Cranfield

CULTURAL AWARENESS IN WATERSUPPLY AND SANITATION PROJECTS

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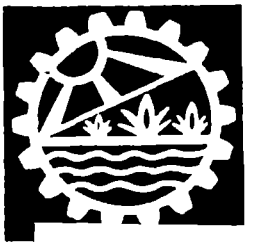

CRANFIELD INSTITUTE OF TECHNOLOGY
SILSOE COLLEGE

CULTURAL AWARENESS IN WATERSUPPLY AND SANITATION PROJECTS

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CONTENTS

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Silsoe, September 1993 Frank van der Kleij

ABSTRACT

Technology-driven solutions have often been proposed as a solution to reduce the amount of diseases relating to inadequate water supply and sanitation. But it is increasingly being recognized that a technical solution on its own will not improve hygiene conditions. Attitudes towards excreta disposal and hygiene practice vary considerably amongst different people and these socio-cultural factors obviously influence the acceptance and use of water supply and sanitation facilities.

Before the influence of cultural aspects upon the policies of agencies dealing with water supply and sanitation projects can be evaluated, the policies of the non governmental organisations (NGO) and the governments need to be identified. Most of the policies of the organisations clearly indicate that cultural factors are important within water supply and sanitation, and describe methods in their policy to overcome or deal with cultural differences. Often community participation or sociological surveys are proposed as a strategy to fulfil the objectives of the programme.

Nowadays every water supply and sanitation project works with or is involved with a sociological approach. However, although a sociological approach is being promoted within the policies of the organisations, the cultural aspects in projects are still often neglected.

The relationship between water supply or sanitation and public health is important. Many cultural factors influence this area and it is therefore important that the ministries concerned cooperate with each other. Yet, many ministries are not integrated.

One important requirement of an improved infrastructure is that the facility needs to be properly used and maintained. Even in the situation were appropriate technology has been used, a change in hygiene behaviour has to accompany the technical improvement in order to obtain maximum health benefit. A six-step procedure can be adopted as a guideline to develop more effective water supply and sanitation programmes.

The purpose of a sociological survey in the contents of a water supply and sanitation project is to identify the priority of water supply and sanitation improvement in relation with other needs in the community, and to collect information on existing behaviours, beliefs and attitudes towards water supply and sanitation.

The need to integrate hygiene education in the planning and implementation of water supply and sanitation programmes is stressed by various policy papers. By changing the behaviours and attitudes towards inadequate hygiene and sanitation, hygiene education attempts to break the chain of disease transmission.

INTRODUCTION

This report has been written as partial fulfilment of a MSc degree in Rural Engineering (Community Water Supply option) at Silsoe College. Relevant information on cultural awareness in water supply and sanitation programmes has been collected, in order to assess the impact of these cultural factors on decision making in projects.

Chapter 1 contains the research aspects of the report, such as the objective and problem analysis of the report. In this chapter the research has been defined and in the methodology is described how relevant information will be gathered.
In chapter 2 the different kinds of cultural aspects are defined. With this background information the influence of these cultural differences on water and sanitation projects can be defined.
In the third chapter, the policies of various organisations involved in water supply and sanitation programmes are identified. The importance of cultural awareness is mentioned in this chapter, and examples are given of project failure due to lack of awareness.
Chapter 4 summarizes the way in which projects can be improved. The change of policy and a horizontal approach of projects are described. Additionally the change of behaviour towards hygiene, and the importance of a sociological survey are given in this chapter. Finally, health education and its influence on projects has been defined.
In chapter 5 the major conclusions of this report have been worked out.

Literature resources have been used as a basis for this report. In the text the name of the author and year of publication have been given. The title of the publication may be seen in the list of references. In addition to this quotations were taken from personal interviews with key persons. In this case the name of the key person is given followed by (pers.).

CHAPTER 1 RESEARCH ASPECTS

1.1 Background

Enlargement of improved water supply and sanitation facilities, will not guarantee a decisive improvement in community health. This turned out to be one of the major lessons of the International Drinking Water and Sanitation Decade (1981-1990) proclaimed by the United Nations. 15,000 people still die each day from diseases relating to water and sanitation (Walsh 1990).

Technology-driven solutions have often been proposed as a solution to reduce the amount of diseases relating to inadequate water supply and sanitation. But it is increasingly being recognized that a technical solution on its own will not improve hygiene conditions. Attitudes towards excreta disposal and hygiene practice vary considerably amongst different people and these socio-cultural factors obviously influence the acceptance and use of water supply and sanitation facilities. It will therefore be important to take these different perceptions into account within project planning and implementation.

Because the diversity of the beliefs and practices within different cultures, each water supply and sanitation project should be considered individually. Although organisations who are involved in water supply and sanitation projects stress the need to integrate cultural differences towards hygiene and health within project planning, the actual inputs are still limited (Yacoob et al., 1992).

This literature review summarizes the way in which cultural and social differences towards hygiene and health have influenced water supply and sanitation projects. An attempt is made to identify the way in which these experiences have led to actual changes within the planning and implementation of future projects.

1.2 Objective and problem analysis

The following objective of the project has been identified:

Identification of the policy of various organisations that deal with water supply and sanitation projects. To evaluate the way in which cultural issues concerning hygiene and health influence the decision making in these projects.

In order to satisfy the objective of the project, the main problem has been analyzed. The crux of the problem can be divided into two components. A combination of an identification phase in which the present problems will be identified, followed by a second research phase which mainly focuses on the solution of these problems.

The problem analysis consists of the following two components:

1. **Do cultural differences towards health and hygiene have an impact on the policy of organisations? What are the policies of the various agencies and which cultural issues are involved?**

2. **What are the various ways in which organisations take perceptions towards health and hygiene into account within the decision making of water supply and sanitation projects?**

1.3 Methodology

The main method of obtaining information for this desk-based study has been the collection of available literature. The information used in this report has been compiled from different universities, resource centres of various organisations dealing with water supply and sanitation and the International Water and Sanitation Centre (IRC).

In addition to the collection of special literature, interviews with people active in the field of water supply and sanitation were conducted. These interviews took place in England and The Netherlands. An attempt has been made to obtain different opinions towards cultural issues within water supply and sanitation by interviewing people with a technical, medical or social science background. The duration of an interview was approximately 1 hour and was conducted on basis of the questionnaire which can be found in Appendix A.

CHAPTER 2 CULTURAL ASPECTS IN WATER SUPPLY AND SANITATION

2.1 Introduction

The word culture has several meanings, Hofstede (1991) gives the following description of culture in a social anthropology context. The collective programming of the mind which distinguishes the members of one group or category of people of another. Culture is learned, it derives from ones social environment and is shared with people who live in that social environment. The social environment consist of values, beliefs and customs (Luschinsky, 1963). Because culture can be found in all aspects of daily life a complexity of beliefs, customs, knowledge and habits regarding water supply and sanitation can also be expected.

Cultural patterns are occasionally nationwide. A language may characterize a region, but different cultures, with their own personal concepts of health and cleanliness, may well be found in small regions. Before the influence of cultural differences towards health and hygiene upon projects can be investigated, the different kinds of cultural aspects have to be defined.

2.2 Perceptions of health and hygiene

Cultural concepts of cleanliness and dirtiness, purity and pollution in communities may bear no resemblance with other communities. Every community has their own perception about what is good or bad depending on their religion, socio economic status, nation and so on (Luschinsky, 1963). Hygiene practices often do not lead to the expected pathogen avoidance. This can be noted from the following example were an Indian villager would sieve his drinking water of it's tiny worms and use it for consumption, while it still might be contaminated with pathogens (Bourne, 1984).

Public health experts would regard this as polluting elements while the villager considers them as dirty. Hall et al. (1991), gives the following example from Lesotho. Men tend to wash themselves less thoroughly than women. A man rarely washes his hands before eating, although he always does so before milking. Personal washing is often not largely linked with hygiene. Old women rarely wash themselves and give old age, and the consequent lack of necessity to appear smart or sexually attractive, as their reason.

Another well known example is the act of bringing out ritual purity by sprinkling a person with highly polluted water from the Ganges river (Bourne, 1984). Cleanliness can be interpretated differently among various people, wiping a face with a dirty piece of cloth is sometimes considered as being clean (Boot et al., 1993). Fukumoto et al. (1989) defined three kinds of dirtiness, perceived by mothers that may lead to handwashing, during his study in ten shanty towns near Lima in Peru. Although different levels of dirtiness are distinguished, from a hygienical point of view a safe situation may not exist.

- **PERCEIVED DIRTINESS**
  When hands look, feel, or smell dirty. The most common type of handwashing.

- **CONTAMINATING DIRTINESS**
  When the hands have been contact with anything considered dirty, such as money, garbage or human faeces. Baby stools are not considered dirty or contaminating.

- **SOCIAL DIRTINESS**
  When mothers wish to improve their physical appearance. Very common, takes place before going out, or receiving guests. It is associated with aesthetic or social values.

Traditional perceptions towards health and hygiene can be identical to modern interpretations. For example dirt and smell avoidance, household cleaning and clothes washing.

On the other hand many situations can still be distinguished where the traditional understanding is strongly contradicted by modern interpretations. Cultural perceptions concerning causes of water and sanitation related diseases, like various types of diarrhoea, worm infestations and skin and eye infections, lead to practices to prevent or cure ailments which are often magical or nonproductive. Amulets are hung over cradles, rooms are fumigated with irritating smoke to drive away the evil spirits and prevent disease (Bourne, 1984). In the meantime the children may well be playing in areas infected with disease-causing bacteria.

2.3 Social and Political factors

Communities all over the world have their own political structure. Even in the smallest communities, socio-cultural divisions may exist according to the ethnic, political or tribal group. Household composition, caste system and age will have a significance impact within the field of water supply and sanitation.

Khare (1964), noted that a high-caste person in India may consider water in a jug to be clean, but greatly polluted, and therefore undrinkable, if the jug has been touched by a low-caste person. In an analysis of the social resistance to a sanitation program in India, Khare (1964) states that the caste system is the most important single factor in sanitation programmes.

Study the customs and beliefs that could prevent community members from readily accepting changes in water source (Chandler, 1985)

Relationships between people can also strongly influence sanitation practices. A parent-children avoidance relationship has been observed in different societies. This relationship might seriously influence the sharing of latrines negatively. The taboo can be identified in varying degrees but the basic avoidance relationship is between parents and their children of the opposite sex (Omambia, 1990).

In some cases people set aside this social behaviour, for example the sharing of latrines is becoming increasingly common in urban areas were a household has only one latrine and construction cost are very high (Omambia, 1990). Geographical mobility brings people in touch with new practices. If new facilities look attractive people tend to copy them (Omambia, 1990). Latrine ownership is increasingly seen as an economic development and people will therefore construct more latrines. It is debateable whether they will use this facility. On the other hand, in emergency situations such as refugee camps people are under stress and might be willing to forget or set aside their cultural considerations (Lambert, pers.).

Gender issues also plays an important role. The dominant issue in many water and sanitation activities such as, drawing and carrying water, hygiene in the house and latrine, has been the division of roles between males and females. In a number of cases husbands have rejected an improved water supply system and hygiene improvements for their family, because they feared that reduction in water collection time would make women and children idle and provide opportunities for undesirable behaviour (Burgers et al., 1988).

2.4 Religion and Folk beliefs

Cultural beliefs and religion largely determine what people consider as being right or appropriate behaviour. Traditional water and sanitation practices indicate that either water or excreta can only be dealt with in a special way. From a hygienic point of view this may not be the most appropriate method.

In many cultures there is still the believe that naturally running water is not harmful to health in contrast to standing water. Water in closed containers is considered to be unhealthy and unpalatable because it does not have the chance to breathe. Mapuche Indians in South Chile prefer to make use of contaminated open wells as part of the traditional preparation of meals above a newly installed pump which provides clean water (Docter et al., 1992). It is also widely believed that cold water and bad smells cause disease (Van Wijk-Sijbesma, 1979).

Re-use of human excreta as fertilizer is often seen as a taboo, because the handling of human excreta is considered to be polluting and dangerous. This is not from a bio-medical point of view but simply because one's excrements or other body wastes can be used by enemies to cause harm (Imboden, 1968).

There is also a widely held belief that children's faeces are harmless (Omambia 1990). Children are allowed to defecate anywhere near or even in the house which will quite likely increase the risk of transmitting infections to other children. People may perceive excreta disposal in latrines as being dangerous if the latrines are used by more family members. People will instead consider it safer to defecate in the bush.

Beliefs and practices towards water supply and sanitation play an important role in various religions. Muslims clean themselves according to Islamic teachings before prayer to obtain ritual purity. Women wash hands, face, mouth, ears, and feet daily before prayers, and take a complete bath after sexual intercourse, menstruation and childbirth. Although purity can be observed during the prayers, hands are not washed on regular basis before cooking, eating and after changing an infant who has defecated (Water International, 1989).

CHAPTER 3 IMPACT OF CULTURAL ASPECTS ON POLICIES

3.1 Target groups of the research

Before the influence of cultural aspects upon the policies of agencies dealing with water supply and sanitation projects can be evaluated, the different sides involved have to be identified. The main groups involved in water supply and sanitation in developing countries are the non governmental organisations (NGO) and the national governments itself. These two groups are therefore chosen as the target groups of the research.

Firstly, policy needs to be clarified in this context. In this subject matter it can be defined as the courses of action by which governments and non governmental organisations (NGO) seek to influence the outcome of water supply and sanitation projects (Ellis, 1992). This includes the goals set by the government or organisations and the methodology to achieve these goals. Often governments interact with NGOs, either via local agencies or because the NGO is involved within the planning and/or implementation of a project.

3.1.1 National Government Policies

Frequently, National water and sanitation policies are established by governments. These policies might cover areas such as community development, health education, operations and maintenance or financing. For example, the government of Belize established a policy which was purely based upon technology type. They only implemented UNICEF certified India Mark II handpumps to standardize the sort of handpump used in their rural water supply programs (Isely et al. 1986). Debateable, whether it is realistic or not, is the use of WHO or UNICEF standards for handpumps per capita or volume of water per capita. Governments try to quickly meet their national objectives according to the water supply by using these standards (Isely et al. 1986).

Zwart-Fernig (pers.) mentions that success rates which governments and NGOs frequently use, are too often figures which technicians stick to, although this does not guarantee that people will actually use all these facilities. If 800 boreholes have been successfully drilled to provide an area of sufficient water, people may not want to make use of the facilities for different kind of reasons.

The main objective of the National Rural Water Corporation of Sudan, is to secure adequate, clean and safe water supply for the rural population, of about 15 million by year 2000 (National Rural Water Corporation, 1990). One of the policies to obtain this situation is community participation in operation and maintenance and identification of the needs within the water supply, sanitation and health. Cultural awareness within this policy is considered to be significant. In the Sudan it is important to use the appropriate technology best suited to the natural and socio-cultural conditions to achieve objectives. There is no universal solution appropriate for every situation (National Rural Water Corporation, 1990).

3.1.2 Non Governmental Organisations policies(NGO)

WaterAid, a registered charity, generally operates with a government or a local partner (NGO). The policy of WaterAid is to maximize local in-country purchase by strengthening local initiatives towards self help. This asks for partnership with local indigenous organisations and participation of the benefitting communities. Partner organisations understand the local language, customs and cultures which are needed in planning effectual water supply and sanitation programs (Richardson, 1989).

The policy of Save the Children Fund UK (SCF) is based on long term work. SCF tries to look in which way the government abilities can be strengthened to establish services or to distribute services (Poore, pers.). To achieve this policy the needs of the people have to be identified. Depending on the way of funding and the hierarchy of the country, SCF tries to combine health education and water supply in a project.

Netherlands Development Organisation (SNV) stated in its country specific general Assignment Policy Paper for Kenya that SNV aims at supporting the poor in developing countries in their struggle to improve their living condition. The main issue in their policy is to make sure that an optimal effort is made to realize a structural improvement in the position of the poor and the disadvantaged. Formulation for water programme is done by the host organisations and not by SNV because from experience it is known that for positive results of water programmes, it needs to be community based (Vossen, 1988).

The policy of Volunteers Service Overseas (VSO) is to build upon what the community already knows and on the existing community structure. The ideas of the community and their attachment to old ways must be incorporated into projects. What is good in present water and sanitation practices should be accepted and developed, rather then being replaced by the latest design (Ball, M., 1991).

Apart from organisations who try to achieve long term results, emergency organisations like Registered engineers for disaster Relief (RedR) aim for short term results. RedR tries to work on emergencies projects, although it is often difficult to draw a line between relief and development. Priority is given to water supply because this is a basic supply (Lambert, pers.). Because RedR gives technical support, mainly to Non Governmental Organisations, the do not have a policy themselves, but they follow the policy of the NGOs.

3.2 Importance of cultural awareness

Most of the policies of the organisations clearly indicate that cultural factors are important within water supply and sanitation, and describe methods in their policy to overcome or deal with cultural differences. Often community participation or sociological surveys are proposed as a strategy to fulfil the objectives of the programme (see paragraph 3.1.2).

Short term emergency programmes often have a high acceptance percentage because people are under stress and tend to set aside their cultural feelings says Lambert (pers.). On the other hand, sanitation, unlike water in which people are learning to use and for various purposes, is a more difficult area. Issues of belief, practices and culture play an more important role within the sanitation sector (Yacoob et al., 1992).

The importance of socio-cultural factors in sanitation programmes was emphasized by Wagner and Lanoix in their 1958 WHO monograph. They said that the most successful public education in hygiene and sanitation should take place on the basis of the local customs, traditions and beliefs. Only in this way can a more technical improvement of the environment be observed (Wagner, 1958). Feachem and Cairncross pointed out that it is necessary to understand local defecation practices and beliefs to value the acceptability of a particular form of sanitation in the community (Feachem, 1978). The framework of the International Drinking Water and Sanitation Decade, provided guidelines on socio-cultural studies in environmental health in developing countries (Simpson-Hebert, 1983).

3.3 Project failure due to lack of awareness

The fact that social and cultural factors influence the acceptance of water supply and sanitation facilities is a well known, and the importance of these factors have long been recognized. However, a lot of water supply and sanitation project still fail, simply because cultural factors are not taken into account within the planning and implementation of a project or are just ignored. New technologies have not been accepted in a large proportion of past projects (Omambia, 1990).

The following example shows how the lack of involvement of women in the design of additional washing facilities led to a failure of the project.

> In a water project in rural Khuzistan, Iran, communal washing facilities were built in the centres of several villages. The objective of this project was to draw the women away from canals for laundry and dishwashing purposes because the canals were infected with schistosomiasis. The laundry basins which were constructed had a rectangular shape and were placed at adult waist height. However project management was not aware of the traditional way of washing by Iranian women. Clothes and dishes are traditionally washed in squatting position. The outcome of this project was that the laundry basins were not used and the women continued to go to the springs (Mathew, 1986).

Another example shows that, although health education had been given to the community, increased knowledge did not have a positive short term effect.

> During a cholera outbreak in Magombe, Kenya the Ministry of Health started a campaign which focused on the construction of latrines and shallow wells. Besides this health education was given. Families who did not have a latrine were fined. Collapsing soils called for expensive reinforced latrines but many poor households did not respond. A socio-cultural survey revealed that a lot of the latrine owners had constructed their latrine at the beginning of the cholera outbreak because they had been afraid of getting fined (Omambia 1990).

The fear of getting punished if they did not construct sanitation facilities made the community build latrines not because they saw it as an improvement of hygiene. After breakdown of the sanitation facility new resources were not constructed.

Apart from the lack of short term effect, poorly thought-out sanitary installations can also be identified. Next to climatical factors, the human behaviour factor, in how and where people like to urinate and defecate also attributed to the lack of success.

> A local non-governmental organisation in appropriate technology, developed and introduced a compost latrine which produced fertilizer by using human fertilizer. The original design came from Vietnam, but was introduced in Guatemala almost 14 years ago. An evaluation survey showed that only 42 percent of 3,000 households were using the facility. Although the staff of the organisation had made intensive efforts over the years only 55 percent of the household who used the latrine used it properly (Yacoob et al., 1992).

The usage of the facilities is very low because there has not been assessed the way in which people dispose their faecal matter traditionally. The community is obviously not used to handle excreta in this way and therefore many households do not use the latrine.

CHAPTER 4 IMPROVEMENTS OF PROJECTS

4.1 Introduction

Project failure within the field of water supply and sanitation in developing is common, the examples given in paragraph 3.3 are just a fraction of past failures. If facilities do not function or are not used, is this not only a waste of project resources but it also means that health benefits can not be achieved. One of the causes of project failure is the conceptual gap between people and planners. The success of the project is endangered because planners fail to subdue this gap or sometimes even fail to perceive this problem (Chandler, 1985). Table 1 illustrates the kind of difference in goals and attitudes which may be found between the planner and people (Curtis, D., 1977). In this chapter possible solutions to overcome the cultural problems regarding water supply and sanitation will be discussed.

	PLANNER'S VIEW	PEOPLE'S VIEW
Cultural Values		
Hygiene:	Scientific concepts of health and hygiene	Traditional views of cleanliness and disease-religion and medicine.
Status:	Attitudes to poverty.	Tendency to associate status with modern technology.
Taboos:	Privacy of latrines; talking openly about sanitation.	Privacy and orientation of latrines; anal cleansing methods; sex segregation.

Table 1. Outlook of sanitation planners compared with the views of local people (Curtis, D., 1977)

4.2 Change of policy

4.2.1 General aspects

In general there has been a change in the policy of organisations throughout the years. Through experience there has been found out that a pure technical approach will not be successful and that cultural aspects play an important role in water supply and sanitation. Nowadays every water supply and sanitation project works with or is involved with a sociological approach according to Boot (pers.). Although this sociological approach is being promoted within the policies of the organisations, the cultural aspects in projects are still often neglected. Several reasons can be given for this problem.

* Water and sanitation projects become often a game of numbers, in which a project is valued by the numbers of latrines, pumps, boreholes installed. All too often people are bypassed because of the pressure of donors to obtain a high success rate.

* Often it is assumed that the policies of implementing agencies are flexible enough to allow changes due to community demand (Chandler, 1985). In an interview Zwart-Fernig comments that especially within governmental programmes the flexibility is frequently low due to bureaucracy.

The policy and objectives of non governmental organisations are often too general. The outcome of a project will therefore be often evaluated positively. For example the provision of safe water is a basic need and improved accessibility has a positive impact for the target group. It is therefore difficult to identify in which way cultural aspects influenced the programme. The Netherlands Development Organisation (SNV), in Kenya used a so-called five elements system to select host organisations. In this way they have developed their criteria into a more discriminating evaluation tool (Vossen, 1988).

4.2.2 Horizontal Approach

The relationship between water supply or sanitation and public health is important. Many cultural factors influence this area (see paragraph 2.2). It will therefore be important that the ministries concerned cooperate with each other. Yet, Zwart-Fernig (pers.) mentioned that many ministries in Africa are not integrated.

According to Dik (pers.) there is also a lack of cooperation between the different development organisations because each organisation wants to upgrade the other. With small scale projects there is a bigger chance to integrate the different services and for example execute a sociological survey to identify sanitation behaviour mentioned Zwart-Fernig (pers). Almost all organisations try to avoid vertical programmes. Dik (pers.) states that a vertical programme works but in almost all cases there is no long term effect. Organisations like DANIDA (Danish Development Organisation) try to develop a horizontal approach, with the purpose to achieve long term results.

According to vanden Wall Bake (pers.), Integrated Water and Sanitation programmes and Integrated Rural Development can be identified. An Integrated Rural Development programme does not have to contain water or sanitation, it depends on the priority given. The World Bank also tries to focus more on the social sector and the integration of for example the health and water supply/sanitation sector according to Dik (pers.).

4.3 Behavioral change

One important requirement of an improved infrastructure is that the facility needs to be properly used and maintained (Yacoob et al., 1992). Even in the situation were appropriate technology has been used, a change in hygiene behaviour has to accompany the technical improvement in order to obtain maximum health benefit.

Yacoob et al. (1992) introduces a case to use community practices regarding sanitation as the basis for project design. Chandler (1985) wrote a similar six-step procedure which can be adopted as a guideline to develop more effective water supply and sanitation programmes.

The planners of a sanitation project determine what changes in sanitation can be introduced within a community. Based upon this the planners can choose the technology and the supporting programmes, like health education. It is vital, that before planners develop any behaviour change initiatives, the planners have to know the cultural aspects involved.

Figure 1, presents a behavioral model for the promotion and implementation of behavioral change. This model relates to sanitation but could also be assessed for water supply.

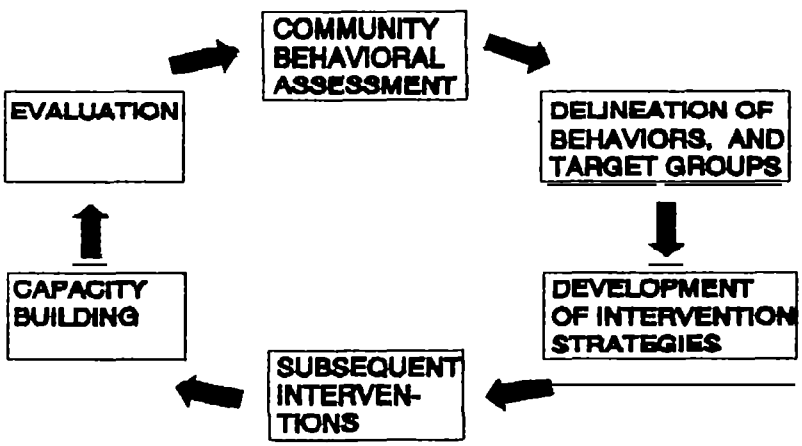


Figure 1: The behavioral change model
(Yacoob, M., 1992)

*** Community Assessment**

If a change in community behaviour is the main objective when implementing a programme, it is crucial to identify the cultural environment of that community. Various types of information may be gathered within the community assessment process:

- Cultural norms and beliefs
- Current knowledge of sanitation issues
- Current sanitation practices
- Existing community structure
- Leadership analysis

*** Delineation of specific behaviours to change and target groups**

This step takes place after the community assessment and involves the set up of a community health group. The group should include community leaders and other significant persons in the community. Participation of this group includes the development of a set of the existing sanitation issues which need modification and prioritize the areas that need to be changed, for example knowledge, behaviour and attitudes.

*** Development of intervention strategies**

In this phase strategies have to be developed in order to implement the changes. Together with a facilitator, for example a health educator, the community health group will develop interventions to produce the wanted changes. Again, existing behaviour data need to be obtained with the purpose to identify what currently is done and what changes need to occur.

- Why does the current practice exist?
- What impediments to new practices need to be addressed?
- Is the community motivated to adopt the new practice?

Subsequent interventions

When the first intervention has been implemented, the health group has to plan the second one. The task of the health worker is to maintain health group interest and motivation.

Capacity Building

Often social scientists give less attention to national level planners when they work with the community. The planners themselves often plan change behavioral interventions without even knowing that particular community. It is therefore important to include all levels in the exercise of developing behavioral change programs.

Evaluation

Community beliefs and practices are the basic variables to use in the evaluation of a behavioral change programme. For example, if the transmission of disease happens via a dog licking faecal matter and lick leftovers off plates, the indicator might be the amount of people who build a dish rack to store the dishes away from the dogs. Boot (pers.) states that from the very start of the project, the important factors have to be assessed. Only then can an effective evaluation take place to identify if for example a lack of cultural awareness existed during the project cycle.

4.4 Sociological survey

4.4.1 Introduction

Already in paragraph 4.3 community assessment has been mentioned referring to behavioral change. The purpose of a sociological survey in the contents of a water supply and sanitation project is twofold.

* Identify the priority of water supply and sanitation improvement in relation with other needs in the community.

* Collect information on existing behaviours, beliefs and attitudes towards water supply and sanitation.

Appendix B gives an example of data to be obtained in a sociological survey (Isely, B., 1982). Dik (pers.) points out that a sociological survey only has to be conducted in preventive projects rather than curative programmes.

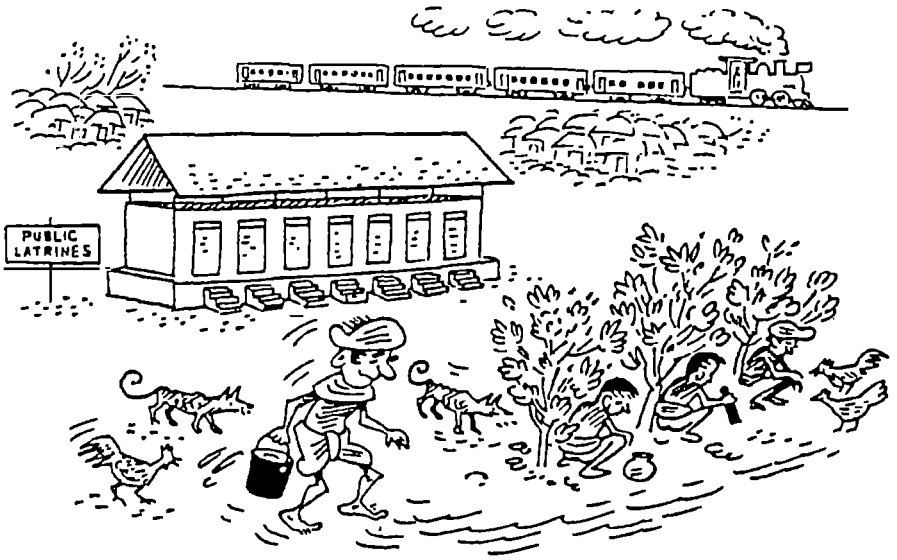
For example, when somebody is ill, they will take medicine under any circumstances. Boot (pers.) says in a interview that, in general, in large scale programmes a sociological survey is necessary. In small scale projects it can be recommended to work participately from the beginning in order to set up a small sociological survey. Vanden Wall Bake (pers.) remarks that the predictionality of a preliminary survey is difficult. The idea of water development is appealing, but after implementation a totally different perception might arise.

4.4.2 Methodology

Planners in cooperation with facilitators need to determine which method is going to be used to conduct the sociological survey. Depending on the situation different methods are possible to obtain behaviour data, for example observation, interviews with key informants, questionnaire.
Boot (pers.) remarks that often it is difficult to find a good facilitator. The facilitator is preferable a local woman, but generally they do not have sufficient education or experience.

4.4.3 Time and Planning

A sociological survey does not have to be more time consuming than a technical preliminary survey according to Boot (pers.). Often donors claim that a sociological survey takes up too much time and therefore costs too much money. In a lot of cases existing preliminary sociological surveys are not used or not even conducted. This often happens in governmental programmes as mentioned by Zwart-Fernig (pers.). A sociological survey needs to take place during the planning of a project although often it takes place too late according to Boot (pers.). Vanden Wall Bake (pers.) states that, because donors often are not interested in large preliminary surveys, to start monitoring during the early stages of a project is preferable. With the information from the monitoring, feedback can be used to improve the situation.



Subtle behaviourial data may be necessary
for a good design (Chandler, 1985)

4.5 Hygiene Education

Many cultural perceptions are based upon misunderstandings, lack of knowledge or education. There is for instance a general lack of knowledge on the transmission of diseases.

The need to integrate hygiene education in the planning and implementation of water supply and sanitation programmes is stressed by various policy papers (Burgers, L., et al., 1988). By changing the behaviours and attitudes towards inadequate hygiene and sanitation, hygiene education attempts to break the chain of disease transmission. The following three approaches can be identified to hygiene education (Burgers, L., et al., 1988).

DIDACTIC APPROACH
- most frequent method, but least effective.
- project agency identifies hygiene problems, target groups are instructed to adopt pratices to overcome problems.

PROMOTIONAL APPROACH
- careful considerations of target group needs/preferences.
- large number of people can be reached in a short time at relatively low cost.
- less effective with complex behavioural change, because more community involvement is needed for sustainability.

PARTICIPATORY APPROACH
- aims to help people solve their own problems.
- target group determines objectives, methods in dialogue with the educator.
- not often used in large scale programmes because of required flexibility and high demands of skill of educator.

A survey of the various target groups should ensure that hygiene education will reach the relevant groups. Often programmes focus on women because they are primarily responsible for child care, water management and cleaning activities. Involvement of men in health education programmes is important as well, because often programmes need their support or sometimes even their approval (see paragraph 2.3). Latrine and kitchen improvement promoted in hygiene education programmes for women, will be unrealistic when traditionally these are the tasks of the men (Burgers, L., et al., 1988).

CHAPTER 5 CONCLUSIONS

Cultural factors relating to health and hygiene have a major impact on the success rate of water supply and sanitation projects, incorporation of sociocultural data in project planning and implementation is therefore essential.

Increasingly planners switched from a policy grounded on technology towards a policy were planners bring project technology into balance with community knowledge, attitudes and behaviours relating to water supply and sanitation.

Although many organisations state in their policy to take cultural awareness into account in project planning and implementation, the actual output during the project cycles is often inadequate. This has several reasons; low flexibility due to bureaucracy, the pressure of donors and a low usage of existing sociological surveys in project planning and implementation.

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APPENDIX A

QUESTIONNAIRE

SECTION 1

Project planning

- Do you have a policy of taking cultural issues towards sanitation into account in sanitation project planning?

- If not, why is this not adopted within your policy?

- Has this always been part of your policy?

Finance & Time

- Is there always a special budget (time/money) included in project planning to permit a survey of socio-cultural attitudes in a particular project?

Training

- Do you train your staff in methodologies for assessing socio-cultural attitudes towards public health and sanitation?

- Is this training specific towards sanitation, or a more general approach?

Methodology

- Do you have a standard methodology for collecting socio-cultural information?

- Who executes this survey: specialist or generalist staff?

- At what stage within the project planning is this survey carried out?

- What is the duration of this field survey?

Technical/Socio-cultural practice

- At what stages are the community consulted about the proposed sanitation project?

- Generally, what is the contribution of the community in implementing your proposed solution to the existing problem?

- What happens if the best technical option does not fit with people's current practices?

SECTION 2

Examples of problems in sanitation projects related to socio-cultural practices

- Have you experienced different types of conflicts between technical and socio-cultural factors in particular parts of the world? eg differences between countries or areas?

- Can you identify and rank the issues which cause the greatest problems related to the successful implementation of public health and sanitation projects (gender-issues, religion, misunderstanding, motivation, economic, other)?

- Which is, in your opinion, the most important factor holding back efficient sanitation or affecting the success of a sanitation project: socio-cultural or technical factors?

- Can these two factors be seen as two separate issues, or are they always related to each other in sanitation projects?

- Do you have the experience of occasions when socio-cultural factors towards sanitation precluded a technical sanitation system choice?

- How often does the best technical option for a sanitation system coincide with the results of a socio-cultural survey?

- Can you/How do you evaluate if the cultural awareness in water supply and sanitation programs contribute towards the success of a certain project?

APPENDIX B

RECOMMENDED DATA FOR A SOCIOCULTURAL SURVEY

Community Structure

- Village organisational structures
- Identification of different disadvantaged groups with respect to water and sanitation
- Key leaders and influential persons
- Decision-making processes, gender issues

Water Usage, Sanitation, Management

- Water rights and ownership
- Household water storage and use
- Preferred watersource for different purposes
- Practices for waste water disposal
- Defecation habits of different people (men, women, children)
- Perception of community needs by women, children and the community as a whole

Water and Sanitation Beliefs

- General perceptions of illnesses
- Concept of clean water and sanitation
- Perceived relationship between water/sanitation and health
- Credibility of official and traditional medical personnel
- Traditional beliefs concerning excreta and sanitation practices
- Personal hygiene habits and practices

Community Economic Patterns

- Means of subsistence
- Ability to pay and preferred spending pattern
- Credit system
- Average household income

Education and Communication Behaviour

- Pathways of communication within the community
- Audio-visual perceptions, literacy rates, dialect

Technological Alternatives

- Data for deciding between traditional alternatives, technical options with local technical skills and capabilities