



Awareness building and problem identification

Ms Esper J. Ncube, South Africa

SOUTH AFRICA IS an arid or seem-arid country with a rainfall that is highly seasonal, and unevenly distributed across the country. Due to scarcity of surface water, the communities also rely on groundwater. The Department of Water Affairs and Forestry has a policy that requires treated sewage and industrial wastewater to be returned to water bodies, to augment the water resource quantity downstream. This has resulted in the deterioration of water resource quality. Salinisation or TDS (i.e. high levels of sodium, chloride and sulphate concentrations) and faecal pollution together with the associated disease-causing organisms, are the most water quality problems facing South Africa, in both surface and ground water. High levels of fluoride concentrations are found in some parts of the country.

This paper will focus mainly on the faecal pollution problem, firstly, as these affects

Areas such as human health and hygiene. Secondly, the majority of the affected People are found in the rural areas and in informal settlements.

Guidelines for Assessing Domestic Water Quality are well written for Scientific and Technical staff, but not for the affected person in the rural areas. The constituents of concern to domestic water user are presented in Table 1 below.

The major question is how to make communities aware of the water quality problems, sanitation, health and hygiene aspects intervening with water quality issues. Impoverished communities provided with services need to understand the importance of maintaining the sanitation systems. The people must be aware of the diseases they can contract due to their sanitation, health and hygiene behaviour.

Water quality literature explaining the transmission routes and types of the water borne diseases they can contract must be accessible to them. Public awareness in the identification and understanding of water quality problems is essential. Once this has been established, the communication channels should be available so that the public is able report in time any of the water quality problems as it arises.

Awareness building programmes are essential in the sustainable management of the installed water and sanitation services. Where awareness programmes were successfully implemented, the communities were able to identify system failures at an early stage and developed a desire to take corrective actions.

One of the first steps in empowering communities in solving water management problems is to develop the ability to recognize and identify the problems themselves. The responsibility therefore lies with the expert to lead the community to understand all issues involved. The expert who is attempting to bring about the awareness building must also each time ask him or herself a question, "Is there not a simpler way to communicate the water quality problem?"

Specialised water management literature is often perceived to be technically complex and not applicable to the South African situation. There is a great need for guideline documents which explain problem solving strategies in simple terms and understandable to the non-technical individual. The water management expert needs to translate complicated concepts into simpler terms such that they are understandable to the lay person. The use of graphic tools in presentation and successful case studies, which, the general public can identify with, was found useful. Experience has taught us that question and answer type guidelines that address every day water supply and waste management issues are useful.

Community water quality management cannot be separated from environmental issues. The community needs to be made aware of the impact of ineffective waste management practices. A judicious balance of community management and Government intervention makes the programmes and projects better and sustainable.

Awareness building - general

The first step to solving the waste and waste management problems is to identify problems and identify with them. Time should be spent trying to understand the problem in general and in particular, how it affects the water quality in all water quality resources being used by the community at

Table 1. Constituents of concern to the domestic water user, i.e. microbiological quality

Key substances	Relevance to the Domestic user
<ul style="list-style-type: none"> Faecal Coliforms 	Indicates recent faecal pollution and the potential risk of contracting infectious diseases
<ul style="list-style-type: none"> Total Coliforms 	Indicates the general hygienic quality of the water
<ul style="list-style-type: none"> Free available Chlorine 	Indicates the adequacy of disinfection using chlorine

large. Understand the health and environmental risks. There is a need to train the citizens, the need to create awareness on Sanitation health hazards, hygiene and pollution prevention. One will ask, “Why pollution prevention?” The answer is it is better than pollution control.

The critical step in awareness building is COMMUNICATION, talk to the people, actively involve them, but do not impose on them. Inform the communities about the problems of disposing into watercourses and the environment in general, its effects on the flora and fauna. Communities must be informed of the different activities the Government, NGOs and other stakeholders are doing or are going to engage in to try and solve their problems in Water Supply and Sanitation. The awareness phase never ends. A population should receive continuous education on issues affecting its lives. There is also a need to make an inventory in which the specialists identify and list all the areas that are affected. This should include a planning stage. In this stage changes to be made are identified. All those who are going to make changes are identified. The starting and finishing times are allocated. Manpower requirements are established, and budgets allocated. If a system is to be replaced it is necessary to allow enough time for those changes to take place. In deciding on whom will make the changes it is imperative that skilled personnel or professionals be used. If an idea or plan develops in any of the professional bodies, an area for implementation should be selected and the plan applied to see whether it works. The important thing is, it should be communicated to the communities that the idea is implemented for the first time and improvements or substitutions will be made in the event of failure of the system. An effort should be made during the implementation to observe and respect the behavioural codes found among people.

Every year South Africa celebrates the more important National Water Week that is celebrated in all ways of communicating the important aspects. The means are:

- Dances, work books, songs, school kits and supplements, TV shows, radio broadcasting, massive distribution of posters, videos, drama and comic books

Health and hygiene – awareness building

Hygiene education needs to be reinforced with visual materials to make it effective. A number of visual materials for education, training, information and promotional activities on hygiene education have been developed for the water and sanitation sector. A hygiene education programme should focus on a limited number of topics such as keeping potable water clean, pump site cleaning and maintenance, care and use of a latrine, hand washing before touching food and environmental cleaning. Collaboration between village committees, field workers and relevant ministries need to be strengthened so that the messages and approaches are consistent.

Methods that have been used in health and hygiene education have taken different forms, both formal and

informal. Health personnel who work in communities have been involved. They could be based in community clinics, mobile clinics or could be members of the community. Other officials have been the environmental health officers and the health officials from district hospitals. It is essential that a “Health Day” be held in the communities every year in which a particular theme is focused on and a health official is invited from the district hospital or the district health services to come and address them. The focus should be on sanitation as well. By doing this sanitation and health related awareness is created. Again involve the community. Participatory programmes where local residents identify a health problem to be addressed or behaviours to be modified have a far greater chance of success. Pre-fabricated, generalised messages designed by project agents and introduced in belief that the practices promoted are not being done in the village because the residents are ignorant usually fail. The other reason has been that if people know something then they will obviously practice it. Discussion groups, house holds visits, radio broadcasts, poster competitions and murals, child to child initiatives and local workshops have proved to be successful. Communities must not only be informed of the causes and effects of problems associated with lack of proper health and hygiene behaviour. They must understand the transmission routes clearly. For example:

Faeces → fingers → mouth → disease → hospitalisation or death

The children are the most affected in this case. Children, especially those who are teething and crawling are particularly prone to this type of transmission because they often put their fingers in their mouths. Graphical tools are important in this case.

Food is contaminated when it is handled with unwashed hands that have been handling faeces.

Faeces → fingers → food → mouth → illness

It is of prime importance for the people to understand that a disease like diarrhoea can be received in many ways and from many sources. Diarrhoea is generated by germs, which are transmitted from faeces to the mouth. Where hands are not washed after passing stools or handling the faeces of infants, faecal matter can pass to the fingers and later to the mouth. Sometimes flies, which carry faecal matter from exposed faeces on the ground, can contaminate food or pit latrines that do not have fly screens. These flies lay their eggs and deposit harmful bacteria on utensils and food surfaces. People, who eat the food, then ingest the harmful bacteria.

Water can be contaminated when people defecate into or near a watercourse, which is used for human consumption and other domestic purposes. This can be the case if latrines are built near or too close to a communal watercourse since seepage or leachate of hazardous materials through the soil into the water source might happen. Similar cases can happen when people defecate on soils that are then washed

into the same water sources by rain. By using this water infection might occur.

More important in health and hygiene issues are the behavioural issues of the community and in particular households rather than on particular diseases. A combination of hygiene behaviour may be required to reduce one disease, while a change in one hygiene behaviour may help reduce the transmission of multiple diseases. Addressing human behaviours, as opposed to diseases, is generally more cost effective and can have an impact on a greater range of threatening diseases than programmes that focus exclusively on the reduction of a solitary disease

Sanitation: awareness building

“Sanitation has been defined as the management of disposal, treatment and reuse of human excreta, solid waste and waste water, supported by good hygiene behaviours, in order to ensure environmental conditions in human settlements which promote the well being and health of the population.”

It is not to be forgotten that every community is unique when it comes to sanitation. This means that communities like individuals have their own ways of organising to deal with problems.

Sanitation projects are community based, but at the same time it demands a lot of responsibility from the owner or user. Thus the role of the project committee in mobilising the community is vital while sanitation projects are driven, and aims at coverage of up to 100 per cent.

In general, in order to create awareness, be it on water and waste management, pollution sanitation or health and hygiene issues, it is necessary for the intellectuals, the external experts or whoever is involved with communities to first come up with a programme which will entail:

- Knowing your community and its composition.
- Knowing the traditional norms and cultural values.
- Knowing the existing structures of the community in terms of leadership hierarchy for effective communication and information dissemination.
- know the amount of information the community already possesses
- Know the in routes and the other extension services given the communities.

Conclusions

Experience has shown that participatory programmes, where local residents identify a health problem or water quality problem to be identified and addressed or behaviour to be modified, have a far greater chance of success than pre-fabricated messages. Generalised messages designed by project agents and introduced in belief that the practised and promoted ways of life are not being done in the village, usually due to backwardness, ignorance and illiteracy have become a failure. It is also wrong to assume that if people know something, they will definitely practice it.

There are three important components that we need to focus on when dealing with sanitation, health and hygiene:

- Increasing community awareness on why water supply and sanitation are important from a health perspective. Particular emphasis should be placed on how proper sanitation facilities; increased quality and quantities of water and appropriate hygiene behaviours and practices can lead to a reduction in locally specified diseases.
- The second component is the proper maintenance and use of newly constructed water supply and sanitation facilities. For this to happen, the communities need to identify themselves with the facilities. The knowledge they already possess must be acknowledged with respect and project leaders have to build on it rather than assuming that there is little or no understanding of the linkages between water supply, sanitation and health
- The third component consists of behavioural change. This should include concentration on at least one inappropriate behaviour at a time, which contributes to health problems in the community. Improved sanitation is a process not a top down approach. People must be meaningfully and respectfully involved, that is from planning to implementation and follow up.

MS ESPER. J. NCUBE, Department of Water Affairs & Forestry, Institute for Water Quality Studies, P. Bag X 313, Pretoria, 0001, Republic of South Africa.
