CHAPTER IV - IMPLEMENTATION OF PLANNED PROJECT

Synopsis

This chapter comprises a description of the actual implementation of the planned pilot project, as described in the previous chapter. Firstly the consecutive phases during which the pilot project was executed, are stated. The execution of each phase is then described: After approval to execute the pilot project was obtained, a background study on telecentres, where interviews on cultural aspects were held with Mr Johann Adendorff, was completed. The most applicable communication techniques were then identified, since the information needs of the community formed the basis of the pilot project. This was followed by a preproduction audience research, where the Development Committee was introduced to the meaning of a telecentre and what it may offer their community by addressing their information needs. A needs analysis was executed by the Researcher afterwards. To integrate indigenous culture, development and the management of the WUA, it was necessary to use an ordinary day-to-day example to explain where the telecentre would fit into the management of the WUA. This explanation was done by means of the illustration of a wagon stuck in the mud, and how the telecentre, as one of the oxen, could contribute to leading the community to development. This was followed by a comprehensive demonstration of the various technologies and the information to be obtained from these technologies.

4.1 PHASES OF THE PILOT PROJECT

The researcher determined that the pilot project should be executed according to the following phases:

- Obtaining approval to execute the pilot project at Thabina
- Background study
- Getting to know the audience
- Identification of information needs
- Integrating indigenous culture, development and management
- Demonstration of the various technologies and the information to be obtained from these technologies.

- Evaluation of the pilot project (Chapter V).

4.1.1 Obtaining approval to execute the pilot project

Before the pilot project could commence, it was necessary to obtain the approval of Mr Massoud Shaker, Director of the Policy and Planning Unit of NPDALE for the pilot project to be executed in his province. He allocated several irrigation schemes in his province to be rehabilitated in order for the community to become self-sustainable and Thabina was one of these irrigation schemes. He appointed LVA as consultants, to uplift the irrigation scheme at Thabina. A letter explaining the extent of the pilot project, the aims and the objectives, was compiled and mailed to Mr Shaker. Mr Shaker was impressed with the idea, but as an agriculturist, had no knowledge of the subject. Meetings with Mr Shaker were arranged in order to explain to him the concept of a telecentre:

- The term telecentre was introduced during the first meeting with Mr Shaker. For the pilot project, the term telecentre would comprise access for the members of the Development Committee to various technologies such as the fax machine, photocopier, a computer with a modem and access to the Internet. It was explained that by means of the technology, the community of Thabina would be uplifted socially and economically in order to become self-sustainable. Through the technology mentioned, they could obtain information on all aspects of agriculture, such as the various aspects of irrigation and irrigation schemes, fresh produce prices, market prices and trends, mechanisation, soil conservation, etc.

- The community members could also communicate by means of e-mail and fax, as a recently founded WUA, with other WUA's, and other agricultural related organisations such as the WRC and DWAF.

- During the second meeting, Mr Shaker was also introduced to the telecentre MACIS, that was previously discussed, in Mamelodi near Pretoria.. He was greatly impressed and agreed that this was the kind of progress Thabina needed, i.e. to solve internal problems by implementing various technologies: "... The belief that underdevelopment is rooted in mainly internal causes which can be solved by external (technological) aid – are still shared by many

development agencies and governments" (Servaes J, 1995:47). His letter of consent was received soon afterwards and the pilot project could commence.

It was agreed during this meeting that the telecentre would be established at Thabina once the consent of the Development Committee Members had been obtained. Mr Shaker mentioned that his Department would appoint a manager. During the pilot project it seemed that writing skills and information-seeking skills were the most important for a Manager, because the Manager would have to correspond with other WUA's and with other agriculture-related organisations. The importance of interpersonal communication skills should not be underestimated. As with the technical skills, obtaining such skills would depend heavily on the availability of funds for courses in these skills.

Technologies at the centre included a fax-photocopier-scanner in one, various computers, as well as the info kiosk. Such technologies can be used on a daily basis, which will foreseeably be the practice at Thabina at a later stage. Firstly, the technologies should be used to correspond with other agriculture-related organisations by means of the Internet and e-mail and also to obtain agriculture-related information from the various Web sites.

It was agreed that communication and further arrangements and settlements would be communicated through the consultant, Dr Jon Rutherfoord of LVA, who was to be the facilitator for the pilot project.

4.1.2 Background study

Apart from the literature study as described in Chapter 2, a background study was then undertaken by the Researcher and various interviews took place to gain information on the following aspects:

- **Communication**

  Various interviews were held with Mr Johann Adendorff of LVA, and throughout the meetings he stressed that communication should take place in a very simple manner so that the illiterates would be able to understand what was being said and meant. It was decided that the demonstration of the technologies, as well as the print-outs of the information obtained from these technologies would be as untechnical as possible, in order to be understood by the illiterate people.

- **Culture**

  Mr Adendorff also stressed that examples from the indigenous culture should be used in order to integrate new knowledge into the everyday lives of the Development Committee. As one of the consultants of LVA, he was well-known and trusted by the Development Committee at Thabina. To integrate the indigenous culture he was called upon to assist with the demonstration of the integration of the technologies of a telecentre into the everyday lives of this community by means of story-telling.

- **South African telecentres**

  As described earlier, an interview with the manager of the MACIS initiative was held. Valuable information on the establishment, funding, aim, limitations and uses of such a telecentre was obtained. It was decided that the telecentre at Thabina would first of all be used for obtaining agriculture-related information and to communicate with other agriculture-related organisations. Later on it could also be used to compile CVs and business plans, as was done at MACIS telecentre in Mamelodi.

  The fear of technology, as experienced by the users of the technologies at MACIS, could also be a problem, but after the demonstration of the uses of the technologies, it was envisaged that this could be overcome. Funding, as experienced by MACIS, would also be a problem. Application for funding should be made to the NDA and other donor organisations to be identified. As with MACIS, the Manager should be well trained in the uses of the technologies.

4.2 GETTING TO KNOW THE AUDIENCE

As it is also far easier to train people to develop skills in areas relating to information and network technologies than it is to take the shy, reticent and socially reluctant person and turn him/her into an extrovert and community animator (Fuchs, 1999), it was decided to communicate through the Development Committee, rather than to address the whole community.

The first workshop was used as an aid to planning - to help decide what to communicate in the broad general area like agriculture through the assessment of the information contexts and information needs of the Development Committee. This stage of formative evaluation is

called context evaluation by some, needs assessment by others, and diagnostic research or front-end research by still others.

Ernberg (1999:12) argues that many people doubt whether typical villagers such as illiterate farmers … would be able to learn to use sophisticated IT and telematic tools. He continues to explain that experience indicates that even uneducated persons can learn how to use modern tools if they could only see the benefit of such tools and if they are motivated.

It is therefore necessary to encourage people to become involved in "information seeking behavior" (Fuchs, 1999). Simply put, people need to come to learn that it is worth their while to take the time and trouble to find information to help them solve their problems. It was therefore necessary to spend some time on helping the Development Committee to understand the value of information and the tools that could be used to access it.

Listening to what the others say, respecting their attitude, and having mutual trust were the basic elements of this process. But it was also borne in mind that the people who were to be developed by means of the technology had their own experienced ways of communicating: "The(se) people are intelligent and have centuries of experience – draw on their strength and listen to them" (Xavier Institute, 1980:11) – listen to what they need, especially their information needs. It means facilitating communities to define their needs in terms of communication (who wants to communicate with whom, why, how), information (what information is needed, by whom, when, where, for what purpose, etc.); and education and training (who needs what, when, where and how would they prefer to have it delivered to them (Richardson & Paisley, 1999:1). Balit (1996) also argues that the development process should start with an assessment of the local knowledge and information needs of farmers. The (easier) way of communicating by means of the technology (e-mail, and fax) – would therefore be explained to the Development Committee.

According to Boon (1992:64), the quality of information should be high. This has to do with the reliability of the information and the system that provides the information. In terms of the information held, it should be accurate, comprehensive, current, reliable, and valid. As Thabina is a farming community, all information and communication would first of all be agriculture orientated. It was foreseen that access to communications and information would dramatically be increased for the people of Thabina, accelerating and bolstering sustainable development.

It was therefore decided that the Facilitator, well-known to the Development Committee, should address the Development Committee first, by explaining the new order, in order to put them at ease. Mody's (1991) advice is that media producers must first listen to representative samples of the larger audience, specifying *their* topic and treatment preferences. The basis of the audience dialogue-based methodology is to listen first, and then speak.

The focus of this project, according to the DSC paradigm, was not a 'communicator' but a more 'receiver-centric' orientation, with the resultant emphasis on meaning sought and ascribed rather than information transmitted. The researcher would respond rather than dictate, and then choose what was relevant to the context of the pilot project: "The emphasis is on information exchange rather than on the persuasion..." (Servaes, 1995:46).

This can be regarded as preproduction audience research. It investigated what the intended audience (Development Committee) knew and wanted to know on the topic area assigned to the production team or, in this case, the Researcher and Facilitator (Mody, 1991). Preproduction audience research identifies community fears and insecurities in addition to community strengths that could be used by the researcher in order to achieve the goal. It was also taken into consideration that a researcher from a different background may potentially be more objective in the process - this was applicable as the Researcher came from a city of the developed world, and the Development Committee came from a developing world. Given the differences of unlike backgrounds between the Researcher and Development Committee, it was crucial to study their information processing behaviours before designing a project for them. Such data collection helps remove the need for "guesstimates" (Mody, 1991), such as what a telecentre comprises and where it would fit into the management of the WUA, the various ICTs provided by a telecentre and what information could be obtained from these technologies.

This process followed Mody's guidelines (1991) on how to collect information on audiences and topics to:

- Go from the known to the unknown – start with confirming existing knowledge on the audience and program topic. Then, proceed to questions you know nothing about. Talk to those who have spent time investigating answers to the questions you have in mind.
- Go from the general to the particular – start with observing the total situation in which the community lives, e.g. how land and capital resources are distributed. Then

proceed to details. Observations will save the team from asking unnecessary questions and point toward relevant subsequent questions about why people behave the way they do (Mody, 1991).

4.2.1 The first workshop

Dr Jon Rutherfoord was contacted by the Researcher and the first workshop with the Development Committee which took place during March 2000, was arranged. The aim of the workshop was to explain the WUA's situation, the concept of a telecentre and the various ICTs which could be made available by the telecentre. First of all, the various role-players were identified:

- Dr Jon Rutherfoord of LVA could be seen as the **facilitator.** As explained before, he was appointed by the Department of Agriculture, Land and Environment of the Northern Province, as consultant, to rehabilitate and upgrade the existing irrigation scheme at Thabina. According to Malan & Grossberg (1998), as the facilitator, he had the crucial role of facilitating between all major agents in order to keep the development process on track.
- The Researcher could be seen as both the **developer** and the **project leader** and played the leading role in the planning of the pilot project based on the DSC paradigm, as the planning was done from outside the community, implemented at grassroots level and group and interpersonal communication was used to create a climate of mutual understanding.
- The **stakeholders** were the various parties with an interest in the development project (Malan & Grossberg, 1998). They were the researcher, Dr Jon Rutherfoord and Johann Adendorff of LVA, and the Development Committee on behalf of the community.
- The **Development Committee,** chosen by the community, was the most powerful body in the chain of decision-making and communication, as the aim was to address their needs.

Before the workshop commenced, the Facilitator explained the objectives and the long-term perspective of the pilot project that was agreed upon by the Researcher and the Facilitator. These aspects were discussed in detail with the Development Committee by means of interpersonal, participant communication. The role-players agreed on these aspects. By means of story-telling, as described under Story-telling to

accommodate indigenous culture, in 4.4.1.1 on page 83, Mr Johann Adendorff explained where the telecentre would fit into the management of their WUA.

The newer approaches to development communication also argue that the point of departure must be the community. "What is essential, is that people are assisted to develop a critical consciousness of their situation … so that they become the architects of their own destination" (Agunga, 1998:29). In his opening address of the first workshop held with the role-players, Dr Jon Rutherfoord, as facilitator, explained the new order formed at Thabina - the recently established WUA, as described earlier - and said that the Government would no longer do everything for them. Thabina would therefore need communication and information to be able to farm successfully. The Development Committee would need to keep record of everything that happened and they might benefit from a pilot project where information and communication services would be made available. As the WUA was established in this agricultural society, Thabina would increasingly need information on agricultural practices as well as a means by which to communicate with other agriculture-related organisations. It was at the local community level that the problems of living conditions, such as the lack of technology, were discussed.

In reaction to this, the Development Committee expressed the wish to become a self-sustainable community by means of the information and communication these technologies could offer them.

According to Bie (1996), current evidence suggests that to achieve sustainability and success, Internet projects for rural development must begin with the real needs of the local community. This required an approach that catalysed local participation, supported the information and communication needs assessment, built awareness of potential Internet uses, helped build the community of users, and built locally managed and ultimately self-supporting communication and information networks. The Facilitator explained to the Development Committee that this project would be based on the information needs, derived from the practical needs as expressed by them during a previous survey done by the Facilitator. The information to be obtained from these technologies, would address these information needs. He also explained, that with the implementation of a telecentre, they would also have means of communicating with other agriculture-related organisations.

4.2.2 Explaining the meaning of the concept 'telecentre': a presentation

During the workshop, the research method and data collection technique was in the form of focus group discussion. A translator (teacher) translated the questions of the Development Committee into English and the answers into the indigenous language for the Community Members. The Development Committee had questions on how they could be taught to operate these technologies and on the possibility of theft. There were also questions on the available information and on which technologies were to be demonstrated at a later workshop.

After explaining the new order (WUA), the meaning of the term 'telecentre' was explained to the Development Committee by the Researcher. It was explained that for this pilot project, a telecentre would comprise a building with the various technologies such as a fax, photocopier and a computer with a modem and Internet facilities from which information could be obtained and by which means communication could take place. A telephone line and electricity would have to be installed before the various technologies could be applied. As the technologies were a new concept to the members of the Development Committee, it was agreed during the workshop, that the various technologies should be demonstrated to them during a later workshop.

Questions asked included questions on the information that could be obtained from the technology. The researcher explained that information regarding the following could be obtained: any market prices could be obtained on a daily basis; market trends; diseases of, and the processing of various crops; trade and fresh produce prices; and the register of South African Agricultural press. Socio-cultural sensitivity was also critical in deciding what was to be communicated and how it should be communicated, i.e. topics, treatment, and channel selection. It was decided that the topic would be what agricultural information could be obtained from the technologies and that it should be done by means of interpersonal, participatant communication. This was particularly important, as the content was counter to their culture. Although the technologies were totally new to the Development Committee, they agreed that they definitely needed this kind of information. The only concern of the Committee members was that they had no funds and it would not be possible to buy these technologies. It was then explained to them that once their letter of consent was obtained, donor companies would be approached to finance the telecentre. As the

technologies were also a new concept to the Development Committee, they asked for a demonstration thereof, which would be arranged for a future date.

During the workshop, the question posed by the Facilitator was what *requirement* information should meet (Boon, 1992) for development. As it was difficult for an outsider to determine the needs of a community, it was agreed upon that the Researcher would do an in-depth analysis of the needs of the Development Committee, as mentioned earlier on and previously executed by the Facilitator, Dr Rutherfoord, to establish the requirement the available information should meet.

An analysis of the workshop (which was taped by a tape recorder) also revealed that the Development Committee needed information on agricultural aspects such as market prices and trends, the weather, plant diseases and the cure thereof, as well as where further information could be obtained from, such as the agricultural press, which could be made available to them by means of the technologies of a telecentre.

During the workshop, the Development Committee members were supported and assisted to manage their own development by exposing them to the appropriate agriculture-related information, and the facilities, training and services that could be rendered by their telecentre. According to Rogers (1973:44), there are four crucial steps left in the process of diffusion and adoption: The knowledge of the innovation itself (information), the communication of the innovation (persuasion), the decision to adopt or reject the innovation (adoption or rejection), and the confirmation of the innovation by the individual. It is important to note that Lerner (1958:44), mentioned the importance of empathy, which is an indispensable skill for people moving out of traditional settings – the individual-psychological capacity of people to adjust themselves to modern environments.

To share information, knowledge, trust, commitment, and a right attitude in development projects, participation would be very important in the decision-making process for the development of this community. During the pre-production audience research, it was evident that the members of the Development Committee were all very emphatic to change – they were all convinced that by using the various technologies, their community would develop towards self-sustainability.

Four members of the Development Committee asked for a brief introduction to the technologies that could be made available by means of a telecentre, and although it

was not planned by the Researcher, it seemed expedient to give the Development Committee a short introduction to the various technologies, which was done by the Researcher.

The following ICTs that could be made available by means of a telecentre were briefly explained to the Development Committee by the Researcher (see detailed explanation in the next chapter). This was not an easy task, as it had to be done without a computer. The following elements of a computer were explained by means of gestures of the hands:

- The computer: monitor, mouse, handling (opening, closing) of existing and new files and the keyboard.
- Internet:
  - search programs
  - various applicable Web sites to obtain agricultural information
  - e-mail: various agriculture-related addresses and how to send and receive messages.

The aim of explaining the ICTs, was to inform the Development Committee of the available ICTs, what information could be obtained from these technologies and the uses thereof.

Before the closing of the workshop, Mr Johann Adendorff explained to the Development Committee where the telecentre would fit into the management of their WUA. This is described in 4.4.1.1 on page 83.

At the closing of the workshop, the role-players decided that an in-depth demonstration of the various technologies should be held at a later workshop. The Researcher told the other role-players that before she could decide which technologies and what information to be obtained from these technologies should be demonstrated, it was necessary for her to perform an assessment of the information needs of the Development Committee. The Researcher would then explain to them at a later workshop how these information needs could be addressed by the various technologies provided by a telecentre.

4.2.3 Individual interviews

Personal interviews were held with Development Committee members after the workshop to obtain each members' opinion, as the community of Thabina was an oral

society and mostly illiterate. In accordance with the exploratory nature of the study, the interviews could be typed as 'standardised open-ended' as the questions were open-ended and the wording and sequence of questions were decided upon in advance, allowing for coverage of all issues and the comparison of responses. On the question of whether they were satisfied with the identification of the role-players, they all agreed, especially on the fact that Dr Jon Rutherfoord would be the facilitator. This was seen by the Researcher as due to the fact that he was well known to the Development Committee, had been working with them for several years, and was trusted by them. It also became clear that as they understood the concept of the WUA established at their irrigation scheme, they all agreed that they would now need to communicate with other WUA's. It also became clear that, although it was a new concept to them, they more or less understood the term 'telecentre'. They did, however, ask various questions on whether they would be able to "work" the computer. It was explained at each interview that an in-depth demonstration would be held in order for them to become familiar with the operation of a computer. Questions on the information to be obtained were also asked by several members of the Development Committee, and it was therefore necessary to explain to them that the Researcher would first have to identify their information needs. It was also again explained to them that the information needs would be based on the needs as determined by a previous survey done by LVA.

4.3 IDENTIFICATION OF INFORMATION NEEDS

Research into the information needs of the community of Thabina was seen as of cardinal importance, as the tendency of many donor agencies to invest in multi-million dollar projects without making a systematic effort to understand the real needs of the people, was a(nother) reason - for delusion, disappointment and failures (Agunga, 1998 and Hammer, 1994).

It was therefore a most important aspect of the pilot project to investigate what the practical needs and aspirations of the Development Committee were, and how it could be addressed in order for the community to become self-sustainable. As the paradigm of DSC was used for the pilot project, indigenous cultural knowledge formed the framework. The Researcher obtained an exposé of the practical problems, needs, fears and aspirations as expressed by the Development Committee. An in-depth survey of these aspects was done by the consultants LVA, during the application of the Development Committee for a WUA.

How the practical needs assessment was done

This pre-development survey was undertaken by the consultants LVA, according to the guidelines and checklists for trainers and development facilitators. These guidelines were compiled as a report to the Water Research Commission on the project: "The Development of Guidelines for approriate Training Levels and Content in support of Sustainable Small-scale Irrigation Development". These guidelines are based on the argument that community members and outsider role-players involved in irrigation development need to be much better informed of their own and other players' roles in the development to increase the chances of success.

Fears and perceptions of South Africa's rural poor is based on people's own analysis of their circumstances and should therefore not be read as a paternalistic viewpoint of 'outsiders'. These results were obtained from fieldwork and was also observed during subsequent work in the Northern Province and Eastern Cape. It is thus assumed that developers and trainers are likely to encounter similar situations elsewhere in South Africa. Farmers should be allowed to participate voluntarily in the proposed training programme. Voluntary participation in training therefore implies that participants have decided to continue with agriculture and want to improve their current practices.

4.3.1 Interaction with interviewers/prospective trainers

The prospective trainers are used as interviewers to do the pre-development survey, which brings them in close contact with the community they will be working in. The facilitator sensitises interviewers prior to fieldwork and trains them on how to conduct the interviews with empathy and understanding. The interviewers share their thoughts and experiences after each session of interviews, with an emphasis on personal experience and understanding of the social and technical aspects of the situation. The survey team compile a list of the needs, problems, fears and aspirations (NPFA).

4.3.2 Interaction with the community

The facilitator and interviewers meet with the community (after permission was obtained from the community leadership) in mass meetings, groups and individual interviews. Participative techniques are used to analyse poverty levels and expectations of the community. Observation and measurements are used to assess and analyse current agricultural practice, and report-back meetings with the community and other role-players are arranged through the community leaders.

The survey results are presented for confirmation by the community during the report-back meeting with the community. The community adopts the results of the survey (NPFA) as a true reflection of the current situation and a basis for development intervention, by nominating representatives to sign the document on their behalf. A possible approach is discussed, including the need for the formation of training groups, and an action plan is developed. The survey team meets with the community leadership to conclude the survey.

4.3.3 Analysing practical problems, needs, fears and aspirations (PNFA)

In order to identify information needs, the Researcher did the analysis of the practical problems, needs, fears and aspirations herself by analysing each individual practical problem, need, fear and aspiration. Various Web sites were visited in order to establish whether applicable information could be obtained by means of which it could be addressed. Web sites from which information could be obtained included the ARC (with various institutes which comprise information on soil, water, climate, engineering, irrigation, fungicides and pesticides), Agrimark and SAFEX.

These aspects expressed by the community were all agriculture related, as they are a farming community, which earns its income by means of farming practices. It was now the task of the Researcher to do an in-depth analysis of each of these aspects to determine what the information needs of the Development Committee would comprise – based on these various aspects.

The exposé of practical needs expressed by the Development Committee formed the basis of the identification of information needs. It was intended to find out what the Development Committee wanted to know and in what form this information would get their attention. Mody (1991) explains that the persons' position in society and the nature of that society (and economy and culture) influence his/her interests and information needs.

Those people who are involved with development at the operational level need information to facilitate development, and during this period, before the demonstration, as much information as possible on the practical needs of the Development Committee was analysed and noted for later use during the implementation of the pilot project. Information was needed on aspects such as

- optimal agricultural methods that are adaptable to the specific region,

- information on markets, as well as on
- demand and supply.

Boon (1992) warns that the developer should also be up-to-date with other fields of development - agricultural development may not take place in isolation from development in other fields such as educational or community development. For the pilot project, however, only agricultural needs were investigated, as Thabina is a farming community. It was foreseen by the Researcher, though, that the pilot project could later be developed into a wider project such as the implementation of a MPCC, where the community would be able to obtain information on matters such as tele-medicine, tele-schooling, etc.

The practical problems, needs, fears and aspirations expressed by the Development Committee, which was analysed in detail by the Researcher, comprised the following:

PRACTICAL PROBLEMS, NEEDS, FEARS AND ASPIRATIONS (PNFA)

PROBLEMS, NEEDS, FEARS AND ASPIRATIONS OF FARMERS AT THABINA IRRIGATION SCHEME.

PROBLEMS	NEEDS	FEARS	ASPIRATIONS
INFRASTRUCTURE AND LAND ISSUES			
Inadequate water for irrigation.	Reliable water sources needed e.g. construction of a dam, or drilling of bore-holes.	Drought and therefore hunger.	Sufficient irrigation water which will ensure food security
Damaged main canal and sub canals.	Repairs and upgrading of canals.		Scheme rehabilitation.
Inadequate water pumps and frequent breakdown of pumps.	Repairs to broken down pumps and additional pumps needed.		
Poor water flow in the lands.	Land levelling.	Poor irrigation.	
Poor access to water for drinking (Lefara Village)	Upgrade the domestic water pipe system.		
Lack of title deeds to land.		Loss of land to government.	To own the land, invest in high value crops and become self sufficient.
Soil erosion a problem as contours have been ploughed down.	Construction of contours to prevent soil erosion by water.	Soil loss and nowhere to farm in future.	
Farm sizes inadequate.	Open up more land for farming and new projects such as piggery, poultry for income.		Additional income from other sources.
Theft of produce in the lands. Thieves also cut fences allowing livestock to enter the scheme.	Security to prevent theft.	Hunger and deprived income.	Implementation of a security system.

PROBLEMS, NEEDS, FEARS AND ASPIRATIONS OF FARMERS AT THABINA IRRIGATION SCHEME.

PROBLEMS	NEEDS	FEARS	ASPIRATIONS
SERVICE ISSUES			
Shortage of tractors and poor tractor services.	Provision of adequate tractor services.	Low yields.	Better quality produce.
Poor service by Mpumulana Co-operative.	Upgrade the business management aspect of the co-operative.		Easy access to crop inputs.
Transport to markets is a problem.	A more efficient marketing system.	Loss of income.	Sale of good quality produce in order to improve income and have a better standard of living.
Poor performance by extension officers.	Transport and further training for the extension officers.	Low yields.	
Unavailability of vegetable seedlings.	Construction of a nursery to supply seedlings to farmers.		
Lack of credit facilities to purchase crop inputs and equipment.	Access to credit.	Poor production by farmers.	To become more productive farmers.
GENERAL ISSUES			
Farmers lack knowledge and skills on crop production under irrigation.	Further training of farmers in all production aspects.	Low quality produce and low yields	Self sufficiency.
Wild animals and rats feeding on produce or destroying crops.		Loss of produce.	
Walk long distance to clinic	Build clinic near Lefara		

By analysing these elements in detail, it could be determined how they could be addressed by the technologies offered by a telecentre. This exposé of practical needs therefore helped to identify the information requirements of the Development Committee, as it could be analysed in order to identify the information needs, based on it. It was important to uncover local skills and knowledge on the uses of technology. These two items would help guide the selection and development of applications and help make the technology useful and appropriate for these local people. Local skills and knowledge identified showed that a large amount of basic farming knowledge existed, but that local skills concerning the use of the technologies was non-existant. This became clear during the first workshop held with the Development Committee, where the question on whether they would be able to "work" the computer, arose.

Ample time was required for the assessment, as factors such as the availability of existing information and the level of use of ICTs had to be determined. As mentioned, the audit of needs is not a once-off audit, and the needs expressed by the Development Committee during the preparatory phase, were integrated with the practical needs expressed during the previous survey done by the consultants, LVA:

- **Practical needs**

  During the survey, conducted by the consultants LVA and the workshop, it became clear that most of the needs expressed by the Development Committee were agriculture related. It was also information related, as the Development Committee needed applicable information on these practical needs in order to address them.

- **Communication needs**

  The following aspects were analysed, and the various technologies and information to address these needs, now had to be identified:

4.3.4 Needs

The most important need was title deeds to land. It was foreseen that once a WUA was established, this was easier to obtain. By means of the ICTs provided by a telecentre, the Development Committee would be able to communicate with banks and other financial institutions in order to acquire financial assistance for developmental and operational costs.

Other practical needs identified included needs such as how to construct a dam or drill bore-holes, repairs, where to buy pumps, upgrade canals, construct contours, and information on a piggery and/or poultry for income. These needs were in fact information needs which could be addressed by means of information obtained from various Web sites, as well as by means of communication with various agriculture-related organisations by means of e-mail.

4.3.5 Problems

This farming community had to face various problems such as how to use irrigation water, how to repair canals and subcanals, the maintenance of water pumps, utilisation of water flow, access to drinking water, how to obtain title deeds, information on soil erosion, on how to enlarge farm sizes, and on how to secure against theft. It was foreseen that these problems could also be solved by using information obtained from the Internet, as well as by means of communication with various applicable agricultural organisations such as the Department of Agriculture: Water Use Management, the Water Research Commission, Department of Agriculture, Land and Environment and many others by means of e-mail and the fax.

4.3.6 Fears

The main fears of the community were poverty and/or hunger and droughts, as they were not well informed on sustainable farming practices. It was envisaged that these fears could be addressed through applicable information and communication, especially by information obtained from the Internet, such as on weather patterns, pesticides and fungicides, manure application, the making of compost, the sustainable cultivation of crops, which could be found on the Internet and various Web sites. Other fears identified were poor irrigation, loss of land to Government, soil loss and where to farm in future. Information on these aspects could also be obtained from the Internet and by means of the Web sites of various agriculture-related organisations. One of the fears mentioned, was the fear of loss of land to Government. Communication via telephone or e-mail with officials of the Department of Land Affairs could set their minds at ease in this regard. Once a telecentre was implemented, they would be able to make better progress with the farming, as they would then be able to obtain information that could lead to better farming practices.

4.3.7 Aspirations

Aspirations mentioned were sufficient irrigation water to ensure food security, scheme rehabilitation, to own the land, investment in high-value crops to become self sufficient, additional income from other sources and the implementation of a security system. It was decided that more information on these topics could be obtained from various Web sites such as the DWAF, National Department of Agriculture (NDA), and the ARC. Various Web sites of companies that implement security systems and of companies to be contacted when 'job hunting' are available on the Internet.

The existing irrigation scheme failed due to insufficient water supply, equipment and implements. Information on irrigation and water supply, as well as on the acquirement and maintenance of implements are made available by various companies by means of Web sites and the Internet. To the question, "what went wrong with the irrigation scheme?" the Researcher determined that the aspects which contributed to this failure were the lack of co-operatives, lack of markets, poor maintenance, lack of co-ordination between the farmers.

Information on management, co-ordination of farmers and farmer training were especially the type of information that could be obtained from the telecentre to address and resolve many of the current problems. Information on markets would also be received very well by the farmers, as this was one of the aspects that contributed to the failure of the scheme, i.e. where to sell, which prices were applicable and what crops to grow - according to the demands.

The Researcher found that the training of extension officers, the improvement of farming methods and improved access to markets would be necessary to upgrade the scheme. The improvement of farming methods and the provision of training to the farmers and extension staff were seen as necessary aspects to upgrade the scheme. During the second workshop with the Development Committee, the Researcher demonstrated methods of acquiring such information.

Conclusion

The ultimate purpose of knowledge sharing was to empower the rural people to take an increasing degree of control over their environment and agriculture. It so critically impinged upon their quality of life, that the Researcher decided to communicate in detail the conclusions drawn by the Development Committee at the next workshop. Boon, (1999)

stressed that in the field of the environment, information technology would help to expand humanity's capacity to understand and manage physical and ecological processes, and to forecast and respond to disasters and catastrophes. Information technologies would also make possible the establishment of better disaster warning systems.

It was decided to provide the information which the community wanted on agriculture and on how they would be able to obtain it through dialogue and by means of print-outs which would demonstrate the information that could be obtained from the computer via e-mail and the Internet.

It was evident that their basic needs involved information on agriculture, as they were a farming community making a living from agriculture, and that an 'attitude change' should be developed – change from a poor, underdeveloped community which needed information on agriculture, to a self-sustainable society, with the necessary information for development.

4.4 INTEGRATING INDIGENOUS CULTURE, DEVELOPMENT AND MANAGEMENT

Before integrating these aspects, a study had to be conducted by the Researcher on how, where and when Africans communicate – the indigenous communication systems, their knowledge of management, their views on development and their willingness to develop.

Integrating new information in African ways of communicating

Africa has a tradition of oral communication ranging from Hausa drummers, … town criers, mammy wagons and tro tros which ferry women traders between urban and rural Nigeria and matatus in Kenia. Messages are communicated orally, interactively, and democratically (Musaka, 1998:11). Villagers generate and regenerate culture by weaving it into proverbs, rhythms and drumbeats (Leach, 1999:84) – they still communicate the indigenous information. When the crops are in and the pace of life slows, there is time for cults and rites, for ancestor worship and rituals and for fun. Griots, storytellers and troubadours call on the villages. Puppeteers, theatre groups and women dancers perform. Drums pound through the long night. And in doing so they ensure the continuity of the culture (Decock, 1996:1). Indigenous technologies and transfer also comprise local materials and resources, and the transfer of skills to use them (Malan, 1998:76).

Indigenous information should be integrated with the new information (Leach, 1999:84), but can these indigenous means of communication provide those in rural villages in Africa with information that will help them to better meet basic needs, feed their children, keep their

families healthy, control their reproductive health and administer family resources? Can they show them how to win status and transform their lives from within their own culture? How do traditional communication networks – from midwives, healers and chiefs to markets, festivals and ceremonies – fit in with the more orthodox approaches to development communication? Are they the routes to grassroots participation, self-reliance and the use of local resources? "For a growing number of communication professionals, the answer is 'yes'" (Decock, 1996:1).

The importance of integrating new information with indigenous culture can not be stressed enough. In order for this specific community to be able to understand and internalise the new information, it was of cardinal importance to communicate it in a way that would be understandable and digestible for the community – in other words, to integrate local culture into the new messages to be communicated to the community. It was therefore decided to keep the language for the pilot project (English) as simple and understandable as possible and to use an interpreter.

Like most rural Africans, the population of Thabina lived outside the global information village. There were no satellite dishes, modems and computers in their world. Only one member of the Development Committee possessed a computer. To the other members of the Development Committee, this was a totally new concept.

But even though global high-tech is a world away and electronic media beyond their means, this rural community transmitted their social and cultural heritage through a communication environment that existed long before sophisticated modern information technologies. African villages have held on to a wealth of indigenous knowledge firmly embedded in the traditional mores and talents of generations past (Decock, 1996:2).

4.4.1 Integration of indigenous information

By means of conversations during the previous workshop, it became clear that the Development Committee, farmers that they are, had years of experience in the local farming practices. But, it also became clear that these farmers would need more information to enable them to eventually become self-sustainable - information that they could very easily obtain from the Internet and by means of communicating with other agricultural organisations, such as DWAF, the WRC and other WUA's.

Indigenous information or "what the people already know" was integrated with the provision of new information – it could be seen as laying the basis for and facilitating

the interactive nature of such provision. It was therefore taken into consideration that the Development Committee had a certain amount of knowledge and experience, such as on how to cultivate and which crops were suitable to cultivate in their area. It was a two-way street – while discussing issues with them, much was also learned from them. When traditional knowledge information is incorporated in the process, it becomes more integral to information sharing (Leach, 1999:82).

As communication at a participatory level, and close interaction with the community is essential for good cultural translation (Malan, 1998) each remark and question asked by the Development Committee was noted. Answers were given promptly, but most of the material demonstrated was explained by means of a demonstration, that would be described later on. Since Rivera and Erlich (1995:203) define culture as a collection of behaviours and beliefs that constitute standards for deciding what is, what can be and what to do about it, their list of a community organiser's qualities includes the following: cultural and racial identification with the community, familiarity with customs and traditions, social networks and values and an intimate knowledge of language and subgroup slang, in addition to analytical, organisational and other skills. Ideally these qualities also apply to the DSC facilitator.

The issue of indigenous information was taken into account by means of the DSC process - what the participants already knew, was integrated in the information supplied by them. Although the participants had a fair amount of farming knowledge, they were not at all familiar with the uses of technology from the developed world. According to Lowrey (1995:10-11), a key factor of accomplishment is attributed to culturally-based community participation: "If we put the culture back into agriculture, perhaps the rural poor will get the chance to be the authors of their of their own development". It was also explained to the Development Committee that "through the use of personal computers, modems and the telephone lines, a community could be established as a new global community – these networks successfully targeted key actors in the development process" (Hamelink, 1998:23) as a rural agricultural society.

Culture is no longer only an 'instrument' of socio-cultural reproduction, but has become a primary resource and an instrument of production. More over, the entire information evolution has a cultural basis. In their analysis of the profound influence that information will have in the coming economic revolution, which will change the

nature of employment and even the nations-state, Davidson and Rees-Mogg (1997:50) said, "Major transitions always involve a cultural revolution and usually entail clashes between adherents of the old and new values". The emergence of the so-called cyberculture represents a revolution on its own, and at this stage one can only speculate about its eventual influence on development as more and more communities attain access to the boundless networks and information of this cyberculture (Malan, 1998:51).

According to Malan (1998:66), (it) poses a challenging role for the DC facilitators at these centres, who should not only do the cultural translation of data and information at the centres, but should help establish a two-way communication flow that will allow informal, indigenous information to be fed into the system – end-users should be guided to perceive all forms of technology as non-threatening (Malan, 1998:77).

4.4.1.1 Story-telling to accommodate indigenous culture

The indigenous culture of the black communities of South Africa is based on story-telling. To make any new information and new concepts understandable, it should be made adaptable to the community's culture in order to be understood. These two view points formed the basis of the communication and explanation of the project by means of story-telling.

Mr Johann Adendorff of LVA was asked to explain to the members of the Development Committee the importance of the information they could obtain by means of the telecentre, and where the telecentre would fit into their development strategy. During the workshop he illustrated the situation by telling a story based on a wagon that was to be pulled from the mud:

The newly founded WUA is soon to be transferred from the Government to the local community of Thabina. The starting point was not only the aspect of legal transfer, but also of upgrading the infrastructure before walking away. It also included the creation of an environment for this scheme, so that it would be self-sustainable in the future. In order to create that environment, one should understand what existed at the moment, and Mr Adendorff explained the following analogue to the Development Committee on where and how the telecentre would fit into their development which included the following

elements and their meaning in the context of the specific community and their specific problems:

- **Wagon stuck in the mud**

The community was described as a wagon stuck in the mud. The mud refers to the unfulfilled needs and unfulfilled aspirations and the fears of the people of the community, *inter alia* problems like poverty. This analogue was immediately understood by the Development Committee because it was a description of the situation on the ground. So the wagon is now stuck in the mud and it is universal to all the current irrigation schemes – they are just like a wagon stuck in the mud. An environment should now be created where the farmers themselves, with the initial support of the Department of Agriculture, could pull that wagon out of the mud.

- **Driving seat**

The next point clearly described to the Development Committee was that this process should be people led. It should not be something that the Department does for them. The first step was then to establish a process of empowerment where the people take the responsibility for pulling the wagon out of the mud. That was very, very important - the starting point. The community elected the members of the Development Committee, as the people in the driving seats, while the people on the wagon represented the whole community – to be led by the Development Committee. The community also decides who from the outside they would like to have on board: is it the tribal authority, the TLC? It would be for them to decide who would be the key role-players. Having done that, it becomes a driving force – like the Board of Directors of a company. Because the Development Committee was elected by the community, it has the potential to become the Management Committee of the WUA in the future. Being elected by the people, the Development Committee would have more power and credibility, as well as being legal.

We now have a leadership and people who support that leadership. People who had identified their problems, needs and aspirations. But how do you address those problems identified by the community? The next step was to say, "what do we need and who do we need to ensure that we can address

these problems. We can not do it on our own, we might be able to do some of it on our own and we can not expect Government to do it all for us. Whoever we get to help us with this process, it must be done in a sustainable way, to last for ever, not only for today."

- **Spokes of the wheel**

The community elected the Development Committee to address their specific needs, which could be seen as the people being in the driving seat. Where communication and information was concerned, the Development Committee needed means of communication to communicate with other WUA's, with the DWAF and other agricultural organisations such as the WRC. They also needed information on many agricultural issues such as irrigation, irrigation schemes, fungicides and pesticides, fertiliser and crop-water management. These were seen as the spokes of the wheels – aspects that that should be addressed.

- **Oxen to pull the wagon from the mud**

The consultants and the Government were there at that stage and would maybe be there for a short time longer, but not for the following year. There was therefore a need to identify role-players, and these role-players constituted the oxen pulling the wagon. They were out in the veld, grazing. You could for instance have an ox who is a mechanisation contractor, it might be the Landbank, it might be the NTK which is a supplier of inputs, or any one that had a role to play, to help pulling the wagon from the mud. The community had identified these role-players. The Development Committee had many, many issues to take care of. They are farmers with decisions to make at policy level and it would not be as easy for them as to pick up the phone and say: "Mr NTK, we need this and that." With there being hundreds of farmers and their needs - say one bag of fertiliser, or half a packet of seed - all would have to be co-ordinated. Something, which all agreed, could be done by the manager of the telecentre, who would be the link between the suppliers' and the farmers' needs.

So, you have to go and fetch and bring these oxen into one span: make appointments with these role-players, bring them together and establish a

relationship with them, for them to help the community and determine the needs of the community. In this case, one of the identified oxen would be the telecentre that could provide the community with information and communication according to the needs of the community. This is how the idea of the telecentre originated – from the community's need for information and communication. The telecentre was seen as one of the oxen, a role player in the span of oxen to pull the wagon, i.e. the community, from the mud in which it was stuck. It was also very important for the oxen to pull in the same direction as a span – they should address all the issues, as the problems constitute the mud in which the wagon is stuck. Otherwise, the yoke would break and the wagon would not be able to move forwards.

- **Wagon-leader**

The management process was very difficult to handle from here. Management would have to know how to work a computer and get a database going, it would have to get information, write invoices, and collect money. The problem was that the farmers did not have the capacity or the time to do all those things themselves, so, in the long term, the Development Committee would have to appoint a manager - a manager who could guide the oxen between the stones. He/she would act on the orders of the Development Committee and be a link between the farmers' needs and the service providers. He would be the one to pull the oxen into a span and make them valuable. So he could call on a contractor, he could call on somebody from the National Department of Agriculture or somebody from the Agricultural Research Council, to come and help with technical training – any role-player that could act as one of the oxen. He does not have to be an expert in everything himself, but he would be the co-ordinator.

It was explained that the wagon-leader was the Chairman of the Development Committee. He should be the person to give the direction in which this wagon should be pulled – to self-sustainability. He would liaise with all the role-players and see that the wagon is pulled into the right direction – according to the needs of the community. Even the upgrading of the irrigation scheme was based on the specific problems and needs. At the end of the day, what ever happens on the ground, would be led by the process and not by Government.

The project would be sustainable in the sense that the community would eventually make their own decisions. The whole development approach would be need-based and people-driven – by the community itself.

4.5 DEMONSTRATION OF THE VARIOUS TECHNOLOGIES AND INFORMATION TO BE OBTAINED FROM THESE TECHNOLOGIES

Once the needs had been determined and the role of the telecentre explained, it was necessary to ensure that there was strong community commitment to support the introduction of the technology, believe in its benefits, value the products it generates and to create a climate in which these people would be happy to work with technology. Technophobia may hamper the adoption of information technologies (Beyers, 1996) – a rich history of using telecommunications locally to meet the needs of citizens would contribute to the success of a telecentre, but in rural areas where this is not present, ICTs could be experienced as 'alien' by many people. In such a case it would help to arrange technology demonstrations … and to engage the local population in all stages of the development of the project (Anderson, 1999:3), which was the next step in the pilot project.

It is necessary to ensure strong community commitment to (Richardson and Paisley, 1999):

- Support the introduction of the technology
- Believe in its benefits
- Value those who work with it and
- Value the products it generates and create a climate in which people are happy to work with technology

Second workshop with role-players in order to demonstrate the various ICTs and the information to be obtained from these technologies

The Facilitator arranged a second workshop with the various role-players, which took place during April 2000. Social marketing remains an ambiguous endeavor, suggesting as it does, that behavioral change can be directly traced back to the media stimulus – the need to learn what triggers action, and how social marketers can pull these triggers (Andreasen, 1995:316). Therefore, to ensure that the Development Committee fully understood what the new technologies would comprise, the demonstration of the uses of technology was held for the Development Committee as a group in a workshop situation. This demonstration was held in the same building where the previous workshop took place. In a study done by Leach

(1999:80), groups were viewed as "information channels": "... in rural areas information tends to filter down via those channels ... and so you have to tap into those channels if you want to gear information to them". Groups are referred to as more responsible, accountable, unlike just picking a person. The Development Committee was chosen by the community to be their leaders, and it was thus appropriate to communicate the new technologies to them as a group.

Background on workshop: Planning the demonstration

Top-down or blue-print planning still takes place whereby project decisions are made without planners even seeing the villages (Richardson, 1997), so development practitioners often find themselves in conflict with donor agency officials and government officials (such as Mr Shaker) who see communication as a process for control and marketing of top-down development agendas. The Researcher decided that the demonstration of the various technologies should be based on participant communication, where the members of the Development Committee could freely ask questions and answers could be supplied. She also decided that this demonstration should be based on the concept of participatory communication where "all the interlocutors are free and have equal access to the mean to express their viewpoints, feelings and experiences" (Bordenave, 1994:43) – the emphasis was on knowledge-sharing rather than top-down transmission of information and teaching.

This was exactly the reason why the needs assessment and the demonstration were executed – as Richardson (1997) mentioned, participatory communication initiatives are interventions that, ideally, enhance empowerment and peoples' participation in development. Oral communication was chosen for the execution of the demonstration as the words of Agunga (1998:41) were taken into account, "that when the appropriate communication input is present, projects tend to perform better". The demonstration was done on an interpersonal basis, and the English of the communicator was translated by a translator (local teacher) into the indigenous language of the community. According to Leach (1999:71) it was found that information provision is largely a participative, interactive process in which the oral or verbal method predominates.

Although "print based methods of providing information are, for various reasons – one of the major being that of illiteracy – often inappropriate in the rural context" (Leach, 1999:73), the printed material used was to support the dialogue and conversations, as a means to demonstrate the information to be obtained from the Internet.

The need for people involvement, assessing attitude and behavior toward innovations (Hammer, 1994:33) were taken into consideration throughout the demonstration, whereby alternative problems were identified: an applied, social scientific approach to development – one that combines the rigor of theory and the experience of real life. The challenge of the pilot project was also to make suggestions, not to give instructions.

Course of the workshop

Before the demonstration could commence, the Researcher explained to the Development Committee that the aim of the demonstration was to inform them how these ICTs - which were briefly explained to them by the Researcher during the previous workshop - could address their needs, fears and aspirations, as expressed by them during the survey previously done by LVA. The Researcher also explained that the practical needs, as expressed by the Development Committee during the survey by the consultants, would form the basis of the communication and discussion on how these agricultural needs could be integrated with the information needs. The researcher also decided that there should, as a start, be focused on these agriculture related needs, as information on tele-medicine and tele-schooling could also be obtained from various Web sites. There was undoubtedly a need for purposive communication, and practitioners should be involved in preparing media campaigns that will attack the information component of development needs, (therefore) audience characteristics, and our knowledge of them are central topics in what is generally called social marketing (Burton, 1998:89 and Richardson, 1997:5).

The information disseminated to the Development Committee by the Researcher included the uses of the computer (word processing, Web sites and Internet), the fax, the modem and the photocopier, as well as information that could be obtained from the Internet such as market information and trends, diseases on, and the processing of various crops, trade and fresh produce prices, the register of the South African agricultural press, etc.

To capture attention, print-outs of the various diseases on crops cultivated by this community were displayed and circulated. This drew their attention to the fact that the computer contains the kind of information they wanted and regarded as necessary for improvement. The various pesticides and fungicides to be used for the relevant diseases were also of great importance to them.

As there was no electricity, nor a telephone line, print-outs of the information to be obtained from various Web sites were introduced. Although illiterate, it was assumed that the

recipients would understand the print-outs, as they were in full colour to make them interesting, with simple illustrations that could be easily understood. However, the print-outs were not used as the main or the sole means of providing information. The main form of provision was oral and the print-outs were viewed as playing a minor role. Apart from being seen as a vehicle for communicating information they were seen as supporting and reinforcing what took place at an oral level. As such, the print-outs were also seen as something which one could leave behind, but which could be referred back to. They were also seen as something the recipients could go away with – as several of the print-outs were handed out to the members of the Development Committee.

To most of the members, the technologies were new and had to be introduced. Only one of the Development Committee members had a computer at home and was familiar with the use of this type of technology. Not only one type of technology was demonstrated, as proposed by Christensen (1997:8). 'Reconceptualisation' technologies, such as the Internet and computers, that could help redefine the educational environment and serve as a bridge to the future, were also demonstrated to the Development Committee.

For the purpose of the demonstration, the various technologies were explained to the Committee members:

4.5.1 Computer

Due to the lack of electricity in the building, the demonstration, which was done by the Researcher, was performed by means of a laptop that could be operated without electricity, and which was also small enough to be carried around to enable the members of the Development Committee to see the information explained on the monitor.

The uses of the various parts of a PC (personal computer) such as the monitor, the mouse, the cursor and the keyboard were explained in detail so that the recipients could get the full picture of the various parts of a PC. It was explained that the printed material to be used in the demonstration would be exactly the information seen on the monitor – in other words, that the print-outs to be used in the demonstration were exact copies of the information displayed on the monitor. After that, it was explained how to use the word processing facilities of the computer: how to type data, how it was stored in the memory and on a stiffy and how to regain the information stored on the computer.

4.5.2 Fax and e-mail

A fax-machine and its operation were also explained. A print-out of a fax message was shown, and the recipients were amazed at the speed by which information could reach them through the fax. The print-out contained the maize prices for that specific day.

One of the questions were whether this could be obtained on a daily basis. The answer was yes, but except on a Monday when no prices are available. This technology, they agreed, would come in very handy, as maize was one of the main crops cultivated by this community.

It was then explained that e-mail was one of the handiest electronic aids available these days: That it was fast, cheap and easy to reach more than one person at once. In an office set-up there are few people who do not communicate via e-mail on a daily basis, while the telephone lines start buzzing in the evenings as people are connecting instantly world wide, chatting and exchanging information.

It was explained to the committee members that through the computer, by means of E-mail, it would be much easier for them as a WUA to communicate with other companies and departments such as the NDA or the DWAF. Also that the information which could be obtained included information on irrigation and irrigation systems; crops and harvesting; crop-water requirements; markets and marketing; pesticides and fungicides; mechanization and conservation. They could for instance obtain the daily prices of products produced by themselves, as well as information on the various markets where it could be sold.

It was also explained to the Development Committee that they could obtain information on weather patterns and flood warnings through the fax and e-mail. This would enable them to know when to remove their irrigation equipment, in case of a flood warning. According to Richardson (1997), farmers do need information on market prices, market trends and weather patterns. The extension officer does not always have all the answers on soil types suitable for specific crops; which remedy to use for what disease; or how much water to apply during which month or week of the year.

4.5.3 Internet

(A full description on where to start and some handy hints are given in Appendix B).

It was explained how to find information fast on the Internet. In order to use the Internet, you need an Internet reader (i.e. Internet Explorer or Netscape Navigator). This software is part of a Windows package and should already be installed when you obtain the Internet service. One does not even have to be able to type - most of the Internet-work with the mouse.

A rural community such as Thabina represents the 'last mile of connectivity' challenge - as both developing countries and underdeveloped countries, with regard to access to Internet services and the telecommunication connections that help transmit services required. The question asked was how the Researcher could co-ordinate and support activities to assist this rural agricultural community in completing the last mile of connectivity.

It was felt that the Internet was well adapted and that its capital costs were relatively low: All that was required, was a personal computer, a modem and a normal telephone connection. The use of the telephone meant that only a small investment would be required to get to the Internet. Through the Web, information on diseases, the appearances of fungi's on the various crops and vegetables, photo images of what the diseases looked like and remedies therefore, in other words, information on pesticides and fungicides could also be obtained. Print-outs of information that could be obtained from the following Web sites were introduced as examples of information available on the Internet (Appendix C) - where applicable, the translator, a local teacher, translated the messages into the indigenous language:

- **Agricultural Research Council of South Africa** ***http://www.arc.agric.za/***

  This is the Web site of the statutory parastatal body, the ARC (Agricultural Research Council). This Web site contains the corporate profile, Web pages of the various institutes of the Council, publications, services, media releases and other links. It was explained that this body has several institutes from which information regarding the following could be obtained: cultivation of vegetables, plants and grain; information on tropical and subtropical plants; on fruit, vine and wine; on animal improvement, nutrition and products; veterinary information; information on soil, climate and water; as well as on agricultural engineering. It was also explained that due to the lack of electricity and a telephone line, the information available on the Internet would be explained by means of the print-outs.

Publications /Products and services and /Benza and Betty Info Cartoons were chosen. The subjects on the list of available info-cartoons read: Petrol engine maintenance; Diesel engine maintenance; Donkey cart; Ripper-planter; Cabbage; Beekeeping; Beetroot; Tomatoes; Carrots; Sorghum; Grain storage; Compost; Chemicals; Mulch; Soil sample; Rainwater; Rabies; Beef tapeworm; Hydatid tapeworm and Hookworm.

Print-outs of the info-cartoons were then shown and explained to the committee members - a full account of these print-outs, all in full colour, can be seen in Appendix D.

These Info-cartoons were very well received, as it was the kind of information this farming community needed. Although the information on the cartoons was in English, these colourful illustrations could be easily understood and little explanation of the cartoons was necessary. These cartoons were so popular, that they were distributed among the participants who asked for copies.

- From this Web site, the **AGIS-Web site** (Agricultural Geographical Information System) was chosen and the information obtained therefrom were: /agricultural info /list of products. *Potatoes and sunflower* were chosen for demonstration purposes:

Potatoes

A print-out of the fungal diseases on potatoes was shown – giving the common names as well as the scientific names. It was explained that the cursor could be moved to any common name, and a picture of the chosen disease would appear on the monitor. Various diseases were described on the print-outs. It was explained that by choosing a specific disease, information on the specific topic could be obtained. The print-out with the four pictures and the descriptions of the symptoms of the disease, were shown to the recipients.

Then ***Fungal*** diseases were chosen and a list of the various fungal diseases were shown. Various fungal diseases were mentioned on the print-out. This was also a matter, as explained to the recipients, where the cursor could be moved to a specific disease, and a coloured photo of the disease would appear on the screen.

The recipients were delighted by this information, as they understood that they would only have to move the cursor until they could find a picture of the disease found on their crops, which meant that they could not only obtain the name of the disease, but also the cure.

- **Institute for Agricultural Engineering**

  As the ARC has many institutes, the Institute for Agricultural Engineering was chosen from this Web site. A printout of the publications list was shown and it was explained that articles on irrigation, soil conservation, mechanisation, renewable energy and aquaculture could be obtained from this site. A list of publications to be obtained from this Web site was shown, as well as print-outs of articles concerning the designing of a low-cost shade-netting structure and flood irrigation. Both articles included photos of the subject, and made it easier for the recipients to understand.

- **Agri24:** ***http://www.agri24.com***

  This is a comprehensive agricultural web site from the Naspers 24 group, incorporating the previous Landbouweekblad on-line. It was explained that the following information could be obtained from this Web site: the latest weather forecasts; daily market prices and trends; a wide range of financial services; financial and economic indicators; and agricultural news.

  Information on market information / market prices was chosen and a printout of the current market prices was shown and discussed. A printout of the SAFEX trade prices was shown and the prices of grains, vegetables, fruit, oil seeds, meat, wool and mohair were discussed. Although it seemed complicated, the recipients understood that these were the daily prices of the various crops, and that it could be obtained on a daily basis. It was also explained that this Web site was linked to the Web site of Agrimark (*www.agrimark.co.za*) and that information regarding economics, trade, weather, grain crops, oilseeds, grain SA, field drops, horticulture, live stock and consultants Agri Management and Agricultural Outlook Conferences could be obtained from this Web site.

- **Aegean Academe, BP:** *http://www.agekon.com*

  On the print-out shown to the recipients, it was clear that information on various topics could be obtained by choosing one of the alternatives: Education; extension; research; seminar; comments; consultant; press; or links.

  The option ***Press*** was chosen and a printout of the various publications available in the agricultural sector was shown. The names of the publications

with the telephone numbers, fax numbers, e-mail addresses and Web sites of the contact persons all appeared on the printout. A copy of the Agricultural News, which could be obtained from this Web site, was shown as an example to them. It was of much interest to them, as an article on the establishment of the telecentre at their scheme featured in this edition.

Clippings of articles from other newspapers on the establishment of the telecentre at Thabina were also shown to the Development Committee. A copy of the registration form to receive the publications on this Web site, was also explained.

- **Pannar:** *http://www.pannarseed.co.za:* It was also explained that seed could be bought by various companies, through the Internet: Pannar, one of South Africa's foremost seed companies, has an impressive Web site.

  The extensive Web site of Pannar Seed provides valuable information on Pannar Seed and the companies in its group, as well as its wide range of products. The information is set out in logical order due to the well-designed Web site and Internet users can very easily find the information they need. The Web site makes provision for local and overseas users, as well as for enquiries and orders via e-mail.

  Apart from complete information on products, information regarding agronomy is regularly updated and provided to users. Pannar has a team of capable agronomists who work under the guidance of the well-known and respected Sydney Bondesio. When diseases and plagues become a problem for a crop-farmer, he can approach the company's plant pathologist, Dr Rikus Klopper. Enquiries may be made to ***infoserve@pannar.co.za***.

  Electronic trade is gradually increasing and will play a greater role in future. This service of Pannar enables the clients to place their seed orders fast. Clients may order their seed at *orders@pannar.co.za* - an interactive communication service - via e-mail. This web site is also linked to the following companies, which were briefly explained:

- **Starke Ayres** markets vegetable, flower and pasture seed. The company markets Pannar products in the Eastern and Western Cape and seed is also exported. Starke Ayres' Web site (*www.starkeayres.co.za*) provides its range

of products, as well as a news site containing important information to seed consumers.

- **Mascor** is a group consisting of several motor vehicle and agricultural equipment agencies. The agencies include Delta (Opel and Isuzu), John Deere Lawn and Garden, Toyota and Volkswagen.

  The Mascor Web site provides access to the company's lively trade in used vehicles and implements. Prices of these products are provided and enquiries can be made on *info@mascor.co.za.*

- **Kombat** produces and markets insecticides, weed killers and fungicides for the local and overseas market *(www.kombat.)* for information on crop tendencies and Seed Quest at *www.seedquest.comco.za).* Another interesting connection from the Pannar Web site is *www.agrimark.co.za*, for information on the seed trade.

The Development Committee as recipients of this information, were all delighted and expressed their astonishment at the large extent of information they could obtain from these various Web sites. It was also explained to them that this was a demonstration of only a few of all the Web sites available on the Internet. According to Mody (1991:30) information loss occurs when the audience does not receive part or all of the intended meaning and information distortion occurs when the meaning received by the audience is a modified form of the meaning that the production team intended to share. It was foreseen that this could happen during the demonstration, but it was foreseen that once the telecentre is implemented, more time would be spent with the Development Committee, in order to explain the operation of the ICTs and the information demonstrated to them. As the topic of the message was relevant to the Development Committee, motivation and ability to scrutinise issue-relevant arguments were high, and attitude changes that resulted were expected to last longer and to have a greater chance of leading to behavioral change. It was clear that the recipients felt that they could only but benefit from these technologies, which most of them had never heard of before. As mentioned earlier, they decided that a letter of agreement should be drawn up in order for the project to commence (Appendix E).

It was explained to the Development Committee that once the telecentre was established, more in-depth training would be provided on the uses of the ICTs and the information to be obtained from these technologies, as Burton, (1998:92) suggests that "... the majority of poor

people will be unlikely to fully utilise the information technology systems because of educational and affordability problems". But for the pilot project, it was made clear to the members of the Developing Committee that donor organisations would be contacted.

Due to a lack of time, information, other than those on agriculture, to be obtained from the Internet, were briefly explained. For the housewives there was information on tele-medicine, where only the name of the ailment is typed in and recommendations by a doctor as well as a list of remedies will appear on the monitor - in other words, lots of information on home and family care.

It was also explained that there were various other types of information that could be obtained from the Internet. For the youth, for instance, apart from all the games, there is information on where to apply for a job when job hunting; where to apply for further studies; and a whole curriculum with the explanation of various school subjects such as mathematics, etc. According to Richardson (1996), young people need to learn how to access and analyse information and the use of information and communication technologies.

During the workshop it was decided that a local extension officer would be appointed by the NPDALE as manager of the telecentre, and that she would be trained in the use of the various technologies by the Researcher. Roling and Engel (1991:128) contend that extension agents need training in "extension science", which they explained as an understanding of the "systematic use of communication to help farmers solve their problems". She was appointed due to the fact that she, as extension officer knew the problems of the farming community, and also because she had a keen interest in the operation of the ICTs.

After conclusion of the needs assessment and the demonstration, it was evident that communication was the key that opens the door to change - "It may well be the missing link in Africa's development puzzle" (Agunga, 1998:44).

CHAPTER V - EVALUATION PHASE

Synopsis

In this chapter the various core elements of the pilot project are evaluated. The successful use of participant observation and the workshop situation are described. This is followed by the evaluation of the various consecutive phases according to which the pilot project was executed. It could be said that during the evaluation phase it became clear that the pilot project was a success due to the fact that a telecentre would soon be established – the Development Committee realised that they could profit by the information provided by the ICTs of a telecentre, as well as the communication aspect by means of which they would be able to communicate with other organisations in the agricultural sector.

5.1 EVALUATION AS SUCH

Process evaluation refers to how the project was implemented, i.e. the attempt made to assess to what degree the strategy and work plan were implemented as planned, why changes were made and what lessons were learned for the establishment of a telecentre, was used to evaluate the pilot project:

Participant observation was used throughout the project. As the Researcher was unknown to the members of the Development Committee at whom this project was aimed, it was decided that Mr Johann Adendorff, who was well known to the community and who was trusted by them, would do the introduction to put the Development Committee at ease. During both the workshops held with the role-players, the atmosphere was relaxed due to Mr Johann Adendorff, who set the members of the Development Committee at ease. This relaxed atmosphere also contributed to the fact that the members of the Development Committee had not only the confidence to express their opinions, but also to ask questions. The incorporation of the indigenous culture by means of story-telling, also contributed to the relaxed atmosphere, as the Development Committee could understand this analogue very well – it was an example of an aspect with which they were familiar.

Throughout the explanation of where the telecentre would fit into their traditional communications system and their indigenous knowledge system, thorough observation was executed to observe and affirm that the Development Committee definitely agreed that they

needed a telecentre. This was of crucial importance, because if the results were negative, the project would not commence.

Participant observation was also applied during the demonstration phase, where the various technologies and the information to be obtained from these technologies were explained. Various questions concerning this subject were asked and, by means of participant observation, various additional needs were identified, such as information on water management, markets and cultivation, as well as on how to communicate by means of the e-mail and fax.

During this study, community involvement was clearly of the utmost importance - the specific needs of the community had to be analysed and applicable means to address these needs found. For the pilot project, the information to be obtained from the technologies provided by a telecentre, were the most applicable, in order to address this community's information needs. These needs were all agriculture related, as the community of Thabina is a farming community and a large amount of information on agriculture could be obtained from the Internet and various Web sites.

5.2 EVALUATION OF THE VARIOUS PHASES OF THE PILOT PROJECT:

5.2.1 Obtaining consent from the Director to execute the pilot project in the Northern Province

This aspect was necessary as Mr Massoud Shaker was appointed by the Government to upgrade the irrigation schemes in the Northern Province and as mentioned earlier, Thabina was one of the schemes he identified to be upgraded. The establishment of a telecentre was also seen by him as of cardinal value. The meetings arranged with Mr Shaker to discuss what the telecentre would comprise, could be seen as being very successful, as it contributed to the fact that he agreed to commence with the pilot project. The fact that a successful telecentre initiative was visited by him, also contributed to his consent to establish a telecentre at Thabina. It was also explained to him that most of the current telecentres failed, because they were dropped as 'from the sky' – in such cases no needs analysis were made beforehand to determine what kind of information was needed by a particular community. It was therefore explained to him that a needs assessment, as well as a demonstration, would be done in order to determine whether such a telecentre could provide in the needs of the Thabina

community. This phase was successful in terms of the fact that a letter of consent was received from Mr Shaker shortly after the meetings.

5.2.2 Obtaining the consent of the Development Committee to establish a telecentre at their WUA

Initially, the members of the Development Committee were skeptical of the idea of introducing a telecentre to their community, as this was a totally new concept to them. But Mr Adendorff explained to them, by means of story-telling, where the telecentre would fit into their development. This was well understood by this farming community, as the analogue of the wagon stuck in the mud (as explained in the previous chapter), was used. After the term 'telecentre' was explained, they had various questions on how they could obtain information from the technology, and it was decided to hold a demonstration. Their biggest problem however, was the aspect of funding, as the Development Committee had no money to invest in such a venture, so it was explained to them that funding organisations would be contacted. This phase could also be seen as a success, as the Development Committee was so interested in the various ICTs, that they requested a demonstration.

5.2.3 Demonstration of the ICTs

The demonstration of the various technologies and the information to be obtained therefrom, was also a great success. The recipients expressed their amazement at the various uses of the technologies, as well as at the large amount of information that could be obtained from these technologies. The printed material consisted of print-outs of information to be obtained, and was used to support the oral communication. As many of the print-outs were in full colour, of easily understandable sketches, it could be understood very well by this mostly illiterate and definitely computer-illiterate community. It was very clear that this information would address their information needs and that the information was needed by the community. The Development Committee was so excited about the new information demonstrated and explained to them, that several of the print-outs were handed out to be taken home by them.

After the demonstration, the Development Committee expressed the need for a telecentre that would comprise the various technologies and information to be obtained from them. They also wrote a letter of agreement (Appendix E) for the

telecentre to be established in their community, which clearly indicates that this demonstration was a huge success.

5.2.4 Information needs assessment

The practical needs, fears and expectations were, as mentioned, expressed by the Development Committee during a survey conducted by LVA. After the Researcher made an in-depth study thereof, it became very clear that the information needed by this agricultural community was for information regarding agriculture-related issues, especially market-related information and information on various pesticides and fungicides – to enable the farmers to increase the quality of their crops and thereby increase their income, as one of the main fears mentioned was the fear of poverty and hunger. Farmer training and the training of the extension officer were also mentioned as being of high priority. It also became clear that the establishment of needs was an ongoing process, as various additional needs were mentioned during the demonstration phase. As the process of communication progressed during the project, the recipients had the frankness to point out additional needs such as information on the market prices, fungicides and pesticides and information on weather patterns. The information needs assessment was a success, as the material demonstrated to the Development Committee, was based on this assessment, as the information was needed to address their needs.

5.2.5 Incorporating indigenous culture

To portray the telecentre as one of the oxen that was to pull the wagon from the mud was indeed a successful analogue. The wagon is an integral part of the recipients' indigenous culture and forms part of their everyday lives. The cultural discourse within the project was established and it could well be said that the general development discourse was an integration of discourses at the level of technical development planning (technocratic developmentalism) and community involvement (related culture). This definitely contributed to the success of the project – where the community decided they could benefit from the technologies and information provided by a telecentre, and also that the pilot project as such should proceed.

5.2.6 Development Support Communication as a tool of the project

The fact that a 'community first' approach was followed, contributed to the success of the pilot project. This approach made the community the sender or source of the

development communication designed to meet their needs, and organised a one-way monologue into a circular dialogue. During all the phases and by means of participant observation, it was clear that the recipients were at ease with the situation – although the technologies were very new to their culture, as well as existing knowledge of this oral society. The translations done by the widely known schoolteacher contributed to the fact that the recipients could easily understand the terms of communication used. Due to the fact that it was based on the DSC paradigm, the pilot project could be evaluated as certainly being successful. It was agency-based, as the Researcher sat down with the Development Committee in order to discuss their information needs, explaining that the pilot project was based on their practical needs as decided on during a survey done in collaboration with them by LVA. There was also horizontal knowledge-sharing between the role-players: existing information was integrated with the new information communicated by the researcher. In addition, a climate of mutual understanding was created by means of group and interpersonal communication. The pilot project was thus executed at grassroots level.

CHAPTER VI - INTERPRETATION, CONCLUSIONS AND RECOMMENDATIONS

Synopsis

This chapter comprises an interpretation of the various aspects of the pilot project, conclusions are drawn and recommendations are made. The basis of any project aimed at development, namely the communication aspect, and specifically the importance of DSC, proved to be of cardinal importance during every project that was to be implemented in a rural agricultural community.

The aspect of time-related issues is also important, as the developer/researcher is usually from a developed world where time is precious and plays an important role. It should therefore be borne in mind that rural people need time, and definitely take their time to make decisions. The information needs assessment and the demonstration are also described, and attention is given to the workshop situation, which seemed to be the optimal situation for participatory communication.

6.1 THE PARTICIPANT COMMUNICATION PROCESS

One of the first objectives of the pilot project was to enter into dialogue with the various role-players and that community involvement would form the basis of the pilot project. The importance of the DSC process during a project that involves communication between parties from the developed world and the developing world, can not be emphasised enough, and will therefore be discussed first. Although the DSC paradigm formed the basis of the pilot project, the top-down communication can not always be avoided, as explained by Malan & Grossberg (1998). The Development Committee had no insight into the use of ICTs, and the whole concept had to be explained to them by the Researcher. The Researcher therefore basically determined the development agenda and was instrumental in explaining the concept of a telecentre and the various ICTs, but it must also be noted that the members of the Development Committee did ask various questions, mainly during the discussion on their needs, and specifically on how the information they needed to address their needs could be obtained. It became evident that feedback - which is a very important aspect of participant communication - existed throughout the pilot project.

It is easy for parties of the developed world – sometimes from various different continents – to get together at a seminar or workshop to discuss various different or common issues. It is

in their culture to get together with strangers and then to immediately sit around a table discussing issues related to their work, and to immediately make decisions or draw conclusions. But for people from the developing world, it is not as comfortable a situation. DSC should seek to integrate people's culture, attitudes, knowledge, perceptions and problems. Firstly, and most importantly, *listen* to the members of the community to be developed – what their needs and aspirations and fears are. Listen to what they have to say and respect their attitude and thereby build mutual trust, the one element that was sought to be established in this pilot project. As mentioned, this contributed largely to the success of the project and can therefore be seen as one of the best practices.

According to Malan & Grossberg (1998), formal and informal communication should be balanced and it can well be said that this was obtained throughout this project. Both workshops were opened with a prayer - by a person appointed by the Chairman of the Development Committee. It is also worthwhile noting that a woman (the extension officer) was asked to open the workshop with a prayer at the first workshop. The common stereotyping of Africans, such as that women always play a subordinate role in the culture of rural Africans, was thereby proved to be unjust - as the opportunity to open a workshop or meeting with a prayer is, in the African culture, only granted to those of whom they have a high opinion.

During the pilot project, it was clear that "everything boils down to communication, understanding and establishing reasonable expectations" (Hammer, 1994:32). To communicate with people of a different culture and therefore of a different language, was also experienced as a complex factor in the communication process. It was experienced as a time-consuming process, where the translator had to translate every two sentences into the indigenous language – or, for that matter, into English for the Researcher. Communication would have been much easier if the Researcher had been able to speak the local language, as indicated by Malan (1998). This brings us to the aspect of time-related issues as discussed below.

6.2 TIME-RELATED ISSUES

DSC as a process is generally directed towards a developing community, and their perception of time is practically the opposite of that of the people from the developed world. They operate as if they have all the time in the world to execute some task, and not for nothing: they are used to standing and waiting for hours in long queues – for water with their water cans, for medication at the local clinic or for food at the local shop. The best practices of all

is to be prepared never to be in a hurry, or become restless, or agitated. This will immediately be noticed (if perhaps only through body language), as these rural people are very sensitive to the attitudes of others toward them.

The best practice is to make ample, if not extensive time for the communications and negotiations, as full participation and involvement takes time (Malan & Grossberg, 1998). A comprehensive and endogenously based communication strategy is one of the most vital components of a project aimed at development.

The first aspect that could be mentioned here was the time allocated to the workshops. They were both arranged to commence at 09:00 on the mornings of the dates fixed. While the Researcher hurried to be in time for the meetings, the members of the Development Committee turned up one by one, chatting and laughing and in no hurry at all. Not one of the workshops started at the appointed time. This could be seriously frustrating to a person from the developed world, but keep in mind that in the developing world, time is definitely not an issue – it is a culture in which time plays but a minimal role.

The second aspect that could be mentioned here was the time consumed by the communication process, as previously mentioned. It was complicated and endlessly time consuming to explain and demonstrate a concept such as the various ICTs by means of a translator who had to translate every second sentence uttered. For him then to take his time to translate each question into English, also took up much time. The best practice would be to make ample time for this process if the communicator does not speak or understand the indigenous language.

It can also be seen as good practice to explain the various issues in a very simple and understandable way - simple enough not to be too technical but sophisticated enough for the communicator not to be seen as underestimating the intelligence of the translator or for that matter, that of the recipients. In other words, take the indigenous culture into account. It can be mentioned here that the analogue of the wagon stuck in the mud was a concept well received. It was an aspect that formed a part of their indigenous culture and the Development Committee understood it very well - the language used by Mr Adendorff and the Researcher was easily understood and translated into the indigenous language.

It is also necessary to note here that these rural people need time to make decisions. During a meeting they will not agree or disagree with an issue. They have to go home, think it over and discuss it with each other. They will express their opinion only at a following meeting,

which can be very time consuming, especially from a Western perspective of the developed world. They really do need time, especially in a situation concerning development, where they are subjected to messages that could have a cardinal effect on their lives and would lead to fundamental changes.

6.3 INFORMATION NEEDS ASSESSMENT

The importance of a needs analysis and a demonstration of the information to be obtained from the ICTs can not be emphasised enough – only once the community realises that they need the technologies that a telecentre can provide, the establishment of such a centre can proceed.

The preliminary research into a development community, their practical needs and their communication systems, can be seen as one of the most important elements in a project aimed at implementing a telecentre in a rural agricultural area. As quoted earlier from Servaes (1995), and according to the DSC paradigm, the point of departure must be the community itself and the people should be assisted to develop a critical consciousness of their own situation. It was also very clear that the establishment of needs was not a once-off audit, but an ongoing process: various additional needs were explained during the implementation phase. Each need addressed led to another expressed, and finally all the ideas mentioned were integrated with the needs as mentioned during the survey done beforehand by LVA.

It became clear that human development can only be achieved when people are empowered to become critically conscious of their social, economic and physical circumstances and on how to use their creativity to improve the quality of their lives in a sustainable manner. People should be encouraged to become involved in 'information-seeking behaviour'. It was therefore necessary to spend time helping them to understand the value of the telecentre and how the information obtained from the technologies could address their needs. As mentioned earlier, the focus of this project moved from a 'communicator' to a more 'receiver-centric' orientation – needs expressed by the Development Committee were rather responded to, than to inform them of their needs. This surely contributed to the members of the Development Committee trusting, not only the communicator, but also the new information presented to them.

6.4 DEMONSTRATION OF THE VARIOUS TECHNOLOGIES

As mentioned, the members of the Development Committee asked for a demonstration of the various ICTs immediately after the explanation of the term 'telecentre'. Such a demonstration

can be seen as a good practice, as it gives the recipients a reliable indication of what such a venture would comprise. Technology is surely one of the most difficult terms to be understood by any illiterate community, but by means of a detailed demonstration thereof, all fears could be addressed.

It is also good practice to start with the very simple (to the western world) aspects to be demonstrated. For this project, concepts like a file, the use of the mouse, the application of the monitor, the memory of the computer and the use of a stiffie to store files (information), as well as the fax and photocopier were explained first.

After the Researcher was sure that the recipients understood the computer, the various applications of the computer were discussed and demonstrated. As mentioned above, the colourful illustrations could be understood immediately, but where information was too technical, like the market prices for instance, in-depth explanations were given. As mentioned above, it is good practice to make ample time for communication.

To convince an illiterate community of the advantages and benefits to be obtained from the various technologies may be seen as being very difficult, if not impossible, to accomplish, but it proved to be worthwhile, and the best practice is to have a demonstration of the technologies. It was also seen as being conclusive that this community would need these technologies to address their needs and problems. The decision to use print-outs to explain and demonstrate the various information, was also seen as good practice, and it surely combated the technophobia which may hamper the adoption of information technologies (Beyers, 1996). As explained, it contained colourful sketches that could be easily understood by this illiterate, oral community. These print-outs were received with great enthusiasm as they were all agriculture related, which formed the basis of the needs of this rural agricultural community.

6.5 WORKSHOP SITUATION

The workshop situation proved the most successful means to establish participant communication. "The workshops are engaging communication, they are not simply a classroom situation where somebody is delivering to others ... a very interactive process – where the sharing aspect is stressed: skills are shared, experiences are shared, learning is shared and so the workshop is a very powerful forum for information exchange" (Leach, 1999:77). The workshop situation also created an atmosphere where the impressions of the Development Committee could be expressed and this information sharing and of building up

a relationship of trust was very important. This workshop situation was identified as the approach most conducive to information dissemination – where there is a group with a particular shared interest (to address their information needs), and the information exchange was quite rich. Information provision was largely a participative interactive process and the oral approach was dominant because it allowed for a two-way sharing process.

The atmosphere during the workshops was also very relaxed, due to the good sense of humor displayed by Mr Adendorff and to Dr Rutherfoord, the facilitator, who handled the workshops in a professional, though relaxed manner. When Mr Adendorff used the analogue to the wagon and oxen in order to explain where the telecentre would fit into their WUA, the members of the Development Committee were especially at ease, as this was an example from their every day lives with which they were familiar - an analogue which they could immediately understand as well as internalise.

The objectives of the workshop:

After two meetings with Mr Shaker, he agreed that the telecentre should be established once the consent of the Development Committee was obtained. The analysis of the practical implications was executed by the Researcher and the information needs of the community were identified and discussed with them during the demonstration. This detailed demonstration was also executed in order to explain to the Development Committee which ICTs could be offered by a telecentre, in order to address their needs. The long-term perspective will now also be achieved, namely the implementation of a telecentre, as the consent of the Development Committee was obtained after the demonstration.

Conclusion

In conclusion, it can be said that it is certainly possible to establish an effective telecentre in a rural, agricultural community, given of course that the consent of the community members can be obtained. This can only be achieved once the community realises where the telecentre could fit into their management. A survey of their needs should also be executed, in order to determine what information was needed for them to become self-sustainable. Although the needs assessment should be done in participation with the community, an extensive survey on the needs of the Development Committee was previously done by LVA. In order to remind the Development Committee of these aspects, the Researcher discussed these needs with the Development Committee before the demonstration. It is thus of the utmost importance to execute a needs assessment, in order to be able to identify what the specific needs are – if the

state of mind, approach, set of values, norms and ambitions etc. of the community are not development orientated, none of the existing development approaches will have anything other than incidental effect.

Telecentres can of course be dropped into the community as 'boxes from the sky', but such telecentres would definitely not be seen as sustainable. For this reason, an analysis of the practical needs was done in order to determine what the information needs were. From the pilot project, it was apparent that the members of the community would need the information that could be obtained from the ICTs for them to become selfsustainable. The sustainability and viability of this project was proved – mainly because the communication of the pilot project was participative and people driven.