The Level of Communication between Communities and Engineers in the Provision of Engineering Services

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THE LEVEL OF COMMUNICATION BETWEEN COMMUNITIES AND ENGINEERS IN THE PROVISION OF ENGINEERING SERVICES

by

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by

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EXECUTIVE SUMMARY

INTRODUCTION

Experience elsewhere and in South Africa has shown the vital importance of communication in all development projects. This reality applies equally to infrastructure development, projects requiring the promotion of technological information and transfer of knowledge. This study has been aimed specifically within the realms of water supply and sanitation projects.

The provision of water and sanitation services to these communities needs to be a bottom-up process that will enhance the capacity of the communities. They should be in a position to take their own decisions affecting the level of service. The process towards this situation depends on effective communication.

TERMS OF REFERENCE

The intention of the research project was to establish procedures to enable the stakeholders in these development projects to communicate and understand one another. The secondary purpose was to determine to what extent standards of service were being dictated by the technical stakeholders and what procedures should be developed to ensure that communities could understand the issues with which they were faced.

METHODOLOGY

The research took the form of investigating case histories in order to establish the level of understanding that had been achieved as between the developers, represented by the engineers, and on the other hand the communities.

Interviews were arranged with a number of consulting engineers that had either completed water supply schemes or were in the process of so doing. The questions concerned the nature of the appointment, the process of communication and training and the degree of success of the projects.

Research at the community level took place over a period of eight months in 14 communities. Information was gathered using participatory research techniques that emphasised a people-focussed approach and open dialogue through guided facilitation. This allowed quantitative as well as qualitative data to be obtained. The information gained covered the extent, focus and nature of consultations with the engineers. It further examined the guidance given on technical matters. Finally it considered the effectiveness of the capacity-building activities and the extent to which they were able to understand the issues.

An extensive review of the literature on various aspects of communication was undertaken.

Finally a workshop was held to which engineers and community representatives were invited in order to voice their opinions and suggestions on how to improve communication between them.

Literature Review

The literature review established a theoretical basis for communication and the factors that impacted on this. Amongst the various factors were the language used, the settings in which the communication took place and the relationship of the participants. The differing needs from within the developing community create different purposes for the communication, whether uni-directional or transactional.

In the development communication process, communication should become an end in itself and not just a tool. It requires active participation of the parties in which needs are expressed and the problems identified in order to create the solutions. Process must be put in hand to move the communities away from the passive and uncritical to that of positive participation and critical.

Communication then takes the form of a dialogue or negotiation between equals. The specialised engineering knowledge is shared with the communities within the specific circumstances. In order to clear the hurdle of using technical jargon it is necessary to facilitate these discussions with a development support communicator who reacts between the change agent and the recipients.

Viewpoints of the Engineers

Although differing viewpoints were expressed, the majority of the engineers saw the purpose of the project in technical terms with a technical end-product. None commented on issues of training or empowerment, or saw the projects in those terms. Their approach differed according to the agency through which they received their appointments and the influence that the communities had in the appointment. The social, institutional and development aspects of the project were not seen as relatively important compared with the technical requirements. The short time allowed for the preparation of a business plan was a point of criticism.

All claimed to have given guidance to the community on technical issues. This was generally given after the business plans had been frozen and no changes in the level of service could be considered.

The capacity-building activities were generally at a low key, with training being given in constructional activities such as pipe laying and concrete work. In only one project were the workers given the opportunity, through the training, to be able to operate on their own without external supervision and thereby enabled to provide small privatised services to other local authorities.

In the evaluation of the project all the engineers believed that the schemes were successful in that the technical objectives had been met but with qualifications on the fact that the level of service did not meet the wishes of the recipients.

Viewpoint of the Communities

From the community perspective it appeared that the communication was targeted at the local authorities and, to a lesser extent, the project steering committees, little or no consultation had taken place within the communities. In only one instance did the community members see themselves as fully involved in the decision-making process. A further point of criticism was that no needs analysis of the community had been undertaken

and that the water project was not necessarily the top priority. The decision to implement the water project had been taken at a higher government level.

Although guidance was given on technical and other issues no attempt was made to ascertain whether the information was understood or could be used as a basis for decision making. Communities did not consider that they had been adequately consulted on levels of service. This was mainly as a result of freezing the business plans.

In evaluation of the projects certain communities did express satisfaction at the training they had received but were unhappy about the project process. Others indicated that the projects would fail while a further seven were unsure as to whether the schemes would be sustainable and properly operated and maintained.

Stakeholder workshop

The views of the communities were reflected at the workshop that was held in July 1999. Certain salient points emerged from this, particularly in regard to consultation. This was needed at the outset of the project with the local authority or the implementing agent taking a lead role. Participation was mainly in the form of capacity building which had not taken place. Proposals were made that the local authorities should train the project steering committee prior to the appointment of the engineers. Concern was also expressed that having trained members of the project steering committee, one or more of them would move elsewhere and the efforts in training would be lost.

There was concern that there was unfair treatment of the rural communities.

Community representatives pointed out that they were not aware of their roles and responsibilities as well as those of the engineers and the local authorities. This had lead to confusion and made meaningful contribution to the project difficult. The engineers supported this viewpoint.

There was criticism of the commitment given by the local authority. This was seen as critical since the local authority was the legal authority and an important player in the delivery of services. The very short time allowed by the authorities and implementing agents for the preparation of business plans by the appointed consulting engineers was seen as unrealistic. This did not allow communities to participate in any way in the formulation of the business plan which set the level of service.

KEY FINDINGS

Community-based Needs Analysis

A proper analysis of the development needs of the community should be undertaken prior to adopting any project for them. It was important to establish who was being consulted, whether the communities were in fact being heard and finally, whether the community was being consulted or simply asked to endorse a decision by higher authority.

Mistaking the Part for the Whole

The project steering committee should not be viewed as the focus of communication. This leads to the conclusion that interaction with the project steering committee equated to communication and interaction with the community itself. The initiatives for capacity

empowerment and communication should be taken outside the project steering committee as well. Grass-root participation in planning and decision making was necessary.

Lack of Identifying Appropriate Service Levels

Insufficient attention was given in all cases to the degree of affordability and the willingness to pay. The level of service that may be seen from outside to be affordable may not be acceptable to the community or supported by a willingness to pay for the lower level of service.

Inappropriate Definition of Capacity Building

From the viewpoint of the community, the training was seen as inadequate. This should promote the functions of governance and the provision of service, as well as provide increasing access to resources and improve the general awareness of the local population in regard to their services. Very little project-related awareness was created amongst the communities.

Information Transfer

It was found that information sharing, consultation and communication would not work if there was just a flow of content, particularly in a single direction. The information sharing was to be based upon a dialogue which ultimately would answer the questions of what the system would cost the household in terms of money and time and to what extent it would change or affect the life of the community members.

Inappropriate Focus of Existing Performance Measures

Current thinking targets the performance indicators on technical milestones i.e. number of persons served or lengths of pipeline laid and commissioned. Greater attention needs to be paid to the commitment of the local recipients to the project. Indicators of this commitment would come through sustainability, the extent to which they address the need for development and the context in the overall area or regional objectives.

Lack of Direct Consultation from the Engineering Perspective

There was a desire to meet and communicate with the communities. This was frustrated to a large extent by the constraints placed upon them by the implementing agent and the fact that they did not know with whom they should be communicating.

CONCLUSIONS

It is essential that water supply and sanitation projects be regarded as not only the provision of infrastructure but for the development of a service support organisation and integrating this with development focus aimed at facilitating local economic development. This perspective enhances the need for appropriate and effective communication. This communication is two-way and forms a dialogue between two active participants. Both should understand that in the transmission of their messages that there may be errors of communication and messages once decoded, may be significantly different from the initial intended message. The context within which this message is transmitted also as an influence on the distortion that may occur. It is important that the communication processes are seen as requiring an inter-disciplinary approach that strives to gain a real understanding of the local context and situation in a collaborative manner.

RECOMMENDATIONS

The recommendations cover the requirement for the active participation of the implementing agent prior to determining the need for, nature and extent of the project.

The engineer should see that he is a member of a multi-disciplinary team. Members from the community should be trained to perform key tasks within the project in terms of planning, implementation and management.

A thorough analysis of the needs of the community should be made at the outset of the project in accordance with the Institutional and Social Development guidelines of the Department of Water Affairs and Forestry.

It is vital that provision of water and sanitation services should be seen as a delivery of service at the householder level. Proper awareness should be created and individual households should sign a service agreement.

The level of service that is to be provided is a matter of negotiation with the communities. The engineer should be Involved in informing the communities of levels of service, the cost ramifications and how these impact on the family budget. Capacity building is seen as an essential component of these schemes. There is an overriding need for creating awareness, participation, knowledge transfer and training. Greater attention should be focused on the transfer of information correctly and accurately.

The measures of performance should be related to indicators that reflect not only the provision and successful operation of the infrastructure but also that of institutional and social development in a context that promotes the provision of water supply and sanitation as a sustainable service.

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1. INTRODUCTION

Mastering the application of technology and technical change has proven to be one of the keys to development progress in less-advanced communities. The transfer of technical knowledge and technical skills creates opportunities for solving key development problems and for transforming the life prospects of masses of poor people. As such, the communication of and transfer of technical knowledge forms an essential component of development initiatives in less-developed communities.

Experience elsewhere and in South Africa has shown the vital importance of communication in all development projects. It forms both the vehicle for obtaining community participation as well as an essential mechanism for promoting management at local level. This reality applies equally to infrastructure development projects requiring the promotion of technological information and knowledge transfer that is characteristic of water supply and sanitation projects.

Despite the essential nature of participation, this concept frequently remains ill defined and loosely structured in its application. Unless the local people are actively encouraged to take part in initiatives to transfer knowledge, skills and understanding in the first instance and to allow joint decision making and management in the second instance, projects can do no more than promote local consultation in a haphazard and perfunctory basis. While local participation is not seen as an universal remedy, it is firmly believed that effective (and therefore empowering) sharing of the process is an essential requisite for project success on an ongoing basis.

Capacity building is a process aimed at ensuring the individuals and the communities are trained and prepared to take over the responsibilities of owning and operating a water project. This will include the ability to take informed and rational decisions concerning the level of service and the reasons and need for cost recovery. It is an empowering process. Ideally all members of the community should take part and share in the process although this may not always be feasible.

The needs of communities (including their need for participation and empowerment) offer a logical and basic point of departure for co-operation between all stakeholders to allow effective development of water and sanitation services, as well as the ongoing management (including operations and maintenance and cost-recovery) thereof. The achievement of appropriate changed and equitable service is dependent on the initiation of actions based on the realities of the recipient or 'client' communities.

Communities are heterogeneous in their nature, settings and situations. For this reason it is impossible to compile standardised "recipes" for ensuring water services management that is identical for all communities. At the same time, it is essential that water supply and sanitation service development initiatives use a conceptual framework that strives to integrate and reconcile the primary objective of supplying water and promoting water management with community-specific realities in a consistent manner. Communication is fundamental to this process.

The success of the communication that has taken place between the developers and the community becomes a yardstick or key performance indicator whereby community participation may be measured.

The provision of water and sanitation services to developing communities needs to be a bottom up process that will enhance the capacity of the communities. The communities should be in a position to take the decisions affecting the level of the service and the final form of the scheme. They should accordingly be empowered to take these decisions. The process however depends on the extent to which the parties can communicate effectively. It requires the community to be informed in a manner that will enable them to understand the technical choices and the consequences of selecting any of the options. It requires the facilitators and the engineers to comprehend the needs and aspiration of the communities and to react to satisfy these needs.

2 TERMS OF REFERENCE

2.1 PURPOSE OF THE RESEARCH

The intention of the research project was to establish:

1. What procedures must be put in place to ensure that communities understand the proposals of the engineers in regard to both the technical choices offered as well as the financial implications;

2. What procedures must engineers follow to understand fully the needs and aspirations of the communities

3. To what extent do the engineers dictate the standards of service and what procedures need to be put in place to ensure that engineers communicate to a client community the possible choices on standards of service, at and early stage of the feasibility report.

4. What procedures need to be developed to ensure that communities understand the feasibility report and to avoid unrealistic expectations by the communities after the acceptance of a feasibility report.

Monitoring of procedures:

- Whether these expectations, as understood by the community, are met:

- Whether the community is satisfied that the end product is what they understood it would be? If not what adjustments are needed to ensure that the intentions of the engineers are truly conveyed to the communities;

- How should reports be prepared to ensure proper transfer of information

3 METHODOLOGY

The research took the form of investigating case histories in order to establish the level of understanding that had been achieved as between the developers, in these cases represented by consulting engineers, and the communities. The data thus gained was used to prepare guidelines on how the approach should be made to the communities.

3.1 ENGINEERS

Interviews were arranged with a number of consulting engineers that had completed either water supply schemes or were in the process of so doing or were implementing a sanitation scheme.

A questionnaire (See Annex A) was prepared which was designed to elicit the following information:

- ⊃ The extent of the consultation during the preparation of the feasibility report or business plan

- ⊃ Was there any phase during which the community leaders were given guidance on and explanations of the technicalities that were involved in the engineering of the project;

- ⊃ The explanations given of the level of the service that would be provided

- ⊃ The descriptions of the service that would be installed and its effects on the day to day life of the community;

- ⊃ The phase in the preparation of the report when these explanations were given and whether the community had the opportunity to evaluate the level of the service before the matter had effectively been decided;

- ⊃ The nature, topics extent and duration of the training offered together with the evaluation of the results of the training; the engineers' perceptions of the success of the project and evaluated against what criteria;

- ⊃ The opinion of the engineer on the success of the communication and of the project itself.

In all it was possible to interview some six different firms of consulting engineers on a total of eight different projects. Of these one was for the rehabilitation of a sewerage reticulation in an existing local authority under the Municipal Infrastructure Programme. Two of the water supply schemes were under the Extended Municipal Infrastructure Programme and the balance was implemented under the Reconstruction and Development Programme. One consultant was unwilling to co-operate on the project that was selected for investigation.

The location of the projects covered four of the provinces. In the North West Province the two selected were in Bethanie and Disake-Mokgalwaneng. Evaton and two projects in Shoshanguve and Tswaing were chosen in Gauteng. Daantjie is situated in Mpumalanga. The sewerage project was executed in Evaton, which has a formal Local Council. The remainder of the

projects were carried out in communities that had no formal structures or Local Authorities with which to make contact.

The interviews were direct between the researcher and the engineer of the consulting firm that had been responsible for carrying out the project and based upon the prepared questionnaire.

3.2 COMMUNITIES

Research at community level took place over a period of eight months in fourteen communities in the Gauteng, Northern, Northwest and Mpumalanga Provinces. Data gathering was based on the use of participatory research techniques that emphasised a people-focused approach and open dialogue through guided facilitation. This approach allows the gathering of quantitative data as well as offering valuable qualitative data that enhances contextual understanding of the experiential meaning of the phenomenon being investigated.

The research team consisted of the Research Co-ordinator, assisted by four fieldworkers and local assistants employed from the communities where the research was undertaken.

The study was initiated by contacting the members of the Project Steering Committee (PSC) in each of the communities and explaining the nature of the research project to them. PSC members introduced the field workers to the broader community who elected persons from the community who would be able to assist with the project.

The bulk of data was collected through using the Participatory Rural Appraisal (PRA) approach[1]. A number of focus group discussions were held in each village with groups ranging in size from 5 to 18 participants. As far as possible, focus group discussions included members of the Project Steering Committee. A relatively flexible programme was used as basis for the focus group discussions and included procedures such as the drawing of Venn diagrams, a variety of maps (infrastructure, water supply points, community structure, etc.) as well as timelines and scoring and ranking exercises. See Annex B. Participants were encouraged to speak freely and, where necessary, were divided into smaller groups to facilitate open discussion. Differences in opinion and perceptions were carefully recorded.

Triangulation that aimed at verification of appraisal results was achieved by means of semi-structured interviews with community residents as well as prominent persons in the communities, including Project Steering Committee members that did not form part of the focus group discussions. While the research activities focused on gathering data about communication initiatives as part of the water project, relevant data were generated about, inter alia, institutional arrangements, the water project process, project related needs assessments and training and capacity building.

This information flowed from the following broad areas of focus for discussions and interviews:

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[1] A particularly appropriate approach for obtaining qualitative and quantitative data on a participative basis in development planning and evaluation processes. See also Mascarenhas, J. 1991 and 1993.

- The extent of the consultation prior to and during the project
- The focus of such consultation prior to and during the project
- The nature of such consultation
- The extent to which the PSC and members of the community were given guidance on and explanations about technical and/or project and/or other issues both prior to and during the implementation of the project;
- The extent to which any needs assessment focused on identifying preferred levels of service and how decision-making in this regard was handled;
- The extent to which information was given about the level(s) of service that would be provided and the specific implications (cost, O&M, etc.) of the proposed service;
- The extent to which communication took place around the detailed design proposed for the community as well as the proposed placement of standpipes, reservoirs, etc.;
- Did the capacity building activities allow them to understand
  - (i)   the project and the project process,
  - (ii) essential information about water (including quantity and quality),
  - (iii) cost recovery including information on the basis for calculating tariffs, the need to pay for services, the preferred method of payment,
  - (iv) the different levels of service and the disadvantages and advantages of each,
  - (v)   health and hygiene, etc.
- Did the training that was provided enable them to take "ownership" of the project;
- Did the communities believe that the project had been successful and on what basis did they evaluate such success/failure.

3.3   LITERATURE OVERVIEW

An extensive review of national and international literature on various aspects of communication and the development of communication guidelines. A significant focus of the literature overview has been an evaluation of communication models and communication requirements within a development paradigm. As such, the overview included an evaluation of the applicability of different communication models, language planning requirements and the implications that the requirements for reconstruction and development as part of infrastructure development projects would have on project-related communication.

3.4 STAKEHOLDER WORKSHOP

Stakeholders of the water projects, that is, the engineer/consultant and representatives of the communities' Project Steering Committees (PSCs) were invited to attend a "Communications Workshop" on 23rd July 1999 to voice their opinions and suggestions on how to improve communication between them. At the same time the workshop served as a perfect arena for the participants to understand and fully appreciate the social, legal, administrative and technical obstacles with which each may have had to deal.

4   LITERATURE REVIEW

4.1   Context of Communication

The fact that infrastructure development initiatives such as water supply and sanitation projects require the development of local capacity to understand, select and manage technology at local level has vast institutional and social development implications for projects. For infrastructural technology to function at optimum levels, it has to be combined with human understanding and expertise. Communication becomes the vehicle for driving the entire empowerment process of infrastructure development and service delivery. It is therefore of vital importance that significant attention is paid to this component of a project.

In this regards Trindade (1991, p32) states that:

"Science and technology may be embodied in hardware, but it is not confined to hardware. Thus real transfer of technology involves much more than access to technology, be it the hardware or the software concerned with it. Technology is a cultural manifestation of a given society and, therefore, its transfer implies the transfer of many social and economic options that the recipient has not considered explicitly, but eventually absorbs.

The pursuit of sustainable development.... requires a certain specific attitude. This attitude can be found in the concept of endogenous capacity which can be interpreted as the capacity to take autonomous and reasonable decisions best suited to the specific context .. at a specific point in time. In simple terms endogenous capacity is the home-grown capacity to take informed and independent decisions. The acquisition of this capacity is an evidence of development."

4.2   Definition Of Communication

With this in mind, communication can be defined as the successful transfer of a message from one person, or group of people, to another person, or group of people **such that the recipient(s) has the same message as the sender**. The message can be transmitted in a simple one way mode and it is up to the receiver to interpret and understand the message. This may not result in the correct message being received. Communication can on the other hand be the product of an exchange in which the interpretation of the original message is refined by a process of sending and receiving messages between the participants. It can also result in transactional communication in which the meaning or intention of the original message is refined and becomes the product of a negotiation or transaction between the sender and the receiver. In the two latter cases, there is a two way or multi-directional transfer of messages.

4.3 Components Of Communication

There are different components of communication. The sender and receiver have been identified in the definitions of the types of communication above as well as the message. The sender of the message may also be referred to as the source or the communicator. The receiver in turn, can be described as the destination or recipient. Messages from the source to the destination denote a one way form of communication whilst the use of communicator and recipient tends to denote a transactional form of communication in which both take part.

The message itself is the thought or concept that the sender wishes to transmit to another. It has a content or meaning which may be factual or the expression of thoughts, ideas or feelings. It has to be put into a specific form for transmission. Signs and codes are used to do this. A sign represents or stands for something else. For example a word is a sign for another object, thought or feeling. Gestures are also signs. The code is the systematic way of combining the signs, for example the grammar of a language.

Encoding transforms the original thoughts into signs, which are in a form that can be transmitted and received. The receiver must now construct meaning from the message and interpret it. The interpretation is subjective and is very important in the two modes of communication.

There must be a medium for the communication to link the sender and the receiver. It is the physical means of conveying the message, while the channel is the route that it follows. In a conversation the voice is the medium while the airwaves form the channel.

Feedback or response provides the sender with information on how the message is being received. It can be in response to the message, it may indicate that the message has not been received. The feedback itself is a message and may be transmitted by word or by body language.

4.4 Factors that Impact on Communication

"Noise" is any interference with communication. It may be physical in the form of background noise itself, it may be psychological in the form of resentment to the sender or it may for example be a visual distraction.

The situation, or context, in which the communication takes place, and the background of the participants influences the success of the transmission. The context could be the work situation, a noisy factory, the home or a lecture theatre. The respective positions or roles that the participants hold also influence the transmission. The background of the participants covers who they are, their full history and learning experiences as well as their values and the way that they see the world.

4.5 Purpose of Communication

There are many reasons for communicating. It may be to express or fulfil a need, to inform, to entertain, to persuade or to maintain a relationship. Some of the needs that have been identified are for survival, safety, social acceptance and relationships, respect and self-actualisation. There may be differing needs from within a developing community.

An awareness of the purpose of the communication is needed to provide the starting point of the communication. The effects of the communication may reflect the original reasons or they may not in which case the effects become unintentional.

4.6 Language and Communication

Language is the code or system of signs through which much of the communication takes place. A shared knowledge and understanding of the language being used is essential for good communication. The words represent objects or thoughts within a codified framework of understanding. Difficulties may arise with the use of words, which for example may have more than one meaning. The context within which the words are used generally defines the meaning that is intended but on the other hand may not. There may be more than one word for the same object, but having different connotations. The connotation may vary from person to person, depending on external factors such as background. It is important to be aware of this in the choice of words, particularly where people of differing backgrounds are involved.

Verbal communication is what the words themselves say. They form only a small part of the message, which is reinforced by the non-verbal communication. This may be the body language that is used or for example the tone of voice. Written communication is a non-verbal form of communication.

Body language or the visible signs of the message may express different messages to members of different cultural groups. Eye contact for example may be essential in one community but considered rude and intrusive in another. Handshakes vary for different classes of people and convey entirely opposite meanings according to whether it is a soft or a firm handshake. Awareness that there are differences may assist in maintaining good relations. The body language is an important component of communication and represents a significant component on the message that is being transmitted.

The non-verbal messages may reinforce, complement, contradict, replace or regulate the message. It is most important that the non-verbal signs used by the recipient audience should be understood by the communicator.

4.7 Communication Settings

Communication takes place in a number of different settings and between one or more participants. Where there is only one person involved, the communication is the thought process going on the mind of the person. This is called intra-personal. When it is between two or more people in a face to face situation it is know as interpersonal. There is good feedback in this

situation. Where there is small group there is feedback within a far more complex situation. Where the members of the small group have a sense of belonging and common purpose, the level of communication is likely to be high.

With public speaking, there is likely to be far less feedback with limited interaction between the audience and the speaker. This is the result of the audience not being a small cohesive group.

In mass communication, for example through the media or public announcements, there is no direct feedback and if it does occur it will be long after the event.

The setting should be selected to achieve the purpose of the communication.

4.8   Culture and Communication

The cultural background of the participants can significantly affect the way in which the messages are received and interpreted. Intra-cultural communication can therefore lead to misinterpretation of the messages as each group has a shared system of beliefs, values and view of the world, which may differ from group to group.

Cultural stereotyping may give rise to prejudice against members of another group and evaluation of the other group against the value system one's own group. This can erect formidable barriers to effective communication.

4.9   Persuasive Communication

One of the purposes of communication is to persuade, either to change or to reinforce the attitudes and behaviour of others. It may take place in any of the settings described above. There are several theories of how persuasion works but it remains a complex unpredictable and uncontrollable process.

An early theory of mass communication holds that the messages had a uniform and predictable effect on isolated individuals in society. Predictable results were expected from messages directed at an audience.

A later theory, called the *two –step flow theory* (Katz and Lazarsfeld 1955), showed that the process of mass communication was more complex than that described in the earlier theory. In terms of the two step flow theory, audiences are not seen as masses of isolated individuals, but rather as individuals in social contact with one another. Mass media messages are regarded as flowing in two stages.

First of all, messages are received by people who use the mass media regularly and often. They are known as *opinion leaders*. These people then pass on the messages to other people through interpersonal communication. Opinion leaders are considered to have greater access to information than others in the group and therefore, the power to influence them. One criticism of this theory is that it suggests an active role for the opinion leaders and a passive role for their followers.

Rensburg and Angelopuulo (1996) describe a further development on this theory, called the *multi-step flow approach*. This approach combines the two-step flow approach with *the diffusion of innovations* approach. They regard the *diffusion of innovations* theory as particularly valuable for communication planners in a developmental environment.

It is recognised that planned communication is often aimed at promoting an innovation. This is related to the persuasive purpose of communication. In a developmental context, such as community water supply projects, the innovation that is being promoted is regarded as one that is beneficial to the community. The outcome of communication aimed at promoting the adoption of innovation (also referred to as the diffusion process) is seen to be behavioural change.

The phases of the *adoption process* of diffusion theory are in order of occurrence:

➲ The *knowledge* stage (information about an innovation),

➲ The *persuasion* stage (change of attitudes and or behaviour with regard to the innovation),

➲ The *decision* stage (deciding what to do),

➲ The *implementation* stage (implementing the decision) and

➲ The *confirmation* stage (confirming the decision made)

An individual known as the change agent plays an important role in this process of the diffusion of innovations.

4.10   Development Communication

Development communication with community participation is the approach that is appropriate inter alia for community water and sanitation projects. The earlier approaches to development communication were characterised by a top down approach. Knowledge was seen to be the preserve of specialists who considered they knew what the communities needed. The purpose of this form of development communication was to persuade the recipients to adapt to the ways of specialists. It is now commonly accepted that this approach is inappropriate and ineffective. It is necessary to seek a way of diagnosing the problems through community participation and thus finding the solutions. The community identifies the needs and information is provided in response to these needs.

In this approach the community shares the research with the change agent in an interactive process of sharing knowledge about the problem and join in identifying solutions.

Of vital importance is the understanding that communication in the context of a development project involves a number of important variables that are absent in other communication initiatives. Frequently, communities selected for infrastructure development projects have, inter alia:

➲ high levels of real and functional illiteracy,

➲ limited understanding of technology as well as technological terms and descriptions,

➲ a home language that is different to that of the implementing agent.

It is, therefore, essential that the first steps in the communication process that aims at promoting the adoption of innovation ensures that a firm knowledge base is developed within the community. This knowledge base is totally dependent on the degree to which the recipients are placed in a position where they understand the basic concepts related to constructs

such as the project, its phases, technology choices (including the diversity of implications of such technology related to costs, maintenance, etc.).

Thus, when planning communication initiatives, it is necessary that we look at the form as well as the function of the messages to be conveyed.

4.11 Effective Communication

For the most effective communication it is necessary to view it as a process of transaction and negotiation which is seen to be the most appropriate and productive for all concerned. It may be seen as a process of negotiating meaning with convergence of ideas and concepts. It requires the co-operation and a willingness to communicate from all the parties. The initiator of the communication has the greatest responsibility in ensuring that communication does in fact take place.

All the participants should understand and share the purpose of the communication so that it can be evaluated in terms of satisfying the needs of the participants. If the purpose of the communication was to persuade, then this is likely to be judged in terms of changed behaviour or attitudes. In communication for community water supply and sanitation the needs of the participants should be identified at the outset if the purpose is to satisfy those needs. The outcome can then be judged if those needs are satisfied.

The setting should be suitable for the purpose. This can either be in small groups or in a mass communication. The latter decision will be influenced by the extent to which the target audience has access to the media to be used. Small groups may not be representative and a good knowledge of the local customs and perceptions regarding appropriate representation at meetings must be obtained.

A key to successful communication is the understanding of the backgrounds of the other participants. This is especially true where there is a cross cultural exchange. The background also affects the perceptions of how people see and interpret aspects of their experience. The personal factors of the communicators, such as age, gender, educational level and position in society are of importance. Messages should be coded to take these factors into account. Recognition of the needs of the participants will assist in improving the level of communication.

The message must be transmitted in a code, which in the first instance would be verbal, using language. Differences in the ability to use a language and the choice of vocabulary should be taken into account in preparing the message. It may be necessary to go over the message a number of times in order to prevent misunderstandings. Technical terminology should be avoided or else used with great care and with proper explanations.

The non-verbal codes of the participants may also be different and the recipients may interpret these incorrectly. There should be an awareness of this and if necessary attention should be drawn to what is intended.

Care should be taken that the message is interpreted with the same meaning that was intended and is not distorted as a result of differing backgrounds and inappropriate coding of the message. A typical example of such differing meaning is found in the context of the sentence "I understand what you have said to me." Within some communities, people will not say that they have not understood a message. This is because it is believed to be extreme bad manners to tell somebody that they have

explained something so badly that it has not been understood. The communicator, having been told that everyone has understood what he has said moves on to the next topic in this belief. Many other examples exist and underscore the care that needs to be taken in ensuring that understanding is promoted.

Medium and channel are important. The most normal medium is speech in face to face communication. This may be assisted by the use of illustrations and in the case of engineering projects, with drawings. The representation of three-dimensional objects in two dimensions is an unfamiliar convention to many and is likely to create false impressions. The use of engineering drawings as a visual aid should therefore be approached with extreme caution. Models and/or illustrations may be far more useful.

It is essential to obtain continuing feedback as the communication process continues.

Distractions or "noise" will interfere with the communication process and steps should be taken to minimise or remove it. The noise may be physical or psychological. The physical setting should be quiet and with the minimum of visual counter attractions. The psychological barriers may not be so obvious. The initiation of the communication process may itself create a barrier in the minds of some of the participants. The time at which the meetings take place may be inconvenient to some of the participants. This will disrupt their concentration on the proceedings.

The context in which the communication takes place may influence its effectiveness. The role of the participants may change within different contexts such as family, community work place etc.

The same principles apply to intercultural communication as apply to normal communication. However more than ever the participants must be aware of the dangers of applying the norms and perceptions of their own culture to the other cultures that are involved. Prejudice, ethnocentrism and type casting create barriers to open communication.

4.12   The Development Communication Process

The earliest concepts of communication in the developing world from those coming from the developed countries were top down in nature. The alternative views emphasised the importance of proceeding bottom up and bringing the needs of the communities into the process. Participation in the process was seen as a means to an end. These principles have been taken further in making participation itself an objective of the development programme. Knowledge is not the preserve of one of the participants but is created through the dialogue of the participants in a research process.

Communication then becomes an end in itself and not just a tool. It requires the participants to join actively in the process, expressing needs, identifying problems and creating solutions. It should encourage an altered mind set in those to whom the development applies. The process should be aimed at moving them away from the passive and uncritical. Positive participation must be encouraged.

The communication must take the form of a dialogue between equals. In this way the specialised scientific knowledge can be shared with knowledge of the specific circumstances and background of the community and how it relates to their needs.

There are specific roles of the participants in communicating in the developmental situation. The initiator of the communication is the change agent or professional expert. An additional person is required in the form of a development support communicator.

Before the development project is planned, the development support communicator investigates the communication needs of the recipient communities. The role then changes to that of facilitator, or go-between, giving support to the communities in their dealings with the change agent. The facilitator then interacts with the parties, working with the messages and interpreting these. The aim is to make the messages clear to the recipients. Technical jargon is avoided and reformulated so that the target audience can understand it.

The development support communicators also investigate the choice of medium, such as visual aids, the setting and the context and advises the change agent accordingly. They do not replace the change agent in the dealings with the communities but rather supports them and clarifies the change agent's messages.

The following diagram indicates these roles. The bi-directional arrow indicates two-way dialogue.
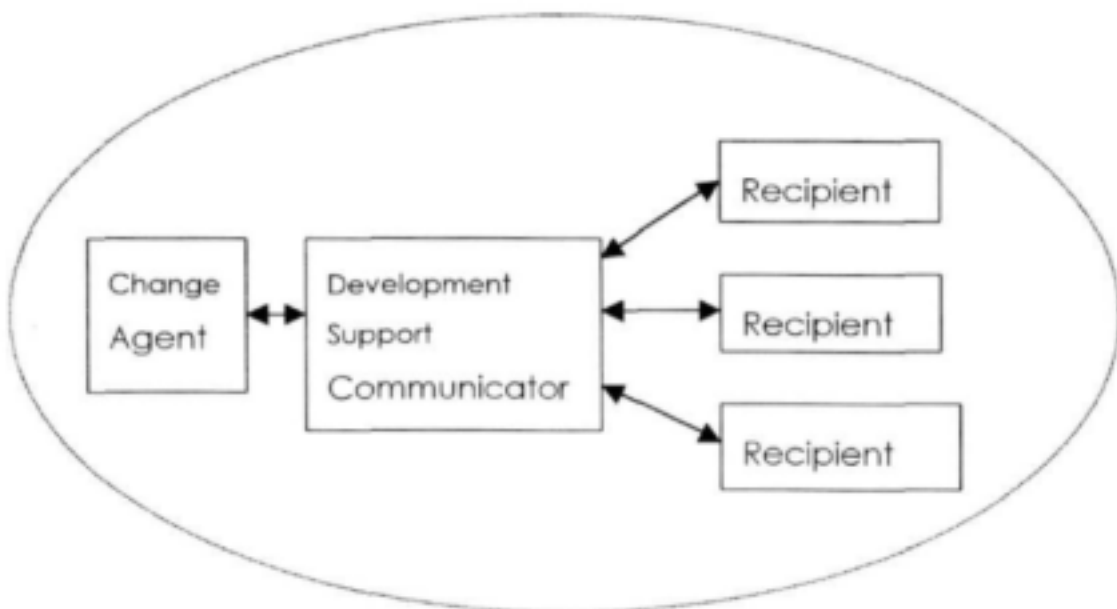
5 RESULTS FROM SURVEYS

5.1 View Point of Engineers

5.1.1 Consultation and Participation Prior to and During the Project

The extent and level of the consultation and discussions with the communities before the commencement of the project differed from engineer to engineer. They hinged to a certain extent on the circumstances under which the engineer was appointed and the period for which the community and the engineer had known one another.

All the engineers saw the purpose of the projects in technical terms with a technical product, either to supply water to the community or to restore a sewer network to proper working order. None commented on issues of training or empowerment or saw the projects in those terms. The communities had not initiated the projects directly and either the local authority or the Department of Water Affairs and Forestry had started the proceedings.

The engineers considered for the most part that the communities saw the projects as top priority or very high on the list of needs. One engineer did not know and had not ascertained the priority. Another considered the fact that the community was without water justified the scheme and that it therefore was the top priority. In only one instance had been established that water supply was the top priority in relation to other needs.

The Department of Water Affairs and Forestry made three of the appointments after inviting proposals. The engineers made submissions to the Department's officials and representatives of the communities. These representatives were introduced to the engineers as being the Project Steering Committees and who influenced the choice of the engineer.

In a number of the cases the business plan had to be submitted right at the outset of the project. The Department of Water Affairs and Forestry at that time had guidelines in force that insisted that funds would not be available for projects with a higher level of service than the basic. This negated any discussion on the level of the service to be provided and no choice could be offered to the communities concerning the level of service in these projects.

Once the business plans were approved, the budget became frozen and it was no longer possible to change the level of service that the communities were to receive under the project. Therefore the discussions that were held only concerned the details of the scheme that was to be built. The consultations were generally held with the Project Steering Committees and not with the community at mass meetings other than in two of the projects.

In two other projects the engineer left all the consultation to the community liaison officer who was appointed by the local authority that was acting as the Implementing Agent. No attempt was made by the engineer to communicate directly with the community.

In the sewer rehabilitation project all the discussion were with the local authority councillors. These discussions were held weekly while the contract documents were being prepared. The technical and contractual issues were discussed and amended to meet the needs of the townspeople better. The training component was also part of these discussions. Good understanding and rapport was claimed.

In the other projects the engineers believed that they had understood the requirements of the communities and that the communities had understood the technical components of the schemes. Constraining the level of service to that of the Reconstruction and Development Programme led to dissatisfaction, which the engineers had to manage.

In one instance a decline in the relationship between the community and the engineer was reported. This came about as a result of dissatisfaction over the decision of the Department of Water Affairs and Forestry to provide the water from boreholes, rather than to draw from the pumping main belonging to the nearby water board.

5.1.2 Guidance and Explanation of Technical and Other Issues

The engineers all claimed to have given guidance to the communities on technical issues. In the majority of the cases this guidance was given at a stage when the business plans had been frozen and no changes in the level of service could be made and the counselling concerned the detail of what was to be provided. As an example in one of the projects, the material from which the reservoir was to be constructed formed part of the discussion. In another the position of the standpipes was explained to the Project Steering Committee. Initially drawings were used, but then when these were not understood, the Project Steering Committee was driven around the area so that the positions could be pointed out. In another the actual stand pipes that were to be used were shown to the Project Steering Committee.

A number of the engineers referred to statements concerning unauthorised connections and that these would not be condoned. These were statements made to the communities and were not really subject to discussion and negotiation.

No consideration was given at the design stage to the ability of the communities to operate and maintain the scheme and the available institutional capacity for this.

Little information was given on the cost implications of changed levels of service, even when the communities asked for a higher level than was provided for in the business plan.

5.1.3 Capacity Building Activities

All the engineers saw the projects in engineering terms only and not as opportunities to build capacity in the community. The training was given as an obligatory component of the Reconstruction and Development Programme.

In almost all the projects the training was given in construction activities such as pipe-laying and construction work. This training was given on the job and in some instances people were sent away on training courses. The courses were not necessarily accredited and were directed more towards the efficient

execution of the projects than to improve the career prospects of the individual or to provide the capacity needed to operate the scheme.

In the sewer cleaning project, four teams from the community were trained to the point that they could operate on their own without external supervision. The leaders of the team were given instruction in the management of the teams. At the end of the project they had the potential of forming small businesses which could act for the local authorities or they could join the local authority and so maintain the sewers on a permanent basis. This component was built into the original contract in close consultation with the Councillors of the local authority.

In only three of the projects was the training directed at the subsequent operation and maintenance of the scheme. Courses were given aimed at the management of the schemes, including basic bookkeeping, how to operate the works and how to maintain it.

5.1.4 Ownership

In only one of the completed schemes did the engineer say that it was successful in terms of the community taking ownership and operating and maintaining the scheme independently. In the sewer cleaning scheme the local authority was continuing to maintain the sewers and no blockages were being allowed to remain. The people of the area had also stopped using the manholes for the disposal of household solid waste.

5.1.5 Evaluation of the Project

The engineers all believed that the schemes were successful in that the technical objectives had been met and after making allowances for the fact the level of service did not meet the wishes of the communities. In the project where the community did not accept the fact that underground water was to be used, the engineer commented that the project was technically successful but socially a failure.

The projects were not evaluated independently and the comments were all subjective.

5.2 APPRAISAL OF COMMUNITIES

5.2.1 Consultation and Participation Prior to and During the Project

Appraisal regarding consultation and participation evaluated two separate components thereof. The first was related to level at which consultation took place (degree of comprehensive representation offered). The second aspect involved the degree to which information given through to communities was understood on the one hand and the extent to which communities participated in decision-making processes related to the project.

Ten of the fourteen communities were actively involved in electing representatives to the Project Steering Committee either directly or through the selection of a representative Development Forum that formed part of the Steering Committee. Despite this, the Project Steering Committee frequently played a marginal role in decision-making processes about the planning and implementation of the project. Only three Project Steering Committees indicated that they had been fully involved in all aspects of the planning and

implementation of the project. In some instances only one PSC meeting had been held.

The majority of projects showed that limited and in some instances no consultation had taken place **within** the communities. The district council and, to a lesser extent, the Project Steering Committee were regarded as the main "target audience" and frequently consultation with these institutions was seen as consultation with the "community". Where representative community structures existed or where formed, information dissemination did take place on a regular basis mainly through the use of mass meetings. The extent to which community members deemed this communication to have been successful appeared to be entirely dependent on the degree of commitment shown by community representatives. In only one instance did community members see themselves as adequately involved in decision-making from the start and briefed on all aspects of the project in a manner that they could understand.

While the need for water projects had been identified by seven of the communities, no proper needs appraisal had been undertaken in any of the communities. A number of projects had been "inherited" by engineering consultants who assumed that consultation had taken place without checking this out. This meant that a Business Plan had been developed at some stage and had been approved prior to any feasibility study having been undertaken. In one instance the community had indicated that they did not want a water project to be initiated because they had access to water of quality and had more pressing priorities. Apparently, however, the District Council as well as the Department of Water Affairs and Forestry had indicated that they had been selected for a water project and did not have any choice in the matter.

The RDP standard was seen as the only option regarding level of service option in all instances, even where communities indicated that they desired a higher level of service. No attempt had been made to ascertain whether or not community members understood the financial implications of such higher levels of service and, where willing, to pay for these.

Consultation initiatives from engineers were largely confined to providing information about aspects of the business plan and about infrastructure. In general, there appeared to be a lack of understanding amongst consultants about the manner in which consultation and participation should take place, the topics that should be consulted on as well as an absence of a clear communication and participation strategy and plan. None of the projects provided significant evidence of a social development objective as an adjunct to the infrastructure development objective.

5.2.2 Guidance and Explanation of Technical and other Issues

Only two communities believed that they had received adequate guidance and explanation of technical issues. In both of these, the engineering consultants worked extremely closely with community representatives and ensured that all information was conveyed in a manner that was understandable to community members. Ample opportunities had also been created to allow an open two-way flow of information from the consultants to the community and from the community to the consultant.

While the majority of the balance of the projects had attempted to provide information in some way or the other, very little was done to ascertain whether or not information was being understood or could be used as basis for informed decision-making.

In no instances was there any evidence that the consultants had attempted to engage communities in discussions about different levels of service and the implications thereof.

In a number of communities, consultants had distributed posters and information leaflets "advertising" the proposed project and indicated that the members of the Project Steering Committee could be approached for further information. However, no effort had been made to even meet with the PSC (all contact took place at the district council level). PSC members eventually hid away (literally) because they believed that the community would victimise them because of the false expectations that had been created.

5.2.3 Capacity Building Activities

In general, capacity-building initiatives had been confined to the provision of training. In most instances the emphasis was on training of local labourers. This was undertaken in eleven communities and in one of these instances the provision of training was to the staff of the contractor!

Additional training initiatives that had been undertaken offered restricted training to selected persons in components of the water cycle, the need to pay for water, health and hygiene, etc. There did not appear to be any integrated attempt to ensure that this information was more widely disseminated into the community and as a result very little awareness creation had taken place within any of the communities.

A participative training needs analysis was only undertaken in one of the communities. The balance of the communities where provided with training but, in many instances did not even know how this training was to be applied - if at all. Despite this, community members who had been trained believed that the training had been of a high standard and were grateful that it had been provided because they believed that it could help them to secure employment in the future.

5.2.4 Ownership

Only five of the communities appraised expressed any sense of ownership about the project. One of these indicated that while there had been a real sense of ownership in the initial stages of the project, this sense of ownership had diminished over time. While they were responsible for the ongoing management of the project, this task was not proving viable in the longer term. Significant incidences of non-payment were being experienced and a large number of unauthorised connections had been made.

A number of communities believed that they had been provided with a project that was based on the needs and wishes of the consultants. One community indicated that this lack of ownership did not present a major obstacle to their acceptance of the project.

Two communities indicated that they had no sense of ownership whatsoever, while one indicated that they did not want the project at all.

5.2.5 Evaluation of the Project

Representatives of four of the communities indicated that they were happy with the project. In one community members indicated that they had been extremely happy with the training that had been provided but unhappy about the project process. They had allowed the project to go ahead purely for the sake of development. They believed that the PSC had been ignored in all decision-making not related to capacity building and had not even been provided with a terms of reference despite specific and repeated requests.

Three communities indicated that the projects would definitely fail while seven were not sure whether or not future operation and maintenance would succeed. A number of communities indicated that they were unaware of who would undertake such operations and maintenance activities.

5.3 STAKEHOLDER WORKSHOP

5.3.1 Consultation and Participation

a) Consultation

Community Project Steering Committees have complained that engineers were ignoring the needs of the communities by not consulting with them about the Business Plan. They believed very strongly that communities should be drawn into the process of compiling the Business Plan. The Project Steering Committees pointed out that they are usually introduced into the project at a very late stage by which time engineers were already appointed and Business Plans were completed or nearly so. They also wished to be brought in to discuss any changes to the Business Plan that might be contemplated.

Consultation with the Project Steering Committee, as viewed by communities, should take place on an ongoing basis throughout the project. Ongoing consultation and discussion with the Project Steering Committees would result in good communication with the engineers. In consequence the Project Steering Committees would become more knowledgeable and could provide better project information. Proper consultation with Project Steering Committees might also refute their belief that engineers tended ignore the land development objectives of the study area.

Consultation is an important part of project implementation. Depending on whether and when consultation occurs, can have serious implications for the project. When consultation takes place, it needs to be done properly and conscientiously to ensure good results. Engineers or consultants have to make sure that they are working in concert and harmony with the community.

Since 1994, most communities have become sensitive to consultation. Government and the Non Government Organisations have emphasised the concept of community participation in development. Most communities, as a result, increasingly feel the need to be consulted during developments, which could ultimately affect them. In some instances, major projects have

had to be stopped because they did not consider that the consultations had been undertaken correctly.

5.3.2 Capacity Building Activities

Community representatives felt that the members of Project Steering Committees were not adequately trained. They pointed out that training should take place well in advance of project implementation and adequate resources should be set aside for this. They wanted the training to make sure that when they did meet with the engineers, they could understand the issues and were able to make meaningful contributions to the process. They also pointed out that they would like to have some technical skills.

They necessity for the advance training arose because they had to know their roles and responsibilities, understand how to interpret financial documents, and understand the engineers' contractual agreement. They wanted skills that would enable them to communicate confidently with engineers. Community representatives also pointed out that the low level of education contributed to problems of communication between engineers and communities, particularly on technical matters.

The engineers proposed that the local authorities should train the Project Steering Committees prior to the appointment of the consulting engineers. They conceded that the project budget and project time frame did not cater for the training of Project Steering Committees members over a long period as the Project Steering Committees s wish for.

Another important point raised was that a skilled and fully trained member of the Project Steering Committees might decide to leave the community and the question which arose was, "Is it practical (considering budget and time costs) to re-train an inexperienced person?" Also, it may seem unfair that the same people (Project Steering Committees members) were trained for every project being implemented in the same community. Should others in the community not have similar opportunities?

Two or three people ought to be trained on how to handle a certain task, rather than just one in cases of the one skilled person leaving the Project Steering Committees or being unavoidably absent.

5.3.3 Lack of Equity

Project Steering Committees members considered that unfair treatment of the rural communities prevailed. This view was expressed as a result of observing the 'advantages' which exist in more urban areas. The unfair treatment is perceived as 'people in urban areas having water systems in their homes, yet in rural areas people are told that the stand pipes could only be placed some 200 metres away.

5.3.4 Roles and Responsibilities

Community representatives indicated that they often did not know their roles and responsibilities during their interaction with engineers on projects. They stated that since their roles were unclear, it lead to a state of confusion and therefore it was often difficult for them to make meaningful contributions to the project.

Engineers regarded the 'mapping-out' of Project Steering Committees roles and responsibilities as extremely important. This would help them to know

who were the correct contact person/s in the community with whom to consult. Some engineers may not consult with the Project Steering Committees members as a result of not knowing what their roles were. The PSC should provide names and details to the engineers setting out each person's responsibilities (as well as that of the Project Steering Committee's) in order to be clarify this at the beginning of the project.

The Project Steering Committees s were uncertain what their legal rights were and to what extent they could be exerted. For instance, could the Project Steering Committees recommend the development of the electrical system rather than the development of the water system, since the Project Steering Committees were aware of what the community's foremost need was.

5.3.6 Commitment of the Local Authority

Both Project Steering Committee members and engineers have had experiences with councillors and council officials not attending pre-scheduled meetings to which they were invited. Councillors and council officials are the major links of communication between engineers, the community and Local Authority, District Councils or water boards. If they fail to become involved, transfer of information to the Local authority/ District council is delayed and may lead to a breakdown or weak communication between all parties.

This issue of 'lack of commitment' was seen to be critical since local governments are a legal authority, and an important player in the delivery of services to communities. Between National government, as the source of funds of water projects, and the engineer/consultant and community, a local government is an inter-face. The local government's commitment can decide, to a large extent, the quality of the end product.

It was clear to participants that local government had a critical role to play in project delivery. However it also became clear was that local government does not necessarily have capacity and skill to ensure that projects are properly managed.

5.3.7 Need for Management and Clarity on Protocols

The engineers sought guidance on what protocols to follow before the commencement of and during the project. The engineers pointed out that confusion often resulted when they consulted with the people whom they believed to represent a community, but later discovered that they may or may not have spoken to the correct people.

The main objective of the Department of Water Affairs and Forestry was seen to be to supply water and sanitation. Decision-making in National and Provincial Department of Water Affairs and Forestry can put a strain on the Local Authority by

- expecting project delivery (commencement and completion of project) within a short space of time

- not identifying projects well in advance.

Local government places time and monetary restrictions on the water boards or service providers to spend the money within a certain time or it will no longer be available.

Local government/district councils make unrealistic demands on engineers and consultants regarding their presentation of Business Plans. The time given for the formulation of the Business Plan in the past has been too short (approximately 5 days). Usually no budget exists. Engineers/consultants tender for the project and with the time and monetary constraints, communities are usually not invited to participate in the formulation of the Business Plan.

It is difficult for the engineers/consultants to produce a high standard of work in such a short space of time and little budget. The impact on communities is visible where the training period and intensive nature of the training cannot be satisfied due to the minimal budgetary provisions. PSC members, even after training may still lack the necessary skills since the project finance may not cater for further training. Thus, efficient and intelligent communication with the community may be at risk as well.

The demands and restrictions placed by local government and district councils on engineers and consultants only heightens the demands and restrictions placed on communities in the study area.

6   KEY FINDINGS

6.1   INTRODUCTION

In an analysis of the major factors that negatively affected communication between consultants (specifically engineering) and communities, it was seen that the majority of factors stemmed from a lack of integrated and comprehensive project planning. A number of good reasons may be identified for this, not least of which has been the traditional emphasis that this project phase is largely executed "at risk". There is a fairly natural tendency by consulting firms to minimise such "at risk" expenditure.

However, the result of this is that vital questions are not asked and essential communications exercises (such as participative research and awareness creation) are not engaged in.

There is international understanding and acceptance that efficient project planning is a vital prerequisite for ensuring the long-term sustainability of community water supply and sanitation projects. World Bank Report (1994) entitled "Infrastructure for Development, indicates, correctly, that:

"Amongst the major impediments to meeting the goal (of addressing the need for improved water supply and sanitation services) are the scarcity of expertise for planning good projects and the lack of globally accepted project preparation standards. The limited human and financial resources in developing countries can be used more efficiently if water and sanitation projects are initially prepared to standards meeting requirements of approving authorities and financing agencies."

The large majority of specific communication-related problems that had been identified, relate back to the fact that significant deficits in comprehensive participative planning could be identified.

6.2   COMMUNITY-BASED NEEDS ANALYSIS

Most frequently, a situational assessment of community needs had been done on the basis of discussions with a small group of people. This was usually with a local or district authority or, in some instances, the Project Steering Committee (that may or may not have been elected on a representative basis). Efforts had not been made to promote participatory approaches such as, for example, participatory appraisal in the initial needs appraisal.

Factors that had not been considered include:

⊃   **Who** was being consulted and heard (and at the same time who was not?) There is a general concern that elites or certain interest groups (usually the most powerful) have had the greatest say in the consultative process.

⊃   **How** were communities being heard? Very little distinction had been drawn between "once off" consultation with the entire community and

further consultation with a small selected group as opposed to full participation in the development process.

- ➲ **What** the community was being consulted on? Often decisions had in effect been made externally (by a local or district authority for example) and simply needed "endorsement".

It is important to stress that the design of the project should not fall into the trap of being merely "extractive" in nature. Not only will it defeat the intended commitment to participation, but it could, also, provide a distorted view of the community and its needs.

It is recommended that any "community needs analysis" be part and parcel of an integrated process. Instead of having a checklist of questions to ask the communities, a *framework of gathering information on a participative basis* should be identified for each community that would help to build a composite picture of what has actually happened at the community and area level and what is required.

6.3 MISTAKING THE PART FOR THE WHOLE (ROLE AND RESPONSIBILITIES OF THE PSC)

It is accepted that the Project Steering Committee (PSC) is a particularly important component of any project. However, frequently there is an inordinate and inappropriate emphasis on the role and responsibilities of the PSC to the extent that it becomes the sole focus of the project. There is, in this, an intrinsic assumption that communication and interaction with the PSC equates communication and interaction with the community.

Additional assumptions are made about the extent to which they can and will provide feedback to the community as well as the degree to which the PSC can (or should) be responsible for mobilisation and awareness creation within the community.

This encompassing role for the PSC is not deemed feasible or viable. PSC members are frequently employed on a full-time basis outside the project and sometimes even outside the region. They do not have the finance, infrastructure or other resources to deal effectively with all aspects of a project that will need to be communicated or to promote the requisite level of community participation.

It is vital that any project should make provision for real participation of all role-players within the community. The key components of such an approach include attention being paid to the following at least:

- ➲ an integrated multi-level, multi-task approach to the project;

- ➲ capacity building to a management level in respect of appropriate target groups (not specifically and exclusively the PSC) that are to be identified prior to the submission of the Business Plan;

- ➲ Ongoing grass-roots participation in planning, decision-making, implementation and control of the project;

- ➲ Strong integration and co-ordination of local development within the broader district and regional context;

- ➲ Ad hoc application of experts on a cost-effective and issue-related basis.

6.4 FAILURE TO IDENTIFY APPROPRIATE SERVICE LEVELS

One of the most serious problems identified during the study relates to the fact that affordability and the will to pay are not given sufficient attention.

While a given low level of service may be affordable to the community, it may not be acceptable or supported by the community and result in a lack of willingness to pay. Experience[2] has indicated that often a higher level of service is more sustainable than a lower level because people are prepared to pay for the higher but not the lower service

The degree to which communities have been able to exercise informed choice about service levels and costs is seen to relate directly to their willingness to pay for services.[3]

6.5 INAPPROPRIATE DEFINITION OF CAPACITY BUILDING

A typical and common finding in all the projects has been the fact that training (the process of transferring specific functional skills and knowledge to bring a person to an agreed standard of proficiency) is seen as synonymous with capacity building. While extensive training had frequently taken place, commensurate capacity building activities related to the mobilisation of communities and the creation of community-wide awareness had not really been addressed.

It is stressed that capacity building means the strengthening of the beneficiary and the institutional ability to undertake tasks. In the context of community water supply, this includes the following:

- Promoting the necessary functions of governance;
- Promoting service provision;
- Increasing access to resources;
- Improving power relationships between the parties involved;

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[2] The following reports serve to support the collective experience.

- Kapelus, Paul (1997) The Development Of Sustainable Water Supply In South Africa: A Social And Institutional Perspectve
- Palmer Development Group, in Association with Cpae Town's Water research Group WRC Report. (1994) Evaluation of Water Supply to Developing Urban Communities
- Consultburo with Afrosearch & Fundile Africa (1996). Survey of Unauthorised Connections in Water Supply Schemes in Mpumalanga and Northern Province
- Stewart Scott Afrosearch & Fundile Africa (1996). Survey of Unauthorised Connections in Water Supply Schemes in North West Province
- Deloitte Touche Consulting (1996). Survey Of Cost Recovery Attitudes And Practices On Government Water Schemes In The Former Homelands Of Mpumalanga And Northern Province

⊃   Improving the general awareness of the local population regarding their services and development in general and the ability to secure an enabling environment for promoting health.

The lack of project related awareness creation and mobilisation is seen as a core deficit in projects. It is stressed that capacity building is required that will serve to allow the community the ability to make informed choices about technological alternatives and costs as well as the implications and advantages and disadvantages of specific options.

6.6   INFORMATION TRANSFER

It was found that the assumption was often made that once people have information, they can make an informed choice. Issues, however, are complex and the decision-making process cannot simply involve the sharing of technical information and the eliciting of a uniform response. It is essential to understand the overall context in which decisions are being made.

Information sharing, consultation and communication will not work if there is just a flow of content (particularly if it is one-way from external sources into the community). Information sharing needs to be related to people's lives and built on the internal community knowledge system. The key is how to make sense of the new information and how to make it meaningful. To do this people need tools to fully understand and to realistically assess the impact of the content.

In terms of potential types of water delivery systems, the individuals need to be able to answer for themselves, inter alia:

⊃   How much is this system going to cost me?

⊃   What other work / time am I expected to put into the project?

⊃   How will it change / affect my life?

For any project to be successful, an analysis needs to be in place that will "unpack" this process and highlight what information exchange is actually required at the community level.

6.7   INAPPROPRIATE FOCUS OF EXISTING PERFORMANCE MEASURES

It has been noted that the central challenge in initiatives to promote water supply and sanitation at community level is one of institutional strengthening and human resource capacity building for the management of sustainable development. While project implementation aims at the development of infrastructure for sustainable water supply and sanitation services the ability of role-players at local level to manage the system on an ongoing basis (including cost recovery) forms an inherent component of such sustainability.

The close relationship between capacity building and sustainability within the context of a project requires that local level role-players be capacitated in respect of the factors that determine the sustainability of the project. However, while capacity building and training are seen as an essential prerequisite for sustainability, they are not sufficient to ensure it. Factors such as the appropriate choice of technology and the ability of recipients to pay for the services that are to be provided form a key component of sustainability. This means that training inputs will be wasted if the project process as well as the circumstances and institutions in which local level role-players function do

not support the requirements for **participatory project planning and management**.

While the provision of water supply and sanitation services forms the core rationale for the implementation of the Department of Water Affairs and Forestry's RDP projects, they also aim at promoting the policy principle requirements of the Department of Water Affairs and Forestry and the Reconstruction and Development Programme. Projects must correspond with the objectives and priorities set by these imperatives and must be consistent with other development initiatives. They must be effective, sustainable and provide a return (economically, financially as well as socially). These additional imperatives require that project implementation be tackled on two levels. These are the delivery of tangible results in a short period of time in the first instance and the promotion of a foundation for future development in the second instance.

This dual implementation level means that the appraisal (monitoring and evaluation) of projects and project related activities needs to focus on concrete or "quantifiable" effects (such as number of households served with water supply) as well as abstract effects (such as the empowerment of people). It is usually accepted that the measurement of concrete deliverables is far easier to measure than abstract ones. For this reason Key Performance Indicators (KPI's) are often tied to a technical milestone having been reached in a project as opposed to a more abstract measure such as the commitment of local recipients to the project. This narrow focus is not sufficient. It is believed that while performance measures and the payment of consultants is based on the achievement of physical milestones alone, no significant progress will be made in ensuring capacity at local level. This opinion is confirmed by an evaluation of the parameters used by consultants to evaluate whether or not the project was a success or not. The imperative rests on the Department of Water Affairs and Forestry to align its performance measures to address this issue. At the same time, however, it is essential that consultants re-evaluate the manner in which they approach projects and ensure that they do their utmost to ensure that both the abstract as well as concrete objectives of infrastructure development projects can be achieved.

Appraisal techniques must include the requirements that projects be sustainable in the medium to long term, that they address the need for development and need to take place within a larger area-based or programmatic context. For this to happen, Key Performance Indicators will need to be developed specifically to address these focus areas during the planning stages of the project.

There is no one perfect model to guarantee success in meeting the difficult challenge facing the Department of Water Affairs and Forestry to ensure that sustainable water projects are transferred to a functioning and capable local authority upon transfer of the project.

All stakeholders need to learn from the planning and implementation phases of projects so that an understanding can be developed of the core components of "best practice" aimed at ensuring sustainability. It must, as well, be remembered that sustainability includes the delivery of infrastructure that works, the development of a service that continues as well as the development of institutions and people at local level.

6.8   LACK OF DIRECT CONSULTATION

It became very apparent from the engineers that they wished to make contact with the communities. Where the appointment was made through an implementing agent a split-level of responsibility occurred. The engineers were obliged to report to the implementing agent whilst trying to meet the wishes of the communities. The implementing agent was represented by another engineer and not by a community facilitator. In no case was a development support communicator appointed to go between the engineers and the communities.

The engineers all tended to view the projects in mechanistic terms and not in the human context of establishing the needs of the community first and then translating these into reality. The appointments that they received required the preparation of a business plan at the start of the projects. In a number of instances the business plan was prepared on the understanding that the level of service was to be limited to the standards prescribed in the Reconstruction and Development Plan and that no higher level of service was permitted. The responsibility for this understanding was placed on the implementing agents. This may or may not be correct. However the passage of time and the outcome of the projects where the communities were dissatisfied with the level of service that had been provided would have clouded any further interviews on this aspect of the projects.

6.9   INSTITUTIONAL CAPACITY

In an analysis of the findings of the research as well as the workshop, it became patently clear that all role-players believe that a capacitated local authority is seen as a key component for ensuring project success and for promoting communication between the different role-players.

A conclusion from the workshop report states that, "... it was interesting to note that the main problem of communication between communities and engineers were primarily not with technical communication skills but with existing or non-existing institutional arrangements. The environment seemed to be a greater barrier of communication.

In addition, findings from the Workshop set out that Issues and problems raised at the workshop pointed at mainly social institutional issues as the main contributor to the problem of communication between engineers and communities in water provision projects. The problem was more evident in the environment in which communication between engineers and communities takes place. Altering the environment to one with in the community is comfortable may be an effective way of dealing with the communication problems that exist.

Despite the fact that the Department of Water Affairs & Forestry's package for Institutional and Social Development for Water Projects clearly demonstrates the need to build institutional capacity at local authority (Water Services Authority)) level, none of the participants who formed part of the different parts of the research project saw this level of capacity building as part of their responsibility.

6.10   CAPACITY BUILDING

The Department of Water Affairs and Forestry will need to ensure that all the role players are aware of the specific capacity (if any) it believes should be built at local authority level as part of any water project. It is accepted that constitutionally , the Department of Constitutional Development and Local

Government is responsible for ensuring a fully functioning local authority. At the same time, transfer of any water infrastructure should to a local authority that can ensure sustainable management (including cost recovery and ongoing operation and maintenance) of the infrastructure on the one hand and the service on the other hand. However, the promotion of large components of the capacity that should exist at local level essentially falls outside the area of responsibility of DWAF. It will be necessary for the Department of Water Affairs and Forestry to ensure that it has, in collaboration with the Department of Local Government (DLG), clarified what capacity can and will need to be built as part of the project and what will become part of a DLG responsibility.

Should DWAF not do so, it will need to ensure that it has sufficient financial resources available to ensure that adequate capacity exists at local level.

7   CONCLUSIONS

It is vital that water supply and sanitation projects are not purely regarded as part of infrastructure development programmes. Certainly, the development of infrastructure should be seen as a key component. In addition to this, there is a need for the development of a service support orientation and ability at local level. The third, and most neglected component is the alignment of the infrastructure provision and service orientation with an integrated development focus aimed at facilitating local economic development.

This perspective enhances the need for appropriate and effective communication. We are not purely putting infrastructure in place or developing a service that will be "bought" at local level, irrespective of the local context. We are actively trying to "communicate for mutual understanding and learning". One of the points of this perspective is that communicators have to be aware of the fact that they are not dealing with a passive audience. The audience can not and does not automatically absorb the attitudes, values and knowledge of the communicator. Information is decoded by the audience (which, in turn is not homogenous) through already formed cultural attitudes. It is therefore vital that communicators accept that the communication process is an interpretive, interactive process. This in turn mandates that communicators truly aim to understand how the viewer or listener constructs meaning. A "decoded" message may in fact be significantly different from the initial intended message and is the outcome of the interpretative process and actions by the recipient(s) of the message.

In addition, it must be remembered that the interpretation is not solely tied at individual level. The meaning given to any communication is tied to the specific context in which it takes place. Effective communication attempts to build on a current context and reality, an existing understanding as well as existing assumptions that "filter" any message that comes from outside. It is important that communication processes are seen as requiring an inter-disciplinary approach that strives to gain a real understanding of the local context and situation in a collaborative manner. This fact directs us to pay far greater attention and engage far more earnestly with the development of communication interventions that are based on an understanding and acceptance of the potential differences in seeing, hearing and interpreting any message that is provided.

8   RECOMMENDATIONS

Based on the foregoing the following recommendations are made.

8.1   THE ROLE OF THE IMPLEMENTING AGENT

The Implementing Agent, be it a local authority, district council, Provincial or Central Government body should become involved in the project in a proactive manner in:

- contacting the community and its representatives,
- forming a Project Steering Committee
- providing some explanations and training to enable the Project Steering Committee to understand and relate to the process
- establish the developmental priorities of the community
- assist the community in appointing an engineer.

8.2   THE ROLE OF THE ENGINEER

The Engineer should see that he is a member of a multi-disciplinary team comprised of professional and non-professional persons. For this reason, in addition to professional team members, persons should be selected from the community and be trained to perform key tasks for the project in terms of planning, implementation and management.

The Business Plan needs to be drawn up in consultation with and empowered Project Steering Committee.

8.3   NEEDS ANALYSIS

A thorough analysis of the needs of the community should be made at the outset of the project in accordance with the Institutional and Social Development Guidelines of the Department of Water Affairs and Forestry. This matter should be one of the contractual obligations of the consultant. A budget for providing this needs analysis should be included in the contract.

8.4   SERVICE CONTRACTS

The provision of water and sanitation services should be seen as the delivery of a service at the householder level. For this reason it is essential that household awareness is created and the individual households sign a service agreement.

8.5   LEVEL OF SERVICE

The terms of reference to the consultant should make it clear that the design level of service must be negotiated with the communities. This will involve informing the communities of the levels of service available, including the basic level of service. The costs the schemes to provide the different level of service would have to be calculated and the impact of each on the family budget explained to the householders. Sufficient information must be provided to ensure that the decisions are taken on a fully enlightened basis.

8.6 CAPACITY BUILDING

Capacity building is an essential component of these schemes. It should be emphasised in the terms of reference that this is an over arching concept for awareness creation, participation, knowledge transfer and training. It must be explained that the overall purpose is firstly to ensure effective, affordable and consequently sustainable service provision. The second is "nation building" in accordance with the Institutional and Social Development Guidelines of the Department of Water Affairs and Forestry on "Capacity Building and Training".

8.7 INFORMATION TRANSFER

Information transfer takes place through a process of communication. It is vital that this process will lead to the promotion of understanding and competence in decision making.

8.8 PERFORMANCE MEASURES

The Department of Water Affairs and Forestry should amend its Terms of Reference to Consultants whereby performance measures are set in accordance with the required programme objectives of infrastructure, institutional and social development in a context that promotes the provision of water supply and sanitation as a sustainable service. Such performance measures should be linked with the terms of payment to consultants for services rendered.

9   BILBLIOGRAPHY

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SUMMARY OF INTERVIEWS WITH THE ENGINEERS

The questions and the answers that were received are condensed and set out below:

1   **What was the objective of the project?**

The answers to this question were in all cases confined to the provision of the infrastructure. Training was not seen as part of the project nor was the creation of institutional capacity.

2   **Who initiated the project?**

One of the projects was initiated by the former Bophuthatswana Dept of Water Affairs. Two were RDP projects started by the Department of Water Affairs and Forestry, two more were begun by the relevant District and Local Councils, one was started by the community approaching the Mvula Trust and one arose from the consultant seeing the need and approaching the local authority. In this case the local authority, using funds made available through the Municipal Infrastructure Programme, made the appointment.

3   **How did you make contact with the community and under what circumstances was your firm appointed?**

In the majority of the projects the initial contact came after appointment by either a government department or the Mvula Trust or the local authority. In two of the cases the consultant had initiated the contact. There were only the two cases where the community had any say in the appointment.

4   **What consultations took place with the communities during the preparation of the feasibility report or business plan?**

In only two of the cases there was continuous contact with the representatives of the community during the preparation of the feasibility report. In the one instance, where the homeland government under the previous dispensation made the appointment there was s specific instruction not to speak to the community. This later changed and discussions were held with the community and the project steering committee to explain the different levels of service that were being considered.

5   **Was the project the most important in the rating of the community? On what basis do you say that?**

In all but one of the cases, the engineers believed that the projects enjoyed the highest rating. In the exception, the engineer did not know. In two of the cases there had been some attempt to find out that this was so but the other

consultants said that they had deduced this from the circumstances prevailing.

6   **What was the attitude of the community towards you and your firm?**

There were differing perceptions on the issue. The majority believed that the attitude was positive at some stage in the project. In two cases an improved relationship was claimed as the project progressed and the benefits became apparent. In one case the relationship soured as the project advanced. In the case of the long-term relationship, the relationship remained good and the perception of acceptability did not change.

7   **Was a proper feasibility study made, either before or after the preparation of the business plan?**

Limited work was done at the feasibility stage. It would be expected that this would be the opportunity to discuss with the community the different levels of service that were possible and the different costs that would be attached to each.

In all cases the business plan had preceded the feasibility report stage and this tended to freeze the possibilities as the funds had then been approved for specific purposes. In no case did it appear that a proper feasibility report had been prepared. In one case there had been discussion over levels of service. In the other cases only an engineering or design report was prepared. These state what is to be done but do not give the opportunity to make any choices.

8   **What guidance was given to the leaders of the community concerning the technicalities of the project engineering?**

Very different reactions were received to this question which was intended to elucidate how the communities were guided in making the choices that they had been offered when the feasibility report was prepared.

In the first case the method of communication was explained i.e. using concrete physical examples to describe the works that were to be built in terms of the preliminary design report. The level of service did not appear to be a subject of discussion as it had been set in the business plan which had been prepared to accord with the minimum level of service that had been set in accordance with the RDP.

In the second case similar explanations had been given verbally in discussion without the aid of drawings etc.

In the third case the source of water that had been prescribed by the Department of Water Affairs and Forestry was not acceptable to the community who wished to draw from a nearby pumping main of the local Water Board.

In the next case, which did not involve any decisions on the level of service, weekly meetings were held with local councilors to discuss details of the contract.

The next claimed that there had been continuing guidance. In two of the others the liaison and discussions had been through the community liaison

officer appointed by the local authority while the last was at the time of the interviews taking place.

9   **How well did you feel that you understood their requirements?**

In all cases the respondents felt that they had understood the requirements in the basic context that water would be supplied to them. While the engineer may have understood the requirements of the communities there were external constraints that prevented these wishes being fulfilled. In the majority of the cases the community had wanted yard taps but these were not provided due to limiting the projects to the basic minimum standard. There was a perception that as no additional funding would be provided for a higher standard of service, no higher standard could be considered. In one case the basic level of service was all that could be provided, as there was a limitation on the bulk supply side. In another problem project, the source of water was laid down by the Department of Water Affairs and Forestry, which did not meet the wishes of the community.

10   **How closely were you able to meet these requirements?**

The engineers felt that they had met the needs of the projects but noted that the needs of the communities had not been met fully due to the constraints of the RDP and the lack of additional funding.

Only in the project to clean out the sewage reticulation system, did the consultant feel totally confident that the project had obtained the full support of the community.

11   **What explanations were given concerning the possible levels of service that could have been provided?**

In the projects involving water supply the explanations revolved around the provision of water at the basic supply level and what it would entail to the householder. In one instance the consultant did explain that yard connections would cost the individual more. This was explained in a similar manner by another engineer, but only to the effect that only the official yard connection would be accepted and that by implication no unauthorized connections should be made.

12   **How did you describe to the community what services were to be installed and what the effect would be on their every day lives?**

Various techniques were used. In the main, drawings were used to supplement verbal descriptions given to both the project steering committees and in mass meetings. In two cases the drawings were not understood and the engineers showed what would happen by walking the project steering committee around the scheme and describing it on the ground.

13   **Did they understand? Were there any difficulties in communication due to language, standard of language etc?**

In all cases, the engineers believed that their explanations were understood and accepted. It was necessary to use the local language for one of the projects. In one of the urban projects Afrikaans was the preferred language. English was used in the balance of the projects.

14   To what extent did the institutional capacity of the community affect your design?

Not one of the engineers considered the institutional capacity of the communities in the design of the projects. Standard solutions using conventional materials were adopted and not innovative thought was given to making the operation and maintenance of the system more suited to the lesser capacity available, be it at the local level or the level of the District Council.

15   How were the decisions concerning the levels of service to be provided made, at what stage in the preparation of the feasibility report (business plan) and by whom?

The answers given to this question are at variance with the answers concerning the level of service in previous questions. The decisions were taken by the Department of Water Affairs and Forestry in limiting the level of service to the basic level of service. In this there appears to have been a misunderstanding concerning the provision of a subsidy and the choice that the communities should take concerning the level of service and the contribution that they could make to improve the level of service.

In most cases the engineers reported that the project steering committees took the decisions in discussion with themselves and the constraints that had been laid down by the Department of Water Affairs and Forestry. In the case of the sewer cleaning project there was no such decision to be taken. The sewage would be taken off the streets.

15.1   What costs were given with the different options and were these related to average family expenditure?

The engineers adopted a variety of methods on this. One engineer defined the cost of water in terms of measurement, i.e. 20 ℓ drum, which the community could relate to. Despite this, the engineer did not consider that the members of the community had fully understood the implications. Another consultant related the costs to that of a 2 ℓ bottle of Coca-Cola per month. The remainder of the engineers either did not address the situation or ignored the cost to the community aspect or used terms that the communities did not relate to. There was one that ignored the issue, stating that in terms of the Reconstruction and Development Programme, the costs were being met by the Government.

15.2   Was the question of cost recovery discussed?

All the engineers addressed this issue with the communities with one exception who assumed that the costs were covered by the Reconstruction and Development Programme. In all the other cases the engineer explained that the cost were to be recovered. In the one case the token system was explained, in another there was an explanation that only the operation and maintenance costs would be recovered. In a third, the community was told that meters were to be installed and the charges would be related to the readings. In the case of the sewer-cleaning project this was not the case as the costs of operating and maintenance were already part of the Local Authority budget. In one case there was no attempt to explain the implications of cost recovery.

16   Was the community given adequate time to understand the ramifications of what was going on before the decisions were made?

Two of the engineers stated "not at all". All the others considered that enough time elapsed from the beginning of the project to allow the community to make up its mind. The causes for the long time were given as the Department of Water Affairs and Forestry taking so long with bureaucratic procedures and the long time that the community took to take the decisions and discuss the issues.

18   What training was given during the course of the project?

Training was given in different subjects on the different projects and to different classes of people. The topics in which people were trained varied from the practical to the skills required for the administration of the scheme.

18.1   To whom?

The beneficiaries of the training varied from the different projects according to whether the subjects were of a practical or administrative nature. The practical courses were given to labourers drawn from the community for on-the-job training. The administrative courses were given to members of the project steering committee or the water committee.

18.2   In what subjects or courses?

The practical training was given in construction techniques involved pipe-laying, construction and on the job drain cleaning. At the administrative level a more relevant set of subjects was taught, covering such subjects as budgeting, administration, financial management and health. The latter training was given by an outside firm at the request of the engineer.

18.3   What was the extent of the training?

Short courses of up to 5 days duration were given for the administrative training to the members of the project steering committee. Certificates were awarded for success in the topic.

In the case of the sewer cleaning , the training continued until the trainee was competent in the particular activity. It is of interest that in this contract no less than 4 crews reached the stage of acting on their own and were in a position to contract to the local council

Only the training given by the supplier of the pipes in the skills of pipe-laying were given on the other project. The course lasted one day and is normal procedure from the supplier concerned.

18.4   How was it accredited and by what organisation?

No formal course was accredited. Certificates were issued in two of the cases. In the courses overseen by the Mvula Trust no certificates were issued.

18.5   How was the training evaluated?

Little was done in this matter by the engineers. In only the one case was an external agent brought in to evaluate the training that had been undertaken.

18.6 Was it (*the training*) considered successful?

All the engineers considered that the training had been successful. This is surprising when no objectives had been set for the training and there was no independent evaluation.

19   How successful do you consider the project to be overall?

The engineers generally considered that the projects had been successful and achieved the objectives. In one case the engineer felt that the social side of the project was not successful. One claimed only 95% success, based on the assumption that nothing can be perfect.

20   What criteria have you used to make this assessment?

A variety of observations led to the conclusion that the project was successful, from the lack of complaints; the fact that a community without a water supply now had one; the resolution of the problem of unauthorised connections; meeting the programme dates; costs and local involvement and the fact that the sewage no longer ran down the street.

21   Did you meet the needs of the community in regard to quality and level of service, cost parameters and the completion date of the project?

Three engineers claimed that they had done so. Two of them referred to delays and cost over-runs. One considered that they had not met the needs of the community and had only met part of their objectives.

REPORT OF WORKSHOP

1. INTRODUCTION

Numerous cases of poor communication occur, either at the commencement of, or during the course of a project and which lead to projects being poorly implemented.

This section reports is the findings made at a 'Communications Workshop" which was held at the University of Pretoria on the 23rd July 1999. The Workshop was part of the investigation into the 'communication challenges' that were experienced during the project planning and the project implementation phases (see Appendix A for attendance list).

Stakeholders of water provision projects, that is, the engineer/consultant and the communities' Project Steering Committees (PSCs) were invited to attend a "Communications Workshop" to voice their opinions and suggestions. At the same time the workshop served as a perfect arena for the participants to understand and fully appreciate the social, legal, administrative and technical obstacles each may have had to deal with.

1. OBJECTIVES OF THE STUDY

The communication challenges that were faced during the implementation of water provision projects were seriously considered and critically analysed. The objective was to bring to light what the relevant stakeholders believed to be the key problems.

Perceived and visible problems which impact on communication were voiced, with the end intention of uncovering effective solutions to deal with them. The parties involved in the project processes suggested the consequent problem-solving ideas.

It was hoped that the informal and direct contact, which the workshop offered to the participants, would aid in the information-sharing process and create a 'comfortable' environment for the affected parties.

3. METHODOLOGY

Engineers, consultants and the Project Steering Committees (PSCs) of communities were invited to participate in a "Communications Workshop". The information-extracting first session (on the perceived and visible problem being experienced), yielded many useful responses. This result was mainly due to the PSCs of all communities interacting with one another whilst the engineers and consultants interacted amongst their own group. In this way, both groups were familiar with the people they were working with and therefore were more eager to exchange information.

In the second session the groups were mixed, therefore making it possible for engineers to interact with PSC members and vice versa. The objective of this

session was for the participants to recommend or suggest possible solutions in response to the communication problems focused on in the first session. The individuals in the mixed groups worked together, sharing experiences and ideas alike.

4.   KEY ISSUES RAISED AT THE WORKSHOP

a)   Consultation

PSCs of communities have complained that engineers were ignoring the needs of the communities they were servicing by not consulting with them about the Business Plan. The belief was that communities should be involved in the drawing-up of the Business Plan. Even if the business plan were to be amended, no action should proceed without consultation with the stakeholders (community or Project Steering Committee). The Project Steering Committees pointed out that they are usually introduced into the project at a very late stage by which time engineers were already appointed and Business Plans were completed or nearly so.

Consultation with the PSC, as viewed by communities, should take place on an ongoing basis throughout the project. Ongoing consultation and discussion with the PSCs would result in good communication with the engineers. In consequence good communication between PSCs and the communities would be achieved since the PSCs would prove to be more knowledgeable and could disburse more adequate project information. Proper consultation with PSCs may also put to rest their fears that engineers usually ignore the land development objectives of the study area.

Consultation is an important part of project implementation. Depending on whether and when consultation occurs, it can have serious implications for the project. When consultation takes place, it has to be done properly and consciously to ensure good results. Engineers or consultants have to make sure that they are up to speed with the community they are working with.

Since 1994, most communities have become sensitive to consultation. Government and NGOs have emphasised the concept of community participation in development. Most communities, as result, increasingly feel the need to be consulted during developments, which could ultimately affect them. In some instances, major projects had to be stopped because consultations were not perceived to have been undertaken correctly.

b)   Lack of education and training

Community representatives felt that PSCs are not adequately trained. Community representatives pointed out that training ought to take place well in advance of project implementation and adequate resources needed to be set aside for such a purpose. The reason for requiring such training in advance is to make sure that when they meet with the engineers, they can relate to the issues and are able to make valuable contributions to the process. They also pointed out that they would like to have some technical skills because they acknowledge that they are lacking in that area.

Communities' representatives strongly raised the need to be trained before they could meet with engineers. They pointed out that they need to know their roles and responsibilities, understand how to interpret financial documents, and understand the engineers' contractual agreement. They requested skills that will enable them to communicate confidently with engineers. Community representatives also pointed out that the low level of education contributes to problems of communication between engineers and communities.

The engineers put forth the idea that the PSCs should be trained by the local authority. They acknowledge that the project budget and project time frame does not cater for the training of PSC members over a long period as the PSCs wish for. An important point raised by the engineers was that a skilled and fully trained member of the PSC may decide to leave the community and the question which arises is, "Is it practical (considering budget and time costs) to re-train an inexperienced person?" Also, it is noted that it may seem unfair that the same people (PSC members) are trained for every project being implemented in the same community. Should others in the community not have similar opportunities?

Two or three people ought to be trained on how to handle a certain task, rather than just one in cases of the one skilled person leaving the PSC or being unavoidably absent.

c) **Perception of unfair treatment in the provision of water**

PSC members are of the impression that unfair treatment of mainly rural communities prevail. This view is expressed as a result of observing the 'advantages' which exist in more urban areas. The unfair treatment is perceived as 'people in urban areas having water systems in their homes, yet in rural areas people are told that the systems can only be inserted approximately 200 metres away from their homes.'

d) **PSC roles and responsibilities**

Community representatives indicated that they often do not know their roles and responsibilities during their interaction with Engineers on projects. They stated that since their roles are unclear, it leads to a state of confusion and therefore it is often difficult for them to make meaningful contributions to the project.

Engineers regarded the 'mapping-out' of PSC roles and responsibilities as being extremely important. Such an action may aid in their awareness as to whom the correct contact person/s in the community to consult with, were. Some contractors may not consult with the PSC due to ignorance of their roles. The PSC should provide names and details of the engineer/ consultant and each person's responsibilities (as well as that of the PSCs) in order to be clear at the beginning of the project.

PSCs are uncertain what their legal rights are and to what extent they can be exerted. For instance, can the PSC recommend the development of the electrical system rather than the development of the water system, after all the PSCs are aware of what the community's foremost need is.

e) **Engineer/ consultant's roles and responsibilities**

Community representatives raised the issue that the roles and responsibilities of engineers and consultants were not usually known to the PSC. Similar to the point made above, roles and responsibilities of all parties involved need to be clarified at the commencement of the project to ensure good communication.

f) Lack of commitment by local authority

Both PSC members and engineers have had experiences with councillors and council officials not attending pre-scheduled meetings to which they were invited. Councillors and council officials are the major links of communication between engineers, the community and Local Authority, District Councils or Water Boards. If they fail to become involved, transfer of information to the Local authority/ District council is delayed and may lead to a breakdown or weak communication between all parties.

This issue of 'lack of commitment' was seen to be critical since local governments are a legal authority, and an important player in the delivery of services to communities. Between National government, as a funder of water provision projects, and the engineer/consultant and community, a local government is an inter-phase. To a large extent, the local government's commitment can decide the quality of the end product.

g) Lack of transparency of engineers

Community representatives asked why PSC members are not given accessibility to the contractual project management documents. They stated their eagerness to know of the project budget, costs, resources and timeframe for implementation during the project. They pointed out that most engineers were not willing to share that information with them. Communities obviously felt that they have a right to access of such information.

However the engineer's point of view may differ. They may be of the opinion that a contract signed with local government is confidential and cannot be discussed at public meetings, such as that with the PSC. It was, however, encouraging to acknowledge that some engineers were proactive in revealing all information to the PSCs of project communities.

h) Guidance on what protocol to follow

The engineers sought guidance on what protocols to follow before the commencement of and during the project. The engineers pointed out that confusion often resulted when they consulted with the people whom they believed to represent a community, but later discovered that they may or may not have spoken to the correct people.

i) Separation of liaison officer from PSC

Some communities have a liaison officer who acts as the intermediary between engineers/ consultants and the community, whilst other communities have PSCs representing the community. If a community has both a PSC and liaison officer, communication may prove complex and difficult.

j) Lack of capacity at local authority level

During the workshop it became clear to participants that local government has a critical role to play in project delivery. The other issue that became clear was that local government does not necessarily have capacity and skill to ensure that projects are properly managed.

k) Lack of proper project management by government

The main criteria of DWAF was seen to be to supply water and sanitation. Decision-making in National and Provincial DWAF can put a strain on the Local Authority by
- expecting project delivery (commencement and completion of project) within a short space of time
- not identifying projects well in advance.

Local government places time and monetary restrictions on the Water Boards or service provider to spend the money by a certain time or it will no longer be available.

Local government/district councils make unrealistic demands on engineers and consultants regarding their presentation of Business Plans. The time given for the formulation of the Business Plan in the past has been too short (approximately 5 days). Usually no budget exists. Engineers/consultants tender for the project and with the time and monetary constraints, communities are usually not invited to participate in the formulation of the Business Plan.

It is difficult for the engineers/consultants to produce a high standard of work in such a short space of time and little budget. The impact on communities is visible where the training period and intensive nature of the training cannot be satisfied due to the minimal budgetary provisions. PSC members, even after training may still lack the necessary skills since the project finance may not cater for further training. Thus, efficient and intelligent communication with the community may be at risk as well.

The demands and restrictions placed by Local government and District councils on engineers and consultants only heightens the demands and restrictions placed on communities in the study area.

During the workshop it was interesting to note that the main problems of communication between communities' and engineers were primarily not with technical communication skills but with existing or non-existing institutional arrangements. The environment seemed to be a greater barrier of communication.

During the prioritisation exercise, there were interesting differences between engineers and communities representatives. Engineers were task-oriented, thinking of what guarantees were needed and the technical details to be clarified before the project could commence. Community representatives were process-oriented.

5. CONCLUSION AND RECOMMENDATIONS

Issues and problems raised at the workshop pointed at mainly social institutional issues as the main contributor to the problem of communication between engineers and communities in water provision projects. The problem was more evident in the

environment in which communication between engineers and communities takes place. Altering the environment may be an effective way of dealing with the communication problems that exist.

The following measures are recommended to alter the communication environment between engineers and communities:

5.1) Local government should be capacitated and be given necessary skills to ensure the proper management of community development projects. Local governments is a critical inter-phase between national, provincial governments, engineers, communities and other agents that conduct work in communities. Local government should be responsible for the following:

   a)   the management of land development objectives;

   b)   keeping in touch with RDP forums;

   c)   appointing engineers;

   d)   ensuring that a business plan is properly drawn before engineers can go ahead with a project;

   e)   they are key-service providers to communities

   Local governments need to have the necessary capacity and skills to take responsibility for ensuring that PSCs are elected in good time and given a general training on how projects function, the roles and responsibilities of different parties participating in a project and how to relate to engineers

   Local governments should also be responsible for presenting engineers to an already elected and generally trained PSC.

5.2. The Department of Water and Forestry (DWAF) at national and regional offices also   need to be capacitated and skilled with management skills to ensure that their   management of projects does not impact on the communication between engineers and communities as it presently does.

5.3. Engineers need to increase the race and gender mix in their professional teams.   Historically, engineers are known to be white males who are perceived as not respecting the ideas and views of communities they work in. As a strategy to breaking that communication barrier, bringing professional people of different race and gender would help change that perception.

COMMUNICATIONS WORKSHOP ATTENDANCE LIST

Venue: University of Pretoria
Date: 23 July 1999

ATTENDANCE REGISTER :

Name	Organisation / Community
Teboho Sejake	Facilitator (RDC)
Kim Moonsamy	Assistant Facilitator (RDC)
Hennie van Staden	BKS Consultants
Patrick Sekgobela	Fundile Africa
Elsie Motubatse	Leboeng Village (PSC)
Joseph Mashaba	Mogogelo village
Bom Lebese	Jericho (PSC)
Bibi Mphye	Jericho (PSC)
Granny Mokoena	Jericho (PSC)
Philip Pybus	Consulting Engineers
Leon van Genderen	Stewart Scott
Jonas Tshikundamalema	V3 Consulting Engineers
Brian Magongoa	Afrosearch

RESEARCH METHODOLOGIES UTILISED AS PART OF THE STUDY

RESEARCH METHODOLOGIES UTILISED AS PART OF THE STUDY

This Appendix provides brief background information about some of the research tools used within communities as part of this study. In addition, it serves to provide an explanation of some of the terms used in Section 3.2 of the Report dealing with the research process at community level.

1 PARTICIPATORY RURAL APPRAISAL

1.1 BACKGROUND

Participatory Rural Appraisal (PRA) is part of a method of data-gathering within communities that uses various techniques to obtain data from communities on a participative basis. The techniques that are utilised involve community members directly in the process of gathering, providing and interpreting data.

1.2 PRINCIPLES AND VALUES THAT UNDERPIN PRA

1. All communities have their own knowledge systems and any intervention can only succeed if it is built on these systems

2. Any community intervention [e.g. this project] should be an empowering process in itself so that information is not just sucked from the community

3. Any learning needs to be linked to action so that if issues are raised during the course of the research/case studies, they can be fed back into the community project planning/implementation process to be addressed

4. Any intervention needs to ensure that the particular challenges and obstacles of marginalised groups [particularly women] are addressed. Men and women will experience the introduction of new technology differently and it is key to understand those differences

1.3 METHODS OF PARTICIPATORY RURAL APPRAISAL[1]

➢ Information derived from secondary sources [files, reports, maps, articles, books]

➢ do-it-yourself: asking to be taught to perform village tasks [transplanting, weeding, ploughing, field-levelling, drawing water, washing clothes, thatching]

➢ key informants: asking "who are the experts" and seeking them out

➢ semi-structured interviews; having a mental or written checklist but being open--ended and follow-up on the unexpected

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[1] From *Participatory Rural Appraisal, by Robert Chambers. Unpublished paper; undated*

Menu of Methods for RRA and PRA [p 2-3]

➢ groups of various kinds (casual, specialist, deliberately structured, community/neighbourhood); group interviews and activities are often powerful and permit cross-checking of info

➢ sequences or chains of interviews from group to group or group to key informant or a series of key informants, each expert on a different stage of a process [men on ploughing; women on transplanting etc.[

➢ participatory mapping and modelling in which community members make social, demographic, health, natural resource or farm maps or construct 3-dimensional models of their land

➢ participatory analysis of aerial photographs [often best at 1:5000]

➢ transects -- systematically walking with informants through an area, observing, asking, listening, discussing, identifying different zones, local technologies, introduced technologies, seeking problems, solutions and opportunities and mapping and programming resources and findings

➢ time lines: listing major remembered events in a village with approximate dates

➢ local histories and trend analysis: people's accounts of the past, of how things close to them have changed, ecological histories, changes in land use and cropping patterns, changes in customs and practices, changes and trends in population, migration, fuels used, education, health and causes of these

➢ seasonal diagramming -- days and distribution of rain, amount of rain or soil moisture, crops, agricultural labour, non-agricultural labour, diet, food consumption, sickness, prices, animal fodder, fuel, migration, income, expenditure, debt etc.

➢ livelihood analysis -- stability, crises and coping, relative income, expenditure, credit and debt, multiple activities

➢ participatory diagramming -- of flows, causality, quantities, trends, rankings, scorings -- in which people make their own systems diagrams, Venn diagrams, bar diagrams, pie charts, and estimates using seeds, pellets, fruits or stones as counters, sometimes combined with participatory ;maps and models

➢ well-being or wealth ranking -- identifying clusters of households according to well-being or wealth, including those considered poorest or worst off

➢ analysis of difference, especially by gender, social group, wealth/poverty, occupation and age. Identify differences between groups, including their problems and preferences

➢ contrast comparisons -- asking one group why another is different or does something different, and vice versa

➢ ranking and scoring, especially using matrices and seeds to compare through scoring, for example different trees, or soils, or methods of soil and water conservation

➢ key local indicators; e.g. what are poor people's criteria of well-being, and how do they differ from those we assume for them?

➢ key probes: questions which can lead direct to key issues such as

   1. What do you talk about when you are together?

3C

2. What new practices have you or others in this village experimented with in recent years?

3. What vegetable, tree, crop variety..... would you like to try out?

4. What do you do when someone's hut or house burns down?

➤ case studies and stories -- a household history and profile, coping with a crisis, how a conflict was or was not resolved

➤ team interactions: changing -pairs, evening discussions, mutual help where the team may be just outsiders, or a joint team with villagers

➤ presentations and analysis -- where maps, models, diagrams and findings are presented by villagers or by outsiders

➤ brainstorming by villagers alone, by villagers and outsiders together or by outsiders alone

➤ report writing at once, either in the field before returning to office or headquarters, or by one or more people who are designated in advance to do this immediately on completion of the RRA or PRA

2   TRIANGULATION

Triangulation is a method of gathering information about social issues or key variables and the perceptions, attitudes, knowledge and needs that inform these by means of:

➤ Entering into a process of communicating with a diversity of role-players and interest groups to gather information on a wide multi-disciplinary basis;

➤ Using a variety of techniques for data gathering, chosen on the basis of their suitability in respect of research conditions, resources and skills, inter alia;

➤ Using the information obtained in this manner to formulate, test and refine recommendations for the establishment of viable, sustainable development programmes.

In this regard, Taylor, Brian and Goodrich (1990 : 16) state that " The key to establishing the validity of conclusions derived from diverse sources is a rigorous cross-checking procedure to ensure that the directions of the evidence provided by each source point at least roughly in the same direction. Such cross validation (some researchers call it 'triangulation') is a simple and powerful method for establishing the 'truth' of conclusions."

3   VENN DIAGRAMS

A Venn Diagram forms part of an overarching data gathering and interpretation technique referred to as socio-metric data. Data gathered in this manner usually provide information about interpersonal and inter-organisational relations. The instrument usually contain questions related to "who provided the information?", "who are the members of the steering committee?", "who do you go to for advice/information?", etc. These questions offer a list of names and/or offices that provide information about the individual's structural linkages to the social system. The graphic analysis of the data may be done by means of a variety of techniques such as a sociogram or a Venn diagram.

Within this study, Venn Diagrams were used to index the relative positions of communicators/information providers as well as the degree to which members of the communities studied had understood their communication/messages.

The specific information topics that had been reported as having been communicated to members of a community where identified. Using the list of names, The research subject was provided with two circles cur from cardboard (one representing him/herself and one representing a communicator who had been identified previously). The content of the information topic was repeated to him/her and he/she was asked to place the two circles in one of four ways. If the respondent believed that he/she had fully grasped what had been communicated, they were asked to place the circles on top of one another (diagram 1). If they believed that they had understood a significant component of the message, they were asked to arrange the circles with a slight overlap (diagram 2). If the communicator had provided them with the specific piece of information but the respondent did not understand the meaning of the information, they were asked to place one circle next to another (diagram 3). Where the respondent believed that a specific message had not been communicated to him at all and had definitely never heard the message, he/she was asked to place the two circles some distance from one another (diagram 4).

This method allowed the researchers to gain an understanding of the degree of communication that had taken place in respect of each of the information categories, as well as the degree to which the recipient had understood the information.
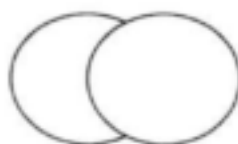
Diagram 1

Diagram 2

Diagram 3

Diagram 3

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GUIDELINES FOR EFFECTIVE COMMUNICATION: THE PROVISION OF ENGINEERING SERVICES TO COMMUNITY WATER SUPPLY AND SANITATION PROJECTS

1. INTRODUCTION

This document seeks to provide practical guidelines for effective communication between engineers and communities in the design, implementation and operation of community water supply and sanitation projects. The guidelines have been developed against the background of research undertaken in a Water Research Commission funded study that investigated CWSS case histories in North West Province, Mpumalanga and Gauteng. The case histories looked at communication issues from the perspective of the engineers and the communities, and these perspectives were later tested in a workshop involving selected study participants. The output of the study is contained in WRC Report Number **K5/830**

The guidelines are presented as simply as possible, so that they are a resource to communities, engineers and others involved in water and sanitation services. The use of the guidelines is detailed in the sections to follow.

2. STRUCTURE OF THIS DOCUMENT

The case history research revealed a number of factors that negatively affected communication between technical consultants (mainly engineers) and communities. These factors are summarised below.

The failure to map the project out in a way that is understood by all stakeholders.
The assumption that community needs can be inferred from a small number of consultations, and over a short period of time.
The assumption that a Project Steering Committee fully represents all facets of community interest in a water supply and sanitation project.
The failure to explore in detail the relationship between affordability, willingness to pay and service levels.
The assumption that simple information leads automatically to informed choices.
The assessment of project performance according to technical measures, ignoring the "softer" issues that underpin sustainability.
Limited direct consultation with the ultimate users of the services provided.
The failure to address the institutional arrangements that will be the foundation for ongoing operation and maintenance.
Confusing capacity building with training, which is simply one of many capacity building tools.

For the purposes of this document, a positive and proactive *communication objective* has been formulated for each of the areas in which poor communication was found. The guidelines are designed to facilitate the achievement of the communication objectives.

The guidelines are based largely on the research and workshop findings, but they also draw on the broader best practice documented in local and international literature. Guidelines are grouped by project phase, to underline the importance of *process* and *timing* in technical communication, and to provide a link with other guidelines (relating for example to training and capacity building) that are similarly organised.

3. SCOPE OF THE GUIDELINES

This document does not claim to be a comprehensive communication manual. It has been developed in, and responds to, a particular CWSS context. Consequently, the guidelines presented here do not replace others currently in use (particularly those contained in the Institutional and Social Development Manuals assembled and circulated by the Department of Water Affairs and Forestry).

The case history research focused explicitly on communities and engineers. Where necessary, however, the guidelines refer also to roles that must be played by local government (service authorities) and service providers. It will be evident to readers that the guidelines listed under various communication themes overlap. This is because communication itself is a complex process that cannot be portrayed in self-contained conceptual boxes. Hence the best way to use the guidelines is to read them all, and to apply them selectively as required.

It must be emphasised that the guidelines are not meant to be prescriptive. However, there is a clear imperative for effective communication between technical experts, the prospective managers of water and sanitation schemes and communities if the schemes are to be sustainable. So while individual guidelines do not prescribe, the overall thrust of the guidelines is to be taken very seriously.

4. USING THE MANUAL

The tables that follow are arranged around eight communication objectives:

- *Securing integrated project planning and execution.*
- *Understanding and meeting community needs.*
- *Securing effective and inclusive community participation.*
- *Securing a full understanding of service options, and commitment to the option selected.*
- *Building broad-based capacity for sustainability.*
- *Securing effective transfer of technical information.*
- *Communicating effectively with all elements of the community.*
- *Defining project performance, collecting relevant information and acting on outcomes.*

These objectives must form the core of any communication plan, and should be monitored through all project phases.

The objectives are organised in the framework of a simplified *project cycle*. Communication requirements will differ between planning and operation phases, for example, and the tables

are organised to reflect this. A fuller description of the project cycle is to be found in Appendix 1. Each table provides *guidelines* for the achievement of a particular communication objective at a particular point in the project cycle. Associated *actions* outline what can be done by engineers and other specialists, community representatives and local government to obtain the required results.

It must be made clear that projects will be different. This document makes assumptions that must be recognised: that engineers and other technical people are involved; that community representation is possible; and that local government is capable of a meaningful role.

GUIDELINES AND ACTIONS

> **Note:**
>
> The following tables outline communication guidelines and associated actions. The actions address three groups: the engineers and other specialists, community representatives (especially the Project Steering Committee and consumer-oriented groups), and the Water Services Authorities. Service Providers are linked to the WSAs, because of the contractual relationship that will bind these parties.

Table 1: Conceptualisation and Design Phase; Communication Objective 1

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing integrated project planning and execution* Guidelines: ❑ Communication must be a central component of an integrated and negotiated project plan. It is fundamental to awareness building, participatory planning, capacity building, training and mentoring. The integrated plan must set clear communication objectives and accountability in each of these contexts. ❑ There is a need for clients and developers to acknowledge that the human development project cycle begins way before the physical, and ends after it. Engineers can play a role in promoting this view, and in persuading clients to design and implement appropriate contractual arrangements.	➤ Set up a framework for an Integrated Project Plan (IPP) well before engagement with stakeholders. The plan must set communication objectives and must detail roles, responsibilities, deliverables, deadlines and sources of support. The plan must include the identification and installation of a service provider, and must be clear on monitoring, mentoring and evaluation activities. The IPP is an implementation and management road map, and is an extension and development of the more technical Business Plan ➤ Workshop the plan with the PSC (if in place), otherwise with key community representatives	➤ A Project Steering Committee must be established as quickly as possible. This will be the primary (but not only) vehicle for community representation during planning and implementation ➤ Participate (where possible) in the preparation of the IPP, and (critically) in the workshop dealing with the refinement of the IPP. Community representatives must take responsibility for ensuring that the plan is meaningful and useful to community stakeholders	➤ The WSA has a stake in ensuring the sustainability of the project. With this in mind, local government should ensure that an integrated plan is formulated and fully discussed. ➤ Identification of an appropriate water service provider must take place as soon as possible. The WSA should champion this process. The WSP must be involved in the roll-out of the integrated plan

> Table 2: Conceptualisation and Design Phase; Communication Objective 2

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Understanding and meeting community needs* Guidelines: ☐ Simply asking communities (or assumed representatives) what they need is not a valid form of needs appraisal. In situations of need, respondents will often offer the response they believe will secure resources. So, when "water people" ask the questions, water will be portrayed as the top priority. ☐ Expressed needs must be tested against well-formulated technical options. For example, a stated need for a high level of service may change when the cost of the service is made clear. Hence needs should be revisited as technical options are discussed, costed and agreed. ☐ Participatory and interactive techniques are a good way to determine needs. Many development practitioners are familiar with such tools, and should be used where appropriate. It is important for participants to address trade-offs, such as the priority of one service over another, or payment relative to service level.	➢ Work with social experts to assess community needs. Experience is very important here. ➢ Social experts should design and implement participatory needs assessment tools ➢ Technical options must be formulated by the engineers. Expressions of need are most likely to be accurate when the options (and their costs) are	➢ The PSC and other community representatives must be identified and mobilised as quickly as possible. ➢ The PSC should participate in the design of tools, and should assist in their administration. Note that the PSC cannot claim to represent all community needs. ➢ The PSC should understand the outcomes of needs research.	➢ The WSA should familiarise itself with needs assessment approaches, and should fully understand the results of the needs assessment. ➢ WSAs must resist influencing needs analysis for political objectives. A particular danger is the promotion of unaffordable levels of service. ➢ If in place, the Water Service Provider should familiarise itself

	understood.		with the tools and results of the needs appraisal.

Table 3: Conceptualisation and Design Phase; Communication Objective 3

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective and inclusive community participation* Guidelines: □ Communication is not a one-off activity, or a periodic task. It must be understood by all concerned as a process that requires goodwill and commitment. It may be useful to discuss and agree a "communication credo" with stakeholders at the beginning of the project. The credo can set out broad objectives and responsibilities. □ Sustainable structures for information gathering should be established where possible. Project Steering Committees are useful in this regard, but are narrow in focus and temporary in nature. Consider building the capacity of local government and NGOs for information gathering. □ The role and responsibilities of Project Steering Committees (PSCs) must be very clearly understood by all stakeholders, and as early as possible in the project cycle. PSCs can help with communication and interaction, but should not be tasked with full responsibility for these functions. □ All information exchange must respond to local priorities and concerns and must be relevant to the recipients. This can be achieved if communication is treated as a process, and if it is monitored by neutral informants inside and	➤ Establish a clear project roadmap in consultation with the PSC (see Integrated Project Plan, Table 1). This must have clear roles and responsibilities. ➤ A large poster portraying the project, with stages, actors and deadlines might be produced, and displayed in public places.	➤ PSC task groups might be established to assist with project management and also to broaden participation. Possibilities are task groups concerned with planning, consumer relations, women, youth etc. ➤ A gender and race mix must be ensured in all project structures. ➤ The PSC must ensure that roles and responsibilities and deadlines are well understood	➤ Local government has a responsibility to its electorate. In this context, the WSA should find ways to safeguard and ensure community participation, and should actively participate in the project themselves. ➤ The WSP should be encouraged to participate and to promote participation.

outside the community. ❑ The development of a simple but comprehensive project "road map" with deliverables and timing will greatly enhance communication. This might take the form of a poster, with appropriate illustrations. The poster can be displayed widely, and may be used to promote the services of an advice office. ❑ Engineers working in the development field should seriously consider the race and gender mix of their professional teams. An appropriate mix will go some way to establishing early trust, and may assist in the development of a longer term relationship.		well understood and communicated.	

Table 4: Conceptualisation and Design Phase; Communication Objective 4

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing a full understanding of service level options, and commitment to the option selected* Guidelines: ❑ Affordability and willingness to pay *must* be assessed, and *must* inform service level decisions. As with needs, simply asking whether people are willing or able to pay is not adequate, partly because many will want to convince the implementing agent and / or engineer not to take the money elsewhere. ❑ Affordability and willingness to pay are best assessed in a participatory way and against the background of *costed* service level options. The participatory method used should clearly demonstrate the kind of service that will be obtainable for a particular payment. ❑ Local government and service providers must be a part of cost recovery communication from project inception. The communication strategy should clearly allocate this responsibility, and capacity should be build if such is required. ❑ Local debate and communication around service levels might be promoted through information exchange with other communities. Such exchange might also assist in determining locally appropriate billing systems and	➢ Engineers must develop a full range of technical options, with full explanation and costing ➢ Social and technical experts must develop ways to assess both willingness to pay and affordability, and implement these tools. The variety of tools is wide, but the use of several approaches is recommended. ➢ Wherever possible, affordability and willingness must	➢ The PSC should support and participate in workshops around technical options, and ensure that the options are fully understood. ➢ The PSC might facilitate information exchange with other communities to discuss service level options. Visits are a good approach, and example of failure should be included.	➢ The WSA might play an important role in ensuring that complete consensus is reached around service level options, and likely costs to consumers. It might be necessary to draw in external arbitration if agreement is not reached. ➢ The WSA and WSP should clarify and consult around the billing system as soon as posible.

management infrastructure. Examples of institutional failure might be included in an exchange programme.	willingness must be assessed against the background of fully costed options. ➤ Specialists should beware of unrepresentative views on service levels.		

Table 5: Conceptualisation and Design Phase; Communication Objective 5

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Building broad-based capacity for sustainability* Guidelines: ☐ In principle, planning should not take place without participation. Participation must inform and shape planning, and not just endorse an imposed product. It is important to involve the right players in planning: eg. a spread of community interests in early project conception; likely water service providers in O&M and management planning. ☐ A "culture of communication" should be entrenched as early as possible, by example, and through capacity building with specific groups (especially potential service providers and local government). The critical role of communication in the delivery of a *service* as opposed to a commodity should be emphasised. ☐ Training is simply an aspect of capacity building. Capacity building refers to human resources, management, systems, support networks, financial resources and relationships. All capacity building must be directed to understanding the job to be done, and should enable those responsible for the job to do it effectively and sustainably.	➤ The specialist team must ensure appropriate participation in project planning (see Table 1). ➤ The development of a detailed O&M management plan might be led at first by the technical team (see Table 12). The O&M planning approach should be introduced and discussed as early as possible. ➤ The O&M plan and training must focus on the job to be done. This	➤ Early training of the PSC and WSP in customer relations should be undertaken. The services might be provided by the specialist team. ➤ PSC and WSP task teams should participate in the establishment of the O&M management planning process. ➤ The PSC should request project management training if necessary to administer the project business plan.	➤ The WSP will be the focus of much of the O&M training. The WSA should monitor the nature and progress of the training. ➤ Training in problem solving skills should undertaken as early as possible.

❑ To be optimally effective and efficient, training must focus on the job to be done, and should aim to build the necessary skills in the right people. Unfocussed training might impart minimally relevant skills, or it might target inappropriate recipients. Participatory approaches and on-the-job training often enhance communication. ❑ Make a clear distinction between the business plan and the O&M management plan. The former is largely the concern of the PSC, while the participative development of the latter is essential to empower the proposed water services provider. The formulation of a management plan must start early. ❑ Training in the principles of planning and problem solving should be considered in some cases. This might be offered particularly to the service provider, to developmental NGOs and to local government. Planning skills will enable local stakeholders to communicate more effectively with technical consultants. ❑ Project planning should not ignore other development planning initiatives, such as Land Development Objectives. It is important to acknowledge these in project planning, and to integrate the planning processes as soon as possible. Early involvement of local government is critical in this regard. ❑ The project communication plan should include communication and cooperation with local government. In the early phases of the project, the establishment of a relationship with local government may be a priority. Later, local government should be an ally, with ongoing responsibility for communication with the community.	requires careful description of the management tasks by the engineers and specialists. ➢ The communication plan should assist with the establishment of relationships, especially with local government.	➢ Training in problem solving skills should undertaken as early as possible.	

Table 6: Conceptualisation and Design Phase; Communication Objective 6

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective transfer of technical information* Guidelines: ❑ Language can be an important matter in communication. The translation of project documentation may promote communication in some contexts. It also demonstrates the willingness of the technical team to engage and inform the community. Translation at meetings is also important, but it must be of good quality. ❑ The appointment of a communication facilitator (or facilitators) to the project team should be considered. It would be best if the facilitator was drawn from the community. To perform effectively the facilitator must be an integral part of the project team, with appropriate training. ❑ Communication facilitators must not be forced to become "sellouts" simply conveying the views and priorities of the technical team. If they lose the confidence of the community, their role is rendered ineffective. Hence they should be seen to have the power to ask difficult questions of the project, and to get the appropriate answers. ❑ Where a community is expected to respond to a technical	➤ Translate technical information where possible and necessary. Provide translation at meetings if needed. ➤ Appoint a communication facilitator. This appointee might be trained to serve the WSP in due course. ➤ Develop clear terms of reference for the communication facilitator. ➤ Consider the	➤ The terms of reference for the communication facilitator should be monitored by the PSC, or its communication task team.	➤ The WSP should spend time with the technical team to learn about technical communication. Special training might be necessary.

input (eg. on the choice of service level), sufficient time must be allowed for thorough debate, and a considered, representative response. Contractual conditions may hinder this process, but engineers should negotiate contracts with communication objectives in mind.	importance of items of technical communication. Plan the necessary time if the communication is complex. Never rush complex communication.		

Table 7: Conceptualisation and Design Phase; Communication Objective 7

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Communicating effectively with all elements of the community* Guidelines: ❑ Encourage unsolicited comment from the community through an open door philosophy. This might be implemented through a locally resourced information office, or through a suggestion box. Community based organisations might also collect and convey sentiments flowing from the community. ❑ Build a stakeholder "map" of the community involved. This should identify all relevant stakeholders, relationships and the strength of the "voice" that each group can mobilise. The map should also identify specific communication needs and challenges, and should serve as input into a communication plan. ❑ The ability to *receive* information should not be assumed. This can be enhanced through an ongoing process of awareness building, through the use of a purposeful communication *process*, and by building an environment where community members are willing to ask questions. ❑ A way to ensure targeted and relevant communication is to build the demand for information. If communities feel	➤ Establish an open-door policy and philosophy, and build awareness of this in the community. ➤ Install a suggestion box if appropriate. ➤ Develop a "map" of all project stakeholders. The communication strategy should suggest ways to reach all of these, and should set specific objectives. ➤ Build a demand for information by	➤ Encourage the community to ask questions and to seek advice. ➤ Establish an advice office, if needed. ➤ Collect and note issues raised by stakeholders. Develop strategies to address these with the specialist team and the WSA. Ensure that weak stakeholders are encouraged to offer opinion. Work with the stakeholder map to address possible communication	➤ The specialist team and the WSP should work closely on the stakeholder map. The WSP will take this over after handover. ➤ The WSA should ensure that none of its electorate are neglected in project communication.

		gaps.	
empowered to ask *their* questions, their true concerns will be exposed. Demand can be built through awareness building, an open communication culture, and vehicles to receive comment (eg an advice office). ❑ Ensuring effective direct contact between engineers and communities is a particular challenge. Among ways to address this are the use of participatory methodologies, a programme of meetings where small amounts of information are shared, the use of models and diagrams, and the use of trained liaison staff. ❑ In contact with communities, engineers should avoid making promises and building exaggerated expectations. This might facilitate project implementation in the short term, but will damage it in the long term. If there are difficulties and constraints, it is better to get these into the open as soon as possible. ❑ Early contacts with communities will shape communication and interaction thereafter. There is no universal rule of initial contact (eg talk to the Chief first, or local government first). However, in principle, contact should be made with all leaders (local government, civic and traditional).	packaging it correctly and offering it freely and frequently. ➤ Make use of all opportunities for direct contact. ➤ Avoid making promises that might not materialise. ➤ Ensure that community contacts are made as early as possible, and that they are as inclusive as possible.		

Table 8: Conceptualisation and Design Phase; Communication Objective 8

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Defining project performance, collecting relevant information and acting on outcomes* Guidelines: ❑ Detailed communication objectives and KPIs should be developed early in project planning, and refined in discussion with appropriate community representatives. Communication objectives must address all components of the project that require the transfer or exchange of information. ❑ In some environments, objective *external* monitoring of communication objectives and KPIs should be considered. This is especially necessary in divided communities. In all contexts, monitoring by a range of informants should be considered. ❑ Project monitoring is often mechanical and numbers driven. The project plan should also monitor progress toward project sustainability. Participation, effective capacity building, and targeted and effective training are all key building blocks for sustainability. KPIs for these elements should address both *quality* and quantity. ❑ Community based monitoring of communication, capacity building and training should be encouraged. This can be	➤ Develop communication objectives and KPIs. Discuss with WSA and community representatives. ➤ With social specialists develop objectives and KPIs that address "soft" issues. ➤ Work with the PSC and WSA to encourage community-based monitoring.	➤ Discuss objectives and KPIs with specialists. ➤ Assist with community-based monitoring capacity, possibly through a communications or monitoring task team. This team might become the recommended consumer group or committee.	➤ Discuss objectives and KPIs with specialists. ➤ With the specialists, ensure that communication objectives and KPIs are built into the WSP contract.

done via focus groups, in meetings or via representatives. Ongoing local monitoring will ensure a robust relationship between communities and service providers post-handover.			

Table 9: Construction and Implementation Phase; Communication Objective 1

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing integrated project planning and execution* Guidelines: ❑ During construction and implementation, preparations for effective communication are likely to be severely tested. Attention should be given to the effectiveness of communication against the background of the communication objectives. Problems should be remedied as soon as possible. ❑ In an integrated project plan, communication responsibilities will be shared with partners in the community (eg. NGOs and CBOs) and with local government. Roles should be confirmed and tested during the construction phase, and working relationships should be consolidated	➤ The technically inclined members of the PSC should assist with the implementation of the project plan. With their project management expertise, engineers can assist with the communication of issues such as critical paths, the consequences of delay, and measures to ensure the meeting of deadlines	➤ Community representatives on the PSC should be very critical of the implementation of the integrated project plan at this early stage. They should ask whether the plan is clear, whether it is inclusive, whether it is empowering, and whether the technical team are taking the communication objectives seriously. Problems must be identified and rectified in this phase	➤ Local government representatives on the PSC might take specific responsibility for ensuring that the integrated project plan becomes the route-map for the project, and that the communication objectives are monitored and met ➤ Ideally, the service provider should be in place during this phase. Local government should ensure that the IPP includes capacity building for the SP if necessary

Table 10: Construction and Implementation Phase; Communication Objective 2

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Understanding and meeting community needs* Guidelines: ❑ During this phase, training and capacity building might include techniques to research and interpret community needs and concerns. Water service providers will require such tools, and local government might find them very useful. A framework for regular customer consultation might be developed in conjunction with service providers and local government. ❑ Particular attention should be given to the needs of vulnerable and marginalised groups as the project develops. For example, it is advisable to develop an approach to serving the very poor, and to do this as early as possible in the project cycle.	➢ Ensure that the project constructed and implemented is in line with objectively assessed needs. ➢ Assess progress against project and communication objectives.	➢ The PSC should oversee training in participatory techniques. This training should be provided by social experts, and offered to the communication and customer relations portfolios of the PSC, and to the Water Services Provider. ➢ The PSC should ensure regular contact with vulnerable or marginalised sections of the community.	➢ The WSA might work through the participatory needs assessment process to build relationships between customers, the WSP and itself. ➢ If appropriate, the WSA might encourage the establishment of a consumer group, possibly as an extension to a PSC communication task team.

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Table 11: Construction and Implementation Phase; Communication Objective 3

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective and inclusive community participation* Guidelines: ❑ Consolidate and implement the PSCs role in communication. Also ensure the involvement of other actors with communication responsibilities. It is important to build the communication partnership with local government and community based organisations during this phase. Assist local government and CBOs / NGOs to develop longer term community participation plans. ❑ Ensure that the communication and participation process does not get lost as a result of an exclusive focus on the training of local government, the PSC and the service provider. The facilitation of wider participation remains important. An advice office may be opened and promoted during this phase. ❑ Service level options must be agreed and resolved in the conceptualisation and design phase. During this phase the service provider should participate in the detailed planning of tariffs and cost recovery methods. Broader participation in these deliberations might be promoted through an advice office, and via NGOs and local government.	➤ In this phase, the specialist team has to ensure that participation does not slip because of delivery pressures. ➤ The specialists should report regularly to the PSC and to the community on progress. The "road map" or poster will be very useful in this regard. ➤ An important area of participation is that around tariff setting. The engineers and social scientists	➤ The PSC, PSC task teams and other community structures should place special emphasis on community participation in this phase. Tariff setting and cost recovery discussions are particularly important. ➤ In large projects, the establishment of a project advice office might be considered. This office may be taken over by a consumer group or the WSP after handover.	➤ The WSA should continue to monitor participation. It is critical that the WSA and WSP support and participate in discussions around tariffs and cost recovery.

	should develop and implement appropriate procedures in this regard.		

Table 12: Construction and Implementation Phase; Communication Objective 4

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing a full understanding of service level options, and commitment to the option selected* Guidelines: ❑ O&M and management planning should proceed on the basis of the service level agreed in the preceding phase. The planning process should be detailed, and should produce a clear understanding of roles and procedures. The service provider (or the people likely to form a service providing body) must be involved in the management planning. This involvement then becomes a form of capacity building. ❑ The service provider, together with the PSC and / or local government, should inform the community on progress with the management planning, showing that this remains within the mandate negotiated earlier. Other communication partners may be mobilised as well. ❑ The management planning process might also begin considering post-handover upgrade possibilities, and the service provider and the technical team may begin discussing such possibilities with local government and appropriate community stakeholders. ❑ The service provider should be introduced to the	➢ The specialist team should begin operations and maintenance capacity building in this phase. A good way to do this is to train for specific O&M tasks, which have been clearly identified and described. The result should be an O&M management plan, and training to ensure its effectiveness.	➢ PSC task groups should participate in the development of the O&M management plan. Actual O&M training must be focussed on the Service Provider. ➢ The community must be informed of progress with O&M training.	➢ The WSA, WSP and community representatives should discuss post handover upgrading options. Roles and responsibilities must be agreed.

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community if it is not already known. Its role should be clearly communicated through all available channels.			

Table 13: Construction and Implementation Phase; Communication Objective 5

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Building broad-based capacity for sustainability* Guidelines: ❑ Targeted O&M and management capacity building should focus mainly on the service provider, with some involvement of local government. One way to mobilise such capacity building is through a management planning process. ❑ Broader capacity building to promote communication and participation should also proceed. This may include training in planning and problem solving with local government and NGOs, and customer communications training with the service provider, local government, NGOs and other community-based structures. ❑ Integration with other capacity building initiatives (eg. by local government) should be cemented and tested during this phase. ❑ Construction provides an ideal opportunity for hands-on awareness building in the broader community, and for concrete O&M and management training for the service provider and service authority. The PSC and technical team are best placed to facilitate this process, and all opportunities should be explored. ❑ Capacity built during the planning and implementation	➢ The specialist team should continue to facilitate O&M management and training. ➢ Other capacity building opportunities should be identified, and used where possible (eg. local government training programmes). ➢ Where possible, the WSP and some PSC task teams should be involved in aspects of the project construction, or at	➢ The PSC should ensure fairness in selection of trainees for O&M training, possibly through a labour desk. In may be necessary in some circumstances to have independent arbitration.	➢ The WSP will be very involved in O&M training. The WSP should monitor the quality of the training, and the participation of the WSP. ➢ Some tasks could be transferred to the WSP before handover, on a trial basis.

phases is often only tested after handover. Earlier testing is recommended wherever possible. This might be achieved by transferring some tasks to the service provider before handover, or by working through simulated operational conditions (and challenges) with relevant parties.	least should regularly tour the site. This will provide the necessary technical understanding of the scheme, but in a very practical manner.		

Table 14: Construction and Implementation Phase; Communication Objective 6

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective transfer of technical information* Guidelines: □ As discussed earlier, the construction phase provides an ideal opportunity to build awareness of the technical nature of the scheme, and to build a practical understanding of O&M and management with the service provider and local government. Tours of the works might be made more meaningful though the use of simplified diagrams and basic working models. These communication instruments could become a resource to be housed in an advice office, or in another appropriate venue. □ Issues of technical communication should be taken up with the service provider in particular, and appropriate capacity built. If possible, the service provider should manage (or at least support) the advice office (if this option is pursued).	➢ Make as much use of tours, and hands-on experience during construction as possible.	➢ Encourage interest in the PSC and among the community in the technical aspects of the project. If an ongoing consumer group is established, this must also take an interest in technical communication, and should learn the essential techniques. ➢ Establish an advice office, if necessary. The people running the office will require training for technical communication.	The WSP should interact as closely as possible with the specialist team, advising and learning from them. The WSA should also engage the technical side of the project.

Table 15: Construction and Implementation Phase; Communication Objective 7

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Communicating effectively with all elements of the community* Guidelines: ❑ The communication *programme* should be implemented in the conceptualisation and design phase, but must be sustained throughout construction and implementation. The programme may include all of the elements listed above, or it may be build around some of them. A key to the success of any programme is clarity around the roles and responsibilities of various communication champions. These may include the PSC, the service provider, the communications facilitator, other liaison resources, local government and community-based organisations. These roles should be monitored and consolidated during the construction phase. ❑ If the communication strategy includes the open door approach encouraged above, ongoing awareness building will be necessary, together with continuous refinement of the capacity to respond to requests for information. As discussed above, a body of resources (documentation, simplified plans, models) should be assembled, possibly to be housed in an advice office.	➢ The specialist team should sustain a commitment to a communication programme. It is tempting to neglect this during the rush of construction. ➢ Continue building awareness.	➢ The communication programme might be overseen by the PSC up to handover (possibly through its communication task team). Thereafter it should be implemented by the WSP, reporting to the WSA. If a consumer group is established, this might monitor the communication programme.	➢ Local government must support the communication programme.

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❑ The point has already been made that the service provider will have to maintain effective communication with the community after handover. Hence involvement in the roll-out of the communication programme is essential. Local government should also be involved.			

Table 16: Construction and Implementation Phase; Communication Objective 8

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Defining project performance, collecting relevant information and acting on outcomes* Guidelines: ▢ Monitoring of communication (and the related areas of capacity building and training) should begin in the design phase and consolidated during construction and implementation. Community-based monitoring is particularly important, and might be pursued using some of the mechanisms listed above. It is important that monitoring informs the capacity building and training processes, and that the findings are noted in the management planning process. ▢ The structure and rationale of the monitoring programme should be discussed with the service provider and with the service authority. In the case of the former, the tools will be useful in building and monitoring customer relationships. The latter may wish to include some of the performance areas and KPIs in its contract with the service provider.	➤ Refine monitoring tools and processes, and share these with the PSC communications task team, the consumer group (if established), the WSA and the WSP. Some training will be required in most cases.	➤ The PSC communications task team might take primary responsibility for monitoring objectives and KPIs, but it will require technical assistance from the specialist group.	➤ The WSA will be directly responsible for monitoring WSP contractual performance indicators. Technical assistance may be sought from the specialist team. ➤ The WSP must make the most of the opportunity to interact with the specialists to build monitoring capacity.

Table 17: Operations, Maintenance and Mentoring Phase; Communication Objective 1

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing integrated project planning and execution* Guidelines: ☐ Integrated project planning should have ensured the installation of a capacitated service provider and a meaningful mentoring programme. Among other things, mentoring should ensure that the service provider and the customers continue to appreciate the broader developmental contribution of service provision.	➤ Once the project has been handed over to the WSA, the technical team has a limited role. A key responsibility is to ensure that the service provider is capable of the technical side of the O&M, and to mentor where possible. This mentoring role should have been planned in the conceptualisation and design phase.	➤ The PSC should be disbanded after handover, to be replaced by a viable water service provider. The integrated project plan might provide for the establishment of a consumer group to ensure communication between customers and the WSP. If planned, this must be implemented by the community representatives.	➤ The IPP should make clear the steps to be taken by the WSA and the WSP to secure a practical and sustainable service contract. These steps should be the responsibility of the WSA.

Table 18: Operations, Maintenance and Mentoring Phase; Communication Objective 2

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Understanding and meeting community needs* Guidelines: ❑ The use of customer relations research by service providers and local government might be tested and refined during the mentoring period. In addition, the activities of community based consumer bodies might be supported and encouraged. Service providers may be intimidated by such bodies, and mentoring should seek to develop a constructive relationship.	❑ The social and technical experts should provide support to a customer relations group, or to the WSP.	❑ If a consumer or customer relations group has been established, this should take charge of further research into community and customer needs.	❑ The WSP should work closely with, and encourage a customer relations group. The WSA might insist on such a relationship in its contract with the WSP.

Table 19: Operations, Maintenance and Mentoring Phase; Communication Objective 3

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective and inclusive community participation* Guidelines: ▢ After handover, the service provider and the service authority should be the main custodians of community involvement in effective service provision. Mentoring should assist these bodies to use community based reporting structures and the advice office to obtain customer feedback on the quality of the service.	➤ Specialists should provide assistance to the WSA, the WSP and consumer groups as required (and agreed).	➤ The establishment of a consumer group (possibly flowing from a PSC communication task team) is strongly advised. This body should work closely with the WSA and the WSP to ensure ongoing participation, and especially a good relationship between the WSP and its customers.	➤ The WSA and WSP should work on a good relationship with the proposed consumer group or committee. ➤ Both the WSA and the WSP have a commitment to protect and ensure community involvement.

Table 20: Operations, Maintenance and Mentoring Phase; Communication Objective 4

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing a full understanding of service level options, and commitment to the option selected* Guidelines: ❏ The service provider will require special mentoring attention during this phase. This assistance should focus on the skills, processes and tools required to build and secure sound customer relations. This process will be easier if the service provider has already interacted with potential customers during the earlier project cycle phases.	➢ Provide assistance where approporiate, especially to WSP.	➢ If a customer relationships group succeeds the PSC, as suggested, this group should monitor interaction between customers and the WSP.	➢ The WSP should monitor contractual aspects of WSP/ customer relationships.

Table 21: Operations, Maintenance and Mentoring Phase; Communication Objective 5

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Building broad-based capacity for sustainability* Guidelines: ❏ Mentoring can be seen as an extension of capacity building. The mentoring process should seek to identify gaps in capacity and should mobilise processes to remedy the problems identified. With reference to communication, a key focus during the mentoring period should be the capacity for service providers and customers to engage in an open and durable relationship. Additional capacity building may be required in this context.	➢ Assist WSA and WSP to fill capacity building and training gaps where necessary.	➢ If a consumer group is formed, this may undertake customer relations training, together with the WSP.	➢ The WSP and WSA should identify capacity building gaps, and take action to fill them.

Table 22: Operations, Maintenance and Mentoring Phase; Communication Objective 6

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective transfer of technical information* Guidelines: ❑ After handover, the service provider should have sufficient capacity to continue with technical communication. Ideally, the customers should see the service provider as the custodian of technical information. Where outsiders are used to communicate on technical matters, this communication should be channeled through the provider. Mentoring should ensure that the service provider secures its position regarding technical communication.	➢ Advise and assist the WSP if necessary.	➢ The consumer committee (or group) should monitor and report on the quality and frequency of WSP technical communication. A key aspect of this communication is around the financial management of the scheme.	➢ The WSA must ensure adequate WSP performance against contract.

Table 23: Operations, Maintenance and Mentoring Phase; Communication Objective 7

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: _Communicating effectively with all elements of the community_ Guidelines: ❏ Ongoing communication between the service provider and its customers should be monitored, and support offered where necessary. ❏ The spirit of open communication promoted in earlier phases should also be monitored. Any breakdown should be assessed and remedied where possible. After handover, the custodians of open communication will probably be local government and the service provider on the one hand, and community based structures on the other. The continued involvement of unrepresented groups should be focus during the mentoring period.	➤ Provide advice and assistance where necessary.	➤ The consumer group (if established) will continue to monitor the WSPs communication policy and plan	➤ The WSA will continue to monitor the WSPs communication policy and plan.

Table 24: Operations, Maintenance and Mentoring Phase; Communication Objective 8

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Defining project performance, collecting relevant information and acting on outcomes* Guidelines: ❑ Monitoring will continue into this phase, possibly managed by the service authority and provider. Mentoring should ensure that the monitoring remains effective, and that the capacity to respond is built and consolidated.	➢ Provide technical assistance as required.	➢ The consumer group (if established) should monitor WSP / customer relationships.	➢ The WSA will continue monitoring the WSP. The WSP should monitor its relationship with its customers.

Table 25: Evaluation and Consolidation Phase; Communication Objective 1

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
➤ Communication Objective: ➤ *Securing integrated project planning and execution* ➤ Guidelines: ➤ The lessons learned from an integrated approach to planning in a particular setting might be documented and shared with other projects. The participation of the community in developing the lessons will help to make them meaningful to other communities and community-based organisations.	➤ In terms of the IPP, the technical team might play an independent and supportive role in evaluation. It might also assist the WSA in documenting lessons. These might be distributed by the WSA to other local government	➤ If a consumer group is established according to the IPP, this will play a key role evaluation. It should inform both the WSA and the WSP.	➤ The WSS should play a key role in monitoring the performance of the WSP. The IPP should have included the development of a M&E process, with appropriate mentoring. M&E must be included in the contract between the WSA and the WSP

Table 26: Evaluation and Consolidation Phase; Communication Objective 2

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	**Community Representatives (including PSC and Consumer Groups)**	**Water Service Authority and Water Service Provider**
Communication Objective: *Understanding and meeting community needs* Guidelines: □ The best measure of the extent to which the service is meeting community needs is the support (monetary and otherwise) given by the community to the service provider. Success and failure in this relationship should be evaluated, and lessons disseminated where possible.	➢ Provide technical and mentoring support to the WSA and WSP as required, and under conditions to be negotiated.	➢ The consumer group should provide feedback to the WSA and WSP on the relationship between the WSP and its customers.	➢ The WSA and WSP should carefully evaluate the support given by the community to the WSP. Problems must be solved immediately.

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Table 27: Evaluation and Consolidation Phase; Communication Objective 3

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	**Community Representatives (including PSC and Consumer Groups)**	**Water Service Authority and Water Service Provider**
Communication Objective: *Securing effective and inclusive community participation* Guidelines: ▫ Lingering problems should be solved during this period. Lessons should be documented and disseminated.	➤ The specialists should ensure that project lessons are recorded.	➤ The consumer relations group should continue monitoring WSP/ customer relationships.	The WSA and WSP should continue monitoring WSP/ customer relationships. If the WSA/ WSP contract sets performance criteria, these must be checked.

Table 28: Evaluation and Consolidation Phase; Communication Objective 4

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing a full understanding of service level options, and commitment to the option selected* Guidelines: ❑ Careful evaluation of the progress and sustainability of the service provider – customer relationship is needed during this phase. Potential problems should be identified and remedial measures. The evaluation should refer to the contract between the service provider and the service authority, and local government should with the resolution of problems where possible.	➤ Resolve problems where appropriate (in negotiation with WSP and WSA).	➤ Consumer group to provide feedback to WSP.	➤ WSA continues to asses WSP performance.

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Table 29: Evaluation and Consolidation Phase; Communication Objective 5

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Building broad-based capacity for sustainability* Guidelines: ▫ The effectiveness and complementarity of various capacity building initiatives should be evaluated, and the lessons disseminated.	➤ Assemble and disseminate lessons	➤ Assemble and disseminate lessons	➤ The WSA should evaluate the sustainability of the scheme on a regular basis, and request assistance if needed.

Table 30: Evaluation and Consolidation Phase; Communication Objective 6

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Securing effective transfer of technical information* Guidelines: ❑ Thorough evaluation of the effectiveness of information transfer would be extremely useful. This might best be undertaken by an external technical communications expert, with the involvement of all relevant community and local government actors.			➢ The WSA might commission an external evaluation by a communications expert.

Table 31: Evaluation and Consolidation Phase; Communication Objective 7

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	**Community Representatives (including PSC and Consumer Groups)**	**Water Service Authority and Water Service Provider**
Communication Objective: *Communicating effectively with all elements of the community* Guidelines: ❏ Lessons should be identified through an evaluation process, and the conclusions disseminated.	➢ Collect and disseminate lessons	➢ Collect and disseminate lessons	➢ Collect and disseminate lessons

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Table 32: Evaluation and Consolidation Phase; Communication Objective 8

Communication Objective and Guidelines	Actions		
	Engineers and Other Specialists (including Social and Institutional Experts)	Community Representatives (including PSC and Consumer Groups)	Water Service Authority and Water Service Provider
Communication Objective: *Defining project performance, collecting relevant information and acting on outcomes* Guidelines: ❑ As before, evaluate, identify lessons and disseminate.	➢ Collect and disseminate lessons	➢ Collect and disseminate lessons	➢ Collect and disseminate lessons

APPENDIX 1:

THE PROJECT CYCLE

Continuation Phase (ongoing life of the water service)

PLANNING PHASE
— Project Feasibility Study
— Project Business Plan

EVALUATION PHASE

DESIGN PHASE
— Detailed Designs

Continuous monitoring, communication, awareness creation and stakeholder participation

IMPLEMENTATION PHASE
— Construction and implementation of ISD training and capacity building plans

Transfer Process

OPERATIONS, MAINTENANCE AND MENTORING PHASE

Project Commissioning

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