitation in developing countries;
- (b) To define the roles and activities of social scientists and health educators in sanitation development;
- (c) To present a guide to methods and procedures in communications support for sanitation development.

(d) - <sup>jos Schidbach</sup>  
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3. Structure of the Report

The report has 4 parts, the first being introductory.

The second part of the report reviews issues of concern to sociologists and health educators in sanitation development and provides background notes on the need for communications support.

The third part examines the role of social scientists and health educators in sanitation planning, and discusses methods and procedures for planning and implementing sanitation programmes and projects.

The fourth part is a model implementation schedule for implementation of communications support activities in sanitation development.

Annexes contain supportive material: literature reviews and references, background and ancillary notes, and a typical check list and job description.

#### 4. Literature Sources

The report has been developed from the experience of planning communications support in sanitation in several countries and from the following secondary sources:

- (a) The collection of reports held by the Environmental Engineering and Enteric Disease Group, the Ross Institute of Tropical Hygiene, London;
- (b) Reports and working papers produced by the Technology Advisory Group, a United Nations Development Programme project supporting low-cost water and sanitation development, executed by the World Bank, Washington;
- (c) A computer search of literature in the medical and social sciences;
- (d) Cross-cultural<sup>sources</sup>/in the Human Relations Area Files, Laboratoire 'd Anthropologie et Sociologie, College du France, Paris.

Communications support in sanitation development does not have an established literature falling as it does between disciplines. The report draws from roughly seven sources, though the distinction between these is fairly arbitrary. Each source is reviewed in Annex II mentioning the most useful references for further study. The sources are listed in Table I.1 with a brief comment on each source.

TABLE I.1  
List of Literature Sources<sup>1/</sup>

(a) General Reviews:	Several publications; important for general arguments; selection abstracted in Annex I.
(b) Planning Guides:	Few publications; often too general.
(c) Social Anthropology:	Few useful items; specific ethnologies, Anthropological field studies and applied studies.
(d) Medical/Epidemiological Studies:	Large literature; interdisciplinary studies with medical anthropologists especially useful.
(e) Health Education:	Large literature; quality uneven.
(f) Socio-Technical Studies:	Small, useful literature.
(g) Country Programme Studies:	Few available, though useful, comprehensive perspective.

<sup>1/</sup> See Annex II for greater detail.

PART II  
COMMUNICATIONS SUPPORT  
IN  
SANITATION DEVELOPMENT

Part II of the report reviews the need for communications support and provides background notes on sociological and educational aspects of sanitation development.



Photograph No 2 : Poorly constructed and inappropriately-designed latrines ( in this case . for primary school children ) may become more of a health hazard than a benefit, and hamper later attempts to promote improved sanitation. The children using this latrine were fearful of stepping inside the shaky superstructure. Public facilities like these require regular cleaning and maintenance to ensure long term usage.



## 5. Prior Experience in Sanitation Development

Indigenous excreta-disposal practices in many developing countries have been rendered obsolete or impractical by social change. Population growth and development have created new aggregations of people with different public health needs. The great improvements in sanitation in Europe in the last century came in the course of general economic development. The prospects for rapid economic development in many poor countries, particularly in rural areas, are poor, and special efforts need to be made in sanitation development to meet public health needs.

In general terms prior experience in sanitation development in most developing countries has taken one of 2 forms:

- (a) Educational Programmes: Typically run by Ministries of Health, or education, these programmes relied upon educating or exhorting householders to build latrines. In times of national mobilization straight educational approaches have had a considerable impact, such as the Vietnamese programme to combat 'the faecal peril'. More commonly, as in most former British colonies in Africa sanitation education techniques have relied upon a small group of health inspectors to cajole mass populations to improve sanitary conditions. In outbreaks of infectious disease educational efforts were backed up by the legal enforcement of latrine construction.
- (b) Construction Programmes: Other sanitation programmes have been centrally-controlled construction programmes, typically run by a technical team from a Ministry of Works or Water Development.

Both these approaches have generally had a poor record. Educational techniques have been inappropriate (see Section 8) and promotion has rarely been supported by sound technical advice. Mass implementation programmes have similarly suffered from inadequate outside support over time. Legislative enforcement may have the effect of antagonizing the local population and resulting in a maze of poorly-constructed latrines which may never be used. Latrines built in centrally controlled construction programmes have fared little better. These programmes have rarely taken

user preferences into account and have lacked educational support. Misused and poorly maintained the latrines have quickly fallen into disuse.

A legacy of previous approaches is an institutional division of responsibilities within the sector, typically between Ministries of Health or Education on the one hand, and works or Water Development on the other. The institutional division and the differences in each's approach remains a major institutional obstacle to sector development today.

More recently the recognition that programmes require both technical and communication support components has lead to greater efforts to establish integrated programmes. Achieving integration in practice is extremely difficult and Part IV highlights the most important points of interaction between project components.



Photograph No 3 : Pit collapse in sandy soils in a home-built, rural latrine . The householders were persuaded to construct the latrine on the advice of health educators following a cholera outbreak. Failures like this, coming soon after considerable effort has been expended on pit excavation and construction lead to a reluctance to make further efforts. The development of sound and locally appropriate technical solutions should precede mass sanitation extension, and technical support be available for maintenance and repair work.

6. What Are Communications Support Needs?

Communications support needs are a disparate collection of sociological and educational problems. Table II.1 outlines communications support needs and activities in sanitation development. Below the principle issues in communication support are discussed in turn, i.e:

- (a) Cultural factors (values, beliefs, preferences, customs) which affect sanitation adoption and usage.
- (b) Factors affecting educational and promotional activities in sanitation development.
- (c) Attitudinal and behavioural aspects of the transmission of excreta-related diseases.
- (d) Social issues in the local-level management of sanitation projects.

These categories are not entirely distinct, but provide a useful means of dividing up the issues.

TABLE II.1

Communications Support Needs in Sanitation Development

Programme Need	Communications Support Activity
1. Cultural appropriateness of technology design.	<ul style="list-style-type: none"><li>- Pre-planning assessment of social soundness of design.</li><li>- Socio-technical design.</li><li>- Monitor and evaluate social soundness of design.</li><li>- Monitor patterns of usage.</li><li>- Design and implement user education support.</li></ul>
2. Sanitation promotion/ user education.	<ul style="list-style-type: none"><li>- Pre-planning assessment of sanitation needs and communications systems.</li><li>- Community discussion.</li><li>- Design and implement promotion/ education programme.</li><li>- Monitoring and evaluation.</li></ul>
3. Behavioural/attitudinal aspects of excreta-related disease transmission.	<ul style="list-style-type: none"><li>- Study human behaviour in excreta-related disease transmission.</li><li>- Socio-technical design modifications.</li><li>- Identify health education targets</li></ul>
4. Local-level project management.	<ul style="list-style-type: none"><li>- Pre-planning assessment of alternative management structures.</li><li>- Design and implement project procedures.</li><li>- Monitoring and Evaluation.</li></ul>



Illustration No 2 : Latrine design needs to take account of user preferences in defecation.

## 7. Cultural Factors In Sanitation Technology Design

### (a) Excreta Disposal Practices and Beliefs

Like other human activities, human excreta disposal, is culture-bound: different societies have different methods of disposing of their excreta. The act of defecation itself is both a physiological process and a social fact, and preferences in defecation differ within and between cultural and social groups.

Table II.2 illustrates the variation in defecation practices in different cultures. The principal cultural variants in excreta disposal are discussed in more detail in Annex IV. Sanitation programmes attempting to improve waste disposal practices and beliefs in the society concerned. Case-study I below illustrates cultural variation in defecation practices in Kenya.

The importance of 'cultural fit' is not only in catering for the range of cultural variation, but it has been argued that defecation training is, universally, a fundamental activity in personality development. Defecation habits and ideas about defecation have particularly been associated with the development of the ego (Hall and Lindsey (1970). Culturally prescribed patterns of anal training may even be a crucial influence on the very nature of whole societies (Whiting and Child (1953). It is for this reason that a minor change in cultural habits may be difficult to achieve.

The sensitivity of the topic in many societies means that sanitation is rarely put forward as a priority developmental need. Moreover it is in general a difficult area on which to gather information, though it must be said that the lack of ethnographic information on defecation may reflect the well-established taboos in European societies rather than the impossibility of gathering data on this aspect of social life. In most African and many other societies, for example, information about defecation practices is far more accessible than in Western societies<sup>1/</sup>. The necessity to defecate in the open or with inadequate cover, and the physical presence of an environment constantly polluted by human faeces tend to make the topic more accessible.

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<sup>1/</sup> For example an attempt to undertake a study on Western defecation practices using the staff of a London institution had to be abandoned through lack of willingness to reveal details of defecation habits.

TABLE II.2

Cultural Variations In Defecation Practices And Beliefs

Practice/Belief	Cultural Variation
1. Choice of preferred site.	Open field defecation - Where cover (behind foliage, in natural depressions etc) Near or in water - No water contact Site within household - Outside site Socially prescribed sites - Individually selected sites
2. Preferred posture	Squatting - Sitting Posture ritually prescribed - Customary posture
3. Preferred times of defecation	Sunrise or Sunset - Periodically day or night
4. Frequency of defecation	Daily average < 1 stool - > 4 stools
5. Anal cleansing habits	Only water used - Paper, leaves, sticks, stones etc used
6. Ideas associated with defecation	Shame Defilement Need for privacy
7. Associated rites and taboos	Ritual washing; Avoidance of defecation sites; Avoidance rules on hands used for anal cleansing; Particular rites involving faeces or defecation sites; Avoidance rules amongst family members when defecating.
8. Social organization of defecation	Strict male/female separation - less strict Communal defecation accepted - not tolerated
9. Attitude to human faeces	Cannot be handled - Seen as useful resource: Used in composting or feeding animals.



Case-Study 1: Cultural Variety in Defecation and Sanitation in Kenya

Kenya, like many former colonies, is a highly complex heterogeneous society. Modern Kenya's cultural heritage is drawn from Africa, Arabia, India and Europe, and over 40 linguistic and cultural groups are distributed across the range of rural and urban social classes. Preferences in defecation and sanitation vary considerably by social group.

In central Nairobi full-flushing pedestal sewerred latrines are the norm; in the arid Turkana and Rift Valley regions there is virtually no provision for sanitation at all. On the largely Muslim coast squatting and anal cleansing with water are the norm and pit latrines situated inconveniently for water collection are rarely used; in richer coastal communities pour-flush latrines may be an appropriate choice of technology. The promotion of individual latrines in coastal communities has met with little enthusiasm, though single sex communal latrines at mosques may be heavily used. By contrast in the central highland district of Kiambu the provision of individual latrines serves as much as 80% of the population. To the West avoidance rules in Luo households restrict sharing a family latrine. Avoidance rules are strongest between in-laws where there are sex and generational differences (e.g. son/mother-in-law), and have severely restricted usage of the latrines constructed in the area.

Close account of cultural norms and preferences in particular communities needs to be taken in sanitation development in Kenya. Local understandings of health and illness are equally important. In Kakamega where intestinal worms were identified as a priority health problem, the majority of the community had the opinion that everyone was born with worms, but that benevolent worms could be made to cause sickness if sorcerers found them in faeces. Tradition held that this could be prevented by burying faeces. Latrine promotion achieved highly successful results when latrines were suggested as an improved method of burying faeces.

Amidst the range of cultural variation in Table II.2 and Annex IV there appear to be several universal themes in defecation practices and beliefs. In all cultures excreta is held to be polluting, and is avoided, though there is a variation in cultural interpretation between excreta as dirty and personally polluting, and excreta as a danger to the social and moral order. It follows that while some form of hygiene is also universal, many hygienic practices have more to do with maintaining the social order by prescribing to ritual, than avoiding disease transmission (Khare (1962)).

Douglas (1966) argues that the universality of pollution beliefs derives from a fundamental human categorization between human controlled action and uncontrollable animal functions. While striving to control our environment we continue to hunger, desire, reproduce and excrete like animals. The latter actions become difficult to classify and the establishment of human culture is protected by taboos on these subjects. Persons who continually disturb the categories (night soil collectors etc.), are excluded from the main body of society. As the body protects itself from pollution by excrement so does society from those who handle faeces (Curtis 1978).

Another apparent universal preference is for privacy in defecation, though here too there is variation in the extent to which people in different cultures will tolerate lack of privacy. This variation and other differences in defecation beliefs and practices are reviewed in Annex IV. Perhaps the single biggest difference lies roughly between South Asian and Middle Eastern cultures on the one hand; and African, American, and Oceanic cultures on the other. The former are highly pollution-conscious societies, these ideas deriving from ancient, complex systems of religious belief. Taboos on touching excreta are most extreme, and anal cleansing with water the norm. In general, other societies have less well-developed rituals associated with defecation.

(b) Sanitation Adoption and Usage

Taking cognisance of existing cultural practices in excreta disposal is the starting point of designing an appropriate sanitation programme. A second set of sociological factors to be considered include the series of more mundane preferences listed in Table II.3.

TABLE II.3  
User Preferences in Sanitation Design

Item	Preference Variable
1. Positioning/Access	Distance from household Privacy of access Ease of access
2. Comfort	Posture Anal cleansing material Odour Presence of flies, mosquitoes Size of superstructure Ensures privacy
3. Safety	Stability Suitability for children
4. Status	Appearance in comparison with local alternatives Choice of building materials Size
5. Aesthetics	Building style Finishing materials
6. Management and Costs	Ease of maintenance Length of latrine life Ease of latrine replacement/renewal Labour needs Financial costs Systems of payment
7. Social Organisation	Inter-familial sharing preferences Intra-familial sharing preferences



Illustration No 3 : The number of latrines constructed may be a misleading indicator of project progress. Studies of sanitation programmes have found that levels of usage are remarkably low in

Adoption in any particular locality will be enhanced by considering local design preferences. More importantly failure to consider local cultural preferences may lead to severe under use of existing facilities. Levels of usage, a critical factor affecting the health impact of a sanitation programme, are rarely investigated, and when they are may be found to be remarkably low.

An evaluation of water seal latrines in Bangladesh, a relatively successful programme, a few years after installation found that well over a third of latrines were completely out of use (UNICEF Bangladesh (1980)). A rapid appraisal of primary school sanitation in Lesotho found a breakdown rate approaching 80% and that even the best latrines were only being used by 15 to 20% of children (Cross (1981)). Case-study II discusses this example from Lesotho in more detail.

Case-Study 2: Problems of Sanitation Usage in Primary School Sanitation  
in Lesotho

A rapid appraisal of a primary school sanitation programme in Lesotho found levels of usage to be remarkably low (Cross (1981)). Only 15 to 20% of children in case-study schools used the latrine. This in a society in which frequent bowel movements are encouraged as a sign of good health, laxative and enema abuse is widespread and diarrhoea is seasonally endemic among the young. The low levels of usage are caused both by inappropriate technical design and the absence of an educational component.

The latrines, constructed by parents, children and teachers, consist of large, single sex communal blocks of squatting slabs serving school populations aged between 5 and 18. The instability of the structures dissuades many children from using the latrines at all. Others, fearful of the size of the squat-hole defecate on the slab, exacerbating a smell and fly problem and making the latrines still less attractive. Older children complain that younger children despoil the slabs, and the lack of privacy in the large communal structures enables younger children to be bullied and teased by their elders in the latrine. Many latrines were less accessible than traditional sites which further limits usage.

For the great majority of primary school children in Lesotho school sanitation is their first contact with a latrine. Few teachers give children adequate instruction on usage, and hygiene education text books are out of date and not in the vernacular language. A more difficult problem is that in general in rural Lesotho, children under the age of 8 or 9 are actively discouraged by parents and teachers from using latrines.

The improved programme would require a better technology and an user education component designed to meet Lesotho's specific requirements.

8. The Need For Sanitation Promotion And User Education

Sanitation promotion and user education is needed for several reasons:

- (a) No expressed demand for sanitation. A distinctive feature of sanitation development in comparison with other sectors, such as water supply, is that there is little expressed demand for sanitation. Inadequate facilities for excreta disposal are not only a topic which a community may be reluctant to discuss, but may rank well below other needs in order of priority.
- (b) Benefits not immediately apparent. The health benefits of improved sanitation are not immediately apparent, whereas those of, say a new clinic, are highly visible.
- (c) Prior experience of low-cost sanitation. Prior attempts at promoting inappropriate, poorly designed or inadequately supported sanitation programmes have often resulted in disillusionment and distrust of low-cost options.
- (d) Knowledge of excreta-related disease transmission. Few communities have a complete understanding of the health risks of inadequate excreta disposal, though it is important to note that such knowledge is not a pre-condition for sanitation promotion.
- (e) Excreta disposal practices averse to change. Excreta disposal practices are often a culturally sensitive area and changes in existing practices may be difficult to achieve. Even a minor change will require promotional activities.
- (f) Efficient local-level management of latrines. To achieve long term usage, users have to be aware of management and maintenance procedures (see Section 10). This is especially important for shared facilities and technologies with high maintenance requirements.

For these reasons carefully designed sanitation promotion and user education activities are generally a crucial component in effective sanitation development. Methods of implementing these components are discussed in Section 13.

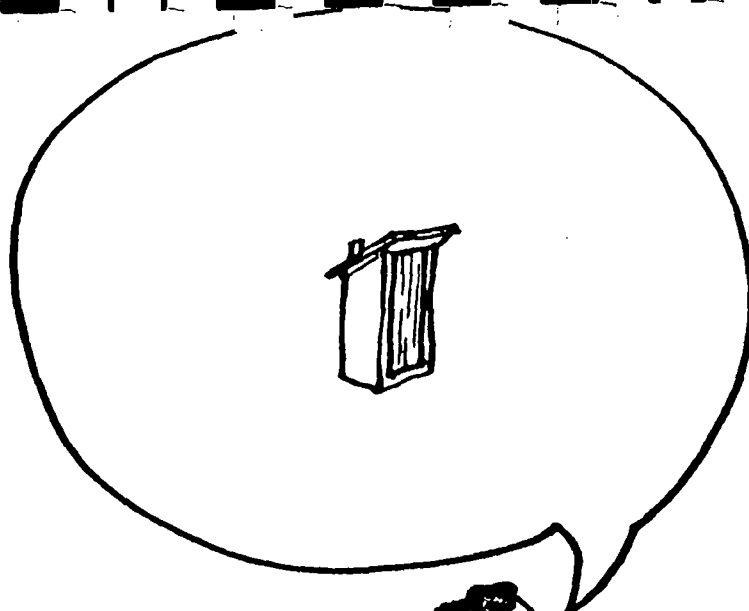


Illustration No 4 : A distinctive feature of sanitation development is the low priority accorded it in many poor communities, in comparison with other developmental needs such as water, education, transport, curative facilities etc. Because of its public health importance a campaign of sanitation promotion and user education is generally necessary to stimulate interest in the sector.



## 9. Behavioural Aspects of Excreta-Related Disease Transmission

Ensuring the adoption and usage of latrines is only one component of preventing excreta-related disease. If the objective of sanitation development is the reduction of excreta-related disease then it is also necessary to consider other factors such as local attitudes and behaviours which affect their transmission.

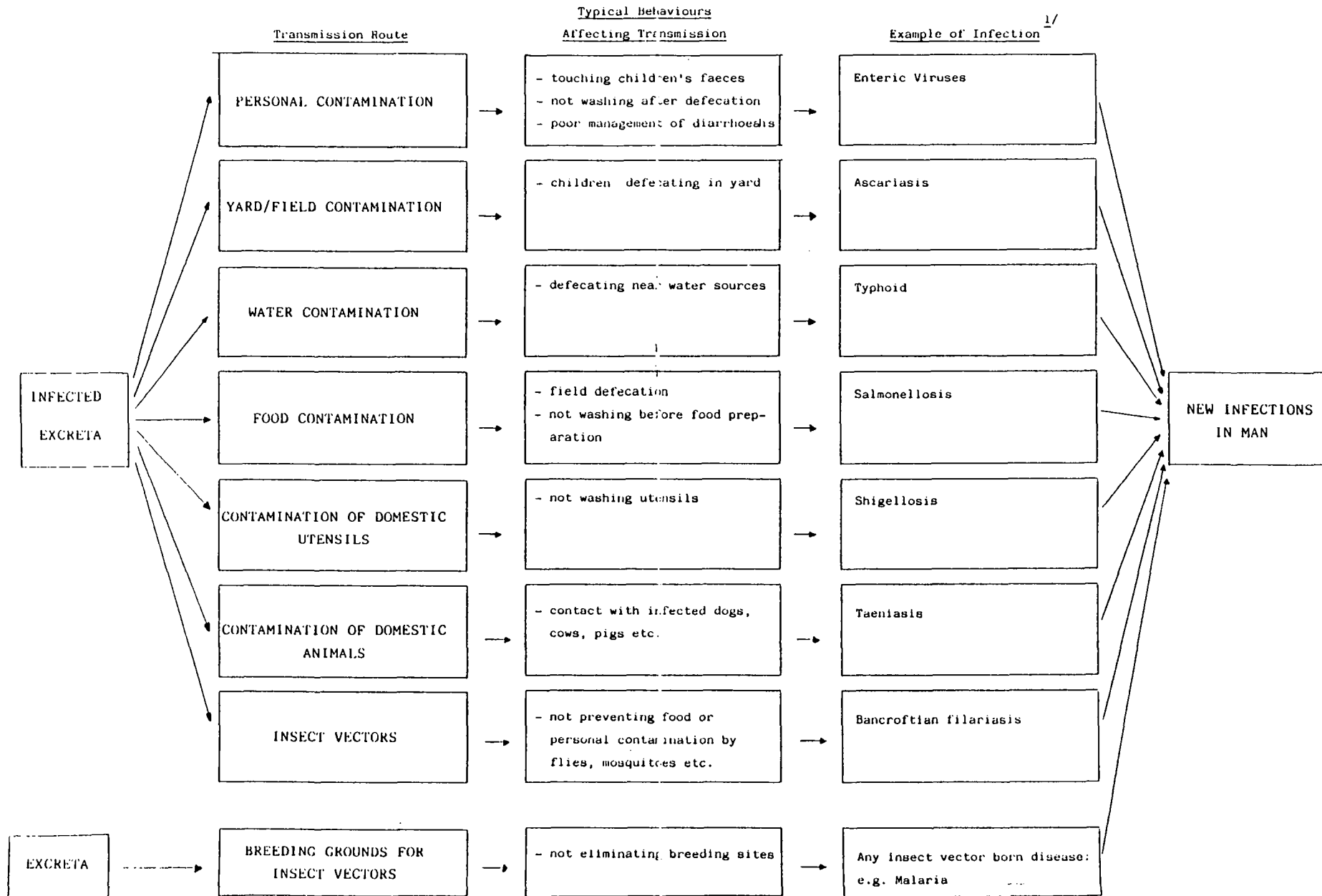
The extent of washing after defecation is an example of a behaviour crucial in preventing excreta-related disease. Several studies have observed that a minority of persons in poor communities wash or bathe after defecation (see for example Ouma and Van Ginneken (1980)). Studies of ritual washing after defecation question its effectiveness in public health terms (Khare (1962)). Clearly sanitation alone in these cases will not prevent excreta-related disease transmission, and complementary interventions, both educational and technological need to be found.

Figure II.1 presents the range of transmission routes for excreta-related diseases. Many of these are unaffected by sanitation and a great many depend upon unhygienic behaviour. Common examples include transmission via:

- unwashed hands;
- inadequate disposal of infant excreta;
- unhygienic food preparation;
- unwashed food utensils;
- flies;
- contact with animals who have been in contact with human faeces.

Case-study III below presents some of the findings of an influential study by Kochar of sociological aspects of hookworm transmission in West Bengal. From a detailed study of defecation habits and hookworm transmission Kochar identified behavioural risk factors in transmission. This data provided the basis for educational support programmes to complement sanitation provision.

Figure II.1 Disease Transmission Routes for Excreta-Related Diseases



<sup>1/</sup> The example is exclusively transmitted by the proposed transmission route.

Case-Study 3: Defecation Behaviour and Hookworm Transmission in  
West Bengal

A detailed study of hookworm transmission in West Bengal illustrates the importance of behavioural factors in controlling excreta-related disease transmission (Kochar (1976) and (1978)). The study examined how patterns of defecation affected the survival, development and distribution of hookworm, larval contact with humans, and sanitation promotion.

Detailed observational study of defecation behaviour found that defecation peaked at dawn and was restricted to specific sites (fallow fields in the agricultural season and bamboo groves in the winter) which became heavily polluted. Less than 1% of people observed wore shoes, and 75% of new stools were within 3 feet of older stools. The duration of defecation was less than 5 minutes, and 90% of those observed ritually washed at a water source within 5 minutes of defecating.

Behaviours which encouraged hookworm transmission include dawn defecation and defecation in shady places (hotter temperatures inhibit egg survival), absence of footwear, concentration of defecation to a single site, poor post defecation hygiene, the length of time spent defecating, and the time interval between defecation and ablution. Hookworm transmission could be considerably reduced in the short term by simple changes, such as furrowing defecation sites so that people walk and squat on the mounds and defecate in the furrows, encouraging prompt ablution etc. In the longer term sanitation promotion would need to be situated within local knowledge and preferences in defecation. Prior experience of sanitation in the area is unhelpful since facilities were considered dirty, uncomfortable, unpleasant and difficult to care for, and unaesthetic.

## 10. Local-level Management of Sanitation Projects

Despite its importance, the concern for appropriate socio-technical design and for 'cultural fit' constitutes the easier part of the spectrum of sociological problems to be considered in sanitation planning. A more difficult task is to generate user enthusiasm for a sanitation project (see Section 9) and to establish a system of project management to ensure long term usage. The central questions here are:

- what is the optimum management structure for a project?
- who will undertake sanitation management functions (organization of construction, collection of payment, maintenance, repairs, and cleaning)?

### (a) Local-level Management Structures

Like any other developmental activity, sanitation development implies a potential change in systems of local-level management and control. For sanitation programmes to be effective, systems of management have to be found appropriate to the social context and the technology in hand.

Sanitation facilities may be managed by a number of alternative means. The optimum method will depend upon the technology and a variety of other social variables. The basic alternative management structures are:

- (i) a central authority;
- (ii) a local community authority;
- (iii) a user's association;
- (iv) private ownership.

The choice of management structure has a great many implications for the management of facilities. Table II.4 presents a comparison of the managerial implications of these alternative structures, and a more detailed discussion of each is developed in Annex V. A central point from this discussion is that low-cost sanitation neglects user and community involvement in project planning and management at its peril. The degree and stage of involvement may vary according to the technology and the social context, but a commitment to user participation in project management or, at the very least, to ensuring that project management is aware of user opinions, is critical to project success. Two examples of effective sanitation development by community involvement, from Pakistan and Canada, are documented in Case-studies IV and V respectively. Further comment on community participation is made in Annex V.

TABLE II.4 Comparison Of Forms Of Local-Level Management Of Sanitation Facilities

Type of Authority	INSTITUTIONAL CHARACTERISTICS						MANAGEMENT PROCEDURES			COST IMPLICATIONS	
	User Access	User/ Authority Relationship	Degree of user Control	Sanctions on Misuse	Degree of user Motivation	Motivation of Manager	Construction	Form of Payment	Maintenance	For Authority	For User
CENTRAL AUTHORITY	Open to all by right of citizenship	Legally compulsory payment	Low	Civil legal proceedings	Low to variable	Bureaucratic state function	Paid labour	Blanket levy or tax	Paid labour	High cost but recoverable	High cost if not subsidised
PRIVATE	Private owners	Voluntary purchase	High	None on owner (criminal proceedings on others)	High	Ownership	Private labour	Private	Private	High initial cost	
USER ASSOCIATION	Association membership	Voluntary Membership	High	Exclusion from Association (criminal proceedings on non-membership)	High	Individual and association interests	Members voluntary labour	Membership fees	Members voluntary labour	Initial capital grants and supervision costs	Low Cost
COMMUNITY AUTHORITY	Open to all in community by right of residence	Compulsory participation not legally sanctioned	Variable	Community pressure or customary legal proceedings	Variable	Public spiritedness; sanitation one of many functions	Community sanctioned labour	Community sanctioned	Community sanctioned labour	Grants and supervision costs	Low Cost

Case-Study 4: Community Participation in Sanitation Development  
in Karachi

Some 2 million squatters live in katchi abadies or squatter settlements in Karachi, Pakistan. One of the largest of the katchi abadies is Baldia township. Sanitary conditions in Baldia are appalling: communal standpipes supply water at best intermittantly, and most residents are served by an irregular and thoroughly unhygienic bucket latrine system. Irregular collection means that excreta and refuse litter the streets (Bakhteari (1981)).

Two pilot sanitation projects have been undertaken in neighbouring districts of Baldia township with very different results. In the first an aid organization hired a local contractor to construct 30 soakpit latrines in a marginally better-to-do suburb. The standard of construction was high, sites picked at random and the facilities given free of charge to households.

The second project took place in a compact homogeneous community known as the 'Turks Colony'. The community had previously constructed cess pits, but lacking technical knowledge they rarely worked. New initiative came from a local cricket team who wanted to practice in the streets. They contacted a local mason and with the support of local community organizations and outside assistance for the purchase of cement, they constructed 30 soakpits in the poorest area in close association with local residents. Subsequently over 200 soakpits have been constructed by community effort with the assistance of community workers and technical advice, and the project is expanding fast. Community workers play a pivotal role in project expansion by maintaining community enthusiasm for the project and bringing in sound technical advice when needed. By contrast no further contractor-built soakpits have been constructed and the initial 30 technically excellent facilities are barely used.

Case-Study 5: Participatory Research in Sanitation among Cree

Indians, Canada

Sanitation was a highly suitable focus for community action among a community of Cree Indians in Canada (Jackson (1979)). Contamination of Trout Lake, the Indian's major source of food, by sewage from a nearby water-borne sewerage system lead to a process of participatory research in which the whole Indian community discussed and analysed the problem and formulated a programme of local action.

The process of participatory research developed in several stages. A group of Community organizers first undertook an initial enquiry to investigate local technologies and who has access to what kind of facilities. A short list of technology options was developed with technical assistance, but paying special attention to user costs and benefits of each option. These alternatives were presented to the community for discussion by public meetings, study teams, individual interviews (with feedback to group discussion) group interviews, questionnaires, seminars, visual documentation and popular theatre. The sharing of knowledge within the community helped to build local confidence and lead to the formulation of a local plan of action directed at improving sanitation and other facilities.

A further conclusion is that private ownership is commonly the preferred management structure, though some functions, such as promotion, construction etc may be undertaken through community authorities or associations. In particular circumstances cost and other considerations may necessitate alternative patterns of management and use. The experience of communal latrines has not been a happy one, but there are notable exceptions to this where well-managed, shared latrines provide a cost effective, socially acceptable solution. Case-study VI summarizes one example: the successful development of 'comfort stations' in Nigeria. Other examples include public sanitation at Mosques, or latrines shared by tenant associations in urban rental blocks. Detailed consideration of long term management arrangements is especially necessary in shared sanitation systems.

(b) Local-level Management Procedures

Local-level management procedures are rarely addressed as a matter of course in participatory development projects. The experience in water supply and sanitation development has been that mismanagement at the local-level is a major cause of breakdown of projects. The establishment of realistic guidelines for local-level management procedures and ensuring their implementation are further tasks in communications support. Local-level management would undertake the following functions:

- (i) Initiation and promotion;
- (ii) Payment;
- (iii) Location;
- (iv) Construction;
- (v) Cleaning;
- (vi) Maintenance and repairs.

Precisely how these different functions are undertaken in any particular instant will vary with social conditions and the technology in use. In Annex VI some general points are made on these management functions.



Case Study 6: "Comfort Stations": Shared Sanitation in Nigeria

"Comfort Stations" were developed in the slum and congested inner areas of Ibadan, Nigeria, which previously had no safe excreta disposal facilities. Comfort Stations consist of toilets, bathing and laundry facilities and serve an extended family compound of 300 to 600 persons. They were constructed by the city municipality with the participation of the families who themselves are the legal owners and are responsible for operation and maintenance.

The early comfort stations encountered problems at each stage of construction: mistrust of city officials and unwillingness to apportion land prior to construction, labour shortages during construction, and lack of maintenance and use once construction was complete. The station with the best record of maintenance and use was cared for by an attendant.

A study of the effectiveness of comfort stations lead to the development of an educational component to support construction (Ademuwagun (1975)). This consisted of community liaison at project meetings; establishing procedures to resolve conflicts during planning, construction and operation; stimulating community discussion and participation by local communication channels, visual aids, and house-to-house visits; and establishing a system of monitoring use and maintenance.

PART III

METHODS IN COMMUNICATIONS SUPPORT

Part III examines the role and disciplinary background of communications support advisors, and presents methodologies used in communications support.

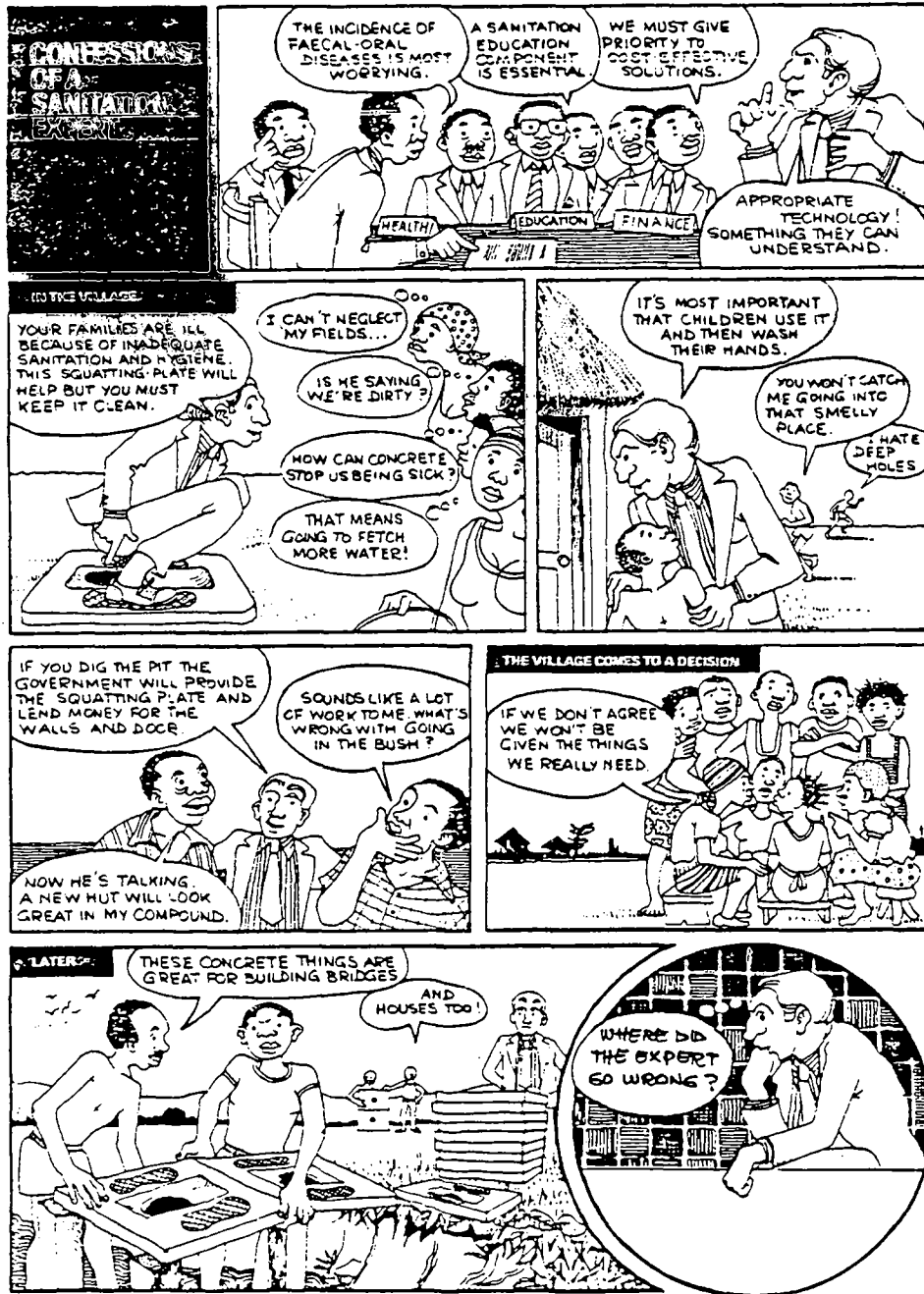


Illustration No 5 : The cartoon illustrates the consequences of planning from the top down. Pre-conditions of effective sanitation development include understanding the community view-point, promoting sanitation according to community needs, and maintaining real communication links between users and technicians.

### 11. Who Undertakes Communications Support?

Communications support functions were defined in Table II.1. The principal functions are as follows:

- (a) Pre-planning and pilot project assessment;
- (b) Socio-technical design;
- (c) Local-level management design;
- (d) Sanitation promotion and user education;
- (e) Monitoring and evaluation;
- (f) Research.

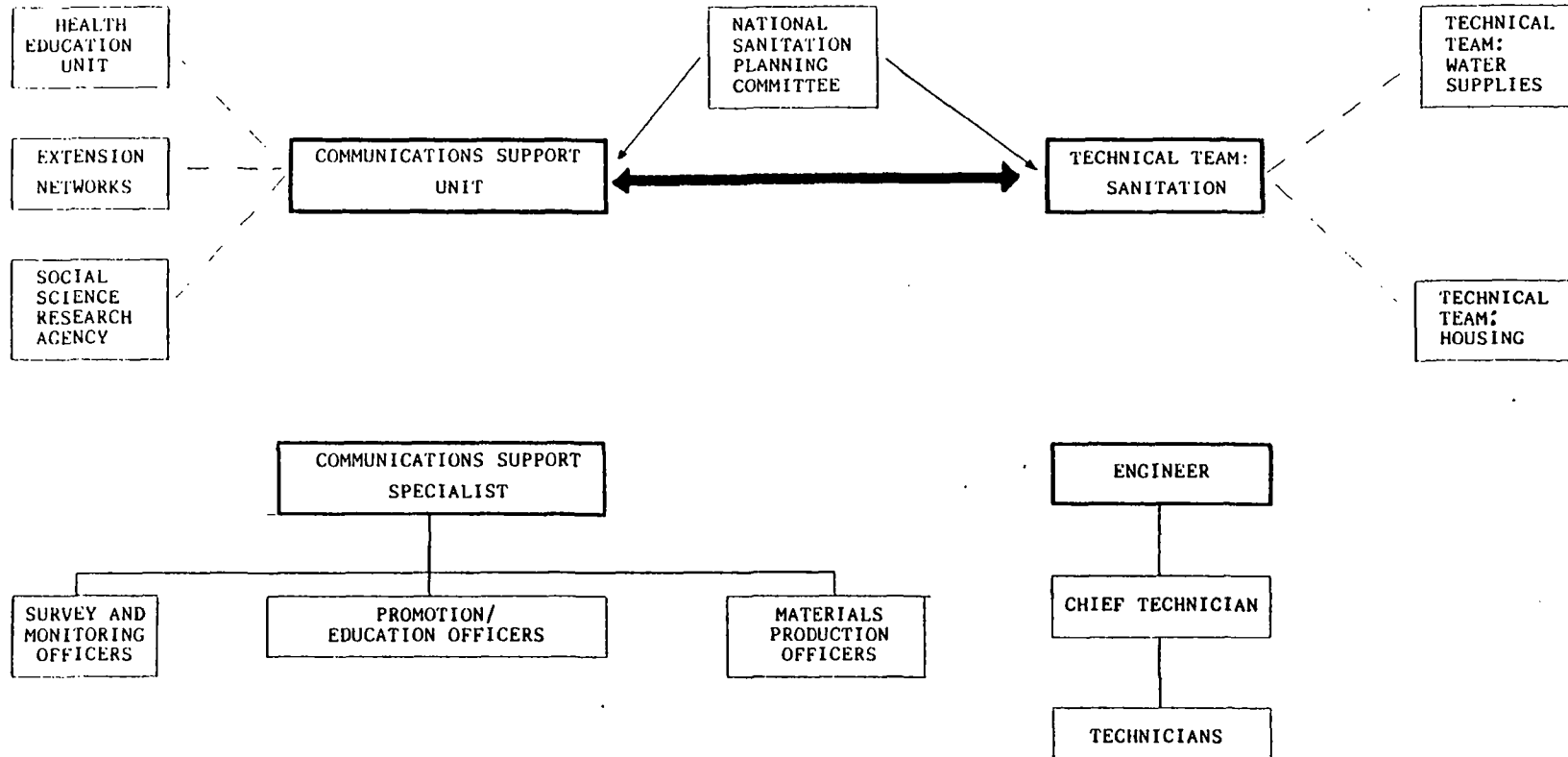
In the past many of these functions have not been carried out at all (see Section 5), often with disastrous consequences. Other programmes have tried to undertake these functions in a variety of ways. Communities themselves, village-level cadres, extension agents, technicians, health educators and social scientists have all worked on these issues. The participation of any of these agents is possible and many have greatly contributed to programme implementation.

Lessons of prior programme experience as to who should undertake communications support include the following:

- Communities and unpaid cadres require considerable outside support for programmes to have long term success;
- On the other hand technicians may not be able to place sufficient emphasis on educative and promotive aspects;
- Contracting out certain functions, such as educational campaigns or surveys, to outside agencies such as health education departments or social research agencies does not encourage integrated programme execution.

Communications support is ideally undertaken by a unit working alongside the technical team. Figure III.1 illustrates typical relations between communications support and technical units. A communications support team would consist of officers responsible for pre-assessment surveys, social aspects of design and implementation, community liaison, sanitation promotion and user education, the production of promotional materials, monitoring, evaluation and research.

Figure III.1 Typical Institutional Arrangements for Communications Support in Sanitation Programmes



The communication support unit services and supports a cadre of field workers. These may be voluntary or paid health auxiliaries, health educators or inspectors, community development assistance or others. Rarely are there sufficient resources to train and maintain fieldworkers responsible solely for sanitation extension. The choice of the most appropriate field extension agents varies with circumstance: cost, administrative practicality, time available to devote to sanitation, and the extent of their community base are the important criteria where there is a choice of extension networks. Where multipurpose fieldworkers are used, special training, efficient communication procedures (particularly where two or more ministries are involved), and work incentives need to be established to ensure that extension work is carried out as planned.

The unit would be headed by a communications support specialist. A typical job description for a communication support specialist is attached in Annex VII.

Skills in communications support, in the sense used in this report, derive from the social sciences, health education and communications. The divisions between these disciplines and their sub-disciplines are often ill understood by other professions in the sector and Annex VIII presents definitions and background information on the disciplinary backgrounds of communications support specialists.

The following sections in this part examine methodologies employed in communication support activities.

## 12. Data Collection

Sociological data is required for the following purposes:

- general programme design;
- socio-technical design;
- local-level management design;
- design of sanitation promotion/user education components.

A checklist of the data required is given in Annex IX.

### (a) Considerations in Planning Data Collection

Below some general points to be considered in data collection are made.

(i) Limit Scope of Data Collection Pre-planning information is invariably required rapidly. What is needed is an applied study for practical application not an academic treatise. For these reasons data collection objectives need to be clearly specified and followed. The traditional format of a considerable and costly 'baseline' survey to be followed up by a further one-off survey several years later may beg as many questions as it solves and unless undertaken at the highest standard may be of little help to programme planners. Sampling techniques need particularly to be applied in the case of large-scale projects. Even when using small samples the comparison of disadvantaged groups may throw up hypotheses which could be followed up later, if of sufficient importance, where resources are available.

(ii) Integrate Study into (Pilot) Project Implementation. Where possible data collection should be undertaken in (pilot) project implementation sites. This improves understanding of different stages of project implementation, and has the added advantage of not raising expectations in areas in which the project may not work. A study specific to an intended program is more useful than a general study.

(iii) Data Collection incorporated into Community Discussion. Alongside more objective measures of sociological factors affecting project design, the community itself should be brought into the planning process to express their own opinions on aspects of project design. Typically this would be achieved at planning

workshops or community meetings.

(iv) Use a variety of Data Gathering Techniques The socio-cultural data required in sanitation planning necessitates a mix of data gathering techniques. A mix has the best chance of identifying potential problems in culturally sensitive areas; is flexible in enabling new hypotheses to be tested in later stages of data collection; provides quantitative and qualitative data; and is a means of double-checking data based on small samples. Reliance on a single technique, typically a questionnaire with closed questions, is ill-suited to gathering attitudinal data or information on a culturally sensitive subject.

(b) Recommended Techniques

The following mix of data gathering techniques are recommended in sanitation planning:

- (i) Observation;
- (ii) Key-informant Interviews;
- (iii) Open-ended Questionnaires;
- (iv) Closed Questionnaires;
- (v) Workshops.

(i) Observation

Field observations are essential to investigate beyond normative behaviour in order to understand what people actually do as opposed to what they say they do. Observations may be carried out by participant observation, during which the researcher resides in the community under study, participating in community life while closely observing socio-cultural factors of importance to programme planning. An experienced social anthropologist can gain considerable insight into a smallish community in this way.

Observational studies of public health and latrine usage may also be established in which an unseen observer can quantitatively assess behaviour. A physical inspection of latrines and their surrounds is also of use when investigating usage and maintenance.



(ii) Key-informant Interviews

Like participant observation, in-depth interviews of especially outspoken, important or informed community members is a method derived from social anthropology to produce qualitative data. It is especially useful in the sector for gathering normative information on culturally sensitive issues, and in developing case-studies on aspects of sanitation development.

(iii) Open-ended Questionnaires

Open-ended questionnaires are often a second option to in-depth interviews, but they can provide a mixture of quantitative and qualitative information on a community's viewpoint in a short space of time. Open-ended questions are structured by the investigator in the hope of generating information or a discussion which might throw up the subject's own perceptions on an issue. It is also a useful technique to generate hypotheses for further, more detailed study.

(iv) Closed Questionnaires (Surveys)

Surveys are a relatively easy-to-administer method of getting quantitative sociological data. Survey design and analysis, however, requires professional advice, and a clear idea of exactly what the survey is measuring. Certain techniques in survey design, such as choosing wealth indicators or asking the same question in different forms, can be used to expand the type of information that can be collected in this way, but it is generally poorly suited to the collection of attitudinal data. An advantage of surveys is that a well-designed sampling method can validate results for a very large population. Further information on survey methodology can be obtained from Pelto and Pelto (1978).

(v) Community Meetings or Workshops

The use of community meetings and workshops in data collection are methods of checking and further developing information obtained by other means. Sanitation planning workshops are low-cost, of short duration and need a minimum of preparation time. For workshop sites to be <sup>effective</sup> sites and participants need careful selection, and the workshop arranged in order to elicit community views while placing local

officials in the position of listeners rather than opinion leaders. (Cross (1982d)) Workshops may be a forum not only for general discussion, but also starting points for local project implementation. Care should be taken not to raise expectations of outside support in areas where this is not likely to be forthcoming.



Photograph No 4 : A Health Assistant positions and marks out the pit diameter for a Ventilated Improved Pit Latrine for a householder in rural Central Africa. The request for technical advice in construction came following a campaign of sanitation promotion meetings in the area. The householder will excavate the pit according to the Health Assistant's specifications and the Health Assistant will return to assist in the construction of the superstructure.

13. Promotion and Education<sup>1/</sup>

A promotional and educational component is required to effect behaviour in the following aspects of sanitation development:

- Sanitation adoption;
- Effective local-level project management and maintenance;
- Sanitation usage;
- Improving hygiene and changing behaviours promoting excreta-related diseases;
- Knowledge of disease transmission.

(a) Media, Materials and Techniques

A great range of media, materials and techniques are available for promotional and educational support activities. These are illustrated in Table III.1. Annex X contains a summary of the advantages of disadvantages of their use. An effective promotional and educational component will combine several of these methods. Optimum combinations will differ according to circumstance. These approaches may be divided into 2 categories; mass media and community approaches.

- (i) Mass Media. Mass media (such as radio, newspapers, billboards) are best used in general promotion to an audience which is wider than actual program beneficiaries in order to pave the way for more specific approaches. Mass media are generally difficult to co-ordinate precisely with construction schedules, and in the initial stages of a programme when delivery capacity is limited, their use may give rise to unfulfilled expectations. Mass media are also unlikely to effect specific behaviour changes, especially in diverse cultural environments, and where a single message will have limited relevance.
- (ii) Community-based Approaches. In contrast community-based approaches (such as community meetings, home visits, folk theatre etc) are more flexible and direct, and are most powerful tools in sanitation promotion and user education. Several techniques are available (slide/tape shows, charts etc) which reinforce and assist the efforts of field extension workers. Traditional communication methods may also be used in sanitation promotion, and can often be used alongside modern approaches, (for example, posters or slides at meetings).

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<sup>1/</sup> This section has relied heavily on Perrett (1982), from where further information on promotional activities may be obtained.

Table III.1 Media, Materials and Techniques in Communications Support

A. Community-based activities:	<ol style="list-style-type: none"><li>1. Public Meetings and Lectures</li><li>2. Group Discussions</li><li>3. Role Playing</li><li>4. Drama</li><li>5. Case Study</li><li>6. Home Visit</li><li>7. Demonstration</li></ol>
B. Mass Media:	<ol style="list-style-type: none"><li>1. Radio</li><li>2. Television</li><li>3. Newspapers</li><li>4. Cinema</li><li>5. Folk Theatre</li><li>6. Wall Paintings and Billboards</li><li>7. Mass Media group listening</li></ol>
C. Other Media and Materials:	<ol style="list-style-type: none"><li>1. Publications and Loose Leaflets</li><li>2. Video</li><li>3. Films</li><li>4. Filmstrips</li><li>5. Slides</li><li>6. Flannelboard</li><li>7. Bulletin Board</li><li>8. Flip Charts</li><li>9. Models, Exhibitions and Displays</li><li>10. Maps, Charts Diagrams</li><li>11. Blackboard.</li></ol>

(b) Considerations in Planning Promotion and Education

Planning an educational component is not merely a matter of making a choice between different media techniques. Annex VIII contains general comments on suitable educational approaches. In this section further comments are made on special considerations in planning promotional and educational activities in sanitation development:

- (i) Keep the Plan Simple. Institutional arrangements in low-cost sanitation development are often in a formative stage and unable to undertake an ambitious or managerially complex activity. It may often be more advisable to work with existing organizational structures and skills, such as using health inspectors or working from within technical ministries, rather attempt to use the issue of sanitation as a force for institutional building or structural change.
- (ii) Timing Carefully Integrated with Other Programme Components. Promotional and educational activities need to be planned in collaboration with construction and other programme components for maximum impact and to avoid raising expectations which may not be met. This usually implies a short lead time, since technical activities may already be in process; close coordination between technical and communication support units and extension workers; and a flexible communications strategy.
- (iii) Focus on Action not Knowledge. Emphasis is best placed on affecting behaviour, by whatever means, than teaching the medical model of health knowledge. The desire for comfort, privacy and status are likely to be far more potent forces in sanitation promotion than knowledge of the transmission routes of excreta-related diseases.
- (iv) Identify Specific Behavioural Risk Factors. User education is most effective when a short list of highly specific behaviours are identified as target issues. This applies both to behaviours in cleaning and maintenance of sanitation technologies, such as closing the latrine door in ventilated pit latrines (in which the interior needs to be kept dark), and to insanitary behaviours affecting excreta-related disease transmission, such as washing after defecation.

- (v) Use Existing Communication Networks. Forms and methods of communication are culturally defined. The design of a promotional/educational component needs to be based on a detailed knowledge of local communication methods and networks. This further enables the selection of specific target groups which are either crucial links in local communication networks, or high risk groups.
  
- (vi) Use Local Health Knowledge. Where appropriate, expressing the desired behaviour change (latrine construction, usage, etc) within the context of local health and medical knowledge is likely to be more effective than imposing the medical model of health knowledge.



Photograph No 5 : Community-based educational and promotional approaches are the most direct, flexible and powerful of techniques of sanitation extension . Above heads of households meet to discuss proposals for water and sanitation extension in the area.



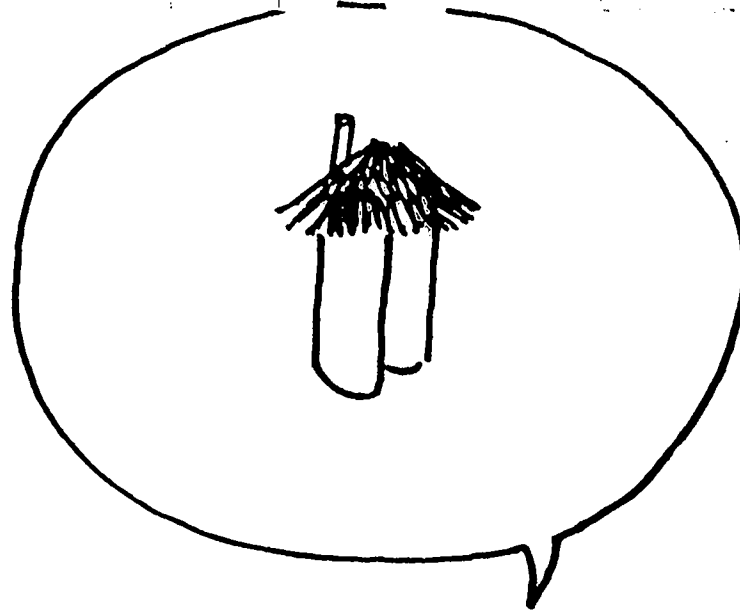


Illustration No 6 : Locally-acceptable preferences should be determined in the knowledge of the costs of different options.

#### 14. Monitoring and Evaluation

##### (a) What are Monitoring and Evaluation?

Monitoring is the regular collection and interpretation of data on programme activities carried out by programme staff. The purpose of monitoring is not only the regulation and control of project activities but also the provision of information, on the basis of which improvements can be made. Monitoring systems have 2 basic elements: procedures in the collection and interpretation of information; and procedures for reporting back to project management.

In theory monitoring is distinct from evaluation in that the latter is an infrequent function carried out by an outside agency and concentrating on overall impact and effectiveness for the benefit of future planning rather than immediate regulation. In practice monitoring and evaluation overlap and feed into one another. The overlap is especially considerable in the case of communications support, since there is need for regular information on the impact as well as the execution of project activities. For this reason monitoring should be an essential and considerable part of the work in communications support. The workload is especially high in pilot stages of project implementation. The function continues through the life of a project, however, and is of particular importance in projects involving community participation, different sanitation technologies and which are undertaken in culturally diverse societies. Where projects are monitored on the scale suggested below, evaluation activities can be cut in scope. The remainder of this section discusses procedures in monitoring communications support of sanitation development.

##### (b) Data Collection in Monitoring

Precisely which aspects of sanitation need to be monitored will depend upon local circumstances. In general terms the following issues require monitoring by communications support staff:

- social soundness of technical design;
- the content, techniques and effectiveness of promotional and education activities;
- procedures in extension, community negotiation and project implementation;
- local-level management;
- latrine usage.

Two sorts of data need to be collected: data on project activities; and data on the community response.

(i) Project Activities. Monitoring project activities is achieved by several well-accepted means:

- Logging staff movements;
- Keeping account of the quantity of data collected and mechanisms for its usage;
- Number and scope of promotional/educational activities;
- Number of people reached;
- Regular communication support unit staff review meetings;
- Regular joint review meetings with technical team;
- Regular joint review meetings with extension workers.

(ii) Community Response. Monitoring community impact can be a complicated and time-consuming task. A mix of data collection techniques are required to accommodate culturally sensitive data, community views on the project, and objective data on usage and public health behaviour (see Section 12). Procedures need to be adopted which do not impinge upon implementation capacity. Extensive 'baseline' and 'follow-up' studies cannot be generally undertaken by small action-oriented communication support units.

One method of monitoring community response would entail the following:

- Establish Community Data File Maintain data file on each implementation area/community storing community data, results and impressions from field visits and community meetings etc.
- Monitor Community Response. Undertake annual rapid appraisal in each implementation area. This would involve the following steps:
  1. Sample households;
  2. Administer open-ended questionnaire on development and public health priorities, user experience, latrine usage, local-level management, educational needs, and problem seeking;
  3. Inspect latrines noting physical condition, level of care, cleaning and maintenance, and evidence of usage;
  4. Choose very small sub-sample for observational study;

- Undertake behavioural observation of latrine use, water use, and all behaviour of relevance to hygiene in the sub-sample;
- Analyse data;
- Hold community meeting/workshop to discuss programme;
- Report back to implementing agencies.

Case-study VII shows the timing of these procedures in a practical illustration.

(c) Reporting Back

The monitoring system should ensure that the information collected reaches those who can act on it. Regular procedures for reviewing monitoring data (such as 2 monthly meetings and monitoring data sheets) should be established by senior personnel in technical and promotional units. The information should be presented so that progress in each aspect can be quickly established and measures taken to resolve difficulties.

Case-Study 7: Typical Urban Sanitation Monitoring Schedule

The following system for monitoring community response was proposed for the communications support unit in an urban sanitation project working in 3 project areas with a total population of over 10,000:

1. Community Meetings - 3-monthly meetings between community representatives, extension workers and communications support staff. Minutes of the meeting and a monitoring data sheet to be filed in a community data file.
2. Site and Community Visits - Additional information collected on site and community visits should be added to the community data file.
3. Rapid Appraisals - Yearly rapid appraisals undertaken in each project site. Rapid appraisal to consist of assessment by different means: questionnaire, physical inspection, behavioural observation, community meeting. Sample sizes should be approximately 60 households, for the questionnaire and physical inspection, and 10 households for behavioural observation in each project site. Sampling for the questionnaire/inspection should be by random selection from plot numbers. Households for behavioural observation would be selected from the sample interviewed ensuring that household members were home, that young children were present and that they were representative community households.

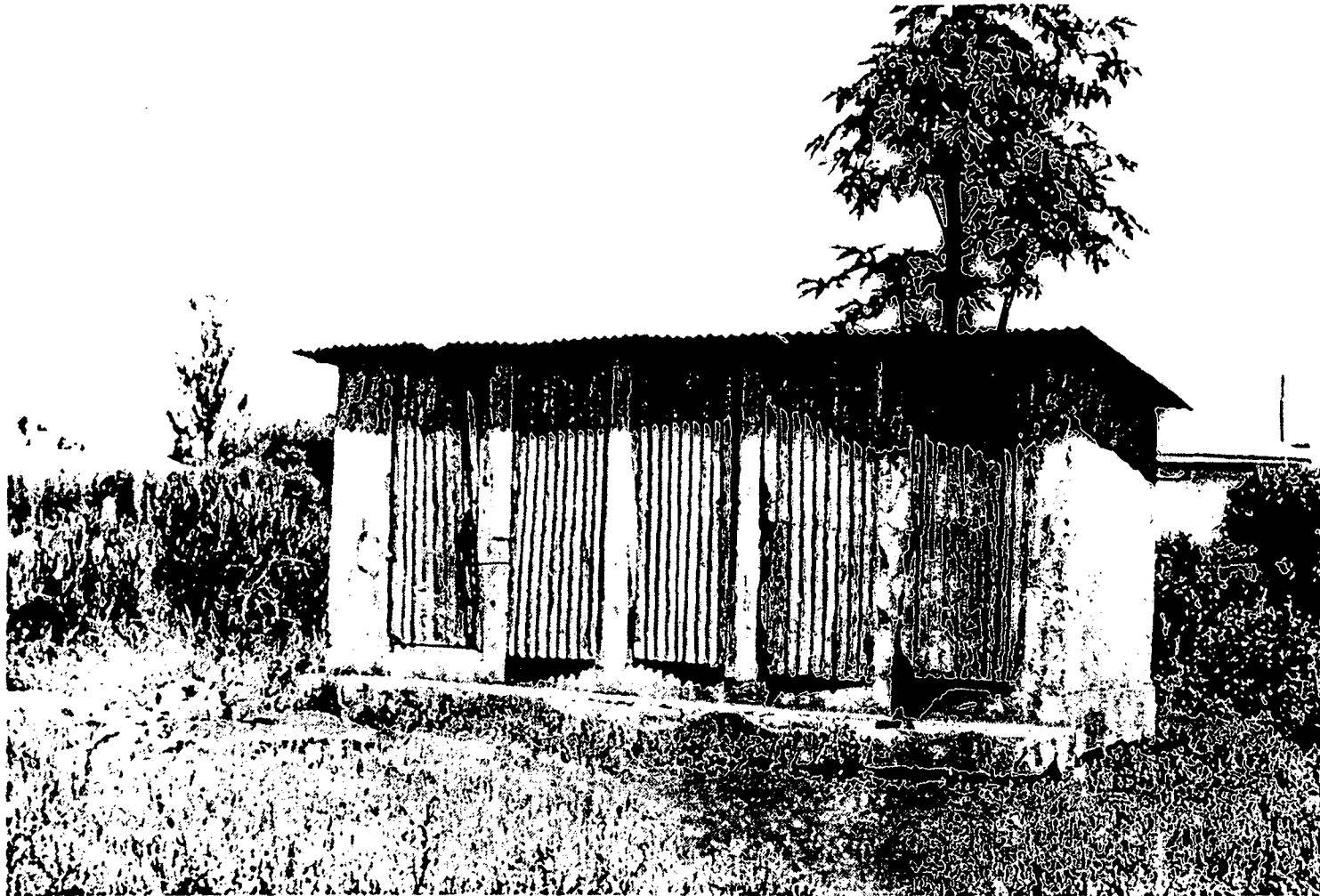
Two communication support workers could complete the rapid appraisal in 3 weeks in the following way:

	WEEK		
	1	2	3
Sample Households	■		
Interviews/Inspection	■■■■■■■■■■		
Sub-sample taken		■	
Observational Study		■■■■■■■■■■	
Analysis/Write up			■■■■■■■■■■
Community Meeting			■

15. Research

It may be useful to undertake research into problems thrown up by monitoring data which cannot be adequately addressed in the course of implementation. This can be done either by officers from within the communications support unit or in collaboration with local universities or research institutes. Even collaborative projects are likely to require considerable management from the communications support unit to ensure that the research is tied to programme needs.

Possible research topics include the full range of communication support issues: sociological aspects of technical design; local-level organization; additional studies of promotional or educational components; and attitudinal or behavioural aspects of hygiene and the transmission of excreta-related diseases.



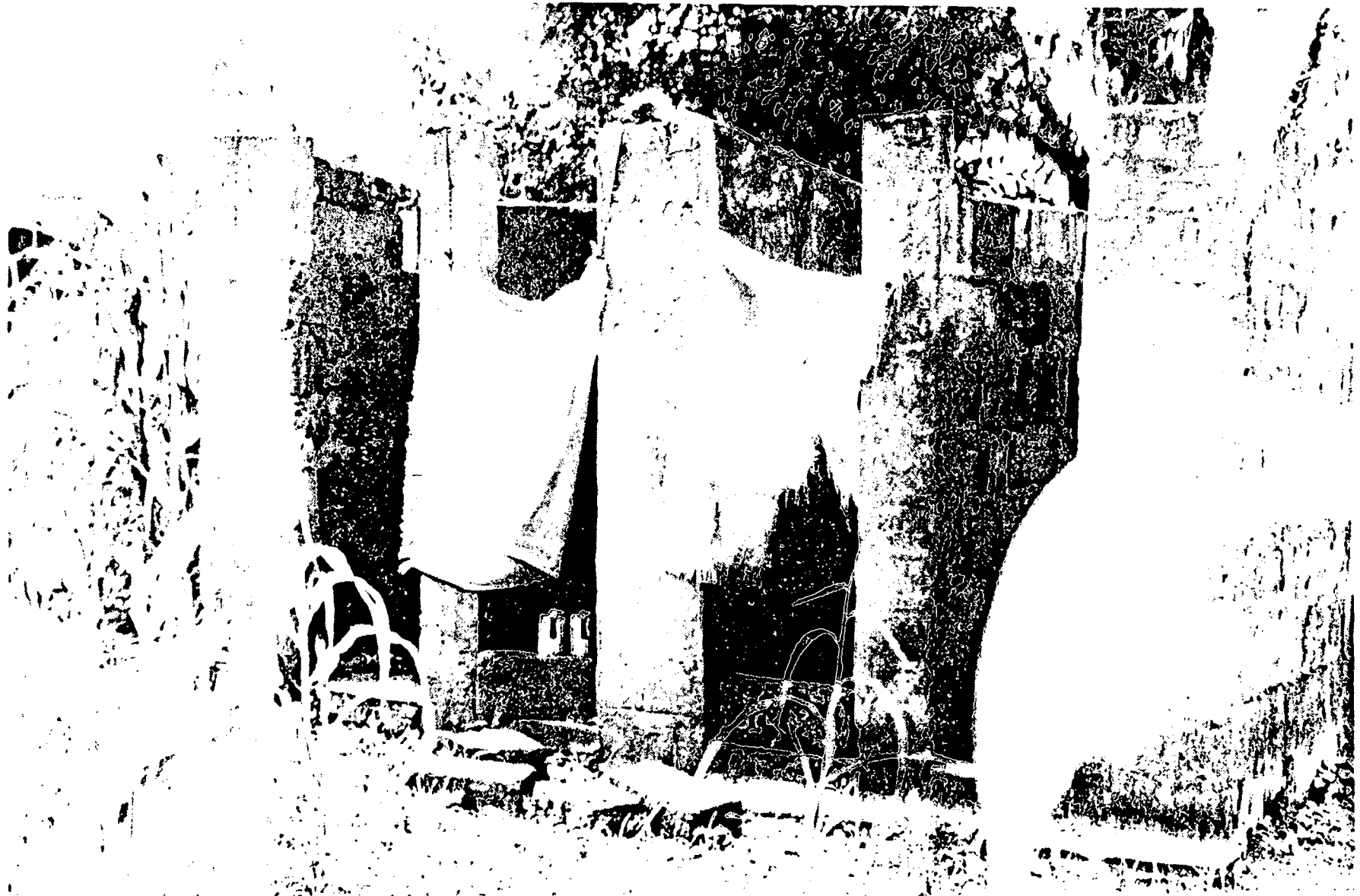
Photograph No 6 : A dilapidated latrine block for urban rental accomodation. Provision for urban tenants are a major need in developing countries and one which Governments and donor agencies often have difficulty reaching. While technically inappropriate these urban latrines are socially acceptable as regards their sharing arrangements. Each latrine is exclusively used by a seperate social group: male adults, female adults, male children, female children and visitors, in accordance with local avoidance rules. Efforsts to upgrade these facilities need to take accepted patterns of usage into account

PART IV

A TYPICAL IMPLEMENTATION SCHEDULE

In Part IV communication support components are positioned in the implementation schedule of a typical sanitation programme.





Photograph No 7 : Communal latrine near a rural village mosque in a Moslem community in East Africa. It stands in a village in which several attempts at the promotion of individual latrines have failed. The latrine is in constant use by men from neighbouring households who visit the mosque. Water for anal cleansing is collected from a water tank near the mosque in the metal containers shown above. An intermediary step to improve sanitation in the village may be to improve these shared facilities. A shared block might be constructed for women and children and local-level management would be the responsibility of the local Moslem association.

16. Typical Implementation Schedule

This section schedules communication support within a typical sanitation programme. The communication support unit is situated in a pivotal position between programme beneficiaries, extension workers and those responsible for technical implementation. This position necessitates that the unit establish sound channels of communication with these bodies at every phase of project implementation. Figure IV.1 illustrates the important channels of communication as well as summarizing communications support functions by phase.

In a typical national programme, communications support activities will usually proceed in the following phases:

- (a) Pre-Planning Assessment;
- (b) Planning;
- (c) Pilot Implementation;
- (d) Programme Expansion.

(a) Pre-Planning Assessment

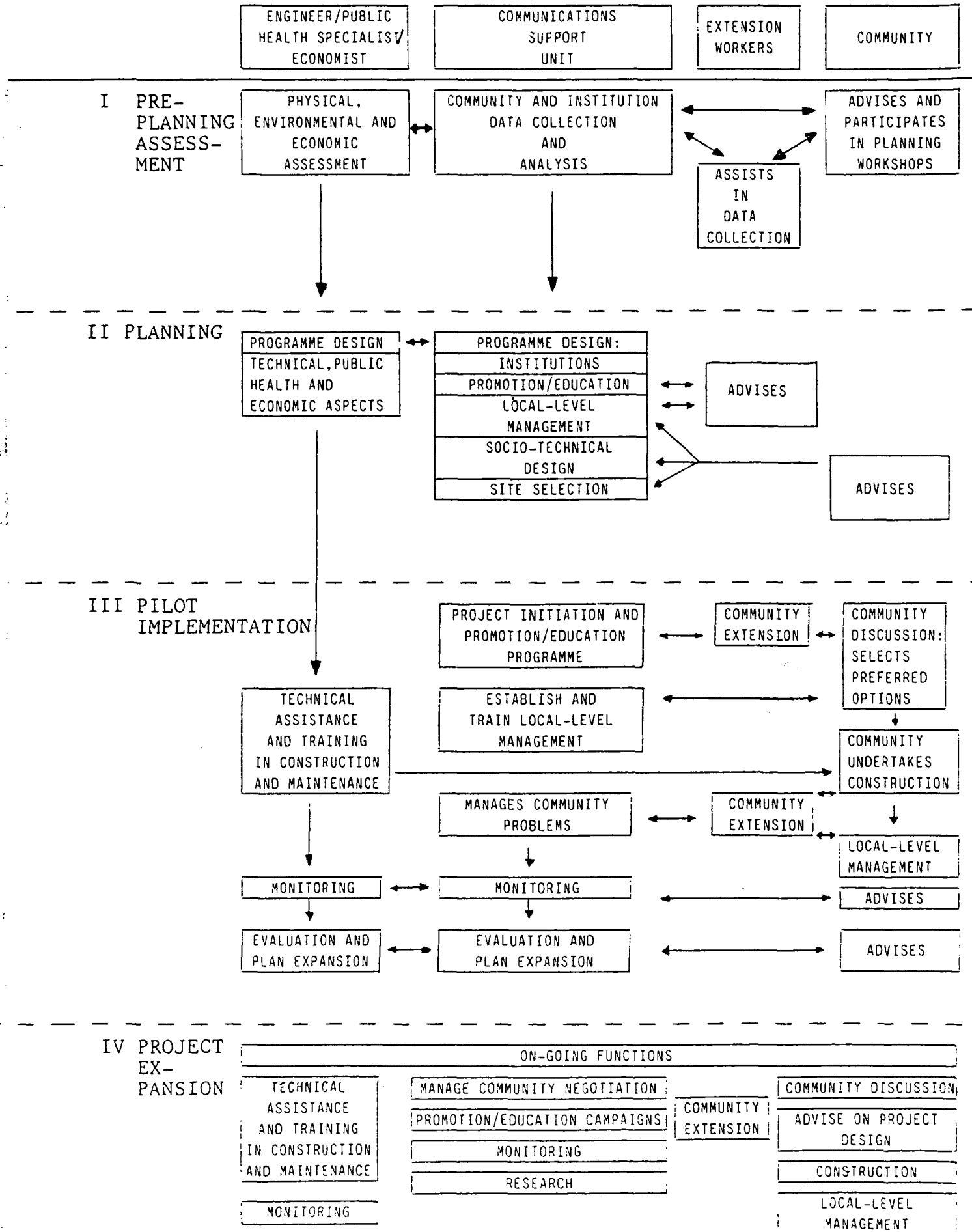
Data collection is the primary communication support function at this stage. Data collection methods are discussed in Section 12, and a checklist of the data required is contained in Annex IX. Liaison with the engineer and other programme planners are necessary in short-listing technology options, institutional designs, cost-recovery options, and drafting possible implementation scenarios.

The most important liaison at this stage is with intended users. The community itself should be brought into the planning process by means of meetings and workshops and their view recorded alongside data from other sources.

(b) Planning

At the planning stage all the data is assessed, brought together and final options of each programme component identified. The final choice of technology, institutional design, economic and financial programme design, and communications support design should be reviewed and agreed upon by all planning team members to ensure that programme components fit together. Further verification on critical aspects of

FIGURE IV.1 RECOMMENDED STRUCTURE OF COMMUNICATIONS SUPPORT ACTIVITIES IN SANITATION PROGRAMMES



communications support design might be sought from communities or extension workers.

The areas of programme design which are of particular concern to communications support are: institutional design and the delivery system, promotional and educational activities, local-level management, social aspects of technical design, and site selection. Precise details of the extent of coverage of promotional activities, specific user education targets and target groups, the timing of educational components in relation to construction operation and maintenance activities, household payment procedures, and strategies for reaching disadvantaged groups all need special consideration.

(c) Pilot Implementation

Communication support functions at this stage are: managing project initiation, undertaking promotional and educational activities, liaising with users regarding the programme, establishing and where necessary, arranging for training in local-level management, and monitoring sociological and educational aspects of programme development. At the pilot stage, where there is the capacity, educational and promotional materials might be produced by the communications support unit in collaboration with a health education department, though in the long run their production might be contracted out.

(d) Project Expansion

Long term communications support functions include managing community negotiation, implementing promotional and educational programmes, monitoring, and, where appropriate further research. Further data collection may be necessary where sociologically different communities are included in the programme, or where technologies are amended. Promotional and educational needs are likely to change as the programme develops and will require periodic review. Communication support is a necessary component throughout the life of a sanitation programme.

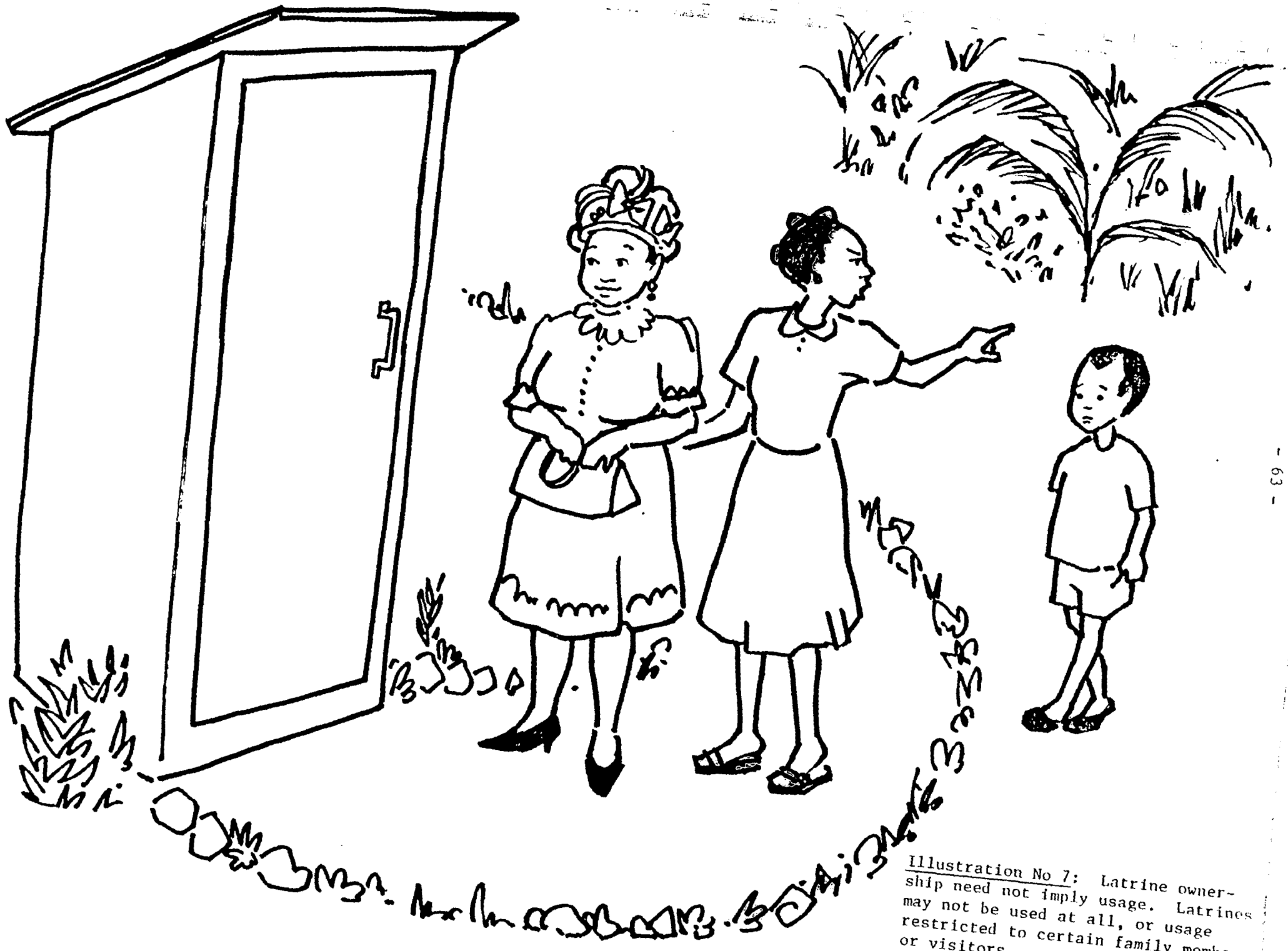


Illustration No 7: Latrine ownership need not imply usage. Latrines may not be used at all, or usage restricted to certain family members or visitors.

## ANNEX I

ANNOTATED BIBLIOGRAPHY OF REVIEWS OF SOCIOCULTURAL ASPECTS OF  
SANITATION

Elmendorf M and Buckles P (1980) Sociocultural Aspects of Water Supply and Excreta Disposal, Volume 5, Appropriate Technology for Water Supply and Sanitation, Transportation, Water and Telecommunications Department, The World Bank, Washington 52p + iv + 15p Annexes.

An investigation of the social and cultural factors influencing people's response to water supply and excreta disposal technologies in 7 rural and urban fringe area communities in Latin America. Part 1 describes the methodology (questionnaire) used to investigate how sanitation and water supply problems are perceived and to what extent people would be willing to participate in projects to improve their situation. Part 2 summarizes case studies drawn from Guatemala, Mexico, El Salvador, Colombia and Nicaragua which describe the community response to a variety of technologies. Part 3 presents the case-study findings cross-culturally according to perceptions, preferences, related practices and the use of social techniques to understand them. Drawing from the findings Part 4 concludes that social and cultural factors should be incorporated into project design to ensure that water supply and excreta disposal technologies are accepted, properly used, and maintained.

The study's major shortcomings are its restriction to Latin America, reliance on a single questionnaire and limited fieldwork. A minor criticism is the uncritical acceptance of the benevolence of planners and technological innovations. Although the weakest in the important World Bank series on Appropriate Technology for Water supply and Sanitation, it remains a seminal study in applied anthropology which has highlighted the importance of social factors in project design for an important audience at a critical time in planning for the Decade.

Perrett, H (1979) Social and Behavioural Aspects of Water Supply and Waste Disposal Project Work, Draft Report, Central Projects Staff, The World Bank, Washington. 32p + Preface 2p + V + Annexes, Tables and Diagrams 38p.

An internal World Bank report, drawing from previous project experience intended to assist World Bank staff in dealing with social dimensions of water supply and waste disposal project planning and management. Part I examines the need for 'socio-technical' packages to ensure technical innovations achieve their intended health benefits. Part II and III examine user participation in project construction, management, operation and maintenance. Part IV reviews problems in the distribution of project benefits, and Part V contains recommendations for incorporating social questions into World Bank project planning. The Annexes, Tables and Diagrams contain checklists, model terms of reference and guidelines for social aspects of project planning and appraisal.

The report's value is limited to planning on the style of the World Bank, but it is a useful document for administrators and planners in detailing the social issues which affect project management.

Van Wijk-Sijbesma, C (1979) Participation and Education in Community Water Supply and Sanitation Programmes: A Literature Review, Technical Paper Series, No 12 WHO International Reference Centre for Community Water Supply, The Hague, Netherlands, 162p + Annexes and References 39p.

A comprehensive review of the literature on community participation and education strategies in water supply and sanitation programmes intended to support national development agencies in programme design and implementation. As a whole the volume attempts to clarify what is implied by community participation pointing out the choices in selecting target communities, the stages of community participation and the need for an integrated programme.

Part II lists the information about a community required by planners and discusses examples in which this information was relevant. Part III similarly lists information which planners should expect to provide to a community. Part IV examines programmes in action and points to processes which facilitate the flow of information between a community and a water or sanitation agency. Part V reviews the preparation phase of establishing an environmental sanitation project, Part VI the planning and implementation

of the sanitation education programme, and Part VII the measures needed to ensure the continued use and functioning of facilities. Parts VIII and IX examine evaluation procedures and outside support needed for an integrated, community-based programme. Annexes include a considerable number of references and a flow diagram of social aspects of programme planning.

The very wealth of detail may restrict its usefulness to single national agencies, but its scope and comparative detail is unrivalled.

Van Wijk-Sijbesma, C (1979) Participation and Education in Community Water Supply and Sanitation Programmes : A Selected and Annotated Bibliography. Bulletin No 13, WHO International Reference Centre for Community Water Supply, The Hague, Netherlands, 238P.

This bibliography is a companion volume to the literature review, WHO/IRC Technical Paper Series No 12, and contains 145 items on community participation and education in water supplies and sanitation. Each item has a detailed abstract, considerably longer than in comparable bibliographies, because much of the material is difficult to obtain in the original. Material has been drawn from a total of 10,000 references in the fields of sociology, social anthropology, community development, communications, health education, adult education, public health, preventative medicine and sanitary engineering. Abstracts are indexed by Authors, key words and countries.

A very useful reference work.



## ANNEX II

## SELECTED REVIEW OF LITERATURE IN COMMUNICATIONS SUPPORT

The literature in communications support is drawn from roughly 7 literature sources:

- (a) General Reviews. The most important general sources are abstracted in Annex I. Commissioned by development agencies to assist the planning of socially appropriate sanitation programmes for the Decade<sup>1/</sup>, the reviews all consider past experience and argue for close consideration of social factors in planning and implementing future initiatives. There is broad agreement among the reviewers as to the sorts of social factors which need consideration and the arguments are generally directed towards engineers and planners. These general arguments are important. Yet the shortage of detailed documented experience, the great variation in that experience and the nature of the subject matter restrict the planning manuals practical application.
- (b) Planning Guides. Of the general reviews Elmendorf and Buckles (1980: Annex B) have developed a brief outline for a methodology to involve communities in projects; Perrett (1979: Annexes 1 to 5) includes checklists and notes for the identification of behavioural problems in the sector, for rapid assessment of social factors, for the review of village management, for the design of health education components, and for targetting projects at disadvantaged groups: and Van Wijk-Sijbesma (1979a) has written the whole of her literature review, although too detailed and complex for practical application, as a tool in the design, testing and evaluation of community participation.

No wholly satisfactory guidelines on project implementation specific to sanitation have been developed. Kalbermatten et al (1981) in the

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<sup>1/</sup> The International Drinking Water Supply and Sanitation Decade, 1981 - 1990.

World Bank series on Appropriate Technology for Water Supply and Sanitation have compiled a Planner's Guide which takes social and cultural considerations into account in programme planning, as does Grover (1982). Pacey (1980) gives a more limited guide to planning rural sanitation based on OXFAM's experience.

White (1981) is one of many papers which catalogues the stages in implementation by community participation (with reference to water supply). Cardenas (1978) in Paraguay and Buckles (1979) in Guatemala, amongst others, draw from country experience to develop general models for the implementation of sanitation programmes by community participation. Jackson (1979) adopts a more radical stance on community participation in presenting the case for the use of participatory research in rural sanitation. The model developed by Glennie (1979) for establishing self-help programmes, which, though based on the development of a rural water supply programme, has considerable application to sanitation and contains a brief annex comparing self-help water and sanitation programmes.

Few other practical "how to" manuals are accessible in the literature. Simpson-Hebert's (1981) forthcoming paper on methodologies for evaluating social factors in sanitation programmes is a welcome contribution. Much of the literature in planning and evaluating water supplies (for example, Cairncross et al (1980) has an application in sanitation.

- (c) Social Anthropology. In view of the sensitivity of data on excreta disposal in many cultures it might be expected that the social anthropological literature would make a substantial contribution to understanding defecation behaviour and the problems of cultural change. But the existing literature has disappointingly few items of real use. The relevant literature derives from three sources: ethnology, theoretical and applied social anthropology.

Ethnologists may in some instances provide important data on behavioural practices. But the quality varies by ethnographer and society, and many may be too dated to have current relevance. A

greater problem is that many ethnographers omit remarking on defecation or sanitation practices altogether.

The contribution from the main stream of social anthropology is equally limited. European Social Anthropology, in particular, has until recently eschewed practical application in administration or planning. Its contribution to the sociology of sanitation remains limited to studies on child rearing, field studies of community and domestic life and interpretative studies on the symbolism of ritual. In this last category Douglas (1966) is a classic examination of the sociological significance of pollution beliefs.

Applied Anthropologists (predominantly North American) have a small literature on the topic. Several early studies commissioned in the 1950's examine the 'cultural barriers' to 'modernization' programmes. Oberg and Rios (1955) report on the problems of self-help latrine construction in Brazil; Foster (1952), in examining human factors in technological change investigates examples of the social unacceptability of environmental sanitation programmes; and Dube (1967) examines 'cultural barriers' in the acceptability of a latrine programme in India, and in project communications in implementation.

More recently applied anthropologists from more diverse theoretical traditions have contributed towards the sector in generating relevant data for planners, in contributing to development plans, in evaluating development initiatives, and, in some cases taking on administrative functions. The following references examine the role of anthropologists in development: Clifton (1970), Cochrane (1971), and Pitt (1976). Recent applied anthropological and sociological studies with specific relevance to sanitation include Curtis (1978), Cross (1979 and 1982a, b and c), Elmendorf (1981), Khare (1962) and Simpson-Hebert (1979). Others have worked in interdisciplinary research teams and their publications are discussed below.

- (d) Medical/Epidemiological Studies. Studies in the medical literature primarily directed towards measuring the health consequences of insanitary or sanitary conditions often provide useful information on defecation habits. In a classic study of helminthic infections Headlee (1933) investigated defecation habits in an Egyptian village, and many similar epidemiological studies in many different societies contain information on excreta disposal (e.g. Buck (1970) and (1972) and Chen (1969)).

Some of the most interesting information in this field comes from medical anthropologists working on behaviours related to excreted infections: see Kochar et al (1976) in relation to hookworm infections in West Bengal, Cheesmond and Fenwick (1981) in relation to Schistosomiasis in the Sudan; and Dunn (1972) in relation to intestinal parasites.

- (e) Health Education Studies. Improvements in hygiene, environmental sanitation, and the promotion of the building and use of toilets have long been the province of health educationalists. Many countries remain without the technical capacity to design and construct latrines on any scale, particularly in rural areas, and rely wholly on educational and promotional activity to improve sanitation. There is a considerable literature, much of it usefully summarised by Van Wijk-Sijbesma (1976b: Chapter VI), which contains the experience of a variety of educational approaches and techniques used with varying degrees of success. Pisharoti (1975) is a standard guide to the use of health education in environmental health programmes. Perrett's (1982) forthcoming paper on planning communications support contains a useful section on information, motivation and education activities in water and sanitation programmes

Sanitation education may include changing specific unhygienic practices (Kidd and Byram (1978)), teaching the theory of disease transmission (Feliciano and Flavier (1967)) or how to construct latrines (Spector et al (1971)). Programmes may be targetted at families, clinics (Wagner and Lanoix (1958)), schools local leaders (Rogers and Shoemaker (1971) or local groups (Hall (1978) and Steuart (1962)). Educational techniques include audio-visual techniques (Spector et al (1971)), radio (Hall (1974) and (1978)), traditional media (Ademuwagun (1975)), local stories and poems

(Cardenas (1978)) and village dramas (Kidd and Byram (1978)).

- (f) Socio-Technical Studies. The poor results of sanitation programmes designed solely by engineers, have lead many development planners to the realization that technological solutions not only need to be safe, hygienic and affordable, but also culturally, socially, and administratively appropriate to a specific society and locality. A number of interdisciplinary studies have recently evaluated the social implications of alternative sanitation technologies in selecting optimum "socio-technical packages", Perrett (1979).

The World Bank volume on Technical and Economic options, Kalbermatten et al (1980) is a standard reference examining the implications of the basic low-cost sanitation options, while Rybcynski et al (1978) provide an annotated technical bibliography. Other useful documents in the substantial technical literature which take account of social factors include McGarry (1977), and Feachem and Cairncross (1978).

Other studies examine social factors affecting the performance of specific sanitation technologies: Blackmore (1978) et al examine the social inappropriateness of aqua-privies in Botswana, and surveys local preferences in latrine design; UNICEF Bangladesh (1980) have studied problems in the use of water seal latrines in rural area in Dacca; Briscoe (1978) points to the social consequences of introducing alternative energy source technologies which break local exchange networks and further disadvantage the poor on the Indian subcontinent; and Wright et al (1978) examine problems in usage of individual and communal latrines in Ghana.

- (g) Country Studies. A final category of literature contains studies which record national experience of communications support in sanitation programmes. A minority of developing countries have well supported programmes, and of those that do, few have been well documented.

Full programme details are not available either for programmes which have failed, or in countries, such as China, and Vietnam, which appear to have made the greatest advances in sanitation extension among developing countries.

Table A II.1 presents a selected list of countries whose experience in sanitation is documented. The best documented country as regards sanitation is undoubtedly India which has not only a considerable literature on health, behavioural and traditional aspects of excreta disposal, but also a literature on evaluations of programme experience. An important document in this respect is the evaluation of a pilot environmental sanitation project in Uttar Pradesh (Planning, Research and Action Institute (PRAI) (1968)).

TABLE A II.1  
 SELECT LIST OF DEVELOPING COUNTRIES WITH DOCUMENTATION  
 ON COMMUNICATIONS SUPPORT IN NATIONAL SANITATION PROGRAMMES

COUNTRY	KEY REFERENCE <sup>1/</sup>
<u>ASIA</u>	
INDIA	PRAI (1968) Maitra (1978)
BANGLADESH	Perrett (1980) Hasan <u>et al</u> (1980)
PAKISTAN	Bakhtari (1981)
NĒPAL	Blackwell (1969)
<u>MIDDLE EAST</u>	
SUDAN	Badran (1980)
<u>AFRICA</u>	
NIGERIA	Ademuwagun (1975) Hunponu-Wusu & Daniel (1972)
GHANA	IDS (1978), Wright (1977) and (1979)
BOTSWANA	IDRC (1981) Blackmore <u>et al</u> (1978)
TANZANIA	Chizenga (1981) Tonon (1980)
ZIMBABWE	Cross (1982c)
<u>AMERICAS</u>	
GUATEMALA	Buckles (1978) & (1979)
PARAGUAY	Cardenas (1978)
DOMINICA	Pineo (1976)
BRAZIL	Backheuser (1978) Silva (1978)
COLOMBIA	Rodriguez (1979)
MEXICO	Miller & Cone (1974)
<u>OCEANIA</u>	
PHILLIPINES	Tiglao (1963) Feliciano and Flavier (1967)
TONGA	Fanamanu (1966)

<sup>1/</sup> Full bibliographic details are in Annex III.

ANNEX III  
BIBLIOGRAPHY

- Ademuwagun Z A (1975) The Ibadan Comfort Stations: An Experiment in Environmental Health Education, Dept. Preventive and Social Medicine, University of Ibadan, Ibadan.
- Backheuser M P et al (1978) "(A programme of Community Health Education)" (in Portuguese) Bol. de San. Panam. 84 (3) pp 255-261.
- Badran M (1980) Report on Mission to Sudan Feb 1 - March 7 1980 Report No TAG/SUD/02, The World Bank, Washington.
- Bakhteari Q A (1981) "People's Participation in Slum Upgrading" Paper presented to the 7th WEDC Conference, Loughborough.
- Blackmore M D et al (1978) "Botswana Low-Cost Sanitation Project in A Pacey (ed). Sanitation in Developing Countries, John Wiley and sons, Chichester.
- Blackwell J E (1969) "Fundamental Education and Village Development in Nepal" Community Development Journal 4 (4) pp 178-185.
- Bremner C C (1964) "Ano-rectal Diseases in the South African Bantu" South African Journal of Surgery 2 (119).
- Briscoe J (1978) "Labour and Organic Resources in the Indian Subcontinent" in A Pacey (ed). Sanitation in Developing Countries John Wiley and Sons, Chichester.
- Buck P (1952) The Coming of the Maori, Whitcome and Tombs, Wellington.
- Buckles P K (1979) "Appropriate Technology for Water Supply and Sanitation: A Behavioural Case-Study: Two Rural Communities in Guatemala" in Report No RES 23 Eight Case Studies of Rural and Urban Fringe Areas in Latin America, World Bank, Washington.
- Buckles P.K. et al (1978) The Training and Utilization of Rural Water Technicians in Guatemala, mimeo, Geneva.
- Burkitt D P et al (1972) "The Effect of Dietary Fibre on Stools and Transit Time and its Role in the Causation of Disease" Lancet (ii) 1408
- Cairncross S et al (1980) Evaluation for Village Water Supply Planning John Wiley and Sons, Chichester.
- Cardenas M (1978) "Rural Water Supply and Sanitation Education in Paraguay" Assignment Child, 45/46, pp 109-120.
- Cheesmond A and Fenwick A (1981) "Human Excretion Behaviour in a Schistosomiasis Endemic Area of the Gezira, Sudan" Journal of Tropical Medicine and Hygiene 84, pp 101-107.
- Chen P C Y (1969) "The Method of Disposal of Human Excreta used by 177 Rural Malay Households" The Medical Journal of Malay 23(3) 159-168.



- x Chizenga S H D (1981) "Health Education, an Essential Component in the Promotion of Health, with Emphasis on Rural Sanitation" in Sanitation in Developing Countries, Proceedings of a Workshop on Training held in Lobatse, Botswana, 14-20 August 1980, IDRC, Ottawa.
- Clifton J (ed). (1970) Applied Anthropology: Readings in the Science of Man, Houghton Mifflin, Boston.
- Cochrane G (1971) Development Anthropology, Oxford University Press, New York.
- ✓ Cross P (1979) "Social and Cultural Aspects of Rural Sanitation in Lesotho" Draft TAG Working Paper, The World Bank, Washington.
- Cross P (1981) "Socio-cultural Evaluation of the Lesotho Primary School Sanitation Project" Draft TAG Working Paper, The World Bank, Washington.
- Cross P (1982a) "A Review of Sociological Aspects of Urban Sanitation" Ministry of Interior, Government of Lesotho, Maseru.
- Cross P (1982b) "Socio-Cultural Aspects of Sanitation Development in Kenya" Draft TAG Working Paper, The World Bank, Washington.
- Cross P (1982c) "Socio-Cultural Aspects of Sanitation Development in Zimbabwe" Draft TAG Working Paper, The World Bank, Washington
- Cross P (1982d) Community Based Workshops For Valuation Planning and Sanitation Workshops. A Case Study of Primary School Study in Lesotho, TAG Working Paper, The World Bank, Washington.
- x Cross P and Anderson (1982) "Sanitation and Rural Development" in Special Issue on Rural Health in Ideas and Action, 145, pp 14-20
- ✓ Curtis D (1978) "Values of Latrine Users and Administrators" in A Pacey (ed). Sanitation in Developing Countries, John Wiley and Sons, Chichester.
- Douglas M (1966) Purity and Danger. Penquin, Harmondsworth.
- Dube S C (1967) "Communication, Innovation and Planned Change in India" in Lerner D Schram W (eds). Communication and Change in Developing Countries East/West Centre, Honolulu.
- Dubois J A (1906) Hindu Manners, Customs and Ceremonies, Clarendon, Oxford.
- Dunn F L (1972) "Intestinal Parasitism in Malayan Aborigines" Bulletin WHO 46, pp 99-113.
- Ekwueme O (1978) "Bowel Habits in Ugandan Villagers" Tropical and Geographical Medicine 30, pp 247 - 251.
- Elmendorf M (1981) "Women, Water and Waste: Beyond Access" in USAID The Impact of Interventions in Water Supply and Sanitation in Developing Countries. Proceedings of a seminar held at PAHO, March 25-6, Washington.

- Elmendorf M and Buckles P (1980) Appropriate Technology for Water Supply and Sanitation, Volume 5. Sociocultural Aspects of Water Supply and Excreta Disposal, The World Bank, Washington.
- Fanamanu J and Vaipulu T (1966) "Working through the Community Leaders: An Experience in Tonga" International Journal of Health Education, 9 (3) pp 130-137.
- Feachem R G et al (1978) Water Health and Development: An Interdisciplinary Evaluation, Tri-Med Books, London.
- Feachem R G et al (1977) Water, Wastes and Health in Hot Climates John Wiley and Sons, Chichester.
- Feachem R G (1980) "Community Participation and Appropriate Water Supply and Sanitation Technologies: The Mythology of the Decade" Proceedings of the Royal Society of London B 209 pp 15-29.
- Feachem R G and Cairncross S (1978) Small Excreta Disposal Systems Ross Bulletin No 8, London School of Hygiene and Tropical Medicine, London.
- Feliciano G M and Flavier J M (1967) "Strategy for Change in the Barrio: A Case of Rural Waste Disposal" in D Lerner and W Schram (eds). Communication and Change in the Developing Countries, East West Centre, Honolulu, pp 279-288.
- Firth R (1940) (1940) The Work of the Gods in Tikopia London School of Economics. London.
- Foster G M (1973) Traditional Societies and Technological Change, 2nd Ed., Harper and Row, New York.
- Gelfand M (1976) "The Pattern of Disease in Africa and the Western Way of Life" Tropical Doctor 6, pp 173-179.
- Glennie C (1979) A Practical Model for the Development of a Self-Help Programme with particular reference to Field Manpower, Training and Institutional Requirements TAG working paper, The World Bank, Washington.
- Grover B (1982) Water Supply and Sanitation: Project Preparation Handbook, Volume 1: Guidelines, The World Bank, Washington.
- Hall B L (1974) "Revolution in Health Education: Health Education in Tanzania" Community Development Journal, 9 (2) pp 133-139.
- Hall B L (1978) Mtu ni Afya: Tanzania's Health Campaign, Clearing House on Development Communications Bulletin 9, Washington.
- Hall C S and Lindsey G (1970) Theories of Personality, John Wiley and Sons, New York.
- Hasan M et al (1980) Sanitation Promotion in Bangladesh: An appraisal of Agencies and Users UNICEF report, mimeo.

- Headlee W H (1933) "Epidemiological Studies of Helminthic Infections in an Egyptian Village: Soil Pollution and Soil Infestation" American Journal of Hygiene 18 pp 695-711.
- Hunponu-Wusu O O and Danbiel S O (1977) "Public Health Aspects of Housing in Nigeria: Observations on Human Factors in Refuse Disposal in Lagos" Health and Hygiene, 1 (3), pp 153-158.
- Husting E L (1968) A Biological and Sociological Study of the Epidemiology of Bilharziasis PhD Thesis, University of London, London.
- Institute of Development Studies Health Group (1978) Health Needs and Health Services in Rural Ghana Volumes I and II, University of Sussex Falmer.
- International Development Research Centre (1981) Sanitation in Developing Countries, Proceedings of a Workshop on Training held in Lobatse, Botswana, 14-20 August 1980, ID Ottawa.
- Jackson T (1979) "Rural Sanitation Technology: Lessons from Participatory Research" Assignment Children, 45/46, pp 51-74.
- Kalbermatten J M et al (1980) Appropriate Technology for Water Supply and Sanitation, Volume 1: Technical and Economic Options, The World Bank, Washington.
- Kalbermatten J M et al (1981) Appropriate Technology for Water Supply and Sanitation, Volume 2: A Planner's Guide The World Bank, Washington.
- Khare R S (1962) "Ritual Purity and Pollution in relation to Domestic Sanitation" The Eastern Anthropologist, 15, pp 125-149.
- Kidd R and Byram M (1978) Laedza Batanani, Popular Theatre and Development, A Botswana Case Study, Institute of Adult Education, University College of Botswana, Gaborone.
- Kochar V et al (1976) "Human Factors in the regulation of parasitic infections, Cultural Ecology and Hookworm populations in Rural West Bengal" in F X Grollig and H B Haley (eds). Medical Anthropology. Mouton, The Hague, pp 287-312.
- Kochar V (1978) "Culture and Hygiene in Rural West Bengal" in A Pacey (ed). Sanitation in Developing Countries, John Wiley and Sons, Chichester, pp 176-184.
- Lewis E A and Ashley-Dejo O F A (1978) "Bowel Habit in an Urban Population Sample" Nigerian Medical Journal, 8 (4), pp 343-348.
- Lewis E A and Kale O O (1979) "Laxative Usage in a Yoruba Rural Community" Nigerian Medical Journal, 9(4), pp 449-452.
- Maitra M S (1978) "Sanitation for the Poor in Calcutta" in A Pacey (ed). Sanitation in Developing Countries, John Wiley and Sons, Chichester, pp 144-152.
- McGarry M G (1977) "Waste Collection in Hot Climates": A Technical and Economic Appraisal" in Feachem R G et al Water, Wastes and Health in Hot Climates, John Wiley and Sons, Chichester, pp 239-263.

- McMichael J K (ed). (1976) Health in the Third World: Studies from Vietnam, Spokesman Books, Nottingham.
- Miller F C and Cone C A (1979) "Appropriate Technology for Water Supply and Sanitation; A behavioural case study, Yalcuc, Mexico 20 years later" in Eight Cases of Rural and Urban Fringe Areas in Latin America, PU Report No Res23, The World Bank, Washington.
- Moore S F (1975) "The Secrets of the Men: A Fiction of Chagga initiation and its relation to the logic of Chagga Symbolism", mimeo.
- Munyimbili A W C (1981) "Pit Latrines in Malawi" in Sanitation in Developing Countries Proceedings of a Workshop on Training held in Lobatse, Botswana 14 - 20 august, 1980, IRDC Ottawa.
- Oberg K and Rios J A (1955) "A Community Improvement Project in Brazil" in BD Paul (ed). Health, Culture and Community, Russel Sage Foundation, New York pp 349-377.
- Ouma J and Van Ginneken J (1980) "A Study of Human Defecation Patterns in Relation to Transmission of Schistosomiasis Man-soni in a Rural Area of Machakos District" Draft mimeo, Nairobi.
- Pacey A (1980) Rural Sanitation: Planning and Appraisal Intermediate Technology Publications, London.
- Pelto P J and Pelto G H (1978) Anthropological Research: The Structure of Enquiry, Cambridge University Press, Cambridge.
- Perrett H (1979) Social and Behavioural Aspects of Water Supply and Waste Disposal Project Work, Draft Report, The World Bank, Washington.
- Perrett H (1980) Report on Mission to Bangladesh, Feb 19-26 Report No TAG/BAN/07, The World Bank, Washington.
- Perrett H (1982) "The Planning of Communications Support (Information, Motivation and Education) in Sanitation Projects and Programms", Draft TAG Technical Note TW/03, The World Bank, Washington.
- Pineo C S (1976) Dominican Republic: History of the Rural Water Supply and Sanitation Programme, Draft report, The World Bank, Washington.
- Pisharoti K A (1975) Guide to the Integration of Health Education in Environmental Health Programmes, WHO, Geneva.
- Pitt D (ed) (1976) Development from Below: Anthropologists in Development Situations, Mouton, The Hague.
- Planning Research and Action Institute (PRAI) (1968) Induced Change in Health Behaviour: A Study of a Pilot Environmental Sanitation Project in Uttar Pradesh, PRAI, Lucknow.
- Rodriguez R I (1979) "Appropriate Technology for Water Supply and Sanitation, A behavioural Case Study: Villarrica, Colombia" in Eight Case Studies of Rural and Urban Fringe Areas in Latin America PU Report No RES 23, The World Bank, Washington.
- Rogers E M and Shoemaker F F (1971) Communication of Innovations, A Cross - Cultural Approach Free press Glencoe.
- Roth H L (1893) The Natives of Borneo Royal Anthroological Institute, London.

## ANNEX IV: CULTURAL VARIATION IN EXCRETA DISPOSAL BELIEFS AND PRACTICES

(a) Choice of Sites

Traditional sites vary with geographical circumstances, but ease of access, comfort and privacy are generally important considerations. Usage of latrines will often depend upon the new facilities providing a better service from the user's point of view. Easy access is particularly important in communities with a high frequency of defecation. Socially prescribed norms, such as access to water for cleansing or the designation of certain defecation sites are other factors affecting choice of site.

(b) Postures

One of the earliest applied anthropological investigations of latrine usage pointed to the fact that latrines with seats were not used in El Salvador, a society in which people had always squatted (Foster (1952)). Squatting remains a strong preference in highly pollution-conscious societies because it minimises anal contact. But in several societies, for example in Latin America (Elmendorf and Buckles (1980:39)) and in parts of Southern Africa (Cross (1981)), seats are preferred among adults. Postures in defecation are of considerable ritual importance in some cultures.<sup>1/</sup>

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1/ For example Dubois (1906) lists twenty three rules to be observed by Brahmins when answering "the calls of nature". These include details of posture:

- V "He will take care to hang his triple cord over his left ear and to cover his head with his loincloth.
- VI He will stoop down as low as possible. It would be a great offence to relieve oneself standing upright or only half stooping ...
- VII While in this posture he should take particular care to avoid the great offence of looking at the sun or the moon, the stars, fire, a Brahmin, a temple, an image, or one of the sacred trees.
- VIII He will keep perfect silence.
- IX He must chew nothing, have nothing in his mouth, and hold nothing on his head".

(c) Times and Frequency of Defecation

In many societies outdoor defecation mostly occurs in hours of semi-darkness, at sunrise and sunset, when there is less chance of being seen. Yet this may not always be possible, particularly given the fact that frequent bowel movements are the norm in many developing countries. Table A IV.2 summarizes data on defecation rates in a range of developing countries. The causes of the different rates are both dietary (bulky foods with a high fibre content lead to large soft stools (Burkitt et al (1972)), and cultural. Laxative and enema abuse are common in societies where local medical therapy supports 'cleaning out' the digestive tract (Lewis and Kale (1979), Cross (1981), Ekweume (1978)). The high incidence of diarrhoeas in developing countries and the fact that loose stools are endemic in many parts of the world (e.g. Bremner (1964)) further emphasizes the need for sanitation facilities to be accessible at all times.

Commentators in a variety of developing countries have observed that flatus is rarely withheld, defecation seldom postponed and that the capacity to defecate at will is widespread (Walker et al (1970), Ekweume (1978)). Another feature of defecation in developing countries is that stools are passed quickly relative to developed country habits where people may often spend a considerable time defecating. Kochar (1979) for example found that the average squatting time was three minutes in West Bengal.<sup>1/</sup>

(d) Anal Cleansing

Different cultural interpretations of the consequences of touching excreta result in a considerable division between those who use water and those who use another means of anal cleansing. Preferences in anal cleansing are often strongly felt, particularly in much of Asia and the Middle East where the use of paper is generally abhorred. Failure to consider local preferences had been one of the major failure of sanitation programmes. In Egypt, for example, a rural programme implementing 50,000 pit latrines failed in large measure because of lack of availability of water.<sup>2/</sup>

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<sup>1/</sup> The greater prevalence of piles in developed countries may be attributable to the longer periods spent straining to push out firm stools.

<sup>2/</sup> UNDP Decade Country Programme Sheet for Egypt.

TABLE A IV.1

Defecation Frequency in Selected Developing Countries

<u>Country</u>	<u>Society</u>	<u>Sample</u>	<u>Frequency</u>				<u>Source</u>
			<u>% per day</u>				
			(1	>1	2	3	
NIGERIA	Urban (Ibadan)	449	11	56	27	6	Lewis and Ashley-Dejo (1978 data re-categorised)
NIGERIA	Rural (Yoruba)	129	7	35	43	15	Lewis and Kale (1978 data re-categorised)
ZIMBABWE	Urban (Salisbury)	144	?	16	65	19	Gelfand (1976)
ZIMBABWE	Rural (Shona)	134	?	13	67	19	"
UGANDA	Rural (mainly Baganda)	1245	1	11	40	50	Ekwueme (1977)
SOUTH AFRICA	Urban (Jo'burg)	369	1	21	37	41	Bremner (1964)
SOUTH AFRICA	Rural (Sekukhuniland)	?	1	42	43	14	Harrison quoted in Bremner (1964)

(e) Associated Rites and Taboos

Pollution-conscious societies have a well-developed set of rites and taboos which ensure cleanliness. Ritual washing and mouth cleansing after defecation is prescribed in many Asian societies. A taboo on using the hand used for anal cleansing for other actions such as eating or touching others is widely practiced. Defecation sites and all those associated with defecation may be avoided.

A variety of other beliefs and prohibitions affect defecation. A common belief in many societies is that man's body products retain the characteristics of their owner and can be targets for sorcery or witchcraft. Husting (1968), for example reports that the Shona prefer to hide their stools by defecating in shady places and areas of thick vegetation. In Tanzania the prospect of mixing faeces in a communal pit was found to be unacceptable (Hall (1978)). In Fiji Roth (1893) reported extreme secrecy about places of defecation. The hiding of faeces was further developed among the Chagga chiefdoms of the nineteenth

century where not only did men hide their faeces, but for fear of becoming sterile, men could never allow women to see them defecate. Young men at initiation were taught to put about a fiction whereby they did not ever defecate and that their anuses were stitched. Moore (1975) interprets the belief as a metaphor to foster male fertility.

In other societies touching faeces in ritual reinforces social values. Among the Nyakusa the Wilsons report that eating excrement in ritual is an expression of madness. The Nyakusa associate excreta with defilement: cleanliness retains dignity and children are trained to take a hoe to bury their faeces after defecation. Traditional Maori society had a custom whereby before setting out for war warriors were vitually protected by the priest at a ceremony at their fort privy and each in turn bit the cross beam of the latrine. Given the Maori distaste for contact with excreta Buck (1952:393) interprets the rite as a demonstration of their resolve for the coming combat.

A set of avoidance customs affecting defecation common to many African societies are those regulating relations between different categories of household members. The large, rural Luo families in Western Kenya, for example, have avoidance rules which prohibit sharing of defecation sites across generations. (Cross (1982b)) In Malawi sharing between in-laws of different generations and of different sexes is especially difficult since meeting or catching sight of one another having just defecated is an abrogation of cultural categories (Munyimbili (1981)). The taboo necessitates separate defecation sites, and may well limit usage of a family latrine.

(f) Preferences in Social Organisation

Local social organization may affect defecation practices at both the community and household level. Communal defecation is not unknown; women and children commonly defecate together in India, and several other societies, though the taboos associated with defecation mean that first preferences are invariably for privacy in defecation. Communal facilities may prove especially unsatisfactory when users are expected to cross social barriers to share the facility. Avoidance of the opposite sex is generally universal, but the strength of the taboo varies between cultures. In Melanesia for example there is strict adherence



to sexual segregation and the setting aside of separate defecation sites. In other societies, sexual segregation is less important and sites are less clearly demarcated.

Social arrangements in defecation also vary within households. Sexual segregation may be more or less important, and certain sites may be retained by different generations. In Honduras women are restricted from using the same latrine as men (quoted in Elmendorf (1981)). Intra-familial avoidances such as in-law avoidance among the Tikopia (Firth (1940)) and the examples quoted above are common in many societies and further affect patterns of defecation.

(g) Use of Faeces

Different cultures have varying uses for human excreta. In many Oceanic cultures excreta are fed to pigs and poultry. In China human excreta is composted and used on the fields. In many other societies, for example in much of Africa, it is considered improper to use human excreta in compost.

## ANNEX V: SANITATION MANAGEMENT STRUCTURES

Sanitation facilities may be managed by a number of alternative means. The optimum method in a particular case will depend upon the chosen technology and a variety of other social variables. The basic alternatives are, management by:

- (a) a central sanitation authority;
- (b) the adaption of traditional authority or a traditional institution;
- (c) a local community authority;
- (d) a user's association;
- (e) private ownership;

These alternatives may also be combined in a number of different ways, as for example where certain duties are allocated to different bodies.

The choice of local-level management structures has considerable implications in the management of facilities. Table II.4 presents a comparison of managerial implications of alternative management structures. A similar comparison of different systems of water supply management has been developed in greater detail in Feachem et al (1978). The distinctive requirements of sanitation as opposed to water supplies and other innovations will be emphasized here.

(a) Central Sanitation Authorities

The main advantage of management by a central authority (national or district) is that tasks are ideally carried out by a routine bureaucratic system and one not reliant on voluntary effort. The more complex sanitation technologies, especially water-borne sewerage, but also nightsoil collection systems are best operated by central authorities, though it is a less practical option for the simpler technologies.

The chief disadvantage is that most developing countries simply do not have the capacity to construct, maintain and collect payment for latrines, particularly in rural areas. Other disadvantages include a lack of flexibility in adopting a programme to specific user's needs; and vandalism and resentment against lack of user controls. Efficient bureaucratic administration

of basic infrastructural facilities like sanitation services particularly in urban areas may well be the ideal option, but for the foreseeable future its applicability is limited to a very few urban areas and specific technologies.

(b) Traditional Authority

Traditional local institutions of authority need to be examined in each case to determine their appropriateness for adaption to local sanitation projects. A general problem of relying solely on traditional authorities is that they lack necessary administrative and technical skills and are inflexible to new demands. For example, while the consent of the chieftainship is a precondition of project success in much of Africa, the chieftaincy itself is unsuited as the sole source of authority in sanitation programmes. In another example on the Island of Tonga the exclusion of women in the traditional style of decision making lead to the failure of a sanitation project, while much more was achieved in neighbouring villages which established community-based authorities.

In particular situations other traditional roles may be successfully adapted to undertake aspects of latrine management. Scavenger castes for example, may be of use in latrine maintenance and pit emptying. In other societies construction might be undertaken by established builders especially trained in latrine construction. These appointments will generally be made from a newly established sanitation authority.

(c) Local Community Authority

Community participation in sanitation management is a fashionable, much-abused approach which conveys a variety of meanings (Feachem (1980)). 'Community participation' is a catch-all phrase, at once emotive and ambiguous, well-suited to the demands of international donor agencies and politicians, and its use can be compared in many ways to the misuse of the concept of community development in the latter years of colonial rule. At its simplest the concept refers to activities undertaken by members of a community for themselves with a minimum of outside assistance, though in practice the process of community participation can have a great many variations.

The critical ambiguity is in the degree of local participation as against the level of outside assistance. White (1978) has developed a ten point scale of community involvement (with respect to community water supply programmes) which is summarised in Table A V.I. The range extends from mere consultation with community representatives about community needs; to community adoption of a variety of project functions, such as contributing labour, cash and maintenance; to autonomous generation of an activity; to a community taking control over the initiation and management of an activity.

One of the few clear lessons from past experience is that low cost sanitation programmes neglect some form of local involvement at their peril.

The literature is littered with examples of failed programmes as a result of a failure to consider user's viewpoints. Community participation as mere tokenism is equally suspect.

A second lesson is that community involvement is no substitute for sound administration (Schaffer (1969)). Planned community participation requires careful consideration of how resources are to be managed and of the structure and functions of local-level management of facilities. The attempt to engage genuine community involvement in programme management is likely to necessitate more, rather than less, extension work by an outside agency.

A third lesson is that, except where communities are highly mobilised under a united political leadership, community involvement in a successful project is a costly affair particularly in terms of recurrent costs to maintain adequate support structures. The support structures needed include motivational campaigns, technical advice and training, support in project management, and maintenance and education programmes to ensure long term usage.

Another distinction in community participation programmes, less commonly drawn, is that between projects in which planned community participation is primarily a means to extending sanitation facilities to prevent excreta-related diseases, and projects which are themselves a means to galvanise local resources towards more fundamental social changes (Cross and Andersson (1982)).

TABLE A V.1

SCALE OF COMMUNITY PARTICIPATION  
IN WATER SUPPLY AND SANITATION PROGRAMMES

- 1) a. Consultation with community representatives, or leaders, to ensure that the programme introduced by the outside agency is adapted to the needs of the community, and avoids difficulties in implementation.
- 1) b. Consultation with other members of the community, or specifically, the poor to ensure that the programme meets their requirements.
- 2) A financial contribution by the community towards construction.
- 3) Self-help projects in which a specific group of beneficiaries contribute labour (perhaps also materials), especially in construction work, to reduce costs. There is a large input from the external agency.
- 4) Self-help projects in which the whole community collectively contributes labour (perhaps also materials), especially in construction work. There is also a large input from an external agency.
- 5) The training of one or a few community members to perform specialized tasks (e.g. village health worker, or operator of a slow sand filtration system).
- 6) Mass action: collective work aimed directly at an environmental change of general benefit, e.g. draining waste water (distinguished from self-help by the relative unimportance of any input by an external agency).
- 7) Collective commitment to change personal behaviour, and collective social pressure for the realization of such changes (e.g. construction and use of a latrine, frequent hand-washing with soap).
- 8) Self-reliance in the sense of the autonomous generation, within the community, of ideas and movements for the improvement of living conditions, as opposed to stimulation by outside agents. The community may well have recourse to external agencies to help with implementation of these improvements.
- 9) Self-reliance in the sense of using only the efforts of the community members themselves and not appealing to outsiders for help.
- 10) Self-reliance in the sense of using local materials and manpower, rather than collecting funds internally in order to purchase goods and services from outside, including increasing local capacities with this kind of self-reliance as a goal.

The early mass establishment of sanitation programmes in Vietnam (McMichael 1976), Mozambique and similar societies was pursued not only because of the efficiency of sanitation as a public health intervention or the symbolism of creating a ritually cleansed new society, but because, unlike many technological innovations, low cost sanitation technology has the potential to be wholly transferred, and need not require long term outside assistance in engineering skills and materials. The argument is here that sanitation development is inextricably part of a broader process of development and social change, however convenient it may be for planners to isolate individual programmes. Even in the case where a less planned, less supported and less costly sanitation project fails in its sanitary aspects, sanitation may yet be a convenient tool for use in promoting rural development in a broader sense.

Difficulties with this approach include the arguments developed in Feachem et al (1978) that the catalyst thesis of community development (whereby one successful undertaking will encourage a community on to greater heights) can well be reversed such that an unfortunate experience will doubly detract from further development initiatives. General-purpose local community committees moreover have the disadvantage that they may not have the support of all community members; that they lack the power of sanction against non-contributors and mis-users; and by imposing their authority on the whole community and not allowing dissenters that they infuse community management with local political antipathies.

Yet there are examples in the literature in which this approach adopted with regard to sanitation has reportedly had a considerable impact. One example developed further in Case-Study V in the text is the use of participatory research in sanitation to involve a community of Cree Indians in Canada in a local analysis of the root causes of community underdevelopment. This led them to formulate a wide-ranging plan of community action (Jackson 1979)).

In conclusion it is apparent that whether for limited environmental health purposes, or for broader developmental goals, sanitation projects require community participation. The former case in particular requires detailed consideration of how communities can translate community enthusiasm into long

term administrative ability. The use of general-purpose local development bodies is only one of several managerial options. Single-purpose committees may be more effective, though more local units still may be even better suited to sanitation management.

(d) User Associations

User associations are local associations founded around specific activities, in this case use of a latrine. They consist of household clusters on the basis of physical proximity, kin or other interhousehold relationships. User associations are invariably a secondary option to private ownership, but they have the important advantage of reducing the per capita cost of facilities and so create a potential to achieve widespread coverage.

As sanitation management structures, user associations have distinct sociological advantages over community authorities. User associations have a clear utilitarian basis for interhousehold co-operation and do not rely on public spiritedness, a situation more conducive to long term usage. The rules and purpose of participation in an association may be clearly established. Dissenters and persons not wishing to collaborate in the project may opt out without undermining a general-purpose community authority.

The applicability of user associations to specific situations should be considered case by case. In many societies no form of sharing would be possible, whilst in others informal interhousehold sharing arrangements are well established and might be adapted to sanitation user associations. Initial sociological investigation and training of user committees are necessary preconditions to a successful programme establishing user committees.

(e) Private Ownership

Individual household ownership of sanitation is universally the preferred distribution of sanitation facilities: individual access enables privacy and encourages the highest levels of usage; private ownership decreases interhousehold dependence and removes sanitation from community debate; the motivation to maintain reasonable levels of cleanliness and maintenance are generally higher; children may be more easily trained to use a family latrine; and latrine building may become simply an extension to the family home.

The only major shortcoming of private ownership is cost. The high initial cost of individual latrines is a major constraint to the widespread promotion of family latrines in the course of the decade. Any so-called 'low-cost' sanitation technologies will remain well out of reach of the majority of rural households unless alternative systems of payment can be developed, or attractive, really low-cost technologies developed as has occurred in Zimbabwe. Another possible constraint in some societies is the need for more than one latrine per households, to conform to preferred patterns of defecation. Finally it is likely that health benefits will only be achieved where entire communities use latrines. A programme promoting individual ownership will invariably also need to promote latrine construction at a community level.



## ANNEX VI

## LOCAL-LEVEL MANAGEMENT FUNCTIONS

(a) Initiation and Promotion

A local-level authority may itself become an agency for project initiation or promotion. Sanitation promotion is discussed in Section 8.

(b) Payment

Low-cost sanitation programmes often only reflect savings at a national level, and to the user are not low-cost at all, representing a sum of the order of the total cost of a household. Realistic levels of payment need to be established not only in terms of the total and long-term cost of the programme, but also in terms of the user's ability and willingness to pay.

Payment collection may take several forms, and need not necessarily be a local-level function. Where it is, local-level or community authorities may appoint a treasurer and advise where payments should be deposited. Regular payment may be difficult for households without wage-earners, and regular cash collections are unsuited to community collection. Single payments may be more suitable, though where necessary, provision needs to be made for maintenance payments, or in communal facilities for the payment of a cleaner, attendant or maintenance agent. In integrated programmes payment may be combined with housing or water supply components. Less common methods of payment are by taxation or by barter.

(c) Location

Siting latrines is a local-level management function taken after considering technical, public health, cultural norms and preferences and land-tenure regulations.

(d) Construction

Construction may be carried out by:

- householders with or without outside assistance;
- community labour with or without outside assistance;
- a central technical unit;
- local entrepreneurs, trained in sanitation construction.

The factors affecting the choice of method include: availability of communal or household labour, the strength of local community organisation, existing systems of labour sharing, the willingness of households to pay for construction, and the availability of skilled labourers locally. Self-help

Construction requires clear advice to pre-empt problems in construction which might disillusion voluntary effort. Where construction is by communal effort locally acceptable methods of sharing the workload and dealing with non-contributors need to be established. Training for maintenance or further extension might be undertaken during construction.

(e) Cleaning

Cleaning household latrines is clearly the responsibility of the household, but the programme needs to ensure that levels of hygiene are sufficient and that cleaning materials are available. The cleaning of shared facilities should ideally be managed institutionally and should be the responsibility of a paid attendant. Self-help cleaning of shared facilities invariably results in poor hygiene and low levels of use, unless established in a strong community organization.

(f) Maintenance and Repairs

Maintenance provision is the most critical long-term local-level management function. User education in maintenance and access to tools and advice are necessary components of a household latrine programme. Trained local builders may assist in the back-up service. Shared facilities ideally require a trained maintenance officer or attendant, or a closely monitored system of maintenance established within a strong community organization: left as a loosely-structured community function little maintenance may be done.

The size and frequency of maintenance and repair needs vary by technology. Maintenance provision for pit latrines should include procedures at the end of the pit life.

## ANNEX VII

## TYPICAL JOB DESCRIPTION FOR COMMUNICATIONS SUPPORT ADVISOR

Title: Communications Support Advisor

Job Objective: The post will be responsible for leading a team planning and executing communications support activities in low-cost sanitation development in collaboration with the sanitation technical section. Communication support activities include: undertaking pre-planning assessment studies of sociological and educational aspects of sanitation; incorporating the results of these studies into technical design, the design of health education activities, and local-level management design; undertaking community-based sanitation promotion and user education; and monitoring and evaluating project progress.

Terms of Reference: The Communications Support Advisor will have the following specific responsibilities:

1. To lead a team in the design, execution and analysis of pre-planning studies assessing sociological and educational aspects of sanitation development across the range of communities to be served with sanitation.
2. To assist in the development of affordable, culturally acceptable sanitation technologies in demonstration and development projects.
3. To design and implement educational and promotional activities to complement technical development in demonstration sanitation project sites.
4. To advise on and where appropriate assist in the development of educational techniques and materials for sanitation development in collaboration with the Health Education Division in the Ministry of Health.
5. In association with health extension workers to develop techniques for community participation and education in sanitation projects.
6. To advise on appropriate local-level management structures and establish local procedures for the implementation,

construction, collection of payment, maintenance, cleaning and repair of sanitation facilities in project sites.

7. Where appropriate to liaise with local social science institutions in the design and execution of socio-cultural studies.
8. To liaise closely with the head of the sanitation technical section to achieve integrated programme implementation.
9. To establish procedures for monitoring and evaluating sanitation project development, and to undertake these activities.
10. When appropriate to advise Government on communications support issues in sanitation development, and to be a resource person on these issues, particularly in the preparation of national sanitation development plans and in the development of sanitation projects for submission to donors.
11. Where appropriate to advise on and develop protocols for applied research activities on behavioural aspects of public health and sanitation.

## ANNEX VIII

## THE DISCIPLINARY BACKGROUND OF COMMUNICATIONS SUPPORT

Communications support, in the sense used in this report, requires skills and experience from at least two sets of disciplines:

- (a) the social sciences;
- (b) health education and communication studies.

This annex contains background notes on trends and subdivisions within these disciplines.

(a) Social Sciences

The poor record of both purely engineering programmes and of poorly supported, inadequately planned community programmes have led in recent years to a somewhat reluctant invitation to social scientists to participate in planned extension programmes. The experience of interdisciplinary programme planning and execution has been encouraging and is clearly the preferred approach in sanitation. The inclusion of social scientists has not been without problems.

A principal problem is that engineers and economists are often loath to relinquish disciplinary control and the involvement of social scientists has been more a token gesture than a real commitment to social issues. It is often the case that, despite the inclusion of social scientists, the critical planning issues are still made on technical or narrowly economic criteria. A further problem is that social scientists' conception of development is often broader than engineers' and economists' whose approach is better suited to the short term programming.

Social scientists for their part present a wide array of perspectives and abilities, and engineers and economists have found difficulty in selecting social scientists with the appropriate skills to meet their needs. Table A VIII.1 sets out some basic definitions of disciplinary divisions within the social sciences, though it should be noted that these definitions vary according to different schools and national traditions. The specific experience, training and orientation of individual social scientists is of more relevance to sanitation development than attachment to a particular subdiscipline. An orientation to applying social science skills is especially relevant.

TABLE A VIII.1

## DISTINGUISHING CHARACTERISTICS OF SOCIAL SCIENCE DISCIPLINES

DISCIPLINE	SUB-DISCIPLINE	DISTINGUISHING CHARACTERISTICS
Anthropology	Applied Anthropology	The professional application of anthropological disciplines to human affairs; also 'Action Anthropology', 'Applied Anthropology', 'Development Anthropology'.
	Cultural Anthropology	The study of non-western societies; Greater emphasis on culture; methodology traditionally field residence using informal interviews and field observations; predominantly North American usage.
	Ethnography	Descriptive studies of human societies (usually of developing countries).
	Social Anthropology	Historically, the study of non-western (usually small scale) societies; greater emphasis on social structure; methodology traditionally involved field residence, informal open-ended interviews and detailed observations; predominantly British and European usage.
Behavioural Science	-	A general term for disciplines concerned with human behaviour; greater emphasis on non-subjective behaviour.
Sociology	-	The scientific study of human behaviour; general social science discipline containing a wide variety of methods and emphasis: in general, greater emphasis on societal facts than individual behaviours.

Within the social sciences there is a longstanding and as yet unresolved debate between 'theoretical' and 'applied' social scientists. The 'theoreticians' have decried applied practitioners' short term thinking, their lack of a coherent theory of society, their tendency to deal only with dependent variables and not the fundamental issues in social change, and the consequent moral and ethical issues raised by collaboration with Governments and outside agencies. Many of these criticisms have, for example, emerged in the reanalysis of the relation between British social anthropologists and colonial administrations.

Applied social scientists have not offered a united response to this attack, though they are fast gaining more widespread recognition. American social scientists in particular, have generally been less troubled by these issues, partly because the professional structure of social science disciplines in the USA is more open to the emergence of new approaches. Applied anthropology is, for example, a major sub-discipline in the USA, though there is a considerable variation in its quality. The case for a more practical involvement in planned social change points to the sterility of purely theoretical debate; the fact that applied social science does not necessitate a lack of theory, but places the social sciences in a more immediate and challenging position by attempting to make sense out of the variety of human action and in linking action to theory; and the fact that other disciplines are looking to the social sciences for assistance in development planning and other applied activities.

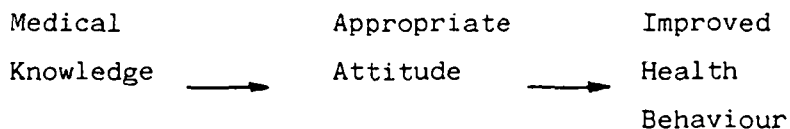
Skills and experience from the social sciences needed in communications support include the following:

- a knowledge of survey methods and analysis;
- experience in sociological analysis in the appropriate cultural milieu;
- experience in development planning;
- knowledge and experience of community liaison;
- management experience.

(b) Health Education and Communications Studies

Health education became a component of sanitation development in the early part of this century. On its own in the past it has proved to be a relatively ineffective tool. Health education in colonial days was an unimaginatively-used, weakly-supported, though much relied-upon tool to promote sanitation development. A reassessment of the assumptions, role and techniques of health education in the 1970s have greatly improved the discipline's potential contribution to the sector. Below health education trends of relevance to sanitation development are summarised:

- (i) Not 'Victim-Blaming' Prior health education approaches assumed that the most important variable in health status was individual behaviour and laid great store on individual culpability in health behaviour (Brown and Margo (1978)). The social context of health behaviour is now given more emphasis, recognizing both the complexity of factors affecting behaviour, and societal forces which often determine behaviours detrimental to health. The shift in emphasis from the individual to the community has paralleled a similar shift from providing information to educating a population (Walt (1982)).
- (ii) Disillusion with KAP Much colonial health education was based on the KAP model (knowledge, attitudes, practices) which assumed that a change in health practices depended upon the acquisition of the medical model of health knowledge:



Knowledge about health risks is no guarantor of healthy behaviour: knowledge about the dangers of smoking has, for example a limited affect on smoking behaviour. A change in health behaviour may be better achieved by several other means, including community pressure and appeals to quite different values. The focus should primarily be on changing action rather than giving information on disease causation.



- (iii) Integration with other Complementary Components Health education in isolation generally has a limited impact. The promotion of improved hygiene where access to water is limited, or of boiling water where time or fuel is at a premium, is bound to fail. Health education is more effective as a complement to technological and other changes rather than having the entire responsibility for a social change. It is a salutary reminder that the great advances in sanitation in Europe occurred as a result of general economic development and technical innovations and owed little to health education per se.
- (iv) Health Education as Community Dialogue. Paternalistic assumptions of health education as a one-way flow of information have greatly limited its effectiveness in health development. A more positive approach conceives of health education as a dialogue between the community and educators in which information from the community is combined with technical and health information to achieve a locally acceptable, yet technically sufficient solution. In the case of sanitation this approach has for example been successfully used in developing the Nigerian 'comfort stations' (Ademuwagbe (1975)), and in Guatemala where Tonin (1980) argues that local participation in the education process was the key component in improving rural sanitation conditions.
- (v) Imaginative use of Communication Techniques. Lectures in public hygiene, the repetition of text book formulae without examining beneficiaries' particular circumstances, and over-reliance on one-way communication techniques, such as the radio, have had limited success in sanitation development. The emergence of communications studies as a separate discipline has greatly enlarged the range of communication techniques available. The imaginative use of different techniques should greatly enhance educational impact.

## ANNEX IX

CHECKLIST OF INFORMATION REQUIRED FOR  
PLANNING COMMUNICATION SUPPORT

- (a) Social Organization
  - (i) Household Composition and typical physical layout.
  - (ii) Local administrative and political structure.
  - (iii) Major class, ethnic, language and other social groupings.
  - (iv) Other formal and informal organisations, committees networks etc.
  - (v) Principal social and economic activities.
  
- (b) Development Priorities
  - (i) Local developmental priorities
  - (ii) Assess extent of self-sufficiency and resources for self-help.
  - (iii) How important is sanitation amongst local felt needs?
  
- (c) Health and Disease
  - (i) Indigenous understanding of principal excreta-related diseases including local disease categories and local ideas of transmission, cure and prevention.
  - (ii) Identify local people and institutions involved in health promotion, disease prevention, and with skills in latrine construction.
  
- (d) Defecation Practices and Latrine Usage.
  - (i) Defecation sites for those without latrines.
  - (ii) Preferred postures (sitting or squatting).
  - (iii) Preferred times and frequency of defecation.
  - (iv) Anal cleansing habits.
  - (v) Values and beliefs associated with defecation.
  - (vi) Rites and taboos associated with defecation.
  - (vii) The disposal of children's excreta and toilet training methods.
  - (viii) Social organisation of defecation (who may share facilities with who).

- (ix) Are human faeces handled (or used for compost, fed to animals etc)?
- (x) Do all members of households with latrines always use them: reasons why this may not be so.
- (xi) Are latrines used for storage (or anything else).
- (xii) Is latrine use restricted in anyway: how is this enforced.

(e) Social Soundness of Sanitation Technology

- (i) Number and type of existing latrines, and dates latrines were built.
- (ii) Proportion of population with access to latrines.
- (iii) Social characteristics of households with latrines.
- (iv) User's assessment of the state and design of latrines (size, life, choice of building materials, durability, ability to be moved, hygiene, smell, flies).
- (v) Locally-perceived attractive features of latrines.
- (vi) Why have households without latrines not built them.
- (vii) Factors affecting preferred siting of latrines.
- (viii) Users ideal choice of latrine.
- (ix) Cost of existing sanitation and local costs of latrine construction.
- (x) How much are people willing to pay for sanitation.
- (xi) How many people are unable to pay for basic facilities.
- (xii) Users' best selection of technology choices in the light of cost.

(f) Project Management at the Local-Level

- (i) The role of community organisations in initiating construction or managing latrines.
- (ii) Responsibilities for construction and management of latrines within the household.
- (iii) Who initiated existing latrines.
- (iv) Who built and paid for them.
- (v) Who cleans, maintains and repairs latrines and how often are these functions undertaken.
- (vi) What is the procedure when pits fill up and who does it.
- (vii) How are abusers controlled.

(g) Outside Support

- (i) What outside support exists for technical advice, health education, support for community management, training facilities.
- (ii) How do users rate this support: what support do they want.
- (iii) Existing health education capability strategies and procedures.
- (iv) What outside activities lead to present latrine activity (give history of the programme showing how this was perceived in the community).
- (v) Do people know how to obtain outside support.

## ANNEX X

ADVANTAGES AND DISADVANTAGES OF DIFFERENT MEDIA, MATERIALS AND TECHNIQUES  
FOR COMMUNICATIONS SUPPORTA. COMMUNITY-BASED APPROACHES

.. APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
1. Public meetings and lectures	Easy to arrange. Reach many people Can have more than one speaker. Create public interest and awareness. Stimulate follow-up discussion.	Audience is usually passive. Speakers may not understand audience's needs. Difficult to assess success. Audience might not learn the main points.	Handouts should be used. Presentation should be clear. Use visual aids when possible Audience should be encouraged to raise questions and to participate. Speaker should establish two-way communication.
2. Group discussion.	Build group consciousness. Individual members of the group can understand where each member stands in regard to the discussed issue: provide chances for exchanging opinions and increase tolerance and understanding.	Some members may dominate. Sometimes difficult to control or to keep focusing on the main issue. Requires trained leaders.	Should be used with an interested audience to discuss a definite problem. Procedure should be flexible and informal. Summary of discussion should be presented at the end of discussion. Decision should be made by group members regarding its stand on the issue discussed. Requires the selection of good chairman.

Source: This table has been taken from Perrett H "The Planning of Communications Support ( Information, Motivation and Education ) in Sanitation Projects and Programs" TAG Technical Note 13/03, World Bank, Washington, Draft, June 1982.

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	- COMMENTS
3. Role playing	Facts and opinions can be presented from different viewpoints especially on controversial issues. Can encourage people to reevaluate their stand on issues and can invite audience participation. Deepens group insight into personal relations.	Cannot be used in community meetings. Some role-players may feel upset by playing a role they do not agree with. Requires careful preparation for the selection of the issue and actors. Careful preparation is essential.	Can only be used in training courses. Follow-up discussion should focus on the issue rather than on actors' performances. Source material about the issue should be provided to the actors to prepare their arguments.
4. Drama	Groups can be active "learning by doing". Can attract attention and stimulate thinking if situations are effectively dramatized.	Actors require attention in training and preparing script. Preparations might be too difficult for the field worker. Difficult to organize because it requires considerable skills and careful guidance by the field worker.	Should be restricted to one issue. Can only be used during training courses. Can be used as entertainment if well prepared before a public meeting.
5. Case study	Can illustrate a situation where audience can provide suggestions. Can elicit local initiative if the case corresponds to local problems	Difficult to organize. Rewording of events and personalities might reduce the effectiveness of the case. Some audiences may not identify themselves with the case.	Should be clearly prepared. Can be used in training course. Questions and discussions should lead to recommendations for audience action. Audience should be encouraged to prepare case studies relevant to its experience.

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
6. Home visit	Establish good personal relationships between field workers and families. Can provide information about rural families that cannot be collected otherwise. Encourages families to participate in public functions, demonstrations and group work.	Field worker cannot visit every family in the community. Only families in accessible localities can be visited.	Records should be kept for families visited. Schedule of home visits should be developed to assure allocation of time for field work activities. Hand-outs should be given to the families visited.
7. Demonstration (with a small group)	Participants can be active and learn by doing. Convinces the audience that things can easily be done. Establishes confidence in field worker's ability.	Requires preparation and careful selection of demonstration topic and place. Outside factors can affect demonstration results and consequently might affect confidence in field worker.	Demonstration processes should be rehearsed in advance. Audience should participate in the doing. Educational materials should be distributed to the participants at the end of the demonstration should be suitable for people to attend.

B. MASS MEDIA APPROACHES

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
1. Radio	<p>Radio technology available in all countries and can reach mass audiences cheaply. Receivers are inexpensive and available in the remotest communities. Messages can be repeated at low cost. Easy to reach illiterate audience. Can be used to support other channels of communication. Efficient to announce events and development activities, and, if properly used, can mobilize audience to participate in public events and projects of value to the community. It is flexible, and style can include drama, lectures, folklore songs, interviews and variety shows. Excellent in regular teaching and out-of-school correspondence courses. Radio is effective in creating awareness and setting agenda of priorities for people's attention.</p>	<p>One way channel. Complicated technical issues. Difficult to illustrate. Audience reaction, participation or interest in messages delivered, difficult to assess. Requires special skills and continuous training of radio personnel. Content may not be tailored to small communities and tends to be general in nature and is usually prepared for national audience, or special ethnic or language group thus reducing relevance to local problems. Difficult to use material broadcast as a reference without investment in radio documentation. Texts of radio programs are usually needed for effective follow-up. This is not always possible.</p>	<p>Radio messages should often be supported by personal follow-up. Radio effectiveness increases if messages used in group discussions (e.g., farm forums) or regular training courses. Desirable for radio to cover local events; assist in explaining and promoting local projects and development efforts. Programming should maintain balance between national and local coverage; interviews and lectures, news and profile coverage of development issues.</p>



APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
2. Television	<p>Its novelty attracts audience and can be the main attraction in rural communities. Can be used to explain complicated messages because of its combination of sound and picture. Programs can be repeated at reduced cost. It is suitable for mix presentation of issues. Suitable for motivation through utilization of folklore art and music, community events, and animated public speeches and debates. Efficient in bringing issues to public attention, and powerful in setting public agenda for action and participation in development effort. Successful in creating awareness. Suitable for illiterate audiences if they have access to receivers or to TV clubs.</p>	<p>Expensive to operate. Receivers not available in many rural areas and among poorest population groups. Has traditionally been used for entertainment and politics more than for development and educational purposes. Programming skills more likely to be available for entertainment. Educational programs may face severe competition from entertainment. No audience participation. Present state of technology in many developing countries does not allow immediate coverage or timely relay of local community actions and events. Requires more planning and preparation, and technical, creative, and communication skills than other media. Difficult to use material televised as a reference without investment in television documentation. Texts of television programs are needed for follow-up. This is not always possible.</p>	<p>Local television stations can play important role in development. More educational training is required for staff. Easy to exchange information and programs are scheduled in advance, well-documented, with heavy involvement of and focus on local problems. Very effective for activating group learning when used in viewing centers or as part of multi-media campaign for education-information and motivation.</p>

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
3. Newspapers	<p>Can provide detailed information. Easy to present technical data in clearly designed text. Important topics can be covered in a series of articles. Can influence the attention of audience by where they place information and on what page. Influential in creating awareness and mobilizing public opinion. Material published can be shared and used as reference. Can be used to support radio and television for education purposes and follow-up on lessons, issues and topics discussed by the other two media.</p>	<p>It can be used by literates only. Difficult to reach isolated communities. Can be expensive for poor families. Requires special writing and editing skills, which are not always available. Like all other mass media, it is one-way communication channel. Feedback is difficult because of audience reluctance or inability to contact the editor. Difficult to publish at regional level. Small communities can not afford to publish their own newspapers without continuous support from national government.</p>	<p>Best source of information if topics of development are covered on regular basis. Can be used to establish community local papers and bulletin boards. Can be circulated to community members to reduce cost per individual family. Could be used to support literacy classes: Sectors could be prepared especially for poor readers and semi-literates.</p>
4. Cinema	<p>Captures attention well. Reaches big audiences in selected countries and can be very cheap (particularly with semi-permanent and travelling cinemas). Can reach lowest strata in certain countries and even have large rural audience.</p>	<p>Is expensive in some countries and may only reach certain sub-groups in the target audience (such as the rich, youth, females). Distribution can be a problem. May be distracting setting for educational messages.</p>	<p>Great care must be taken in preparing the film clips.</p>

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	- COMMENTS
5. Folk theater	Culturally relevant. In some countries is easily available and inexpensive. Often more credible to the traditional elements of society than the modern media.	Can lose control of the message. Format can distract from content	Flexibility of the form can vary from country to country. One of the best uses is often a combination with a modern medium such as television, radio, or supported by loudspeakers.
6. Wall paintings Billboards	Potentially available to large audience. Low costs per person reached if well located.	Can be easily ignored. Limited to simple messages	Message must be extremely well designed and pre-tested. Siting is critical to be able to reach the kinds of people intended.
7. Mass media group listening	Combines mass media and personal channels. Can be prepared and used for many audiences over a period of time. Encourages group participation.	Requires preparation for recruiting groups, training group leaders, and preparation of educational material. Can be expensive. Dropout can be a problem if special efforts are not made.	Should be regularly held. Participants should be provided with educational material. Can be effective in enforcing literacy and adult education. Programs selected should be about local problems. Tape recorders can be used. They are flexible. Can be used to tape role-playing, group discussion and interviews with local personalities.

C. OTHER APPROACHES

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
1. Publications and Loose Leaflets	Excellent for in-depth presentation of issues and technical information. Can cover more than one topic. Easy reference and can be directed to specific audiences. Can be illustrated and made attractive. Can support other media for education purposes.	Expensive. Can only be effective if well designed and produced. Poorly printed publications may be expensive but not be read. Require special editing, design and production skills.	Should be used to support special campaigns, such as literacy and adult education. Most useful if topics are covered in series of publications. Could be used successfully in group discussions and as back up for public meetings. Can also be used for in-service training of field staff and to keep up morale particularly if field staff are widely dispersed.

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	- COMMENTS
2. Video (Forum)	<p>Can be used to introduce new ideas to selected audiences. Excellent tool for micro-teaching. Can introduce complicated concepts and technical issues in a series of presentations; can record field operations and activities and use them on numerous occasions; can be used to teach skills and change attitudes. Feedback to the broadcaster can be immediate and relatively accurate. Can be handled by model farmers and community leaders; can build useful libraries for teaching in the case of literacy and adult education classes.</p>	<p>Is expensive. Forum members tend to drop out. Breakdown in hardware is common, and batteries are exhausted. Forum requires highly skilled personnel and extensive hardware. Restricted to communities where trained field agents are available. Requires continuous servicing and maintenance and up-dating. Can become negative tool for development if fails to attract different sub-groups in the community (such as the poorest and religious or racial minorities). Sometimes because of difficulty in finding needed materials or training manpower, many events in the community go by without being recorded or utilized.</p>	<p>Forums require continuing attention from professional organizers. Most successful in small group learning. Group discussion leaders must be carefully selected and trained. Training materials and programs must be carefully organized and kept in order. Its efficiency increases if used in combination with booklets and handouts at the end of the discussion. Should be used to teach special skills, for structured instruction and where possible, as a tool to generate participation among a rural community or one that is for other reasons isolated from ongoing programs or slow to cooperate.</p>

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
3. Films	Use of sight and sound can attract audience's attention. Can make great emotional appeal to large audiences.	Good films are rare. Equipment costly to buy and maintain. One-way communication unless properly used. Requires skill in running film projectors.	Best if combined with discussion groups. Much work to be done regarding getting good films made. Attention should be given in getting audience to evaluate the film. Films should be used for stimulating discussion rather than for teaching alone.
4. Filmstrips	Much cheaper and easier to work than films. Easily made from local photographs. Encourage discussion.	Usually sight only. Not so dramatic as motion pictures. Could be expensive.	Can have recorded commentary. Strip can be cut up and individual pictures mounted as 2" slides: then can be selected and re-arranged.
5. Slides	Have all the advantages of film strips plus more flexibility and can be more topical. They can be used in a series to illustrate a concept.	Could be expensive. Difficult to have them on all subjects of teaching.	They should be used after careful preparation of logical sequence and a good commentary.
6. Flannelboard	Can be portable and mobile. Can be prepared by expert in advance. Little skill required in actual operation. Could be used to make presentation more dynamic.	Can only be used for what it is prepared. Cannot adapt to changing interest of group. More elaborate than ordinary blackboard. Difficult to keep up-to-date.	Very useful but only for the prepared talks. Audience can participate. It should be used step-by-step. Flannel materials should be stored properly for future use. Flannelgraphs should be numbered according to their order in the presentation.

APPROACH	MAIN ADVANTAGES	MAIN DISADVANTAGES	COMMENTS
7. Bulletin Board	Striking, graphic, informative, flexible, replaces local newspapers. Keeps community up-to-date with information.	Requires preparation and attention to community needs	Should be combined with maps, talks and photographs. Very suitable for posting articles, announcements and news of development in the community.
8. Flip charts (turnover charts)	Cheap and simple. Can be stopped at will for analysis. Can be prepared locally. Ideas could be illustrated in sequence. Illustrations on flip chart could be used many times for different audiences in different sessions.	Soon torn. Can only be seen by a few at a time. Can be difficult to illustrate complicated ideas.	Should not be overlooked for illustration of simple sequences - especially with small groups. Lectures should be prepared in advance for use on several occasions.
9. Models, exhibitions and displays	Appeal to several senses. Can be used in various occasions and situations. Can illustrate ideas in detail.	Not many workers can build them or use them properly.	Useful models and exhibitions could be built up locally. Should be used in familiar places - centers.
10. Maps, charts, diagrams	Visual appeal. Should simplify details. Permit leisurely study: Can develop sequence on display boards.	May mislead by over-simplicity. Create transport and storage problems.	Should be made especially for groups. May need careful explanation at first. Could be used as summary of information. Symbols and layout should be familiar to the audience.
11. Blackboard	A flexible tool. Easy to make and to use. Can be very attractive if used properly. Use of colored chalks can add to its visual appeal. Can be portable.	Requires some manipulation skill (though quickly acquired). Requires teaching skills to make best use.	Should be essential in every group. Very useful for schematic summaries or talk or discussion. Audience can participate. Small blackboards can be portable. Writing should be clear and organized.