

AN EVALUATION OF SANGONeT AS A REGIONAL ELECTRONIC INFORMATION AND
COMMUNICATION NETWORK FOR DEVELOPMENT AND HUMAN RIGHTS
ORGANIZATIONS IN KWAZULU-NATAL

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DECLARATION

I hereby declare that this thesis is entirely my own work, except where due reference has been made. The work has not been submitted for a degree at any other University

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As the candidate's supervisor I have/~~have not~~ approved this thesis/dissertation for submission

Signed : 
Name: CHRISTINE STEWELL Date: 26th February 2002

DEDICATION

This work is dedicated with lots of love to my parents, Beauty and Abner Ndlovu, and the rest of my family. Thanks for the love and support and for understanding when I could not be there when you needed me because of my studies.

ABSTRACT

This study was a user oriented evaluation of the South African Non-government Organizations Network (SANGONeT), a regional electronic information and communication network for development and human rights workers. SANGONeT emphasizes the need for integrating a variety of information related tasks through the use of information and communication technologies (ICT). Its mission is to facilitate the effective and empowering use of ICTs by development and social justice actors in Southern Africa. While SANGONeT is one of the oldest networks for development and human rights sectors in South Africa, no other evaluations of this particular network, from the users' perspective could be traced.

The study sought to determine SANGONeT's intended users' perceptions of the network, in terms of their level of awareness and, utilization, accessibility, relevance of the network and its level of facilitation in networking. SANGONeT was evaluated using effectiveness indicators. The respondents were the development and human rights organizations in KwaZulu-Natal which subscribed to SANGONeT, or those which use certain services provided by the network as well as those which do not use the network but which are potential users. The SANGONeT subscribers formed only a small proportion of the population. They were all included in the study. A number of potential subscribers who were nonsubscribers were added.

According to the findings, the subscribers were satisfied with the services that SANGONeT provides and they do see it as a networking facilitator. The nonsubscribers and the nonusers were not aware of the network's existence or the services it provides. Underutilisation does not result from the problems of accessibility and relevance. Lack of awareness emerged as the main reason for the underutilisation of SANGONeT in KwaZulu-Natal. Based on the findings of the study, recommendations are made for SANGONeT as well as suggestions for further study.

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LIST OF ACRONYMS AND ABBREVIATIONS

ANC:	African National Congress
APC:	Association for Progressive Communication
CABECA:	Capacity Building in Electronic Communications for Africa
CBOs:	Community-based organizations
FIDO:	Fugitive Information, Data Organizer
HSRC:	Human Science Research Council
FTP:	File transfer protocol
ICT:	Information and Communication Technology
IDRC:	International Development Research Centre
IDT:	Independent Development Trust
ISP:	Internet Service Provider
NGOs:	Non-Governmental Organizations
PADIS:	Pan African Development Information Systems
PRODDER:	Programme for Development Research
RDP:	Reconstruction and Development Programme
RINAF:	Regional Informatics Network for Africa
SANGONeT:	South African Non-Governmental Organizations Network
SPSS:	Statistical Product for Service Solutions
UNESCO:	United Nations Education, Scientific and Cultural Organization
WWW:	World Wide Web

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CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 Introduction

Evaluation of an information service is important in determining whether the existence of the service is justified (Lancaster 1993:8). The extent to which a service satisfies its users in meeting their information needs or the extent to which it meets the objective set for it can be established through evaluation. SANGONeT is one of the oldest electronic information and communication networks in South Africa. It provides services to development and human rights organizations in Southern Africa. This study evaluates SANGONeT from the users' perspective. No other evaluations of SANGONeT from the users' perspective could be traced (Appendices A and B).

This chapter covers background information about SANGONeT, including the problem statement for the study, research objectives, questions and justification for the study. The operational definitions, scope and limitations of the study are also addressed in this chapter.

1.2 Background information about SANGONeT

SANGONeT is a nonprofit development information network. It has provided networking services for information exchange to the South African Non-government organization's (NGOs) community since 1987 when it was called Worknet. It was established to facilitate communication and information exchange between trade unions, social justice organizations and the international community during the apartheid era (SANGONeT 2001). In 1992, as a result of a partnership with the Development Resource Centre, it was renamed SANGONeT (Levin 1995:21). In June 1994 it became the first Internet Service Provider (ISP) in South Africa. At that stage its mission was to provide affordable and accessible electronic communication, information and networking services to support development and social change actors in South Africa (SANGONeT 2001).

SANGONeT has extended its services to provide information and other related services to all civil society organizations dealing with development and human rights in southern Africa. It is a member of Association for Progressive Communication (APC), which is a nonprofit

association of member and partner development networks around the world, providing a forum for the exchange of information and for sharing ideas on regional and global levels (Levin 1995:19). APC is committed to making the Internet accessible to the global civil society in Africa through its members like SANGONeT (SANGONeT 2001).

SANGONeT is defined as a regional electronic information and communication network for assisting development and human rights workers (SANGONeT 2001). In January 2001 the network refocused its main purpose from being an access and information provider to being an information facilitator. Its new mission is to facilitate the effective and empowering use of ICT tools by development and social justice actors in southern Africa. It emphasizes the need for integrating a variety of information related tasks through the use of ICT tools. SANGONeT's aims and objectives, considered relevant to the present study, are to:

- ▶ act as an information provider for the development community in the region;
- ▶ increase Internet access to Community-based organizations (CBOs) and the development sector;
- ▶ build capacity in the development sector by providing training and consultancy services;
- ▶ consolidate SANGONeT as the leading information provider in the development sector and explore partnerships with other NGOs;
- ▶ share information, build capacity and link people and organizations through the use of ICTs;
- ▶ support those who are exploring the possibility of using the Internet and assist in the use of ICT to its full potential (SANGONeT 2001).

SANGONeT's primary target group are civil society organizations, development consultants, donors, parastatals, and people in private and public sectors who have joined in the fight against poverty and underdevelopment in the Southern African region (SANGONeT 2001). The SANGONeT user community comprises NGO sectors ranging from churches, trade unions, community-based organizations, parastatals to individuals. SANGONeT markets its services through newspapers, community news services, workshops and, the NGO Week promotion and, by distributing brochures and pamphlets and, during community events. SANGONeT's users pay

a subscription fee, which is R92.00 per month or R999.00 per annum (SANGONeT 2001).

SANGONeT's services allow access to:

- ▶ The Internet
- ▶ World Wide Web (WWW)
- ▶ Electronic mail (E-mail)
- ▶ Web services
- ▶ Mailing lists
- ▶ Training services
- ▶ Consultancy services
- ▶ Local area network
- ▶ Community news services and
- ▶ Electronic resources such as
 - ▶ Sabinet
 - ▶ African National Congress information
 - ▶ Green and White Papers issued by the government
 - ▶ Legislation and draft legislation
 - ▶ Government Gazettes
 - ▶ Constitutions of the world
 - ▶ Directory information
 - ▶ *Mail & Guardian* archives (SANGONeT 2001).

SANGONeT provides space for sharing news and, requesting and disseminating information. It provides a forum for dialogue around common issues in the development and human rights sectors (Ochieng and Radloff 2001:89). SANGONeT also does information searches and supplies guides sites relevant to its clients information needs (SANGONeT 2001). It offers the following services to nonsubscribers: the creation of databases and Web sites; training consultancy and; community news services, for example, online announcements (SANGONeT 2001). Nonsubscribers pay a fee for these services.

Communication services take the form of software and hardware made available to facilitate the use of ICTs, particularly E-mail and the Internet; dial-up; online announcement services; and mailing lists. On a weekly basis Internet demonstrations and discussion fora on how to use the network effectively, are held at SANGONeT's offices in Johannesburg. Training services from how to find information to how to use information is also provide in these offices. Technical support on how to use ICTs and manage them effectively is also part of its service (SANGONeT 2001).

1.3 Research problem

As stated earlier SANGONeT is a regional electronic information and communication network that aims to facilitate the "effective and empowering" use of ICT tools. As mentioned in section 1.2, although SANGONeT was established in 1987, there is no record of any evaluative user-oriented study on SANGONeT having ever been conducted. The researcher has also noted that SANGONeT is underutilized in KwaZulu-Natal (section 1.6). The investigation undertaken in this study is to ascertain the extent to which SANGONeT facilitates the effective use (section 3.1) of ICT tools by development and human rights organizations in KwaZulu-Natal and to evaluate SANGONeT from the users' perspective.

1.4 Research objectives

The research objectives of the study were to determine:

1. the level of awareness of the existence of SANGONeT among potential users.
2. the level of awareness about SANGONeT's services among its actual and among potential users.
3. the accessibility of SANGONeT to all its intended users.
4. the extent to which SANGONeT provides relevant information for the effective functioning of the organizations which it serves and those which it intends to serve.
5. the extent to which SANGONeT facilitates networking among its affiliated organizations in KwaZulu-Natal.
6. the reasons for the perceived underutilization of SANGONeT in KwaZulu-Natal, and then:
7. to make recommendations as to what could be done to increase the utilization of SANGONeT in KwaZulu-Natal.

1.5 Research questions

The research questions answered by the study were:

1. to what extent are SANGONeT's potential users aware of its existence?
2. to what extent are SANGONeT's actual and potential users aware of its services?
3. how accessible is SANGONeT to its intended users?
4. to what extent is the information provided by SANGONeT for its intended users relevant to them for their effective functioning?
5. to what extent does SANGONeT facilitate networking amongst its affiliated organizations in KwaZulu-Natal?
6. what are the reasons for underutilization of SANGONeT in KwaZulu-Natal?
7. what recommendations can be made for increasing the utilization of SANGONeT in KwaZulu-Natal?

1.6 Justification for the study

Evaluation is an essential element in the successful management of any enterprise (Lancaster 1993:1; Lombo 1997:2). Ongoing evaluation of any organization or service, and in this particular case an electronic network or information network, is necessary for successful service delivery. The purpose of an evaluation is to justify the existence of an information service (Lancaster 1993:8). In the case of there being negative findings, an evaluation aids in identifying possible sources of failure or inefficiency with a view to raising the level of performance in the future (Lancaster 1993:8).

According to Adam and Haflam (1992:33) user studies of networks should be carried out regularly to ensure that the information services of a network keep up with the changing requirements of its users. Satisfaction of user needs is the ultimate justification for the existence of any information system or service as is also the degree of success its users have in obtaining information. These assessments are fundamental elements of an evaluation (Bawden 1990:41), hence SANGONeT needs to be evaluated in terms of the extent to which it meets the needs of its intended users and also in terms of the extent to which it successfully assists its users to facilitate development by providing relevant information through the use of ICTs.

It is estimated that although over six billion rand has been spent since the 1970s in supporting the various NGOs that have worked to promote innovation and change in various sectors of the society, very few of these have been evaluated (Potter 1999:209). Sayed (1998:53-54, 58) recommends that research needs to be conducted on the SANGONeT and PRODDER initiatives to determine their effectiveness in NGO usage. SANGONeT sees itself playing a major role in facilitating the use of ICTs by NGOs and other civil society organizations (SANGONeT 2001).

This evaluation is limited to organizations in KwaZulu-Natal where development efforts are urgently required. It is the third poorest province in South Africa, with 40% of the households living in poverty. KwaZulu-Natal has the largest population of all nine provinces, with 62% of the population having no access to basic services (Kok, Ndlovu and O'Donovan 1997:1). According to PRODDER 2000, there are more than 324 development and human rights organizations working in KwaZulu-Natal. These facilitate development projects in both rural and urban areas of the province. KwaZulu-Natal, therefore, provided a rich field for investigating the potential of a network such as SANGONeT.

Chowdhury (1998:20) states that there were six hundred organizations that subscribed to SANGONeT nationally by 1998. In 2001 there are only thirty-three of 324 development and human rights organizations, subscribing to SANGONeT in KwaZulu-Natal (SANGONeT: 2001). This point suggests that SANGONeT is underutilised in KwaZulu-Natal. The present study investigates why KwaZulu-Natal development and human rights organizations do not subscribe to one of the best established electronic information and communication networks in southern Africa. The questions raised above necessitate the inclusion of non-subscribing organizations in the evaluation of SANGONeT.

Initially users are often unsure of new technology and that they require extra support to get started (Chowdhury 1998:7). However, as SANGONeT has been in existence for over a decade, by now potential users should be more confident about subscribing to it. It is important to evaluate the information service that facilitates the use of ICT tools for competitiveness in stimulating development through its users and whether it helps them to function effectively. SANGONeT is evaluated on its effectiveness in facilitating development (Appendices A and B).

1.7 Operational definitions

The operational definitions used in this study are listed in alphabetical order in this section.

Accessibility is a major determinant factor in the use of an information service (Lancaster 1993:13). Access to information is related to information infrastructure, including communication channels, access points needed for acquisition and processing, use of information (Kiondo 1998:80). Accessibility includes costs of online access (Lancaster 1993:273). Cost of online access refers to the charges incurred in accessing remote databases and electronic networks, and these include telecommunication charges, purchase of computer equipment and training in the use thereof. Accessibility in this study includes the availability of ICT infrastructures, skills, connectivity and funds. The ICT infrastructure required in using SANGONeT are computers and telecommunication lines. SANGONeT provides software and hardware at a cost including E-mail and connection to the Internet. Skills refer to the ability to use the SANGONeT facilities and services, for example, in computer literacy and on the use of the Internet.

For a network to be sustainable, it should be able to generate income from the services it provides through charging fees for subscription, training and consultancy (Chisenga: 2001:8). SANGONeT does charge for subscription, training and consultancy. For example, for E-mail and Internet connection SANGONeT charges R6,500 when hardware is not supplied by the organization and R10,500 when SANGONeT supplies hardware (SANGONeT 2001). Such amounts may prove too costly for small organizations that have other priorities for their limited budgets and this limit access to the network. When resources are scarce, choices between infrastructure and serving the poor are often made in favour of serving the poor (Menou 1993:32).

Actual users in the present study refers to the organizations which subscribe to SANGONeT.

Awareness, in Poole (1985:112) is defined as a state in which a user has knowledge of something. Awareness about the electronic information and communication network includes knowledge about the existence of the network, its services, and the value of the use of electronic

networks (Chisenga 2001:7). In the present study, awareness refers to knowledge about SANGONeT, which includes awareness of its existence, the nature of its services and the value in using it. The present study seeks to establish whether those organizations which SANGONeT intends to serve know about the network and its services.

Computer literacy is the understanding of basic principles of computers including related concepts, systems and the ability to use them (Collin 1999:77 ; Freedman 1998:74).

Development organizations are organizations that seek to promote social and economic development in a society. They are usually referred to as NGOs. Their activities include education and training, capacity building, job creation and, primary health care, amongst others (see section 2.3).

Effectiveness refers to a range of assessment points from, inputs to outputs and through service outcomes and impacts of the service (Wyley 1997:20). Effectiveness indicators are those indicating user satisfaction and the amount of use made of the service (Menou 1993:63; Bawden 1990:19; Lancaster 1981:106; Mchombu 1996:64; Menou 1993:64). User satisfaction and the amount of use are measured, according to actual use of SANGONeT, that is use by the actual users.

Human rights organizations are defined as private organizations which devote significant resources to the promotion and protection of human rights (Baehr 1999:114). They are independent of both the government and political groups that seek direct political power and they do not seek such political power themselves. Baehr (1999:114) maintains that they are private in their form, but public in their purpose. They use internationally agreed values, standards and rules to tell states what may not be done and what should be done, in order to protect the citizens and non-citizens of a state (Baehr 1999:114). They usually operate as NGOs.

Information and communication technologies (ICTs) are commonly referred to as computerized information technologies and include telecommunication services, WWW, teleconferencing and electronic networks among, others (Adam 1999:1; Hall 1994:110; Ochie

and Radloff 2001:89). Communication technologies such as telephones, E-mail, and the Internet are used to transmit information. Information is the raw material that processed by ICTs (Castells 1996:61).

Information literacy refers to a person's ability to access and understand a variety of information resources. According to Doyle (1992) information literacy requires the following abilities, to:

- ▶ recognize accurate and complete information as the basis for decision making and problem solving;
- ▶ recognize the need for information when it arises;
- ▶ identify potential sources of information;
- ▶ develop successful search strategies;
- ▶ access sources of information including computer-based and other technologies;
- ▶ evaluate and organize information for practical application.

Networking is a form of collaboration between networks which exchange information from organizations (Fowler 1997:112). Valk, van Dam and Cummings (1999:26) regard networking as an important communication strategy that mobilizes, decentralizes and disseminates information among its members. Mchombu (1997:9) argues that a network is not only a service, but is a tool used to access information more efficiently and quickly. Its goal is to form a strategic alliance for the provision of information to support in this case, human development. Thus networking facilitates resource sharing and information exchange between organizations which have a common purpose, which in this instance promote social and economic development.

Non-Governmental Organizations (NGOs): The term NGO, in South Africa applies to a complex web of civil organizations, including quasi-government bodies, for example, Independent Development Trust (IDT), organizations affiliated to liberation movements, for example, Kagiso Trust and can even include multilateral agencies (Abugree 1994:121). In the present study the term NGO will be used to refer to the civil society organizations, parastatal bodies, trade unions and community based organizations that SANGONeT serves presently, as well as those it plans to serve in future.

Potential users are those organizations who use or may use the type of the services provided by SANGONeT, but who do not subscribe to SANGONeT. These include organizations that no longer use the services provided by SANGONeT.

Poverty datum line is a measure of poverty based on income and consumption (*World Development Report 2000/2001*). The income or consumption below this line indicates that a household is poor. According to the Department of Social Development, in South Africa the poverty datum line is the income of R950-R1200 per month for a household of six people.

Relevance of an information service is measured against the users' information needs and how well the service meets those needs (Abugree 1994:129; Lancaster 1968:121). Needs and perceptions of the community being served help to determine the relevance of the service. The relevance of the information provided by SANGONeT can only be assessed by those organizations it serves and by those it intends to serve. Questions related to the relevance of SANGONeT to the users and potential users are:

- ▶ how much of what is brought to the users attention is relevant to their interests and information needs?
- ▶ what proportion of the items brought to the users attention does the user ask to see (Lancaster 1993:13)?

Bawden (1990:100) argues that relevance assessment by the actual service users is subjective, but it is that subjectivity which reflects the true users' needs.

1.8 Limitations and scope of the study

SANGONeT changed its focus and its mission statement at the beginning of the year (2001) as mentioned in the background information to SANGONeT (section 1.2). This evaluation is based on the new mission statement embraced by SANGONeT.

Development and human rights organizations can overlap in terms of their activities. This overlap is due to the origins of the NGO sector in South Africa and the factors defining the overlap section 2.3), for example, Baehr (1999:122) describes human rights organizations as being part of the NGO phenomenon. The civil society sector is a very dynamic sector. The

development and human rights organizations change according to the needs of society and also according to donors' interests. As there is a health crisis resulting from the AIDS and HIV epidemic, more civil society organizations have begun providing health services (section 2.3). Hashemi (1995:109) maintains that donors' interest have turned towards HIV/AIDS and a large number of NGOs are integrating HIV/AIDS programme into their activities. The sampling frame used for the study thus includes development and human rights organizations as well as organizations that provide health services to the society.

As stated earlier the study deals with organizations in KwaZulu-Natal only. This limitation was necessary to make the study a project of appropriate size for course work. NGOs in KwaZulu-Natal province were preferred over and above those elsewhere because they are more easily accessible by telephone, as well as other forms of communication. In addition, as stated in section 1.6 this province provides a rich field for development and human rights organizations. The sampling frame of potential users, although it is the most comprehensive list available, does not list all development and human rights organizations in the KwaZulu-Natal, therefore some of them will not have been included in the sample. This affects mainly the selection of potential users, but there is no other complete list available.

1.9 Summary

The mission and the objectives of SANGONeT have been explained, together with the services that SANGONeT provides. The research problem, objectives and the research questions are stated and supported in the justification of the study. Operational definitions as well as the scope and limitations of the study are also covered in this chapter. In chapter 2 a review of related literature is covered. The third chapter covers the methodology used in this study. The results of the study are presented in chapter four and discussed in chapter five. Conclusions and recommendations form chapter six and this is followed by the bibliography and appendices.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The chapter reviews literature on information and communication networks which relate to the study. Also included are reviews of works dealing with issues related to the delivery and exchange of development related information. Other evaluative studies and methodologies are discussed, especially those concerned with information exchange and with the use of information and communication technology to facilitate development, as for example, the International Development Research Centre (IDRC) study on the use, benefits and constraints of electronic communication.

2.2 Development

The primary objective of development is to increase the capacity of people, communities and institutions. This requires investing in communication systems to facilitate information transfer, as well as in learning and behavioural changes required in the development process (Woods 1993:13). From Woods' point of view (1993:15) development is putting in place systems to create knowledge, skills and, attitudes, and developing people's ability to use and maintain those systems. Development organizations have a responsibility to develop such systems and then to maintain them so as to develop people's capacity.

Development is primarily concerned with the well-being of people (Boon 1992:65). Development is designed to direct and accelerate change in society to bring about improvement in the living circumstances of those in poverty and those who are disadvantaged (Fowler 2000:9). According to Fowler (1997:4) poverty incorporates a lack of the quality of life which acknowledges people's capacity to fulfill valuable functions within society. These functions are determined by people's ability to access and control the following commodities: food, income, natural resources, education, health, good social standing and as well as those concerning security.

Development is also referred to as social change. Social change incorporates not only developing economic production, material infrastructure and political systems, but also includes attitudes,

relationships with other people and their perceptions of nature (Rist 1997:21). Development is not limited only to social change (Rist 1997:13). It appears contradictory in that it consists of a set of practices which require the general transformation and destruction of the natural environment and social relations. General transformation and destruction of the natural environment is a consequence of production as this always involves destruction. The practices are those which are social, economic, political as well as cultural by nature. Development appears to be a philosophy as well and related practices forming a single whole despite contradictions (Rist 1997:24).

Sustainable development refers to the challenges facing contemporary human society between reconciling future development with protection of the environment (Elliot 1994:107). According to Fowler (2001:16) sustainable development brings particular types of change in a dynamic system linking society, ecology and economy, thus achieving balance and sustainability. Sustainability of development work lies in the increasing capacity of people and of NGOs themselves to respond to forces they themselves do not yet control. Sustainable development in health focuses on equity in wellness, on long-term resource perspective and on increasing the capacity of the community to be fully effective partners in the policy formulation and the implementation process (Ong and Joseph 1995:540). Fowler (2001:7-8) maintains that the core task in sustainability is creating conditions so that benefits endure changing conditions; in creating the continuing ability to adapt.

Sustainable development consists of the following core elements:

- ▶ **Natural environment** - This must not be degraded, and needed to be productive and well managed. Sustainable development ensures that the natural environment is not degraded, and reduces environmental hazards, while increasing biological productivity (Fowler 2001:16).
- ▶ **Economic dimension** - This includes finding viable and non-exploitive systems that offer solutions to the tensions arising from disharmonious development (Elliot 1994:4 and Fowler 2001:10). Sustainable development reduces the economic vulnerability of households, increases assets and equity, as well as access to appropriate economic goods and services (Fowler 2001:16).

- ▶ **Social dimension** - Sustainable development increases public accessibility, and enlarges choices with the equitable satisfaction of needs (Fowler 2001:10). The social dimension includes establishing political systems which secure effective citizen participation in decision making (Elliot 1994:4). It should advance social justice, promote participation and inclusiveness among social and political institutions; enhance mediation institutions in forming a bridges between groups; and respect cultural and human diversity (Fowler 2001:16).
- ▶ **Technical dimensions** - Sustainable development promotes the use of technological systems which foster sustainable patterns of trade and finance, and which are appropriate systems in terms of environment, economics and society (Elliot 1994:4; Fowler 2001:10).
- ▶ **Time dimension** - This refers to inter-generational responsibility (Fowler 2001:10). The time dimension of sustainable development emphasizes development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Elliot (1994:19-21) highlights the following as the challenge of sustainable development: inequality of resources threatens sustainable development by confining some people to poverty and this often leaves them no choice but to degrade and destroy the resource base on which future livelihood depends. The same inequalities allow others both globally and nationally as well as within a community to use resources wastefully in ways that damage the environment, as for example, in pollution. The environmental concerns of the poor are those associated with immediate survival needs. Elliot (1994:21) maintains that in attempting to overcome poverty by focusing on the welfare issues of the poor sector of a society, sustainable development will be possible.

According to Barnard (1999:13) for Southern African countries to achieve people-centered and sustainable development, they need to respond to the following challenges: to call for good governance, investment in social services, equitable economic growth, gender equity, peace and security, as well as the challenges presented by globalization. Globalization is the tendency of markets to become global rather than national as barriers to international trade are reduced, and as international transport and communication improve, and as large multinational companies and organizations grow their services in the global market (Pass, Lowes and Davies 2000:223). The

development sectors need to recognize and engage with regional and global issues that impact on their work and changes in South Africa (Sadek 2000:36).

NGOs and other development organizations which grew out of labour and civil organizations are taking the challenges of shifting from protest to the creation and harnessing of opportunities for the disadvantaged (Abugree 1994:127). Barnard (1999:13) argues that the future of Southern Africa lies in regional cooperation and integration. Integration is now a global trend, and when combined with application of resources, it could assist Southern Africa to respond to the above challenges.

2.3 Development and human rights organizations

Development and human rights organizations are usually NGOs. The term NGO is a generic grouping to which most organizations belong broadly. As mentioned in section 1.7, in South Africa the term NGO refers to a complex web of civil organizations and quasi-government bodies; organizations affiliated to liberation movements as well as to multilateral agencies (Abugree 1994:121). NGOs can be both institutionalized self-help organizations and professional organizations which provide a range of services at grass roots level (Abugree 1994: 121). According to Kobler and Tettey (2000:252) NGOs are the most effective means for addressing the problems of developing societies and the needs of their poorest members in a manner not matched by government officials. NGOs are often referred to as grass roots organizations because they are closer to ordinary people (Baehr 1999:119).

NGOs have learnt how to work with other grass roots organizations, and how to put projects together with minimal financial and technical assistance (Edward and Hulme 1995:2). The NGO's legitimacy can be justified by the positive changes it brings to the community (Fowler 1997:183). However, some NGOs are more interested in private rather than public benefit, for example the staff is awarded with overly generous remuneration packages amongst other things (Katz Commission Report 1997:10). NGOs, like other organizations, need to be accountable to both donors and beneficiaries. Accountability is generally interpreted as individuals or organizations reporting to recognized authorities and being held responsible for their actions. According to Edwards and Hulme (1995:3) there is a dearth of reliable evidence on the impact

and effectiveness of NGOs, and this makes it difficult to generalize about the NGOs' accountability. Accountability emphasizes impact and effectiveness. According to Edwards and Hulme (1995:11) measuring the impact and effectiveness of an NGO in relation to the kind of development subscribed to by most NGOs is a very difficult task, particularly in relation to "empowerment" and other such qualities. Lack of accountability can result in the likelihood of ineffectiveness and also allow for inappropriate actions by the organizations.

The relation between development and human rights organizations is illustrated by Baehr (1999:32), who regards economic and social rights as human rights because the eradication of poverty, malnutrition, illiteracy and unemployment need to be recognized as human rights. Access to health services is also regarded as a human right. The African National Congress (ANC) Health Plan, for example, states that the health of all South Africans will be secured and improved mainly through the achievement of equitable social and economic development (Ong and Joseph 1995:538). Human rights organizations are part of the NGO phenomenon (Baehr 1999:124). Brophy and Haplin (1999:353) remark that NGOs are increasingly taking a leading role in responding to abuse of human rights. Thus development organizations which are concerned with the social and economic development of people are closely related to human rights organizations. According to Baehr (1999:125) and Muthien (1999:iv) human rights organizations are organizations which devote significant resources to the promotion and protection of human rights. They range from international bodies such as the United Nations, through national governments, to NGOs and local campaigns groups (Brophy and Haplin 1999:353).

When referring to development and human rights organizations, the term, civil society organizations is often used. Fowler (1997:8) describes these as an array of people's organizations, voluntary associations, clubs, self-help or interest groups, religious bodies, representative organizations, NGOs, foundations and social movements. According to Fitzgerald (1992:22) civil society organizations address a variety of development issues and problems relating to the following: the environment; socioeconomic development; human rights; human resource development; gender equity; rural and urban development and; research as well as policy issues. They are not part of government or political parties and they are non-profit organizations (Fowler

1997:8). They are essential vehicles for both service delivery and for the maintenance of democratic practices within societies through their active involvement in debates and decision making (Walters 1993:16). Meyer (1997:1128) defines civil society organizations as political and economic entities.

Fowler (1997:8) lists the following functions of civil society organizations. They

- ▶ provide for mobilization, articulation and pursuit of interests of individuals or groups;
- ▶ provide institutional means for mediating between conflicting interests and social values;
- ▶ give expression and direction to social, religious and cultural needs;
- ▶ limit government from expanding its control;
- ▶ nurture values of citizenship required for democracy in modern nation-states.

The critical role of civil society organizations in the reconstruction and development of South Africa was established in the struggle against apartheid, and while providing services to the poor and marginalised during the transition period (Abugree 1994:122; Sadek 2000:35; Wishart 1995:26). They played a support role in the political negotiation process and were involved in the writing of the Reconstruction and Development Programme (RDP) base document. According to Abugree (1994:122) and Wishart (1995:26) the political transition has forced NGOs to focus on development. The present role of the civil society organizations is to ensure that the government policies, legislation and implementation are in keeping with the mandate given by the electorate and in ensuring that integrated development becomes a reality (Sadek 1999:35). Dangor and the Development Resource Centre (1997:19) list the following as the main areas of activity of the development and human rights organizations in South Africa: community development, education and training, capacity building, job creation, urban development, housing, primary health care, providing information, and human rights advocacy.

2.4 Information for development

Information is a strategic resource that should contribute to socioeconomic and self-sustaining development and it is a powerful business resource (Akhtar and Melesse 1994:314 ; Cillie 1994: 2). However, it has little use if it is not communicated to the right users at the right time (Stilwell 2001:48). Parker (2000:235) equates information with water, because as with water we do not

always know what information is available and we cannot always access it. Even if information can be accessed, we cannot always make use of it, because it may be presented in an inappropriate language or format or it is not compatible with our needs (Parker 2000:235). Stilwell (2001:48) states that information needs to be presented in an appropriate manner and in a meaningful way for potential users. Information has an actual value when used and a potential value that has to be assessed after it has been used (Parker 2000:233; Rasmussen 2001:14).

Information creates both challenges and, the means necessary, for successful adjustment. It creates new possibilities of dealing with problems of poverty, inequality, environmental degradation that have the potential to enable economic and human development (Alemie 1998:181). Du Toit (1997:600) and Du Toit and Strooh (1995:53) maintain that within a sustainable development paradigm which puts the needs of people first, information may be viewed as an organic connection that facilitates linkage and that delivers appropriate material for knowledge building of and decision making by development workers. The availability and the utilization of information are important social and economic indicators (Boon 1992:69).

Boon (1992:67) identifies three levels of information needs for development. These are:

- ▶ the needs of the people being developed;
- ▶ those of the people involved with development at an operational level,
- ▶ the needs of the people involved in the management of development projects who use information to support decision making.

This study is concerned mainly with the second and third levels of information needs in development.

According to Rasmussen (2001:14) access to information enables people to make critical judgements regarding civil, social and political aspects of the state as well as its activities and the impact such judgements may have on the general public. Wishart (1995:27) argues that provision of relevant information and facilitation of its access are key elements in development process and services. Boon (1992:69) lists the following criteria, among others, that must be considered when providing information services for development:

- ▶ assessment of information needs to be met by the service;

- ▶ users' level of information literacy;
- ▶ accessibility of information, which includes both infrastructures and information skills;
- ▶ quality of information, in terms of accuracy, comprehensiveness, currency and adaptability;
- ▶ effectiveness and efficiency of the system in providing the information.

Gooch , Getaneh and Woolley (1998:211) state there is a growing awareness that a strong information base is necessary support development planning and the management of resources. Development planning and implementation are extremely difficult without quality management information (Du Toit and Strooh 1995:33), because information is a primary input to NGO production (Meyer (1997:1128). The NGOs' economic activity includes sharing information, in addition to other functions (Meyer 1997:1128). Accurate, timely information is an indispensable tool and an essential precondition for effective responsive action and for the promotion of human rights (Brophy and Haplin 1999:352). NGOs are increasingly required to deliver professional and effective services. This is changing the way information is produced and managed within NGO and other development actors (Du Toit and Strooh 1995:35).

2.4.1 The impact of information on development

Deane (2000:239) quotes the World Bank 1998/1999 Report which states that "the reason why developing countries are not progressing faster is because they lack access to knowledge".

The impact of information depends on its accessibility and the timeous provision of relevant information (Cillie 1994:2; Akhtar and Melesse 1994:314). Parker (2000:235) views the impact of information as the perceived benefit by its users as revealed by objective evidence. According to Rasmussen (2001:14-15) measuring the impact of information on social development and democracy involves assessing which information contributes towards the growth of a just, participative and stable society. Measuring the impact of information in the fields of education and research involves assessing the extent to which access to the Internet and other information resources add value these fields (Rasmussen 2001:14).

2.4.2 The new information and communication technologies (ICTs) and development

Information and knowledge have always been critical components of development. Evolution in technology has determined the productive capacity of society and living forms standards of

economic growth (Castells 1996:66). The new ICTs have the potential to meet the challenges of addressing basic needs, developing human resources, growing the economy, creating a culture of effective service delivery, promoting participatory democracy, and conveying different cultures and ideas (Miller 1996:4). ICTs thus have an important role to play in meeting a range of needs.

The new ICTs allow the knowledge, inputs, and work products of industries, government and professionals to be captured as digitized information which can be manipulated, processed, duplicated, stored and transmitted at a low cost (Addo 2001:144). Castells (1998:2) equates the role of ICTs to that of electricity in the industrial era. The new ICTs are changing how we work, learn and govern (Alemie 1998:181). The use of ICTs can help make development efforts more efficient.

ICTs, particularly the Web-based information systems, present enormous opportunities for scientific communication in Africa (Adam 1999:1). According to Alemie (1998:181) ICTs can create possibilities for sustainable development and have the potential also to support such development. The new ICTs, in particular, the electronic networks, have expanded and diversified the available means for sharing data and information within and among a wider range of actors in the field of sustainable development than before (Hall 1994:110-111). They are changing the traditional ways of conducting information business, by establishing new sources of information and new methods of communication on a global basis (Adam 1999:3).

ICTs increase accessibility to electronic resources such as the Internet, E-mail, computer conferencing, electronic discussion fora and information retrieval, amongst the NGO community (IDRC 2000:2). The Internet is an enormous virtual library which is used as a reference tool to supplement the information resources found in libraries (Chisenga 2000:182). The Internet facilitates the use of:

- ▶ **E-mail** - This is used to exchange ideas and coordinate joint projects. E-mail's advantages are: its fast access, convenience, and the cheapness and informality of its use. By using E-mail users are able to send electronic messages and various types of computer files, and to participate in electronic discussion groups (Chisenga 2000:181). In Africa it is becoming

increasingly used for general correspondence, document exchange, arranging meetings and in the exchange of research ideas.

- ▶ **Discussion lists and fora** - Discussion fora are virtual fora created for the exchange of ideas and information. Addison (2000:13) lists various forms of Internet discussion: Usenet, E-mail discussion lists, electronic conferencing, instant messaging, chatrooms and video conferencing. There are over one hundred mailing lists and news groups about Africa. Almost all of them are hosted outside Africa.
- ▶ **WWW** - World Wide Web can facilitate electronic publishing. Organizations are using the WWW to advertise their services (Chisenga 2000:181).
- ▶ **FTP** - File transfer protocols are used to send files or get files from servers remotely located. There is limited use of FTP in Africa, due to the lack of knowledge regarding available resources (Adam 1999: 2).

Castells (1996:61-62) outlines the following characteristics of the new ICTs paradigm:

- ▶ information is the ICTs' raw material,
- ▶ information is an integral part of all human activities and all processes of our individual and collective existence are directly shaped, but not determined, by the new ICT media,
- ▶ networks are created not just to communicate, but also to gain position to "out" communicate,
- ▶ there is a growing convergence of specific technologies into highly integrated systems, as for example, with telecommunications and computers.

The crucial role of ICTs in stimulating development is that they allow countries to skip stages of economic growth, by modernizing their production and increasing their competitiveness faster than in the past (Castells 1998:2). However, Castells (1998:2); Valk, Van Dam, Cummings (1999:30) and Wyley (1995:6) point out that ICTs do not solve the world's social problems, but they are only tools that can be used in development. Brophy and Haplin (1999:355) argue that information technology can only deliver information, it cannot determine the impact that information will have. Deane (2000:240) argues that not only is access to information and knowledge important, but skills to assess and debate that knowledge are also necessary. According to Addo (2001:146) knowledge increases the possibility of development, technology has a potential to enhance both knowledge and development. Information is one of several

components used in the development process and it is not always the most essential factor (Stilwell 2001:42).

ICTs can support organizations in the following way:

- ▶ enhance decision making capability through timely access to information;
- ▶ contribute to sound management and financial control;
- ▶ provide access to the databases of contacts and support agencies;
- ▶ facilitate participation in democratic government;
- ▶ expand knowledge and broaden insight and perspectives;
- ▶ offer cheap and fast ways to communicate, such as E-mail;
- ▶ through the use of Listservs provide an interactive way to discuss issues, encourage responses and coordinate action on specific issues (Brophy and Haplin 1999:354; Miller 1996:6 and Cillie 1994:2).

In the human rights sector, the new ICTs play the following role. They allow:

- ▶ for the circulation of information which might not otherwise have been circulated;
- ▶ for interactive communication between various parts of the human rights movement;
- ▶ for local groups to contact international groups directly without the need for an intermediary and;
- ▶ serve as an aid to the human rights movement in its efforts to collect, interpret, and disseminate information and to push for appropriate action in response to any violation as well as;
- ▶ play a role in developing issues networks on related issues and these are used to pressure the governments to act (Brophy and Haplin 1999:354-355).

Castells (1996: 33) remarks that the new ICTs have spread at the speed of lightning in less than two decades. However, he points out that there are large areas of the world, as well as a considerable segment of the population which are still “switched off” to ICTs. The speed of ICT diffusion is selective both socially and functionally. According to Castells (1998:2) and Miller (1996:6) Africa is being left out in a technological apartheid, as the technology gap between developing and developed countries is vast.

2.4.2.1 Networking in development sector

Since the mid 1980's electronic networks have increased in importance and usefulness as tool for development and social change (Mikelsons 1992:1). Networking facilitates the sharing of information and transforms member institutions into parts of a larger entity (Meyer 1997:132). It allows for the creation of global villages in which people can share and communicate ideas (Addo 2001:144). Networking makes the sharing of scarce knowledge resources easier, through the use of networking forums, Listservs and online conferences (Adams 1996:4). Meyer (1997:1133) argues that by investing in networking, NGOs can exchange information and thereby strengthen each other. ICTs strengthen NGO networking by increasing their capacity to exchange messages, discuss issues, and share information rapidly and economically through the use of E-mail. Thapisa (2000:174) maintains that value-added networking services will include such services as electronic data interchange, E-mail, managed data network services and access to information services, as well as strengthening NGO capacity for advocacy work. According to Freedman (1998:447) value-added networking is a communication network that provides services with extra benefits for the users.

Exchange of information and resource sharing which includes the expertise of organizations involved in development is very important, especially in Africa where resources are very limited. Networking and information sharing increases the effectiveness of both development organizations and human rights organizations (Sayed 1998:25; Meyer 1997:1132). Social development today depends on establishing the ability to establish a synergistic interaction between technological innovations and human values, which makes productivity, flexibility, solidarity, safety, participation and accountability possible, thereby providing a new model of development which would be socially and environmentally sustainable (Castells 1998:1).

The following are benefits of electronic networking in the development of Africa:

- ▶ access to national, regional and global information;
- ▶ opportunities for making an input of local information to the global infrastructure;
- ▶ an efficient flow of information that improves productivity and competitiveness;
- ▶ exchange of ideas, information and expertise;

- ▶ efficient communication that can improve solutions to problems such as food insecurities, poverty and illiteracy;
- ▶ prevention of potential duplication of efforts;
- ▶ opportunities to use the synergy of a group to find solutions to a common problem (Chowdhury 1998:6-7; Valk, Van Dam and Cummings 1999:27; Chisenga 2001a:8).

However, electronic networking has its disadvantages (section 2.4.3).

Addison and Ballantyne (2000:17) suggest that development organizations should consider more closely networks as sources of information, communication vehicles or platforms, and as a way to organize effective information flow. By working together, synergies are built between organizations with information to share and groups of people looking for information, and those wanting to communicate with people who have appropriate technical platforms and tools (Addison and Ballantyne 2000:17). Castells (1998:5) states that organizations which do not follow networking logic are eliminated by their competition because the former are not equipped to handle the new model of management, in which information is seen as a strategic resource critical to all levels of management.

The performance of a network depends on two fundamental attributes. These are connectedness and consistency (Castells 1996:171). Connectedness refers to the structural facilities of and noise free communication between the network's components. While consistency refers to the extent to which there is commonality between the network's goals and the goals of its components.

Milkensons (1992:1) argues that computer networking is cheaper and more convenient than facsimile. Africans must take advantage of the availability of ICTs to realise development. Building local networks helps to develop a user base that will be able to sustain international connections and more sophisticated applications (Chowdhury 1998:7). It is important that content should be locally driven (Miller 1996:7 and Adam 1997:92).

2.4.2.2 The use of the Internet in the development sector

Bray (1998:115) uses two Burma case studies in his analysis of strategies applied by the NGOs in the use of the Internet as a campaign and advertising tool. He concludes that the Internet is

used by NGOs to coordinate their activities regionally, nationally and internationally. The Internet provides valuable information on NGOs' campaigns on particular issues and it allows them to spread information about those issues. As an advertising tool NGOs can use the Internet to advertise their existence (Bray 1998:117). The Internet can also benefit NGOs greatly because they can link with other organizations which have similar interests. More and more organizations are banding together to form Internet gateway portals which act as social levelers, "yellow page" type directories pointing visitors to various web sites and other information resources (Addison and Ballantine 2000:14). According to the findings of the study conducted by Haplin on the use of the Internet by human rights organizations, the primary reason for its use is that it is quick and convenient and facilitates collaboration (Brophy and Haplin 1999:357). Sayed's explorative study (1998:54) on the use of the Internet by NGOs in the Western Cape, also concludes that the Internet is a valuable and effective tool for facilitating the role of NGOs in development.

Addison and Ballantyne (2000:15) outline the following trends as current trends on Web cooperation in the development sector:

- ▶ decentralization - organizations with a common interest come together, work on a shared website and work towards dispersed responsibility for content, updating, coordination and facilitation.
- ▶ growing reliance on databases - well-developed databases are important assets in Internet gateway sites, as almost all rely on interconnected databases to generate and track Web pages.
- ▶ more attention is paid to content - content is repackaged and recorded to suit different types of users, as for example, providing full text rather than referring to hard copies.
- ▶ the emergence of thematic gateways.
- ▶ more attention is paid to the concept of communities - Internet users are clustering in communities around group issues and problems. These communities find expression through research and information exchange networks of various kinds. Members of these networks share certain characteristics and information-seeking behaviour.

Jensen (1998:v) mentions that there are very few African institutions represented on the Web. Adam (1996:5 and 1997:92) suggests that emphasis should be given to collecting, organizing and publishing local information and in making it available on the network. NGOs and other

development organizations have an important role to play to make the local content available on the Internet to facilitate resource sharing (Yavo 1999:9). Adam (1997:92) remarks that African institutions should develop their own content and they should be active contributors to global resources instead of being passive consumers of imported information. Africa's participation in content creation is fundamental for connectivity to be sustained and for competitive advantage in the global economy (Adam 1997:93).

2.4.2.3 ICTs in Africa

Africans are beginning to recognize the opportunities, challenges and complexities of the information society (Adam 1996:1). One challenge has to do with the way information is transmitted and used and as Stilwell (2001:42) points out, "Making information available to illiterates and other groups for whom the usual format used for conveying the information would pose a barrier to access" is of paramount importance. On the other hand, Mambo (1999:42) states that there have been encouraging developments in the use of computers, telecommunications, networking in all parts of Africa. Woods (1995:11-12) mentions that at the World Summit on Social Development in Copenhagen, March 1995, the role of information technology as an integral part in the effort to achieve social development was recognized. This statement raises the question of whether or not the new information and communication technologies, especially the Internet, can aid development of Africa.

Thapisa (2000:172) writes that global information should bring about a two way exchange of common values which can be shared whilst allowing specific and universal cultures and technologies that have developed to merge and be mutually strengthening and enriching. Kwankum and Ningo (1997:2) argue that African countries need to take a proactive approach in the development of information technology in Africa, that they should not simply react to trends in the IT industry but play an active part in their determination. It is also important that ICT requirements of a country be determined within the context of that country's requirements and its socioeconomic and political situations as each country is unique (Mandon 1994:4). Adam (1996:1) suggests that to make connectivity a reality and a useful tool to the locally centered development, local actors should develop capacity to implement networks that address their day to day problems.

Miller (1996:7) and Chisenga (2001a:7) argue that ICTs are now available at a low cost and that they have the potential to meet the development challenges of and to allow the less developed countries to move to the centre stage of development. The availability of modern ICTs is making it easier to participate in information exchange and resource sharing, and for organizations to be part of an electronic information and communication network like SANGONeT. Development information networks on the African continent are lagging behind due to lack of funds, viable information communication infrastructures and skills (Chisenga 2001a:10). These problems are likely to influence the participation of organizations in networks like SANGONeT.

According to the *World information report 97/98* (1998:252) published by UNESCO in January 1996, South Africa ranked 18th out of one hundred and forty six Internet host countries. In the *World information and communication report 1999/2000* South Africa is ranked 27th out of 258 Internet host top-level domain names. More variables have been added on the list of countries. This suggests that South Africa has better developed ICT infrastructures than other African countries and indicates that South Africa has the infrastructure to make use of ICTs in development. The question raised is whether or not South Africa, and particularly its development organizations, are utilizing these ICTs for the development of the country.

2.4.3 Problems and obstacles in using ICTs and information for development

There is a growing number of national and international NGO networks and coalitions due to the advances in communication technologies (World Resource Institute 1992:215). Networks allow access to the global information infrastructure, and participation in the global information society (Miller 1996:3). Miller (1996:3) also notes that there is a high demand for ICTs and services in the developing world, but an unsatisfactory level of investment in information infrastructures. However, according to the World Resource Institute report (1992:215) southern NGOs have little experience in information systems management, among extenuating factors.

Adam (1996:1) argues that while the impact of information revolution and ICTs is tremendous the existing infrastructure, socio-economic, cultural and political situations in Africa pose major difficulties in introducing, implementing and defusing new ICTs. Even in countries like South Africa, where connectivity has been developed, the majority of the underprivileged remain in the

position where they are far from being able to benefit from what the global information infrastructure can offer (Adam 1997:91). The major problems experienced in Africa are not technical but managerial, political and cultural and due also to a lack of resources (Adam 1996:1). Adam (1999:3) lists the following barriers in the effective use of ICTs:

- ▶ social, economic and political infrastructural barriers,
- ▶ cost of access,
- ▶ lack of awareness,
- ▶ inadequate bandwidth,
- ▶ inability to filter useful information from the Internet
- ▶ and limited capacity to publish information on the WWW.

Chisenga (2001b) in his paper on the digital divide presented at the LIASA 2001 conference, defines the digital divide as a gap caused by various factors between those who have and those who do not have access to the following: computer facilities, Internet, information literacy and use skills, computer literacy skills and appropriate information content. Miller (1996:6) maintains that this gap can be narrowed by developing an information infrastructure and effectively utilizing ICTs in service delivery. Chisenga (2001b) argues that the digital divide on the African continent in most cases is a question of having access to basic and appropriate information content: “Access to ICTs will be meaningless to people unless they are able to use the technologies and access content that is appropriate and relevant to their needs”. The major problems and obstacles in using ICTs are discussed in the following sections.

2.4.3.1 High cost involved in using the ICTs

The problem of the high cost involved in participating in electronic information and communication networks and in using ICTs is noted in literature by Boon (1992:70); Jensen (1998:8); Mambo (1998:18), Muller (1997:438), Sheba (1998:152) and Woods (1993:100). According to Kanamugire (1998:137) financial resources include initial investment cost, purchase of equipment; recurrent costs for staff development, and document delivery; acquisition of documents, hardware and software installation and maintenance. Access fees include subscriptions, hourly rates and telecommunication costs (Dubey 1988:47). The lack of financial resources required to support development can be attributed to the fact that information service

in organizations is seen as support service of the lowest order (Boon 1992: 70; Kanamugire 1998:138).

2.4.3.2 Requisite skills for ICTs use

Limited skills in the use of ICT tools due to lack of training is also a major problem (Gooch ...et al 1995:214; Jensen 1998:8; Sheba 1998:152). ICTs and electronic networks require skilled staff to install and manage the technology and networks (Chisenga 2000: 186). Adam (1999:9) points out that as technology advances, available skills often remain the same. Mambo(1999:43) suggests that developments in computerization must go hand in hand with the development of skilled staff at different levels. According to Mambo (1999:44) the difficulties occurring in training which have been around since the 1980's are: inadequate training to enable trainees to apply their knowledge appropriately; low levels of training and lack of sufficient practical training to give trainees first hand experience; lack of training in the areas such as networking, electronic telecommunications policies, intermediate and advanced technologies and network administration. According to Boon (1992:70-71) education is required according to the explicit role of information in development, as well as how to determine information needs in development areas, and how to organize and transfer information with regard to development. Computer, information and telecommunication science education must advance with new developments in the ICT field (Adam 1999:9).

2.4.3.3 Poor infrastructure

The problem of poor infrastructures is discussed by Mambo (1998:178, 183) and Sheba (1998:152), among others. According to Zulu (1994:81) and Katundu (2000:165) basic infrastructure includes electricity supply, computers, telecommunications, technical expertise, literate population and information resources. Mambo (1998:178) states that the provision of good telecommunication systems for computer networking is paramount while Sayed (1998:57) argues that the critical issues relating to access appear to be those relating to infrastructural problems. The arrival of the new ICTs have created pressure to update the infrastructure in Africa (Adam 1999:3). Kwankam and Ningbo (1997: 6) suggest that Africa's lack of infrastructure can be turned into an advantage if properly managed by using the latest technology to build new infrastructure. They argue that using the latest technologies will assist in bypassing several stages

of and decades in the information technology development process and benefiting from the experiences of more advanced countries. However, lack of infrastructure can result in Africa becoming a dumping ground of obsolete technology (Addo 2001:146 ; Zulu 1994:83). Efforts are being made by governments, the private sector and donor organizations to improve connectivity, ICT infrastructure and facilities in Africa (Katundu 2000:168) .

2.4.3.4.Lack of awareness

Potential information users are largely unaware of the existing information services at their disposal or of the potential value of the information available to them or of how to utilize this information (Boon 1992:71). Inadequate understanding of the benefits of using ICTs is a major constraint of growth and development, and manifests itself in the form of blocking by bureaucracy, as well as in ineffective networking cultures and insufficient top-level commitment (Adam 1999:6). According to Dubey (1988:50) information systems and services are not fully integrated in the national development of many less developed countries due to lack of in-depth awareness regarding the importance of the role of information in national development. Dubey (1988:51) and Kanamugire (1998:138) argue that information systems and services receive lowest priority and are considered to be an expensive luxury which results in information not being utilized effectively.

Other problems include:

- ▶ **Accessing local information** - Poor organization and the fact that information is presently gathered by international bodies, affect its availability to potential local users negatively (Boon 1992:71). Limited access to the Internet in smaller, poorer, remote and rural organizations has also been noted by Addo (2001:147), Jensen (1998:8), and Sayed (1998:57) among others. It has also been established by the Economic Commission for Africa survey that the highest number of Internet users work in the NGO and private sectors, the majority are male and 90% of them have university degrees (Adam 1999:10).

- ▶ **Poor cooperation among institutions** (Sheba 1998:152) and lack of both exposure to the culture of sharing information as well as to open access to communication (Jensen 1998:8) which results in resources being widely scattered and in duplication (Boon 1992:71).

- ▶ **User-oriented studies and user studies** - Existing information services are not designed and/or operated with a view to providing specific users' needs as users' studies are not often conducted. Users are thus not often consulted regarding the development of information services, and information services are seldom evaluated (Boon 1992:71).

Despite the difficulties listed above, the role of information technology in development as well as its impact on, have been seen to be critical in providing an effective information service and in facilitating information transfer in development (Kanamugire 1998:128).

2.4.4 Examples of evaluative studies of the impact on and the effectiveness of information on development

Methodologies used by other researchers and findings which emerged from projects related to this study are discussed here. The studies selected have all investigated a similar issue, namely, the role of networking and the use of information and communication technologies in development particularly in Africa. The studies considered relevant here are extensive and were conducted in more than one African country, whereas this study includes development and human rights organizations in KwaZulu-Natal only.

Jensen (1996) reported on the Regional Informatics Network for Africa (RINAF) in an external evaluation for the United Nations Education, Scientific and Cultural Organization (UNESCO). This study is similar to the RINAF evaluation in that it is an external evaluation of an information and networking service by an independent evaluator. The evaluation of RINAF assessed actual and potential impact of UNESCO on the African region in the telematics arena. That evaluation was done from the perspective of the organization or donor unlike this present evaluation which reports on the users' perspective. It explores the impact of RINAF as well as the wider body of networking within Africa and tries to identify problems, success factors and ongoing needs.

The object of the study was to identify future requirements of programmes which support networking in Africa within the countries of UNESCO responsibility. The evaluation method was used to assess RINAF by visiting seven of its focal points. This was augmented by contacts and knowledge acquired during the consultant's work in thirty-one African countries over a period

of five years. Observations were also made, and information gathered, from other focal points as well as from a wide range of outside contacts familiar with the ICT environment. Evaluation reports of studies which had already been completed were taken into account. The survey method was used to gather the information from each country and, regarding that country's ICTs and networking environment.

Michel Menou reports on connectivity within Africa with reference to the use, benefits and constraints of electronic communications. He presents a combined report on the methodological issues in the study. The study was carried out by the Capacity Building in Electronic Communications for ECA Development in Africa (CABECA) project for Pan African Development Information Systems (PADIS (UN-ECA)) as part of an IDRC-sponsored research program on the impact of information within development. The aims of the study were to explore methods of assessing the impact of electronic communication in Africa and to gain insight into that impact. The study was conducted in Ethiopia, Uganda, Zambia and Senegal.

The above impact study encompassed studies on efficiency, effectiveness, and cost-effectiveness of information systems and infrastructures as well as studies on user satisfaction. It was initiated to measure the impact of Fugitive Information, Data Organizer (FIDO) nodes set up by CABECA and carried out after the system operators and users were trained. The present study is similar to it in that they both assess the effectiveness of using electronic communications in development.

The survey method was also used in the Menou's study. E-mail questionnaires were employed during the first phase of the study. The methodology used in the present study is similar. During the second phase interviews were conducted. In conclusion Menou (1998:14) suggests that studies on the impact of electronic communication should be made with reference to specific development issues, sectors and/or organizations. The study also concluded that a global evaluation of a national situation could hardly be meaningful, beyond defining observed patterns of use and availability, in the absence of evidence at micro-level. These conclusions indicate the relevance of a small scale evaluation like the current study and which is confined to KwaZulu-Natal, beside those done on national or regional scales.

2.5 Summary

An attempt to consult as many relevant and up-to-date sources of information as possible has been made in this chapter. The information sources consulted in this study have been used to place the research problem within a theoretical context. Works dealing with ICTs, information and communication networks, as well as those relating to development and development related information were consulted as were works dealing with issues related to the delivery and exchange of development related information were also included. Two examples of effectiveness studies are provided. The next chapter focuses on the methodology used in the present study.

CHAPTER 3

METHODOLOGY

3.1 Evaluation research

An evaluative approach is used in this study. Lancaster (1968 :118; 1993:1) defines the evaluative method of research as a scientific method that is used to determine how well a programme performs. Evaluative research is a tool for assessing the usefulness of a social intervention (Bless and Higson-Smith 1995:47; Babbie 1989:326). A social intervention is any attempt to change the conditions under which people live (Bless and Higson-Smith 1995:47). Busha and Harter (1980:162) argue that evaluative research is a means of arriving at an intelligent conclusion about a programme's effect and its intrinsic value.

Evaluations are carried out to improve understanding in how a programme works and to investigate whether, and if so, how people change their attitudes and behaviours through successful intervention (Babbie and Mouton 2001: 339). According to Busha and Harter (1980:160) in evaluating an information programme, its relative effectiveness in terms of its goals, standards and objectives is determined and described. There is a special relationship between the goals of the programme being evaluated, and its target group because programmes are conceptualized and designed to address the needs of a particular group (Babbie and Mouton 2001:346). Wyley (1997:10) argues that evaluation assesses the actual and current situation with regards to the intended outcomes.

An evaluator needs information on the extent of a programme's delivery in order to substantiate claims of usefulness regarding the outcome of an intervention. The evaluator also requires information on the coverage by an intervention as well as information on the programme defusion (Babbie and Mouton 2001:346). Babbie and Mouton (2001:345) further argue that the socio-political context as well as the specific geographical location or setting in which a programme is implemented, sometimes turn out to be decisive in the programme's success. The present study evaluates the effectiveness of SANGONeT's provision of information and service to the development and human rights organizations it serves and those it proposes to serve.

Patton cited by Babbie and Mouton (2001:337) summarizes the purposes of evaluation as follows:

- ▶ to make judgement which is of merit or worth;
- ▶ to improve the programme and
- ▶ to generate knowledge.

An evaluative study of an information service can address any one or combination of the following: the entire programme; a specific project of the programme, or a specific service by the programme (Menou 1993:93). An information service can also be evaluated from any of the following perspectives: the information service provider; its users, both actual and potential or its beneficiaries, its donor agencies or society at large (Menou 1993:93). The present evaluation is undertaken from the users' perspective because it is mainly concerned with the effectiveness of SANGONeT in meeting the information needs of its users. An evaluation done from the users' perspective measures use in terms of amount of use, amount of non-use, purposes of use, satisfaction with the attributes of outputs, awareness of service and benefits, ease in using as well as cost of use (Menou 1993:94). However, this study does not measure the cost-benefits of using SANGONeT.

The usage measurement of an information service includes those factors which influence it (Menou 1993:93). These factors can be accessibility, awareness and relevance of an information service. An evaluation from the users' perspective provides a qualitative user judgement of performance of the information service. Bawden (1990:7) says of evaluation from the users' perspective : "Only such an approach can give full weight to the actual and practical value of a system or service, within its everyday context, taking into account, fully and explicitly, the value of the information provided to the users ...".

According to Lancaster (1993:9) evaluation methods can be subjective or objective depending on who is doing the evaluation. In order for an organization to gain credibility with its target users it is important for it to be evaluated objectively. An evaluation based on opinions is subjective (Lancaster 1993:8). A user-oriented evaluation is subjective, because it is based on users' opinions about the users about the information system or service. Purely subjective

evaluations can be very limited (Bawden 1990:16). However, users can give a true indication of the need to examine a particular area of service (Bawden 1990:16). Bawden (1990:95-96) also argues that user-oriented evaluations are capable of channeling subjectivity, so as to draw from it the maximum amount of information (Bawden 1990:95-96).

The evaluation approach was used in this study because it establishes the outcomes or effects and because it examines evidence relating to the indicators of a programme's effectiveness (Potter 1999:212). Indicators assist in determining the degree to which an activity succeeds or fails in meeting the stated general needs for and objectives of using the resources, and of achieving the expected results (Menou 1993:91). The present evaluation is based on analysis of the following indicators:

Effectiveness indicators, which relate to user satisfaction and amount of usage (Bawden 90:19; Lancaster 1981; Menou 1993:63) (section 1.7).

Impact indicators, which relate to both actual and potential use, and include market penetration (Menou 1993:64). According to Mchombu (1996:4) impact must be seen from the users' perspective and in reality. Impact evaluation attempts to establish what difference the availability and use of information makes, to the ability of people to cope with issues they themselves consider critical to their success (Menou 1998:2). Impact refers to a variety of outcomes along a continuum beginning with the mere appearance of a "novel" object and ending with lasting material and behavioural transformation (Menou 1999:2). An impact study must be an ongoing process and it requires continuous observation (Menou 1999:7). According to Menou (1999:7) impact studies are often based on a comparison between an initial situation and the situation that follows the introduction of change at any given time. The nature of an impact study, as described above, makes it impossible to measure the true impact of SANGONeT on its intended users in this particular study, due to the time limit and the unavailability of baseline data on SANGONeT. However, the following impact indicators listed by Menou (1993:96) are measured in the present study, they are:

- ▶ amount of use and non-use;
- ▶ purpose of use;
- ▶ factors affecting use or non-use, for example, access, relevance and, awareness;
- ▶ satisfaction with the attributes of outputs.

The current study thus uses only some impact-related measures, rather than attempting a fully-fledged impact study.

According to Babbie and Mouton (2001:341) evaluation should address the following questions:

- ▶ Is the programme conceptualized and designed in such a way that it addresses needs as perceived by its target groups? This question can help to identify the unmet needs of the target population. Babbie and Mouton (2001:341) argue that this is a precondition to programme evaluation.
- ▶ Has the programme been properly managed? This includes questions such as: does the programme in fact serve the target population, are services and infrastructures in place to support the programme implementation.
- ▶ Have the intended outcomes of the programme been realized? This includes impact studies aimed at measuring the success or failure of the programme's intervention.
- ▶ Were the programme's outcomes obtained in the most cost-efficient manner? This includes evaluation of efficiency and of cost-benefit.

As earlier observed, the study does not address the last aspect mentioned above. The choice of one or more types of evaluation depends on the timing of the evaluation.

Survey method was used in this study as it allows one to generalize from a smaller group, a sample, to a larger group, an entire population. Survey method relies upon observation in the acquisition of data (Leedy 1993:187). It is suitable for this study because it can produce quantitative information about people's beliefs, opinions, characteristics and, past and present behaviour (Neuman 1994:221) and this is useful in drawing conclusions on their views about SANGONeT.

3.2 Population

A population is a group of units to which a researcher generalizes the results of the research (Powell 1982:68). Gay (1976:67) defines a population as a group that is of interest to the researcher and which has at least one character differentiating it from another group. According to Stephen and Hornby (1995: 84) the population sampled can be limited and defined by certain factors. In this study the population comprises SANGONeT users as well as all the organizations

involved in development and human rights that SANGONeT intends to serve in KwaZulu-Natal. This include those which have never used SANGONeT before and those which no longer use it.

The SANGONeT Web site is accessible to all, but there are special services that are accessible only to registered users, as for example, access to Sabinet online. Actual users in this study refer to those users subscribing to SANGONeT. Those organizations which use it but do not subscribe to it are grouped together with non-users, as potential users. Non-users include all relative organizations which have never used services provided by SANGONeT as well as those which no longer use it.

SANGONeT provided the researcher with the names of thirty-three development and human rights organizations and which use its services in KwaZulu-Natal. A list of development and human rights organizations in KwaZulu-Natal was obtained from PRODDER 2000 which is a directory of development organizations in Southern Africa published by the Development Resource Centre and the Human Science Research Council (HSRC). It is the most comprehensive list available and includes most development and human rights organizations in Southern Africa. The PRODDER list has three hundred and twenty-four entries of organizations in KwaZulu-Natal.

3.3 Sampling

Sampling was used to select a number of units out of the whole population in such a way that the characteristics of each unit approximate the characteristics of the whole population (Leedy 1993:20). True sampling allows each member of the population an equal chance of being chosen (Stephen and Hornby 1995:84). In the present study organizations not on the PRODDER list mentioned were not included. Sampling should represent the population on a smaller scale, in the incidence variability of the characteristics being investigated (Stephen and Hornby 1995:83-84). A sample must allow one to reach a conclusion relevant to the complete population.

3.3.1 Sampling method and sample size

According to Stephen and Hornby (1995:84) a large population does not need to be measured by a large sample to give valid results. They further point out that validity depends more on the

appropriateness of the questions asked, and on the fullness and accuracy of the responses. Leedy (1993:205) argues that the sample size depends largely on the degree to which the sample population approximate the qualities and characters of the general population. It is determined by:

- ▶ the degree of precision required between the sample population and the general population;
- ▶ the variability of the population; and
- ▶ the method of sampling employed.

A census criterion, which allows for the inclusion of all units of the population, is suitable for selecting the actual users sample as it allows for the inclusion of the entire population (Israel 1992:2). All SANGONeT actual users and 30% of the potential users were included in the sample. Thirty percent is generally acceptable (Kaniki 2001). After removing the actual users and the pretest sample from the list, there were 307 organizations left on the list. Thirty percent of 307 is approximately 92 organizations. Thus a sample of 92 organizations was used.

The systematic random sampling method was used to select a sample population of potential users. Random sampling is that most likely to yield a sample truly representative of the population (Neuman 1994:200). However, the systematic random sampling method is criticized for not allowing all the units of the general population to have an equal chance in being selected. Stephen and Hornby (1995:86) argue that when the sample frame is arranged in alphabetical order, it does not prevent the random selection of units but it does give the units of the general population an equal chance in being selected. The sample frame for this study is arranged in alphabetical order.

Systematic random sampling allows the selection of certain items in a series according to a predetermined sequence (Leedy 1993:211). When using systematic random sampling method, the researcher uses k intervals to select elements from the sampling frame. K is determined by the ratio of the sample size to that of entire population (Neuman 1994: 204).

$K = \frac{\text{population}}{\text{sample size}}$

sample size

$K = \frac{307 \text{ organizations}}{92 \text{ organizations}}$

92 organizations

=3,34 the value of K is rounded off to the nearest figure which is 3.

Thus every third organization and starting from the beginning, was selected from the sampling frame. There were a few cases where the third organization was not selected, for example, where the organization is a school which is neither involved directly in development nor in human rights activity. In these exceptional cases the organization coming before or after the third organization was selected.

3.4 Data collection technique

This section covers the instrument and method used in the data collection as well as the procedures followed.

3.4.1 Design and structure of questionnaires

Questionnaires are instruments used for collecting the data in a survey study. The purpose of the questionnaire in this study was to find out the perceptions and opinions of both actual and potential SANGONeT users regarding its services. The questionnaire comprised twenty-six questions (Appendix E). A combination of open-ended and closed questions was used in the questionnaires to make it easy for the researcher to analyze data while at the same time allowing respondents to express their views. The questions were compiled using insight gained from the background material on SANGONeT and literature review.

3.4.2 Pretesting

It is essential that a questionnaire be piloted on respondents as similar as possible to those in the group eventually asked to participate (Birley and Moreland 1998:45). A pretest is done to allow the researcher to identify those items which might be misunderstood; are poorly constructed and /or those which are irrelevant (Birley and Moreland 1998:45) . A pretest also points to problems not foreseen and relating to design and methodology (Powell 1997:105). One actual user and four potential users were randomly selected for the pretest. The questionnaires were E-mailed to

the four organizations which are on E-mail and faxed to one organization which is not on E-mail (July 2001). After two weeks they were sent reminders both by E-mail and by telephone. Only three questionnaires were returned. The questionnaires that were returned were used to identify questions needing rephrasing. More questions were added to the questionnaire as some of the responses indicated areas that had not been covered in the initial questionnaire. The final questionnaire was refined and then sent out to the users sample. Those who had participated in the pretest were omitted from the sample.

3.4.3 Procedures for data collection

Questionnaires can be sent to people who cannot be reached physically (Leedy 1993:187). They were used in this study because data was being collected from organizations all over the province. Questionnaires were either E-mailed, or posted to those organizations without E-mail (September 2001). All questionnaires were sent with a covering letter (Appendix D) explaining the purpose of the study and containing the instructions to be followed when returning the questionnaires. They were addressed to the Directors of the organizations, who were requested to forward them to the relevant people as well as to confer with all the people in the organization who could make an input in answering them. Telephone interviews with SANGONeT staff were also used to clarify certain issues relating to the study. All returned questionnaires were numbered and filed.

One of the disadvantages of using questionnaires as instruments of data collection is the low response rate they have (Leedy 1993:187). The researcher sent reminders to NGOs that did not respond to initially. The E-mailed and posted reminders were followed by telephone calls. Some respondents requested that the researcher fax the questionnaire. Despite faxing questionnaires, again some of these respondents did not return the questionnaires.

3.4.4 Response rate

A total of 123 questionnaires was sent out to potential and actual users. Thirty-one questionnaires were sent to actual SANGONeT users and 92 to potential users. However, only 97 questionnaires reached the target sample. Of the 48 NGOs on the lists provided by SANGONeT, 20 were either no longer functioning or their contact details could not be traced at

the time the study was conducted. Twenty-four out of 92 NGOs sampled from the PRODDER directory also either no longer existed or could not be contacted during September to October 2001. A total of 50 questionnaires was returned. When the NGOs which were listed on the sample frame and which were untraceable, were excluded, the study had 52% response rate. Two of the original potential users had started to subscribe to SANGONeT while the study was being conducted and had thus become actual users.

3.4.5 Data analysis

Data is analyzed so that the researcher can provide a summary of what has been studied, and answers to the research questions (Sapsford and Jupp 1996:162). According to Birley and Moreland (1998:59) data analysis consists of sorting data into broad themes and outcomes which are related to the research questions and to the literature review. The survey data is then analyzed so as to find patterns in the data which will enable the researcher to draw her/his conclusions. A combination of qualitative and quantitative data analysis methods was used in this study.

Consistent codes were assigned to the expected responses for the closed questions. The purpose of coding data is to render data in a form which can be presented and analyzed (Birley and Moreland 1998: 59). Responses to open questions and to the category of “other” questions were not precoded (Sapsford and Jupp 1996:164). Data reduction relating to open questions was initially done manually, using content analysis to determine categories of the most frequent responses. Gay (1981:137) defines content analysis as a method of analyzing the qualitative description of the composition of the object of study. Qualitative coding was used following the two steps in Fielding (1993:227): identifying the different concepts as they appear in the responses to questions in the questionnaire, the second step involves sorting those concepts into categories. Each category had to be broad enough to represent a meaningful proportion of responses, yet not so broad that the meaning of data would be lost (McCormack and Hill 1997:71). Once categories were established, data assigned to them was converted into numerical codes (Powell 1993:151). These categories were included in the coding scheme. A coding scheme describes the location of variables and lists codes assigned to the attributes of those variables (Babbie and Mouton 2001: 415).

The coded data was analyzed using Statistical Product for Service Solutions (SPSS). The SPSS provides a user with a comprehensive set of procedures for data transformation and file manipulation and it offers a large number of statistical routines used in social science. The coded data was entered on a matrix design using the SPSS. Data was cleaned and evaluated to check for completeness, comprehensibility, consistency and reliability (Powell 1997:63). Data was initially analyzed in terms of frequency of response and then percentages were calculated. Marginal frequency distributions were also produced and bar graphs developed to express these frequencies.

3.5 Evaluation of the research methodology

Various problems were encountered in the study, for example, the researcher encountered difficulties in reaching some of the NGOs sampled for the study. It was mentioned in section 1.9 that the NGO sector is very dynamic. Some of the NGOs sampled no longer existed by the time of the study. The researcher also experienced difficulty regarding the contact details of some NGOs as these had changed by the time the study was carried out.

As mentioned in section 3.2, SANGONeT provided the researcher with a list of 33 subscribing organizations. One of these NGOs were no longer functioning by the time the study was conducted, according to the national offices of this NGO. Another NGO, a one person office, had employed a new member of staff who was not in a position to answer the questionnaire as she was still undergoing training at the time this study was conducted. These two NGOs could therefore not be included in the sample

SANGONeT did not provide the contact details of the NGOs subscribing to its services. The researcher consulted telephone directories, the PRODDER 2000 directory as well as searching the Internet for contact details and found those of twenty five NGOs. The researcher contacted SANGONeT for the necessary details of remaining NGOs. They provided the researcher with another list of fifteen NGOs, six of which were on the first list. A total of twelve NGOs from both the lists provided by SANGONeT had contact details which were obsolete. The Telkom directory was consulted but these NGOs were found not to exist on the Telkom database. It was then assumed that these NGOs no longer existed.

The sample of potential users was drawn from the PRODDER 2000 edition, as the 2001 edition was not available to the researcher at the time this study was conducted. Some of the E-mail addresses and telephone numbers had changed. In the cases where E-mail addresses were not functioning, the questionnaires were posted to the NGOs. Two weeks later reminders were posted to the NGOs which did not reply. Those NGOs that did not respond to these reminders were contacted by telephone. It was then found that some of these NGOs were no longer functioning.

3.6 Summary

The evaluative research method was discussed in this chapter. The chapter defined the study population and explained the sampling procedures. Method of data collection used in the study was discussed. The instrument used in data collection was pretested by conducting a pilot study. The procedures for data collection and data analysis used in the study were explained. The research methodology was evaluated for its validity and problems encountered when the study was carried out have also outlined in this section. In the following chapter research results are presented.

CHAPTER 4

PRESENTATION OF THE RESEARCH RESULTS

4.1 Introduction

The research results presented in this chapter are structured according to the two main areas covered by the questionnaire, namely, the general characteristics of the population, and secondly, their perceptions of SANGONeT. The first ten questions of the questionnaire cover the general characteristics of the survey population. The rest of the questionnaire comprises questions aimed at establishing both actual as well as potential users' perceptions of SANGONeT.

Of the total number of questionnaires which reached the target sample (Section 3.3.4), 50 were returned. There was thus a 52% response.

4.2 Characteristics of the population

The characteristics of the population consists of descriptions of both the services and the groups targeted by NGOs; types of ICTs and kinds information used by the NGO sector in KwaZulu-Natal. The first question requested the name of the participating NGO. This question was asked to enable the researcher to keep a record of the NGOs which returned questionnaires so as facilitate administration of the questionnaires and responses.

4.2.1 Target groups served by the users

The second question sought to establish the NGO's target groups, thereby enabling the researcher to categorize the KwaZulu-Natal society groups which the NGOs aim to serve. Some of the respondents serve more than one group of society and therefore more than one response was possible. Of the respondents, 10 (20.4%) provide services to disadvantaged communities. Some respondents gave general answers, such as: "the general public", "the whole of KwaZulu-Natal" and "SADC community". The "other" category reflected below includes workers, entrepreneurs, farmers, pastoralists, religious groups, victims of violence, criminals, victims of crime and their families.

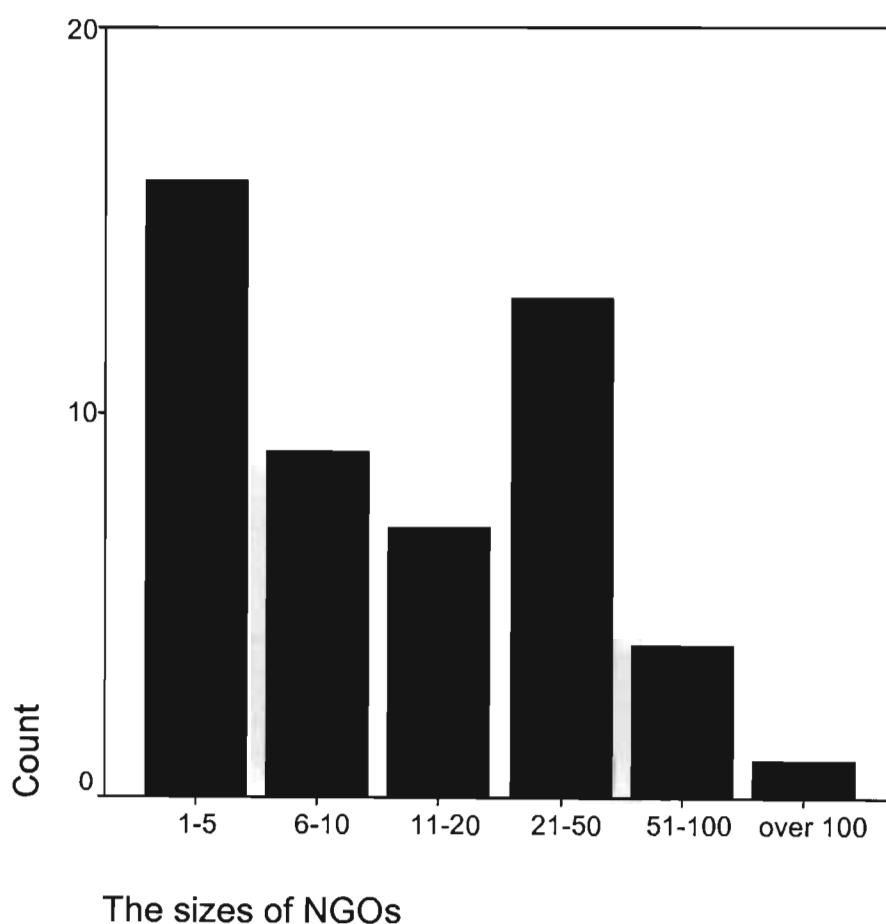
Table 1: The major groups served by NGOs (n=50)

Target groups	Frequency	Percentage
Disadvantaged communities	10	20.4
Children and youth	8	16.3
Rural communities	7	14.7
Women	7	14.7
Students and educators	4	8.1
NGOs and CBOs	4	8.1
Disabled and sick people	3	6.1
Other	7	14.7
Total	50	100

4.2.2 Number of staff in the organizations

The respondents were asked to give the size in terms of staff of their NGO. There were 16 (32%) NGOs with staff members numbering from one to five. A group of small NGOs with number of staff ranging from six to ten, comprised nine NGOs (18%). The medium sized NGOs, whose staff members number between 21-50, were 13 (26%). Four (8%) respondents indicated number of staff ranging between 51-100 members. Only one (2%) had a staff of over 100 members. Figure 1 shows the range in the sizes of NGOs in KwaZulu-Natal.

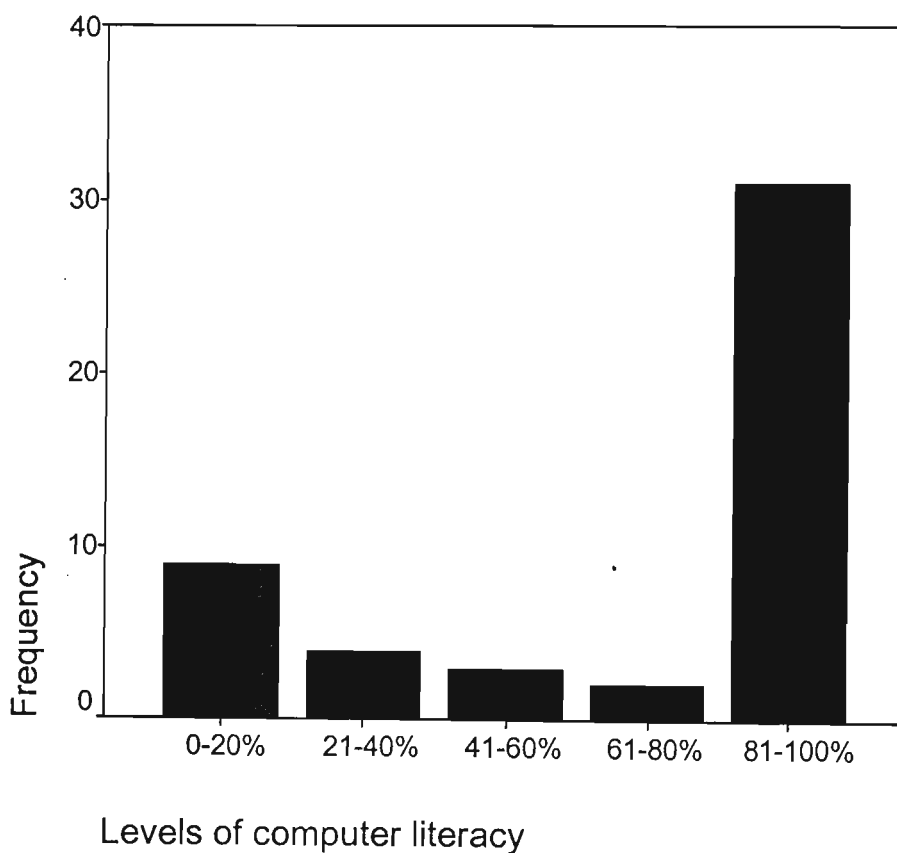
Figure 1: Range in the sizes of NGOs



4.2.3 Levels of computer literacy amongst staff

The respondents were also requested to state number of their staff which were computer literate. This was to establish the levels of computer literacy amongst the staff members of the NGOs. Figure 2 below indicates the levels of computer literacy within the NGO sector in KwaZulu-Natal. Of 32 (64%) NGOs which had a computer literacy rate of above 80%, 17 had 100% of their staff computer literate. There was only one NGO where none of the staff members were computer literate. These findings suggest that a lack of computer literacy was not an obstacle to the use of SANGONeT by the organizations surveyed.

Figure 2: Levels of computer literacy in NGOs



4.2.4 Budget for training in the use of ICTs

The use of ICTs also requires certain skills that can be acquired through training. Respondents were requested to state the percentages of their budgets which were allocated for training in use of ICTs. Ten (20%) respondents did not answer this question. Three (6%) respondents said they did in-house training in their organisations. Ten (20%) respondents did not budget for training. Twenty (40%) respondents budget 1-5% for training in the use of ICTs. There was only one (2%) NGO which had a budget of above 20% for such training. Table 2 below presents the findings.

Table 2: Percentage of NGO budgets allocated to ICT training (n=50)

Percentages of ICT training budget	Frequency	Percentage
0%	10	20
1-5%	20	40
6-10%	3	6
11-20%	3	6
Over 20%	1	2
In-house training	3	6
No response	10	20
Total	50	100

4.2.5 ICTs used by NGOs

According to the responses, a total of 38 (76%) respondents have access to telephone, fax, E-mail and the Internet. This indicates that a large proportion of NGOs have the required infrastructure to use SANGONeT. There was one organization which has access to telephone only and no other ICT. This respondent made the following comment: “We are operating under extremely difficult situations in the rural part of the [province] ... no electricity, roads, etc.”. Eight (16%) respondents use telephone and fax only, and five (10%) use fax, telephone and E-mail. Table 3 presents the findings on the ICTs used by the NGOs.

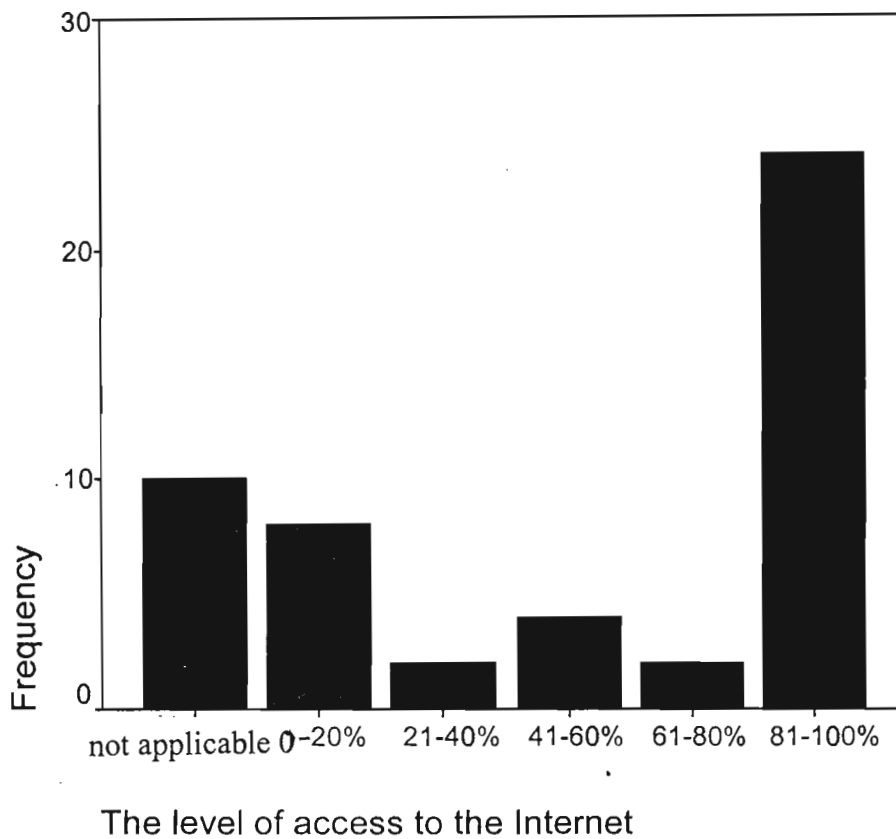
Table 3: ICTs used by NGOs (n=50)

ICTs used	Frequencies	Percentages
telephone	1	2
telephone and fax	8	16
telephone, fax and E-mail	5	10
telephone, E-mail, fax and Internet	38	76
Total	50	100

4.2.6 Access to and use of the Internet

The respondents were asked to indicate the number of people within their organization who have access to the Internet. The researcher then calculated the percentage of staff per organization which have this access.

Figure 3: Levels of Internet access available in NGOs



The results were grouped in categories to produce the graph (figure 3). Ten (20%) respondents do not have access to the Internet. The respondents of whose staff have 100% access to Internet amounts to 24 (48%). Figure 3 displays the levels of Internet access amongst the staff of the organisations. “Not applicable” indicates that these respondents do not have access to the Internet.

With regard to the use of the Internet, respondents indicated that they use the Internet mainly in searching for information, 23 (46%) of the cases use it thus. Sixteen (32%) respondents use the Internet for research. It is used for E-mail by 13 (26%) respondents and five (10%) use it for marketing. Only two respondents (4%) use it for networking. The “other” category includes the following responses: fundraising, updating Web sites, electronic publishing and electronic banking. Table 4 shows types of uses of the Internet amongst the survey population and more than one response per respondent was possible.

Table 4: Purposes for which the Internet is used by the NGOs (n=50)

Purposes	Frequencies	Percentages
Information	23	46
Research	16	32
E-mail	13	26
Marketing	5	10
Networking	2	4
Other	4	8
Not applicable	11	22

4.2.7 Budget allocation for use of ICTs

To be able to use and maintain ICT infrastructure involve costs. The respondents were asked to indicate the percentage of their budgets allocated to the use of ICTs. Of the 50 respondents, eight (16%) did not respond to this question. Of the 42 organizations which answered the question on the budget allocated to the use of ICTs, two (4%) organizations do not have such a budget. Nineteen (38%) respondents indicated that they set aside 1-5% for the use of ICTs. Only two (4%) NGOs allocate more than 20% of thier budget to the use of ICTs. This is illustrated in table 5 below.

Table 5: Percentage of NGO budgets allocated to ICTs (n=50)

Percentages of the budget allocated to ICTs	Frequency	Percent
0%	2	4
1-5%	19	38
6-10%	11	22
11-20%	8	16
Over 20%	2	4
No response	8	16
Total	50	100

4.2.8 Information most frequently searched for by the NGOs

The list of types of information most frequently searched for in the questionnaire was compiled from SANGONeT's description of the of information it provides. Table 7 gives figures on these types of information. Information on government, 33 (66%), followed closely by information for development, is used more frequently than any other type of information. Of the 25 (50%) who use health information, three (6%) respondents indicated that they searched for information on HIV/AIDS in particular. Three (6%) respondents mentioned other types of information services which were not listed on the questionnaire. Information on fundraising, street children and children's issues, as well as political information were listed as the other types of information required by respondents. The information on the list least used is information on housing. It can thus be ascertained from the results of the study that the information provided by SANGONeT is relevant to NGOs in KwaZulu-Natal

Table 6: Information searched for most frequently used by NGOs (n=50)

Types of Information	Frequency	Percentages
Government	33	66
Development	32	64
Human rights	28	56
Education	26	52
Health	25	50
Women's issues	23	46
Labour and economy	23	46
Environment	16	32
Housing	8	16
Other	3	6

4.3 Users' perceptions of SANGONeT

The following section covers user's perspectives of SANGONeT in terms of level of awareness, utilization, accessibility, and relevance of the network's services. The users' perceptions of SANGONeT as network facilitator are also discussed in this section as well as the overall benefits of subscribing to SANGONeT.

4.3.1 Awareness of SANGONeT services

The third part of the questionnaire comprised questions about SANGONeT. Questions 11 to 14 were directed to NGOs which use some of the services provided by SANGONeT, but which do not necessarily subscribe to it. In questions 11 to 22, respondents were requested to indicate the levels of awareness about the services provided by SANGONeT and levels of awareness regarding its existence.

4.3.2 Reasons for subscribing to SANGONeT

SANGONeT provided the researcher with two lists of subscribers and non-subscribers who use some of the network's services, for example, E-mail. Some respondents confused "subscription to" with "use of" SANGONeT, for example, one respondent answered "no" to the question whether they use any of the SANGONeT's services, and then "yes" to the question whether they subscribe to SANGONeT. A total of 17 respondents indicated they use the services provided by SANGONeT, but only 15 of the 17 subscribe to SANGONeT.

A total of 17 (34%) respondents indicated that they use the services provided by SANGONeT and 15 (30%) subscribe to the network. The respondents who indicated that they subscribe to SANGONeT were requested to give the reasons for subscribing to the network. Relevant coverage was the reason most cited by respondents to whom the question was applicable, 11 (73%) of 15. Two (12%) respondents gave other reasons, such as, SANGONeT being affordable, being a previous management's decision, useful for lobbying, announcements, electronic publications and to access E-mail.

Table 7: Reasons for subscribing to SANGONeT (n=15)

Reasons	Count	Pct of cases
Relevant coverage	11	73
Networking	4	27
Uncertain	2	13
Other	6	40

Respondents who do not subscribe to SANGONeT were asked to give reasons why they did not subscribe. More than one reason was mentioned by respondents. Of the respondents who answered the question, 18 (51%) cited lack of awareness as their reason. Lack of awareness regarding SANGONeT also featured in general comments. Ten (29%) respondents expressed an interest in more information about SANGONeT. In the “uncertain”category, the following reasons were stated: “no specific reason”; “tried some years ago, ... have not been able to subscribe”. The “other” category includes the following reasons: “Chambers of Commerce are not classed as NGOs”, “considering using it”, and “business is unstable”. Table 9 lists the reasons mentioned for not subscribing to SANGONeT.

Table 8: Reasons for not subscribing to SANGONeT (n=35)

Reasons	Frequencies	percentage of cases
Lack of awareness	18	51
Use other networks	10	29
Expensive	5	14
Lack of suitable ICTs	1	3
Other reason	3	9
Uncertain	7	20
No response	1	3

Ten (29% cases) respondents indicated that they use other networks . Of the ten, two (20%) NGOs use the same alternative network, namely, BRAIN. One (10%) respondent joined the network in 1990, four (40%) joined in 1999, three (30%) joined in 2000 and only one (10%) NGO joined in 2001.

The respondents were asked to state how they had discovered SANGONeT. Of the 17 (34%) respondents who answered this question, seven (41%) heard about SANGONeT from other NGOs; two (12%) from SANGOCO and PRODDER; one (6%) from the media; and three (17.6%) were uncertain, for example, one respondent said “it was the previous management’s decision”.

The respondents were also asked when they joined SANGONeT. One (6.6%) respondent joined SANGONeT when it was still Worknet in 1989 and one (6.6%) joined in 1993. Two (13.3%) respondents joined SANGONeT in 1995; five (33.3%) in 1997; one (6.6%) in 1998, another one (6.6%) in 2000 and two (13.3%) in 2001.

The results of the study indicate that the purpose for which the SANGONeT service is most frequently used is for communication. Fifteen (88%) respondents use the network’s communication services, followed by six (35%) NGOs using the support services. Training and information services are used by three (18%) of the cases. Table 10 summarises the usage of SANGONeT’s services.

Table 9: Usage of SANGONeT's services (n =17)

Usage of SANGONeT's services	Frequency	Percentages
Communication	15	88
Support service	6	35
Information	3	18
Training	3	18
Electronic publishing	2	8

There appears to be some confusion amongst the respondents as only three (18%) respondents indicated that they use the network’s information services, but eight respondents who did not indicate using these however, rated SANGONeT’s information services.

Questions 13 and 14 were designed so that the users could evaluate some of SANGONeT's services, which are available to non-subscribers as well (Section 1.2). These services are training and Internet discussion fora. None of the respondents rated the SANGONeT's training, despite the fact that three (18%) respondents indicated that they participate in training provided by SANGONeT. A rating of SANGONeT's Internet discussion was not done as none of the respondents participates in it. The least used service is the electronic publishing service, which is used by only two (8%) respondents.

4.3.3 Relevance of information services provided by SANGONET

Questions 7 to 10 were designed to establish the information needs of NGOs in KwaZulu-Natal, in order to compare them with the types of information provided by SANGONeT. Question 10 lists the types of information provided by SANGONeT and this question was left open in order to give the respondents an opportunity to mention other types of information that were not listed. All the respondents indicated that they use the same types of information as those provided by SANGONeT. Only three (1.3%) mentioned "other" types of information not listed on the questionnaire, in addition to that listed (Section 4.2.8).

SANGONeT's actual users were requested to rate SANGONeT's information services because they had access to some data bases only available to subscribers. However, some potential users rated SANGONeT's information services which are available to the general public. Most of the respondents did not indicate the information service as one of the services they use, but rated it.

The comprehensiveness of SANGONeT's information is rated as good by 10 (58.8%) respondents. Coverage of databases, for example, Sabinet, is rated as good by nine (52.9%). Accuracy of information retrieved from SANGONeT's information site and databases as well as efforts involved in retrieving information, are rated as good by eight (47.1%) respondents. While the coverage by SANGONeT's information sites is rated highly by six (35.3%) of the respondents. Relevance of SANGONeT's information service in addressing the objectives of NGOs is well six (35%) respondents.

Table 10: Rating of SANGONeT's information service (n=17)

Rating of SANGONeT's information service	no response		excellent		very good		good		fair	
	no.	%	no.	%	no.	%	no	%	no	%
Coverage of information sites	2	17.6	1	6	5	29.4	6	35	2	11.7
Coverage of databases	4	23.5	0	0	2	11.7	9	53	2	11.7
Comprehensiveness of information	2	11.7	1	6	2	11.7	10	59	2	11.7
Relevance of information	2	11.7	2	12	4	23.5	6	35	3	17.6
Accuracy of information	2	11.7	2	12	3	17.6	8	47	2	11.7
Efforts involved in retrieving information	3	17.6	0	0	3	17.6	8	47	3	17.6
Total	17	93.8	6	35	19	112	46	277	14	58.6

4.3.5 Overall benefits of using SANGONeT

The actual users were asked to state how they had benefitted from using SANGONeT. Information, communication and networking benefits were mentioned by 10 of the 17 (58.8%) respondents. A total of eight (53.3%) respondents mentioned the benefits associated with information. Networking was listed by five (30.1%) of the respondents to whom this question was applicable. Communication, including access to E-mail and the Internet, is named by four (26.6%) of the respondents.

One of the respondents made the following comment: “improved access to up-to-date information, access to a wide range of information resources, better networking and more efficient and reliable communication.” Advertising was mentioned by one (6.6%) respondent as the organization’s only benefit of using SANGONeT. Only two (11.7%) respondents indicated that they have not benefitted anything from using SANGONeT and one (6.6%) respondent did not answer the question.

None of the respondents mentioned that they had ever evaluated SANGONeT. It appears that SANGONeT’s users have not been given an opportunity to evaluate the service.

4.4 Summary

The general characteristics of the survey population, which include the target population, the ICTs used, levels of computer literacy and access to the Internet as well as the reasons for using the Internet for, have been presented. The characteristics also include the proportion of the budget allocated by NGOs to the use of ICTs and to training in the usage of ICTs. The presentation also covers the study population’s perceptions regarding SANGONeT, in terms of its usage and of the respondents’ level of awareness with reference to the network’s existence and its services. The ratings also include those demonstrating the networks’ accessibility and the relevance of its information services to its target population.

CHAPTER 5

INTERPRETATION OF THE RESULTS

5.1 Introduction

The study sought to evaluate the effectiveness of SANGONeT as an electronic information and communication network for the development and human rights sector (section 3.1). The following effectiveness indicators were measured in this study:

- ▶ amount of use and non-use;
- ▶ purpose of use;
- ▶ factors affecting use and non-use, for example, access, relevance, awareness;
- ▶ satisfaction with attribute of outputs (Menou 1993:63-64, 96; Bawden 1990:19; Lancaster 1981 ; Mchombu 1996:4).

The discussion on research results is centered around these indicators.)

5.2 Users' profile

The study population provides development and human rights services to various categories of society. Their activities centre primarily in serving the disadvantaged, the unemployed and rural communities, as indicated by the research findings. This is in keeping with those activities of the development and human right sector mentioned by Dangor and the Development Resource Centre (1997:19), and which include community development, education and training, and job creation, among others.

The study population addresses a range of development issues as stated by Fitzgerald (1992:22), and including the environment, socio-economic development, human rights, rural and urban development, among others. This is evident from the types of information they use in their work. They deal with what Cole (1994:234) considers to be the fundamental concern of sustainable development, which is the struggle for better housing, healthcare, education provision, workers' rights, the fight for a democratic order, and social and political dimensions protecting the environment. However, only a small proportion of the present survey population, that is, eight out of 50 respondents (3.7%), provide services relating to housing.

5.3 Users' perceptions of SANGONeT

The findings of the study suggest that SANGONeT's users have not been given the opportunity to evaluate the service. Accountability of a non-profit organization to its beneficiaries is crucial, as lack of evaluation increases the likelihood of ineffectiveness or inappropriate action by the organization (Edwards and Hulme 1995:9). Lack of feedback from evaluation is a serious matter for an information service, yet Boon (1992:71) points out that users are seldom consulted regarding the development of information services and that information services are seldom evaluated.

This section discusses the users' perceptions of SANGONeT in terms of their levels of awareness, their utilization, the accessibility of SANGONeT and the relevance of SANGONeT's information service as well as the users' perceptions of SANGONeT as a networking facilitator.

5.3.1 Utilization of SANGONeT

Babbie and Mouton (2001:341) maintain that a prerequisite of a programme evaluation is to establish whether the programme serves its target population. It was noted earlier in section 1.3 that SANGONeT is being underutilized in KwaZulu-Natal. The study also reveals that only 30% (15) of the respondents subscribe to SANGONeT. SANGONeT does not seem to serve the majority of its target population. This underutilization appears to result from the lack of awareness referred to in section 4.3.2.1. Of the 35 respondents who do not use SANGONeT, 18 (51%) state lack of awareness as the reason for not subscribing to SANGONeT.

5.3.2 Awareness of SANGONeT

Awareness about the electronic information and communication network includes knowledge of the existence of the network, its services, as well as the value of the use of electronic networks (Chisenga 2001:7). As stated earlier, there is a lack of awareness regarding the existence of SANGONeT by the development and human rights sectors in KwaZulu-Natal. The relatively poor usage of SANGONeT's services is also aggravated by the fact that even actual users are not aware of some of its services. It is interesting to note that SANGONeT hosts Internet discussion fora but none of the actual users participates in them. Training is another least used services. This is possibly due to the fact that some NGOs do their own training and also that SANGONeT training is conducted in Johannesburg, which may be too far away for most KwaZulu-Natal users. A

remarkable proportion of the study population, 88% study cases, use only the communication services.

As mentioned earlier in section 1.2 SANGONeT markets its services through newspapers, community news services, workshops, the NGO week promotion, by distributing brochures and pamphlets, and during community events. Only one respondent learnt about SANGONeT through the above-mentioned channels and in that case via the media. A large proportion of the subscribers learnt about SANGONeT through other NGOs (41%). In section 5.2.1, it was also mentioned that a substantial proportion of the study population was unaware of the existence of SANGONeT. Potential users commented that “SANGONeT has never been marketed to us.” This indicates that SANGONeT has not thoroughly penetrated its target group in KwaZulu-Natal. It was mentioned earlier that this is not an impact study, but some impact indicators were used in the study (Section 3.1). Market penetration is one of the impact indicators (Menou 1996:64). For SANGONeT to make an impact, it needs to market its services to penetrate its targeted user groups in KwaZulu-Natal

5.3.3 Accessibility

The accessibility of an electronic network requires infrastructure, information literacy (section 1.7) and use skills (Boon 1992:27; Chisenga 2001b). It also involves cost, including: the purchase of equipment, the recurrent costs of staff development, hardware and software installation, maintenance, as well as access fees (Kanamugire 1998:137 and Dubey 1988:47). To participate in an electronic and communication network like SANGONeT requires infrastructures for ICT, information and computer skills, and funds to maintain the infrastructure as well as pay access fees.

5.3.3.1 ICT infrastructures

A high percentage of the study population has the ICTs required to access SANGONeT. Of the study population 72.3% use telephone, fax, E-mail and the Internet. This shows that those NGOs have the ICTs required to use SANGONeT, as in order to subscribe to SANGONeT access to the Internet (SANGONeT 2001) is necessary. It was mentioned earlier in section 1.2 that SANGONeT is also an Internet service provider. SANGONeT is not only an electronic network, it also facilitates access in the use of ICTs. Facilitation of access to relevant information is one of the key

elements in the development process (Wishart 1995:27). One respondent indicated E-mail and Internet access as the overall benefits of using SANGONeT.

One respondent stated that they subscribe to SANGONeT but do not have the required infrastructure to access SANGONeT. This was checked with SANGONeT, who denied such business with this organization (the name of the NGO was not mentioned to SANGONeT). One other respondent states that they do not yet have the required infrastructure, they use SANGONeT as a mentor.

Babbie and Mouton (2001:346) argue that the success of a programme depends on the socio-political context and the geographical location or setting in which a programme is implemented. Thus the availability of suitable infrastructures is not the only requirement for success in SANGONeT in reaching its target population and satisfying their needs. Castells (1996:33) points out there are still large areas of the world and a considerable proportion of the population which is still “switched off” from the ICTs. South Africa may have better developed ICT infrastructures than other African countries, but there are still areas unprovided for. As noted one respondent made the following comment: “We are operating under extremely difficult situations in the rural part of the [province]... no electricity, roads, etc.”. This respondent states that they would like to participate in SANGONeT as an electronic network had they had the required infrastructure. However, this is the only case reported in the study where the geographical location of the respondent prevents participation in SANGONeT.

5.3.3.2 Skills required to use SANGONeT

For the NGOs to be able to use SANGONeT, they need basic information and computer literacy (section 1.7). The results of the study show that thirty respondents (60%) have an 80% and above computer literacy rate amongst their staff members. This indicates that the survey population has the required computer literacy skills to use SANGONeT. Only 20% of the cases do not use the Internet in their organizations. The difficulty of limited access to the Internet affects only small, remote and rural organizations, as discussed in the literature (Addo 2001:147; Jensen 1998:8; Sayed 1998:57). This was confirmed by the respondent who made the comment about lack of infrastructure quoted in the previous paragraph. Doyle’s (1992) summary of requirements for

information literacy (section 1.7) indicates that information literacy and use skills is one of the barriers in the use and access of SANGONeT by the potential users.

5.3.3.3 Costs involved in using SANGONeT

The study reveals that a good proportion of the population budgets for the use and training in the use of ICTs. However, only a small portion of the budget is allocated to this use and training. Of the survey population, 20% does not budget for training in the use of ICTs and four percent do not budget at all for ICTs. Five (14%) of the 35 potential users mentioned cost as the reason for their not subscribing to SANGONeT.

The cost involved in the use of ICTs include purchase of equipment, recurrent costs of staff development, acquisition of hardware and software, installation and maintenance, and access fees (Kanamugire 1998:137). Access fees include subscription, hourly rates and telecommunication costs (Dubey 1988:47). As mentioned earlier, the study shows that a large proportion of the survey population has the required equipment and most of them use the Internet. Most NGOs, therefore do not need to budget for the equipment, they only need to budget for its maintenance, the software required to use SANGONeT and their access fees. It was mentioned earlier that a high percentage of the survey population is computer literate. However, Mambo (1999:43) and Adam (1999:9) point out that developments in computerization must go hand in hand with the development of skilled staff at different levels. Budgeting for ongoing training in the use of ICTs is therefore important.

ICTs, like SANGONeT, can create possibilities for sustainable development and they have the potential for supporting sustainable development. On the other hand, ICTs are only part of several components used in development and they are not always the most important factor (Stilwell 2001:42). It was also mentioned in section 1.3 that KwaZulu-Natal is the poorest province in South Africa. One respondent states that “this is a network that can benefit NGOs, bearing in mind that we do not budget for subscription to paid networks ...”. This statement suggests that the priorities of NGOs facilitating sustainable development do not always include use of ICTs.

5.3.4 Relevance of information provided by SANGONeT

Relevance of SANGONeT's information services was evaluated in relation to the users' information needs (Lancaster 1968:121). Relevance of information to a user is the measure of a relationship between information and the need thereof (Loose 1990:239). Information needs arise when individuals seek information regarding a present need or when they foresee that information might be of some use in the future (Loose 1990:239).

The study tried to address those questions vital in evaluating the relevance of an information service as stated by Lancaster (1993:13). They are:

- ▶ how much of what is brought to the users' attention is relevant to their interests and their information needs?
- ▶ what proportion of the items brought to the users' attention do they ask to see?

According to the study, the types of information provided by SANGONeT are relevant to the information needs of the study population. A large number of subscribers (68.8% cases) cited relevance of the network's information coverage, as their reason for subscription. Lancaster's second question did not appear to have been addressed by SANGONeT to any great extent as no user oriented evaluation appears to have been done.

The quality of information provided by SANGONeT was also evaluated, and in terms of accuracy, comprehensiveness and relevance. The study reveals the small proportion of the population which took part in evaluating the network's information was generally satisfied with it.

5.3.5 SANGONeT as a networking facilitator

Only 27% of the study cases mentioned networking as one of their reasons for subscribing to SANGONeT. Networking was also mentioned by 30% of the respondents to be one of the benefits in using SANGONeT. It appears only a few subscribers consider SANGONeT a networking facilitator. There was a small proportion of the potential users who subscribe to other networks (30% of the study cases). The study shows that only a few NGOs are exposed to networking culture. This is one of the problems in using ICTs as discussed in the literature (Sheba 1998:152). The development and human rights sector in KwaZulu-Natal need to be made aware of the value of being part of a network, particularly in sharing knowledge and expertise.

5.4 Summary

The potential users were not aware of the existence of and the services provided by SANGONeT. Obstacles to the use of ICTs like SANGONeT related to accessibility and to the relevance of SANGONeT to the development and human rights sector in KwaZulu-Natal were not causes for the underutilization of the network. The actual users expressed satisfaction with SANGONeT's information and communication services, and with SANGONeT as a facilitator for networking.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

In this chapter the research objectives are reviewed and an overview of the study is given. Conclusions drawn from the findings of the study are discussed. Recommendations to SANGONeT are made as well as recommendations for further study.

6.1 A review of the research objectives

The purpose of this study was to investigate the extent to which SANGONeT facilitates the effective use of ICT tools by development and human rights organizations in KwaZulu-Natal. The study sought to evaluate SANGONeT from the users' perspective.

The following were the research objectives of the study: to determine

1. the level of awareness of the existence of SANGONeT among potential users.
2. the level of awareness about SANGONeT's services among its actual and among potential users.
3. the accessibility of SANGONeT to all its intended users.
4. the extent to which SANGONeT provides relevant information for the effective functioning of the organizations which it serves and those which it intends to serve.
5. the extent to which SANGONeT facilitates networking among its affiliated organizations in KwaZulu-Natal.
6. the reasons for the perceived underutilization of SANGONeT in KwaZulu-Natal, and then:
7. to make recommendations as to what could be done to increase the utilization of SANGONeT in KwaZulu-Natal.

6.2 An overview of the study

In this section a brief summary of each chapter is given.

Chapter 1 provided background information about SANGONeT. The importance of the ongoing evaluation of an information service was emphasized. The researcher could not trace any evaluations of SANGONeT from the users' perspective. The research problem, research objectives, questions and justification for the study were also presented. Operational definitions, and the scope and limitations of the study were also included.

Chapter 2 reviewed works on information and communication networks which relate to the study. It included works dealing with issues related to the delivery and exchange of used in information development. Other evaluative studies and methodologies were discussed, in particular, those concerned with information exchange and the use of information and communication technology to facilitate development.

In **Chapter 3** the evaluative research method was discussed. The chapter defined the study population and explained sampling procedures. Self-administered questionnaires were used to collect data. The questionnaire was pretested by conducting a pilot study. Questionnaires were distributed to both actual and potential users participating in the survey population. Data was analyzed using SPSS software. The research methodology was evaluated for validity and problems encountered during the study were also described in this section.

In **Chapter 4** the general characteristics of the survey population, including its target population, the ICTs they use, levels of computer literacy and access to the Internet, as well as the reasons why they use the Internet were presented. The characteristics presented include the proportion of the budget NGOs allocate for the use of ICTs and training therein. The presentation also covered the study population's perceptions of SANGONeT, in terms of usage, and the respondents' level in awareness about the network's existence and its services. The results also included the networks' accessibility and the relevance of its information services to its targeted users and the extent to which it facilitates networking among subscribing organizations.

Chapter 5 covered the discussion of the research results based on the effectiveness indicators, namely the amount of use and non-use, the purpose for use, factors affecting use or non-use and satisfaction with the attributes of the outputs.

6.3 The research findings

From the discussion of the research results the following findings were presented:

- ▶ There is a relatively poor use of SANGONeT's services in KwaZulu-Natal. The underutilization appears to result from a lack of awareness of the existence of SANGONeT and of its services. Potential users are not aware of the existence of and the services provided by SANGONeT. Actual users are found not using some of the services, for example, none of the actual users

participate in the Internet discussion fora. This suggests that they are not aware of this service. SANGONeT is not reaching its target population satisfactorily.

- ▶ SANGONeT does not appear to be effectively marketing its services in KwaZulu-Natal. If SANGONeT is marketing itself, marketing methods do not seem to penetrate its target group.
- ▶ The study population has the required ICTs to use SANGONeT. Development and human rights organizations in KwaZulu-Natal have high levels of computer literacy. They also budget for the use of ICTs as well as for training in the use thereof. Therefore, accessibility in terms of infrastructures, skills and finances does not affect the lack in use of SANGONeT.
- ▶ The information provided by SANGONeT is perceived as relevant to addressing the objectives of development and human rights organizations in KwaZulu-Natal. Those respondents who did use SANGONeT's services were satisfied with the accuracy and comprehensiveness of the information services provided.
- ▶ SANGONeT's actual users mainly use the network for communication. On the other hand, SANGONeT is not generally perceived as a networking facilitator by development and human rights organizations in KwaZulu-Natal.
- ▶ SANGONeT's actual users have not been given the opportunity to evaluate the network.

6.4 Conclusions

As earlier mentioned, potential users are not aware of the existence of and the services provided by SANGONeT. SANGONeT is only used by a very small proportion of the population. Obstacles which are generally seen to hamper the use of ICTs like SANGONeT, and which are related to accessibility and relevance do not apply in the case of SANGONeT. Those barriers are not causes for the underutilization of this particular network.

The actual users expressed satisfaction with SANGONeT's information, communication services, and with SANGONeT as a facilitator for networking. The actual users form a small proportion of the study population. However, actual users are not using the majority of the services provided by the network.

While SANGONeT is one of the oldest electronic information and communication networks in South Africa, it has not successfully penetrated the market in the province of KwaZulu-Natal. It

can thus be concluded that SANGONeT does not effectively facilitating the use of ICT tools by development and human rights organizations in KwaZulu-Natal.

6.5 Recommendations for SANGONeT

The following recommendations are based on these research findings, and on the guidelines to increase the use of an information services as suggested by Allen (1996:258).

- ▶ SANGONeT needs to improve its marketing strategies in order to increase the target users' awareness of its service. E-mail provides a cheap way of distributing information and as a good proportion of its potential users are on E-mail, SANGONeT should consider using E-mail to advertise its services. The results of the study indicate that many NGOs found out about SANGONeT from other NGOs. Therefore SANGONeT should find ways of better utilizing the users to market the network to others.
- ▶ Maintaining contact with the intended user group and encouraging them to use the services as well as retaining the kinds of records that will ensure interaction is very important. The researcher experienced difficulties in obtaining contact details of actual users from SANGONeT. SANGONeT requires an up-to-date database of the contact details of its subscribers and of its target group.
- ▶ Establishing effective ways for service delivery so that barriers are not created between the users and the services they need, is also crucial. One of the barriers in using certain SANGONeT services offered in Johannesburg, for example in training and participating in Internet demonstrations, is that of distance. SANGONeT needs to consider the possibility of setting up provincial offices, so that its services are more accessible to its intended users. If regional offices cannot be established, SANGONeT may also look at using "road-shows" like Sabinet does. SANGONeT can bring some of its services such as training closer to its users by running free or cheap regional training sessions for its clients. This can also help to attract more users.
- ▶ The importance of ongoing evaluations of an information service was emphasized in the literature. SANGONeT needs to give its subscribers the opportunity to evaluate the network's services on a regular basis.

6.6 Suggestions for further study

The following areas for further research are suggested:

- ▶ An investigation into methods for promoting a networking culture by sharing knowledge and expertise into the development and human rights sector.
- ▶ The literature review reveals that there is a need for users' studies relating to the development of information services (Boon 1992:71). Users must be consulted regularly as their information needs change rapidly.
- ▶ Cost-benefit studies of information services are important, and especially in organizations where management is reluctant to invest in ICTs and where information services are seen as support services of the lowest priority.
- ▶ Accountability in terms of effectiveness and impact is very important in non-profit organizations. Non-profit organizations which provide information services require constant evaluation in terms of their effectiveness and the impact they are making. It was stated earlier that this study was not an impact study. It is suggested that when new information services are introduced, impact studies should be conducted. The current exploratory study has provided some baseline data upon which such a study could be developed. Ongoing impact studies are important to keep an information service up-to-date.

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APPENDICES

APPENDIX A: Letter to SANGONeT

To: <info@sn.apc.org>

From: NOKUTHULA NDLOVU

Date: 12 Mar 01, at 11:14

Subject: Research

Dear Sir / Madam

I am studying for a Master of Information Studies at the University of Natal, Pietermaritzburg. I intend to evaluate SANGONeT as an information system for development organizations. My study will cover the NGOs in KwaZulu-Natal.

The literature I have been able to review so far indicates that the Internet can be useful in narrowing the gap between developed and developing societies. I have selected SANGONeT because it is a well-established information system in South Africa and because it is Internet based.

The study will not only focus on NGOs that subscribe to SANGONeT, but it will also include the nonsubscribers. I hope the results of this study will benefit not only SANGONeT, but also your subscribers and potential subscribers, and people working with similar information systems.

I have been unable to identify any studies on SANGONeT. I would like to know if there are any completed studies or studies in progress on SANGONeT which you know of. I would also like to know if it is possible to access any internal reports, and if you can provide me with a list of affiliated NGOs in KwaZulu-Natal.

Your assistance will be greatly appreciated.

Yours faithfully

Nokuthula Ndlovu

ndlovun@plho.kzntl.gov.za

APPENDIX B: Letter from SANGONeT

From: <lauren@sn.apc.org>

To:"NOKUTHULA NDLOVU" <NDLOVUN@plho.kzntl.gov.za>

Date:3/12/01 11:43AM

Re: Research

Dear Nokuthula

Your research sounds interesting and SANGONeT would be willing to assist.

Unfortunately there are no studies that I am aware of that focus on SANGONeT. Please let me know what kind of internal documents you require. You may have to be very specific.

I will try access a list of the NGOs we do work with in the KZN region.

Thanks

Lauren

Lauren Fok

SANGONeT - Client Relationship Officer

187 Bree Street, 13th Floor Longsbank Building, Jhb, South Africa

P.O.Box 31, Jhb, 2000

Tel 011 838-6943

Fax 011 492-1058

Toll free number 0800 115220

email lauren@sn.apc.org

APPENDIX C: SANGONeT questionnaire

SANGONeT Questionnaire

1. In your website your mission is very clearly stated, but your aims and objectives are not very clear. Can you clarify your aims and objectives?

2. Who are the SANGONeT's user community?

2.1. Do they subscribe?

2.2. What services are available for the SANGONeT community?

2.3. How much is the subscription fee?

2.4. Do they pay extra for accessing SABINET and other databases?

3. What services are available to the general public (non-subscribers)?

4.How do you market your service? What strategies do you use to reach your target group?

5.In KZN there seems to be a low subscription , are you aware of any reasons for that?

6. Do your intended users get a chance to express their needs, make comments and suggestions about SANGONET?

How do you facilitate that?_____

APPENDIX D: Covering letter of questionnaire

Department of Information Studies
School of Human and Social Studies
University of Natal
Pietermaritzburg

The Director

I am a Masters student registered with the Information Studies Programme, School of Human and Social Studies, University of Natal (Pietermaritzburg) and I am conducting research towards the completion of my degree.

My research intends to evaluate SANGONeT (South African Non-government Organization Network) from the users' perspective, including nonsubscribers. SANGONeT is a regional information and communication network for assisting development and human rights workers in Southern Africa. My research intends to investigate the extent to which SANGONeT assists development and human rights organization in KwaZulu-Natal. The attached questionnaire contains questions in this regard. Your participation in this study is important as the results will be beneficial to your organization and other organizations involved in development and human rights work. Your participation is valuable whether or not your organization subscribes to SANGONeT.

With regard to the completion of the survey, I would like to suggest that the questionnaire be answered by someone who best represent the views of your organization on the subject. Your confidentiality is assured. If you so wish, your organization and chosen respondent remain anonymous.

It would be greatly appreciated if the questionnaire was completed as soon as possible. If it is possible, I would like the answered questionnaires to be returned before the 21st of September 2001. A completed questionnaire may be posted, faxed or e-mailed to the addresses listed below. If you have any queries, please contact me.

Thank you for your cooperation.

Yours sincerely

Ms Nokuthula Ndlovu
P.O. Box 533
Pietermaritzburg
3200
Tel: 033-3940241 ext 2216
Fax: 033-3942237
E-mail: ndlovun@plho.kzntl.gov.za

APPENDIX E: Research questionnaire

Please note that your participation in this study is essential irrespective of whether or not your organization subscribes to SANGONet. Please try to answer all questions. Make a cross (X) in the appropriate box(es).

1. Name of your organization _____

2. Who does your organization aim to serve?

3. How many staff members are working for your organization? _____

4. How many members of your staff are able to use computers? _____

5. Indicate which information and communication technologies your organization uses

Telephone	Fax	E-mail	Internet	Other, specify _____
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6. If your organization has the Internet, how many members of your staff have access to it? ____

7. If your organization has access to the Internet, what does it use the Internet mainly for? ____

8. On average, what percentage of your budget is allocated for the information and communication technologies listed in question 5?

0%	1-5%	6-10%	11-20%	over 20%, specify _____
----	------	-------	--------	-------------------------

9. On average, what percentage of your budget is allocated to staff training in using information and communication technologies listed in question 5?

0%	1-5%	6-10%	11-20%	over 20%, specify _____
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10. What type of information does your organization frequently search for?

Women's issues	Human rights	Health	Government, e.g. legislation	Housing
Environment	Development	Education	Labour & economy	Other, specify__

11. Does your organization use any of the services provided by SANGONeT?

Yes	No
-----	----

12. Which of the following SANGONeT services do you use?

Information, e.g. Sabinet	Communication, e.g. e-mail	Electronic publishing
Support service	Internet discussion forums	Training

Other, specify _____

13. If your organization participates in SANGONeT Internet discussion forums, How would you rate them?

Excellent	Very good	Good	Fair	Poor
-----------	-----------	------	------	------

14. If your organization participates in training provided by SANGONeT, how would you rate it in terms of improving efficiency in your organization?

Excellent	Very good	Good	Fair	Poor
-----------	-----------	------	------	------

15. Does your organization subscribe to SANGONeT?

Yes	No
-----	----

If your answer is YES to question 15, proceed to question 20-26 and general comments. If your answer is NO to question 15, answer questions 16-19 and general comments at the end of the questionnaire.

16. What are your reasons for not subscribing to SANGONeT?

17. If your organization subscribes to another electronic and information network, please name the network you are using _____

18. When did you join it? Please give approximate date _____

19. Why did you join it? _____

20. When did you join SANGONeT? Please give approximate date _____

21. Why did you join SANGONeT? _____

22. How did you find out about SANGONeT? _____

23. How would you rate SANGONeT as an information service in directly addressing the objectives of your organization?

	Excellent	Very good	Good	Fair	Poor
a) Coverage of information sites					
b) Coverage of data bases, eg. Sabinet data base					
c) Completeness of information retrieved					
d) Relevance to your information needs					
e) Accuracy of information					
f) Effort involved in retrieving information					

24. What are the overall benefits gained by your organization as a result of subscribing to SANGONeT?

25. Has your organization ever had an opportunity to critically evaluate the services provided by SANGONeT?

Yes	No
-----	----

If yes, in what way has SANGONeT's services been evaluated and what, briefly were the results?

