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I. Purpose of the Case Study

This case study seeks to establish under which conditions rural telecentres can make a meaningful contribution to bridging the “triple digital divide”, - between North and South, between urban and rural communities, and between men and women in rural areas.

1. *Framework of the Study*

The study has been written as part of the evaluation of the Hivos policy and action programme “Access for all: equal opportunities in cyberspace”, 2000-2004. This evaluation consists of a desk study on the success of “mainstreaming ICT” in the activities of Hivos and its partner organisations, and three in-depth case studies on

- the contribution of ICT to the working of networks (especially in Latin America),
- knowledge sharing on ICT applications in micro-credit programmes (in South Asia),
- the added value of ICT for partner organisations in rural areas (in Southern Africa).

The present case study concentrates on the activities in rural areas by partner organisations in East and Southern Africa. It focuses on the opportunities for rural telecentres to make a significant contribution to counteracting the digital divide.

2. *The Triple Digital Divide*

The “Digital Divide” is not only a divide between highly industrialised and developed countries. In most capitals of developing countries, there are many Internet Cafés, and it is easy to get access to the Internet (although the price – even if low in comparison to prices in industrialised countries – may be prohibitive for large parts of the population).

The main digital divide is between urban centres (wherever in the world) and rural areas in developing countries, which largely lack access. Rural areas are often beset with a number of extra problems. Electrification has not reached many villages. Telephone connections are often bad or non-existent. Schools and other public facilities are often poorer than in the capital. The population lives in a more dispersed way. The general level of education is lower. Much of the available information on the Internet is not relevant in such a context.

Wherever there is a connection to the Internet, there is a third digital divide. The barriers for rural women to get access to the Internet are even higher than for men. This has to do with their access to education, the overall burden on rural women which leaves them hardly any time, and the relative lack of mobility.

3. *The spread of rural telecentres*

As a reaction to this situation, “telecentres” have been set up in many developing countries to counter these different forms of the digital divide. What are “telecentres”? And what does “rural” mean in this context?

i. *Definition of “telecentres”*

A “telecentre” in this case study is a place in which (a) different means of communication (such as telephone, fax, photocopying, and the Internet) are accessible to (b) a large number of people, ideally the general public.

A local post office in which these services are available could qualify as a “telecentre”, a computer lab at a school which is not accessible to a larger public would not. A public payphone would not yet be a “telecentre”. Access to the Internet is part of the concept of a “telecentre”. But a “telecentre” could probably continue to function for a while without an Internet connection, with other sources of information (leaflets, CD-roms, videos) used instead.

ii. *What are “rural areas”?*

A rural area is an environment in which the majority of the population earns its living from agricultural activities. It can be a “peri-urban” environment in the direct neighbourhood of cities or an area far away from any urban agglomeration. One of the major characteristics of such an environment is that people live relatively dispersed, - with the result that the users of a telecentre (with the exception of the small number that lives in the direct neighbourhood of the centre) have to cover some distance to reach the TC. It also implies that the suppliers of important services (repair, training) are probably far away. Another criterion is that these centres have to cater for the specific needs of farmers (and farming related activity) and their families (e.g. information needs with regard to agricultural inputs, marketing information, veterinary information ...).

4. *The scope of this study*

The author of the present case study had the opportunity to visit seven telecentre sites in Uganda and Zimbabwe in which five of Hivos partner organisations are involved. These partner organisations are:

- CEEWA: Council for Economic Empowerment for Women of Africa (Uganda Chapter)
- KRC: Kabarole Research and Resource Centre (Uganda)
- ZWRCN (Zimbabwe Women’s Resource Centre & Network)
- AFRICA 2000+ (Zimbabwe), and
- SAFIRE: Southern Alliance for Indigenous Resources (Zimbabwe).

The visit took place in the second half of April in 2004 (21-25 April in Uganda and 28 April – 1 May in Zimbabwe). Additional information was obtained from staff members of partner institutions during the Southern Africa Regional ICT Workshop, organised by OneWorld.net/Africa and Hivos, in Lusaka on the 26-27 April, 2004. Uganda and Zimbabwe were chosen on the basis of the relevance of local projects for the main question asked and for reasons of feasibility (visits to several projects within a short time period, combination with the ICT workshop in Lusaka).

5. *Mixed experience with telecentres in the past*

The topic of telecentres had been chosen, because anecdotal evidence suggested that the original high expectations with regard to rural telecentres were not fully justified. Many of the telecentres have fewer visitors than originally anticipated. The visitors come for many personal purposes (making telephone calls and photocopies), but seldom for development related activities.¹ If they use the computers, they often play games. If visitors do search the Internet for development related information, they often do not find anything relevant to the local context. And if they find relevant information, they lack the means to make use of this information (.e.g. market information, because they may lack the means of transport to profit from a higher price on a market somewhat farther away).

Therefore, not only functioning telecentres were visited, but also sites where a telecentre was planned. The objective of these visits was to find out in how far the owners of the project were aware of the experience of operating telecentres and in how far they do learn from such experience and can be expected to do better in the future.

6. *Future focus of Hivos ICT policy in Africa*

Africa has been a special challenge for the Hivos & ICT programme. Exposure to ICT had been lowest (in comparison to other world regions), and problems with the infrastructure persist, especially in rural areas. Access is often slow and this does not motivate the use of Internet. Though constraints have become less during the last four years in most countries, and ICT is now vibrant in Southern Africa, rural areas often remain unconnected.

An important question for the future is, therefore, whether Hivos should focus more on rural areas in Africa, or whether the overall problems of electricity and telecommunications infrastructure and the general level of education and economic development would suggest other priorities. This study will offer some reflections on the

- *cost-effectiveness,*
- *appropriateness,*
- *sustainability and the*
- *overall development impact*

of rural telecentres in an environment such as in Southern Africa. It will conclude under which conditions Hivos should invest more or less in rural telecentres. These ideas can form an input into the future ICT policy of Hivos as a follow-up to the “Access for all: equal opportunities in cyberspace” programme (2000-2004).

This report does not offer a proper evaluation of the work of the individual partner institutions involved in this field or of the specific telecentre projects that have been visited. It concentrates on factors that decide on the success or failure of such projects as a policy input for the future ICT policy of Hivos.

¹ It is not easy to decide *a priori* what a development related ICT activity is. Anriette Esterhuysen (Association of Progressive Communications) remarked at the ICT workshop in Lusaka on 27 April 2004 that the pressure to make a “responsible use” of ICT for development might turn out to be a barrier to feel comfortable with ICT. Kids who play games and become familiar with ICT this way may turn out to be the Bill Gates of the future. They appropriate and internalise the basics of ICT while playing. The same might happen to people putting their kid’s photographs on the web or do other playful things. It is therefore not so easy to decide beforehand what the most development related ICT applications are, and the borderline should not be drawn in a too narrow way.

II. The Telecentres visited

The main characteristics of the seven telecentres visited are summarised in Table II.1. This chapter provides some information on the organisations that have started the centres and a description of the telecentre itself.

Table II.1: Basic information on the seven telecentres visited in Uganda and Zimbabwe

Place	Location	Organisation	Characteristics
Nabweru			
6 km northwest of Kampala (Uganda)	On premises of sub-county administration	Started as Acacia project, now under sub-county administration	“Intimidating location”; linked to Community Radio
Buwama			
64 km south of Kampala (Uganda)	Integrated into community centre in market town	Started as Acacia project, now under sub-county administration	Embedded into community centre, but little used
Mukono			
Goma sub-county, Kampala (Uganda)	Integrated in living area in outskirts of Kampala	Set up and administered by CEEWA	More a suburban than a rural setting
Bwera			
15 km from border to RD Congo (Uganda)	Central location in small border town	Associated with KRC	Very lively civil society organisations
Harare			
City Centre of Harare (Zimbabwe)	City centre near embassies	Owned by ZWRCN	Educates groups of girls from rural areas in ICT
Insiza			
Insiza District (Matabeleland South) 30 km from Filabusi	Centre of the village near shops	Funded by Africa 2000+	Logical follow-up to host of other common activities
G.(ORAP)			
12 km from Plumtree (10 km from border to Botswana in Matabeleland)	Part of a school for vocational training near local hospital	Set up by SADNET, supported by SAFIRE	Relatively isolated but probably frequented by students

*1. Council for Economic Empowerment for Women of Africa
(CEEWA, Uganda Chapter)*

CEEWA-Uganda activities fall under four broad programs which encourage interventions from household to international levels. These programs are

- Women and agriculture (promotion of gender sensitive agricultural policies)
- Women and Finance (advocating for gender sensitive credit policies and programs)
- Women and economic decision-making (gender equity in economic decision-making)
- Women and entrepreneurship development.

It is under this last programme that CEEWA is implementing its ICT Project to economically empower rural women entrepreneurs.² The project first received a one-year funding from Hivos in June 2002 for phase II operations after the end of funding from IDRC. It was extended in June 2003 to March 2004 to enable completion of all the planned activities. The project's operations are in four sites (Kampala, Nabweru, Buwama and Mukono).

Under the Women and entrepreneurship development program, CEEWA has up to now trained a total of 423 entrepreneurs in ICTs use and application in business development. At all three locations visited, groups of more than 10 women had gathered to tell about their own background and their own experience with the courses followed and their use of ICT (which may be, for example, a nice looking list of prices for hairdressing services).

The aim is to help women (and occasionally men, too) to start or improve their own business. Often these are women farmers that engage in commercial production to increase their monetary income or who start a shop or another business alongside their farming activities. Examples of such activities would be:

- to (flock) 200 cocks,
- to set up a small stationary shop
- the "six bulls association" to raise cattle
- to found a piggery,
- to run a restaurant,
- to produce bricks,
- to sell fish,
- to start a snack shop.

CEEWA mainly offers basic courses in business development (on record keeping, saving, marketing, customer care, business planning and development, pricing and costing, loans and loan management. Making use of a computer is part of the course programme. The ICT use by these women is often relatively limited (making a telephone call, using a calculator, writing a letter, printing a price list). The indirect benefits of such a use are often more important than the direct benefits. It takes an important threshold away. It conveys the feeling that they are part of "modern times", that they can use the information on the Internet if need arises. It is empowering even if no extensive use is made of the Internet.

CEEWA also offers a large number of useful booklets on different aspects of agricultural activity (for example on the production of passion fruit, green pepper, cassava, banana, beans, onions and cabbage seedlings, maize, sweet potato, etc.) and on basics of business

² Economic Empowerment of Women Through Use of ICTs. A case of the CEEWA-Uganda ICTs Project, Kampala (booklet, no date).

development (booklets on entrepreneurship, business planning, organizing and time management, buying and selling, costing and pricing, record keeping, credit management, marketing, etc.) Video documentaries have been produced on banana production, Poultry keeping, Pig Farming and the CEEWA-ICT Project Experiences. Booklets and video documentaries are either in English or in Luganda language. This material would be very useful for many other projects. It should be distributed to a much wider audience, not only in Uganda, but also in other Southern African states. Hivos could eventually play a role in assuring a wider use of the interesting material that has been compiled.

CEEWA has also produced an interesting CD-rom that helps users to get through the first steps of making use of a computer. ICT use by CEEWA is highly application oriented. CEEWA is in the midst of an internal evaluation of its own ICT-project to get more information on what the impact of their training programs is and on what happens with the knowledge and competencies that women acquire during the training programs

CEEWA is an organisation that has engaged in a number of useful activities. It is well organised, has very competent staff, and occupies a spacious office amidst the embassies and the offices of other international and national development organisations in the centre of Kampala. It is an organisation that does very well what it does, and may be looking for new challenges in the future.

CEEWA is in the midst of transforming its ICT project into an Empowerment Resource Centre. The process of designing a business plan for the Centre was completed with technical assistance from SNV in February 2004. The CEEWA website www.ceewauwires.org was put back online in February 2004 after getting a new hosting company (Africa online). Efforts are under way to update the information. Up to date information on best practices in agriculture and business development has been collected and is being repackaged for uploading on the website.

In the next phase the project will build up capacity to train trainers; the trainers will come from the ranks of the beneficiaries themselves. As a follow-up to the trainer training, they will be supported for 1 year, monitoring the results,

CEEWA facilitated a visit to the telecentres at Nabweru (see photo next page), Buwama (photo below) and Mukono.



The Telecentre at Nabweru

The telecentre at Nabweru started as part of the Acacia Initiative (of the Canadian IDRC). It opened in May 1999.

It is located in the premises of the sub-county administration, which could be regarded as an advantage because many people would come there anyway. It turned out to be the opposite: people regard the premises as an intimidating environment (“If I have not paid my taxes, I might be put into prison”). It also has the disadvantage that some county representatives try to use the Telecentre as a kind of secretariat (especially to make photocopies), without thinking about paying for the services.

The sub-county has become the owner of the centre, but it does not finance it (all budget lines are already committed to other purposes). The income is not enough to pay the manager a salary which would be the equivalent of the salary for a comparable position elsewhere. According to the manager, it would be very difficult to become economically self-sufficient: If fees are high enough to cover the costs, they would probably deter an important part of the constituency.

At this moment, relatively few people make use of the services. Forms of “e-government” (formulas to be filled in on-line, etc.) could increase the use, but that seems for the far away future.

The telecentre is also the studio for the local community radio, where local presenters were trained at the moment of the visit. Since there was no electricity at that moment, they could not demonstrate their skills.

CEEWA made use of the facilities for their training programs, but few other civil society organisations seemed to use the centre on a regular basis.



The manager of the centre is standing in the back row (third person from the left). In the front row Mary Kuzambiza, director of CEEWA (second from the left), and Rehema Baguma (first from the right), together with beneficiaries from the CEEWA training programme.

The Telecentre at Buwama

The centre also became operational in 1999. It is part of a community centre in a small town 64 km south of Kampala, some 200 m off the main road, and about 1200 m away from the sub-county administration. It has the advantages of the proximity of the administration, without the disadvantages of the centre in Nabweru (which is on the premises of the administration). A sub-county official passed by towards the end of the function to underline the sub-county's support for the centre.

It is the most spacious of the centres visited, managed by a young woman since a couple of months (after having closed for two months when the former manager left for another position, because he did not see a future for the centre after the donor announced to pull out. The salary is less than that of other telecentre managers, since the "carrying capacity" of the rural centre is less. It has to finance itself now. According to the manager, it covers its costs (though rates are below market rates), but I am not so sure about that.

When the present manager took over, most of the equipment was not working. After a while, the computers were working again and the photocopy machine, but not the fax, telephone or Internet. According to the manager, the Canadian donor organisation should at least take care that all the equipment is functioning before leaving definitely. She would have preferred a gradual phasing out of the donor support instead of a sudden pull-out. The "handover" to the sub-county is planned as a big function, - which could have better taken place at the moment of the opening of the centre.

Not having had an official opening contributed to the unfamiliarity of many people with the centre. They know that it does exist, but they do not know what it can contribute to them. On a quiet day, not more than 2 people may visit the centre. On a busy day, about 20 would come. There is a market nearby, but market days do not attract extra visitors.

Since the telephone (and thus the dial-up connection) has hardly been working (the private provider MTN was having problems sustaining telephone services on account of weak network signals), the centre cannot offer full services. People who visit the centre therefore may only come once, if they do not find what they came for.

This underlines the importance that a centre should start with a broad range of services offered (and a lot of printed material available). If potential users find something of use to them the first time they come, they will spread the word and they will come back. The manager expects more publicity for the centre once it gets linked to community radio. When the community radio is going to work, it will also be a way of advertising the services of the centre.

CEEWA did some training at Buwama last year, this year no training has taken place. (After a number of trainings, the group of potential beneficiaries becomes limited in a rural setting with a limited number of people in the immediate neighbourhood – although the organisers say that there is still a large unfilled need. There is now a group of 16 active women (which started with 13). At the moment of the visit, a group of 5-6 students were using the computers.

The Telecentre at Mukono

This centre has been started by CEEWA itself about a year ago. It is operated directly by CEEWA. It is a small stand-alone building situated in the outskirts of Kampala in the midst of a living area where people also maintain some agricultural activities (e.g. zero-grazing cattle raising).

In 2002, an ICT baseline study was carried out in Mukono District. The study indicated that most women were involved in the running of own enterprises, but lacked ICT skills and facilities within their communities that would facilitate communication and access to information to enhance their business.

The manager is a young man who is quite popular among the beneficiaries – he has a solid ICT knowledge, good communication skills, didactical talent, and a business development outlook. (This also makes the centre vulnerable: what does happen if this talented person moves on to another position.)

The big difference to a Cybercafé is that the centre provides formal training in the use of ICT, linked to concrete applications in business development. The centre provides training in ICT use to enable women to keep their records using ICTs. Many of the women underlined that an important part of the training program was on how to save some money to start a business in the first place.

The courses are very basic (how to write a letter). Women continue to meet every week: Good practices in record keeping need frequent guidance and monitoring. A by-product of the training is that a group spirit has developed. The women exchange experience and plans. This in itself contributes to empowerment.

Talking about the use of ICT, many women mention the use of a telephone first. It helps them to cut on transportation costs and to save time.

The discussion has shown that it is important to offer a broader range of services than just ICT training. Training in concrete applications like business development is helpful. But a lot of additional preconditions have to be met by the women involved to build up and expand their own businesses (continued coaching, micro-finance, legal advice, etc.).

The problem of distance to the telecentre could be reduced if computers were also available in the surrounding parishes. Some women might team up and buy their own computer to use it as a business.

It was not clear whether the centre was also used by other groups (beside CEEWA). This might be a precondition for operating it in a sustainable way in the future.

2. Kabarole Research and Resources Centre (KRC)

KRC is a quite unique organisation, located in Fort Portal in Western Uganda. Established in 1996 by a number of graduates from Makerere University who wanted to make a contribution to the development of their home region, it now occupies a crucial position in the mountainous Rwenzori Region along the border to the DR Congo, at about 300 km from Kampala). It is not only a research and resource centre, but has been a catalyst for the creation of many civil society organisations in the region as well as networks between these organisations. KRC has a holistic approach to development that is geared towards the transformation of the social, economic and political spheres. The participatory approach involves the local communities in identifying their needs, designing of possible solutions and monitoring their own progress.

KRC has four program areas:

- Micro Projects
- Human Rights
- Civil Peace Service and the
- Micro Finance Association.
-

These fields are closely interrelated. Without peace and security, the other activities could not unfold. Without respect for human rights, they would not be sustainable. Without additional sources of income, conflicts about scarce resources would flare up.

The different program areas are linked and coordinated by the Coordinating Unit. The overall “Sustainable Civil Society Empowerment Program” has the objective of empowering the civil society to effectively and efficiently transform their lives in an equitable, economically dynamic and environmentally sustainable manner through provision of financial, technical and organizational support; networking and advocacy, research and information dissemination. KRC is an excellent example of an integrated regional approach. KRC works together with foreign partners, but tries first and foremost to stimulate the local potential in the region itself.

KRC has been instrumental in bringing about the Bwera Information Centre Project (see next page and photo on front page).

A car from the German Development Service, which is used by KRC in Fort Portal, Uganda.



The planned Telecentre at Bwera

The Bwera Information Centre Project (BIC) in Kasese district in Western Uganda. The idea of establishing an information centre came up in September 2002 at a workshop organized by the Kabarole Research and Resource Centre (KRC) and its partners at Fort Portal. KRC conducted an open space technology workshop to ponder on issues affecting development in the Rwenzori Region. Participants identified six key factors hindering development in the region. The lack of information sharing among the development partners was singled out as the most important factor limiting the rate of development.

Karambi Action for Life Improvement (KALI) and other local partners in the Bwera region explored ways of developing an information sharing system as a strategy for improving the quality of life of the rural poor they serve. IN a first meeting in August 2003, KALI, Karughe Farmers' Partnership (KFP), Kyempara Farmers, Ikongo Rural Development Association, and Cartas-Kasanga resolved together to establish a community information centre and approached KRC for possible assistance. The centre will start its operations in June 2004.

What makes BIC very promising is the large number of organisations involved (more than 20) which will not only be users but also producers of content. BIC will provide a broad range of information including agricultural, marketing, health, sanitation, environment, functional adult learning, human rights, good governance, gender and development.. The ICT staff will gather, process, package and disseminate the information a form that meets the clients' demand and needs.

A steering committee comprising eight members drawn from each of the four main local partners was elected to oversee project implementation, ensure that the project is run by competent personnel and source relevant materials. The project will first hire services of volunteers who will be trained in information technology. These volunteers will be paid a subsistence allowance. As the project takes root and expands, full time staff will be recruited.

A partners' forum will represent all the civil society groups involved in BIC. This will be the supreme policy making body for the project. BIC is an excellent example of a project with a broad base in civil society, with many organisations closely involved in the planning and decision making process. It is a showcase for the best sequence of events (starting with a close cooperation among civil society organisations in the planning process, rather than putting up a centre first and then hoping for cooperation among interested organisations to come about.

Discussions at Bwera focused on the planned cooperation with local schools in content production and on the opportunities to earn an income from local content creation. A good insertion into international networks will be necessary to find the right channels for marketing the content. Concerns about intellectual property rights might limit the willingness of local groups to make their knowledge available.

A strong emphasis will be put on training programs. Video films have been identified as being the most effective way of teaching agricultural technologies to a semi-literate audience.

3. *The Zimbabwe Women's Resource Centre & Network (ZWRCN)*

ZWRCN is a non-governmental organisation working in the gender and development field. Its core business is gathering, interpreting, publishing and disseminating rare and life-changing information in order to allow women to make informed choices about their lives and influence government to implement gender sensitive policies.

In 1999 with a small grant from the Pacific Institute for Women's Health, ZWRCN set up the very first Zimbabwean Internet café dedicated to creating e-mail and Internet knowledge, use and access to women working within the community of non-governmental and other organizations. The café started operating in August 2000. At the inception ZWRCN targeted women working in women's NGOs for the training and the services, but it later broadened the target group to women and girls in general because most of the women's NGOs decided to have their own Internet connections in their offices. The last group training for women's NGO staff was in November 2001.

ZWRCN has recently repositioned itself and increased its research activities. It has carried out a large survey in three provinces on the impact of HIV at the household level. People were trained in the use of a camera and made pictures that challenge the viewer to consider a world without gender imbalances. The resulting publication "Picture My Life" with photographs selected from a total of 675 images taken by 18 women and 12 men in six wards in the Midlands and Matabeleland South provinces illustrates how removing gender discrimination could bring a turnaround in the current pattern and direction of HIV infection.

The HIV project has some links with the ZWRCN programme to provide ICT training to young women from rural areas (see next page). The high school girls come from the same wards on which the HIV survey concentrated. Raising HIV awareness (and the gender aspects in the spread of HIV) is also part of the training that the girls receive in Harare.

Besides, ZWRCN carries out a large scale project on gender sensitivity of the national budget. The analysis of the budget of five ministries clearly demonstrates that policies and budget do not match. ZWRCN has done some path breaking work in this field, which could also be very interesting for similar organisations in other countries (e.g. CEEWA in Uganda).

The Internet Café had been intended to be an income generating project, but has not reached that stage. The fact that the connection was unreliable (and much of the time down) made the Café lose many clients. It is discussed in how far it can be transformed into a commercial venture. At this moment it is still donor funded (via organisational funding).

ZWRCN's website could need some additional input, but time of the only IT officer is scarce.

ZWRCN now has a staff of 12. The future is somewhat uncertain, since most NGO activity is frustrated by the political situation and government efforts to bring NGOs under control.

Digital Divas

The Internet Café of ZWRCN is included in this report because ZWRCN actually carries out a program to bring 108 groups of 12 girls each from rural areas to Harare for ICT training. At the end, the programme will have made 1300 girls more familiar with ICT. So instead of (or in addition to) bringing ICT to a rural community, it brings the villagers to ICT facilities during school holidays. At the moment of the visit, the ICT Training and Mentoring for Gwanda High School Girls Workshop was taking place, a one week programme which not only provides an introduction to ICT (up to the level that the participants can open an email account, send and receive emails, and surf the Internet for relevant information).

The ICT program is inserted into a broader program which discusses the impact of the current economic situation on the education system, the spread of HIV/AIDs, and the impact of social and health problems on the girl child. The girls also meet women in prominent positions who may become role models for them.

For many of the girls participating in the project, the visit to Harare and the ICT training have a tremendous impact on perspectives and ambitions for the future. I girl who planned to become a nurse, for example, would discover that she could also become a doctor instead.

A problem with the courses might be that they are not really inserted into a longer term trajectory. Most of the girls will not find Internet access in their communities and cannot really put the knowledge acquired to some immediate use. The courses do not seem to be embedded into a broader programme for rural development.

ZWRCN offers the courses at its own Internet Café which has additional rooms for training programs. The Internet Café is open to the public and was used by several students and a teacher preparing teaching notes at the moment of the visit. Patterns of usage change with the seasons: in the school holidays, teenage groups dominate (youth living around the centre), with you men downloading music, going for entertainment and emailing their friends. Young girls do email, first of all.

ZWRCN tries to keep women interested after the training through events on “e-Friday”. Women use the Internet Café for professional progress (e.g. a 53 year old women that gets promotion but has to master powerpoint or Excel for the new position), to look for jobs or educational opportunities and to send CVs, or to identify economic opportunities (traders looking for opportunities arising from the Cotonu agreement. Consultants would type out their training materials, reports or contracts.

The scanning service attracts other NGOs (most of which have no scanning facilities) but also consultants who scan their contracts. The installation of a CD-writer is planned. Clients would also like to have telephone and fax services, but ZWRCN is not able to provide that. The facilities cannot be held open for 24 hours, because the location is not safe enough, and increasing security would increase costs (overtime for guards).

It is a big challenge to make the Internet Café if not an income generating activity, then at least a self-financing activity. There is always a delicate balance between business orientation and development activities.

4. *Africa 2000+ Network*

This organisation emanates from the UNDP network (as part of an effort by UNDP to indigenize the structures created during past programmes). It was set up as a response to Africa's perennial problems of drought, hunger, poverty and environmental degradation, - to support grassroots communities and local institutions in executing environmental protection and ecologically sustainable methods of food production and provision of fuel wood.

Africa 2000+ enables rural communities to identify their own needs and determine their own plans. The organisation support multi-faceted rural development programmes which integrate, for example, gardening, biogas installations, support for HIV/AIDS affected households, education. It sees its own specialisation in the ability to integrate all these different aspects onto one development package (the ambition seems to be realised in the Insiza district project).

The AFRICA 2000 plus Network tries to capture much of the indigenous experience regarding local plant varieties, traditional agricultural systems and food production, health practices, and the like. Cooperation with a university has been arranged, but too much dependence on institutions of higher learning is avoided, because people speak another language. Instead, Africa 2000+ wants to make sure that the local people get training.

The Africa 2000+ redesigned programme focuses on the establishment of Participatory Development Model Centres in three pilot areas (Insiza, Mwenezi and Chipinge districts). At all three locations, it supports the creation of infocentres. Technical support is provided by a person from a convenient location from which each of the three centres can be reached within a day. The communities that host the three centres will document their own experience and will share information among themselves (and with other institutions). Africa 2000+ forms part of a network with institutions in 11 African countries which try to capture the indigenous knowledge in the field of sustainable agriculture. The organisation has also participated in the South-South exchange programme which Hivos organised.

While SAFIRE has more experience in documenting local knowledge with drought resistant varieties and in assuring the link between sources of information and the target groups, Africa 2000+ has the advantage of being more embedded internationally and of having built up much community support through integrated rural development programmes with a broad scope, determined by the communities themselves. Both organisations try to do something very similar and could benefit considerably from a closer cooperation. SAFIRE's training for rural information centre operators could also be interesting for the operators of the telecentres supported by Africa 2000+. The two organisations used to cooperate in the past, but somehow this cooperation has become less intensive.

Africa 2000+ supports participation of rural communities in activities to rehabilitate and conserve the environment. The project at Insiza is a good example of such an effort, involving a large number of community members. The "pass on the gift" scheme assures that the benefits of a programme reach an ever increasing number of people (a successful chicken project would pass on two chicken and a cock to another household to start a similar project; a cattle project would pass on the first calf to another family, etc.).

The Telecentre in Insiza District (30 km from Filabusi, Matabeleland)

This is one of three such projects which Africa 2000+ (an offspring of UNDP) has launched in different parts of the country. Mr. Osmond Mugweni, who facilitates these projects, lives at a central location from which he can reach each of the projects within one day. All of these projects are in dry areas and combine different objectives (such as sustainable agriculture, HIV/Aids, alternative energy...)

The centre in Insiza is almost ready: the house will soon be occupied (an impressive construction from local materials which can also house functions for the community, see picture) and the equipment can soon be installed. Connectivity used to exist via a radio-connection, but for unknown reasons, it did not work any longer, and the contact to the telephone company was difficult to establish.

An impressive number of members in the community was involved of the different activities that developed over time. All the groups were introduced during the visit, including the group of women who had cut the grass to make the roof. Every activity of the community was a logical continuation of earlier community activities and contributed to the overall development. A clear 5-year perspective has been formulated, operationalised in a plan for the coming year.

A highlight of recent activities has been the construction of a number of biogas installations, each catering for the energy needs for cooking and lighting (not yet, lamps are not yet there) for one to three households. The installations are fed by the manure of two pieces of cattle which is enough to provide for the needs of one household. The community gathered a rich experience with the biogas installations (size of pipes, size of digester, mixture of input, recovery time...) which it wants to document and store, to share it with other projects.

It seems to be a vibrant community with a strong record of well organised and successful activities in the past seven years. It is now starting an inventory of indigenous knowledge. The main purpose of the computer will be to store this knowledge in a central place. (There may be some illusions about the invulnerability of electronically stored information.)



5. *Southern Alliance For Indigenous Resources (SAFIRE)*

SAFIRE was established in 1994. It is a Zimbabwean NGO which assists rural communities in the development of self/sufficiency through the improved management of their natural resource base. Historically it developed out of an environmental organisation that tried to create opportunities (especially in the environment of refugee camps) for an economic use of natural resources to increase the interest in the conservation of these resources, while at the same time providing sources of income for the people involved. Since then, the mandate of SAFIRE has broadened considerably.

SAFIRE supports Community Based Natural Resources Management Networks, such as the Southern African Drought Technology Network (SADNET), in which SAFIRE cooperates with the Canadian organisation “Partners in Rural Development” and CARE in Zambia. It is the purpose to extend this network to other African countries. SAFIRE concentrates on rural farmers in drought prone remote areas, 65 % of whom are women, most of whom are responsible for day to day household livelihood requirements. SAFIRE is strong in Networking and information exchange. It participates in the Open Knowledge Network. It is active in information needs analysis, the documentation and dissemination of information, training in grassroots documentation, facilitating community level information exchange and establishing rural information centres.³

SAFIRE has (helped to) establish five telecentres (3 are computer technology driven, 2 at rural schools, 1 at a rural growth point, 1 at a training centre and 1 is set up at Women’s marula oil processing factory in one of the most remote areas of Zimbabwe) SAFIRE provides training for rural information centres operators, and it supports selected NGOs/CBOs in email and internet connectivity (upgrades, modems and ISPs registration).



SAFIRE very much stresses the necessity to pay attention to the whole chain of information from the sources to the target groups of the information. It has embarked on an Agricultural Market Linkage Programme. In this respect, SAFIRE differs very much from organisations that provide access to the Internet, but rely on (the hope that) existing information will satisfy the information need of the users.

SAFIRE continuously monitors the following aspects³ of its telecentres:

- ◆ Level of participation (numbers, gender and activities)
- ◆ Numbers of materials going through the hub
- ◆ Numbers and quality of new materials developed by communities and demanded by communities
- ◆ Number of information requests and visits to the information centres by men, women and the students
- ◆ Emails coming through from rural community information centres
- ◆ New technologies adapted
- ◆ Levels of use of different types of media

³ From the presentation of Anne Chishawa-Madzara (SAFIRE) at the Southern Africa Regional ICT Workshop, Lusaka, 27 April 2004.

The Telecentre at Gala Upole

This Information Centre is part of SADNET, the Southern Africa Drought Technology Network, which is financed by the Canadian organisation Partners in Rural Development and managed by SAFIRE (the Southern Alliance For Indigenous Resources). It is situated at 12 km from Plumtree (busy regional centre on the highway), 120 km West of Bulawayo in Matabeleland, about 10 km from the border to Botswana, next to a rural clinic with a number of shops about 500 m away, on the premises of a training centre of ORAP (Organisation of Rural Associations for Progress).

The ORAP Training Centre (8 staff members) offers (one year long) courses in construction, metal working and garment making. It has a garden and a production unit (metal working) as income earning activities. Two larger dormitories are under construction and will provide accommodation for about 80 students. This will be part of the constituency of the Information Centre, but it is not the main target group.

In a small office, a computer and printer are installed, connected to Econet via a dial-up connection. A laptop and a digital camera are available. SAFIRE staff was replacing the modem of the computer (destroyed by instable currents), but connectivity could not be restored during the day of the visit. It was very difficult to place a telephone call to Econet's customer service in Harare, which – when finally reached – could not give a better advice than “keep on trying”. It is planned to have two old computers, not connected to the net that can be used for training. (When they break down, technical support has to come from far away.)

The office offers the paid use of the telephone to the community (who mainly want to contact relatives in Bulawayo, Harare, Botswana, South Africa ...). A small library is being installed in the neighbouring room, with a collection of books, brochures and pamphlets, divided into broad categories by three women, part of the executive board of the project. The material will be consulted in the library, but the environment is not yet conducive to comfortable reading.

The intention of the project is to help the local community to capture its knowledge in the field of agricultural practice (especially regarding more drought resistant crops like sorghum) and to exchange this knowledge with other centres. The local community has started to bring together its knowledge on millet. Sorghum will be next. The community has much experience with sorghum (and a lot of local sorghum varieties). Many other communities have lost their experience with sorghum and consume more maize. The community is assisted by a student in communication who also takes care of another project (which is about 120 km away), alongside her studies. SAFIRE has experience with helping local communities in articulating their knowledge and experience. It offers structured questionnaires and special training. The community cooperates enthusiastically in the project of describing its daily practices. They are eager to get knowledge from other communities, with knowledge on groundnut production and natural alternatives to pesticide use as examples. But in general, there seems to be more offer than demand for indigenous knowledge.

Fees for telephone calls, computer use, and in the future perhaps also photocopies probably will cover the costs of consumables and connectivity, but not of staff and replacement of equipment or major repairs. ORAP staff can operate the Centre alongside other activities, while using the equipment also for general office purposes. If the use becomes more intensive, the double purpose may create conflicting demands on the office staff (probably not more than one person).

III. *Conditions of success*

Short visits to the telecentres described above do not provide a solid base for general conclusions. They do give rise to some ideas about what could explain success or failure of rural telecentres.

Three criteria could be used to decide whether a telecentre can be regarded as successful or not:

- 1) It has to attract a sufficiently large number of visitors who make use of the services offered.
- 2) The visitors have to do something with the information which contributes to the development of their own community.
- 3) The activities have to become sustainable so that at least the running costs of the centres are covered, if not the costs of an eventual replacement of larger pieces of equipment.

Many telecentres do not fulfil any of these criteria. They have relatively few visitors. Visitors do not use the potential of the internet for development relevant information. And the centres do not cover their costs. It is an open question whether cost coverage can be expected from telecentres in rural areas. If they have a heavy training component, they may have to be evaluated like a school which will also normally not cover its costs. The different objectives of “serving the poor” and “becoming sustainable” may obviously be at odds with each other.

It is especially the first generation of telecentres, installed in the late 1990s, that suffers from this trade-off. Since these centres were installed at the initiative of an outside organisation, they did not enjoy broad popular support from the start and had some difficulties to make their existence known to a larger public. As a result, the small number of visitors makes it difficult to cover the costs and ever become self-sufficient after the donor withdraws the support.

The following conditions of success are formulated with an eye on the second generation of telecentres which actually are started by many organisations. They try to learn from past experience and aim at a larger public support right from the start. Here are some considerations that may help to improve the chances of success.

1. *Embeddedness in civil society*

It is difficult to achieve an intensive use of ICT facilities if a centre has been set up by one organisation only. Then it will be regarded as that organisation’s “baby”, and other organisations will stay at some distance. It is much more promising if many civil society organisations come together ways before the real start of the operations of a telecentre and discuss how the centre will be run, which services it will offer, which prices it will have to ask, and what kind of activities should be linked to it.

If large groups get linked to the initiative, and if these groups can identify objectives that they can better reach with the use of ICTs, then there is a good chance that the centres will be used intensively.

The planning of many telecentres was implicitly based on the individualism of Western societies. The services offered would obviously appeal to individuals who would like to pursue their own ambitions with the help of the information that they can access on the Internet. This perspective would incite many community members to visit the telecentre and use its services

However, to move anything in rural areas in developing countries, collective efforts are necessary. Only if groups are mobilized, things start to get moving.

The ICT applications ideally have to be linked to the concrete communal needs and activities in other areas (irrigation, deforestation, drought resistance, educational needs, human rights campaigns, etc.). If this link is established, then it is no longer a question of “either – or” (e.g. of a new well for drinking water or a computer for a telecentre). Then it becomes “a computer to access information on how to obtain clean drinking water and to use it in the most economical way”. Only if the social organisation exists to apply the information found to many different development projects in the community, only then an effective use will be made of the services of a telecentre.

2. *Working equipment*

An obvious condition for success is that the equipment is working. Equipment with a long downtime makes users quickly lose any interest.

To assure that the equipment is working, there has to be someone (if possible more than one person) who can provide fast support.⁴ More than one person in charge of (or connected with) the telecentre should have followed a basic course in computer maintenance. More than 80 % of equipment failures have a rather banal cause and could easily be fixed by somebody with basic skills (which often can also be put to use elsewhere and earn some additional income for the individuals in question or for the organisation).

Most of the downtime is not caused, however, by defect equipment, but by failures in the infrastructure: low connectivity or power-cuts. A reliable Internet connection via a satellite dish might be more expensive in the first instance than a dial-up connection. But the higher reliability (and the speed of transmission) may be worth the higher price. Otherwise, the centre runs the risk that a large part of the potential constituency will quickly lose interest and not come again.

3. *The importance of distance*

Many telecentres have been built with the ambition to serve a whole district or sub-county. However, the real “catchment area” is much smaller. Especially for women, a distance beyond 5 km is prohibitive. It would imply to walk for more than one hour to reach the centre

⁴ In the case of Africa 2000+, there is one person who takes care of the three centres in different parts of the country. But to come and go would always be about one day travel (and enormous costs of patrol), perhaps just to do some small but crucial activity which would make the equipment work again. The costs of patrol alone will be a big burden on the budget of the organisation.

and to walk more than one hour back. Men are somewhat more mobile, if they possess a bike (women hardly bike in Africa). When asked what the greatest obstacle is that impedes them to make more often use of the centre, the answer often is that it is too far away. People would prefer to have a telecentre in their own parish which would reduce the threshold considerably. It seems highly desirable, therefore, to think about ways and means how this distance can be overcome (e.g. by “satellite centres” in different villages, see below).

In the planning process, such factors that make a telecentre less attractive for a large part of the potential constituency are often not sufficiently taken into account.

4. *The right location*

For the same reason of easy access, a central location is crucial. A location near to other facilities (post-office, shops, hospitals, schools, bus-stops, markets, council administrations) is crucial, especially if women are to be reached who normally are more time-pressed than men.

For them, it is also crucial that the centre is located in a safe area where they would not feel inhibited to go. (Safety is, of course, also an important criterion for the protection of the equipment against theft and vandalism.)

Not all central locations seem equally suitable. It turned out that the premises of a sub-county administration (at Nabweru) turned out to be perceived as intimidating by visitors. It therefore seems to be important to do some research on such perceptions before a definite decision is taken on the location of a telecentre.

5. *Broad spectrum of services from the start*

It is obvious that an information centre should provide a broad range of services and sources of relevant information. Visitors would then find something interesting to them even in the case that there is no connection or that there is a power-cut. There should be a rich spectrum right from the start, because people who come once out of curiosity and do not find anything of interest will not easily come a second time.

This implies a network of cooperation institutions which can provide (perhaps as a loan) interesting material (videos, books, booklet, brochures, posters, CD-roms) not only in English, but also in the local language(s).

6. *Political acceptance*

In the case that a telecentre has been set up by an NGO, there might be the tendency to keep a certain distance to state authorities. NGOs often have good reasons for that. However, in the case of a telecentre, this could turn out to be counterproductive. If any antagonism develops, telecentres are quite vulnerable because they depend so much on public infrastructure. Telephone repair might be postponed, power supplies cut, licences withdrawn, etc. Therefore, at least a kind of “peaceful co-existence” should be aimed at.

A more positive scenario could imply that public authorities and the organisations responsible for a telecentre together explore opportunities to facilitate administrative procedures for citizens (by online information on legislation and procedures; forms that can be filled in and submitted on-line, etc.). This could at the same time alleviate the administrative burden of public authorities, while reducing waiting time, irritation and transport costs for the individuals and increase the use of the telecentres.

7. Quality staff

As with all social interaction, success depends very much on the skills and competencies of crucial persons involved. The managers of a telecentre fulfil a crucial function. They need a lot of different competencies which are seldom found combined in a single individual, - and if they are, then the risk is very high that such a talented person will quickly move on to a position with larger responsibilities, higher income and greater impact.

Managers of a telecentre do not only need technical, managerial and administrative competencies. They need to have good communication skills. They also have to be well informed about the different initiatives going on in the community in order to offer an optimal support in the search for relevant information. They also have to be entrepreneurial in order to help the centre to achieve financial self-sufficiency.

In the actual economic situation of many developing countries, it may be possible to find persons who do bring along all the characteristics desired. But if the situation improves and the demand for such talent increases, it can be difficult to keep these managers. In the case that crucial staff members move, others should be able to fill their place at least temporarily in order to keep the telecentre functioning.

8. Training

This underlines the importance of training. Training should not only encompass ICT training for users and potential users. That is the precondition anyway. If nobody can use the ICT equipment, a telecentre will have few visitors. But the training offered could go much further. In many fields, the Internet offers not only interesting material, but also well elaborated training programs. A telecentre could therefore also be the place to offer a broad range of training programs in areas relevant to the local community. This is a potential that has hardly been tackled yet in most telecentres. Cooperation with schools and a broad range of NGOs would offer a lot of opportunities for that. It would add to the development impact of the centre, and it would make a larger constituency aware of the opportunities that access to ICT offer.

The elaboration of training programs in areas in which the local community has some special experience can also be envisaged. Eventually, such training programs could be offered via the Internet to a worldwide constituency and in the end generate an additional income to the community.

9. *Additional support for initiatives*

A lot of information is available on the Internet that could help boost the development activities of local communities. But the information alone does not yet empower community members to engage in such activities. Normally, a number of other preconditions have to be met.

People must have access to *credit facilities*, they may need some *legal advice* to explore which form specific activities would have to take, and some organisational advice in order to find suitable ways of cooperation among the different individuals or organisations involved. They may need *transport* to visit and reach markets further away. They have to produce *samples* of what they want to offer to clients, etc. In short, there are many other enabling factors that have to exist alongside a telecentre to make use of the information obtained. If these additional facilities are not available, the opportunities remain dreams which cannot be turned into reality.

10 Alertness for change

Projects in the field of ICT are inserted into a rapidly changing environment. Not only political and economic developments can change the situation drastically, technological change can also lead to new challenges and other priorities.

An important precondition for success is that the people responsible for the centre are aware of changes in the environment and are flexible enough to jump on new opportunities or to react to new challenges. One of the developments unforeseen five years ago, for example, with the very fast spread of mobile phones. They often satisfy the immediate communication needs of a large group of users and can reduce the number of visitors of telecentres. But they could also be used in an innovative way to increase the reach of telecentres.

The following example illustrates that the viability of telecentres very much depend on some macro-developments. Figure III.1 presents four different scenarios for the development of telecentres, depending on the development of connectivity and on the political climate in the country in question.

Connectivity may increase very rapidly. This could be the result of some technical, economic and political developments: Technical developments might reduce the price of direct satellite access; a positive economic development might increase competition between different providers and lead to enough economies of scale; political developments might lead to a liberalisation of the market, and political support for large-scale infrastructure investment. If connectivity improves very quickly, this might lead to a situation that many organisations and individuals might buy their own computer and get direct access to the Internet, reducing the demand for services of a telecentre.

But connectivity might also remain a big problem and could even deteriorate in some cases (as seems to be the case in Zimbabwe where the public telephone system is badly maintained with many telephone lines not being repaired for more than five years now for lack of spare parts). If new technology remains out of reach, if the economy remains in the doldrums, and if investment in infrastructure remains neglected, the conditions for telecentres are quite bad,

too. It would be difficult and expensive to establish a connection, connections would be unstable and slow, and there would be little incentive to make use of such services.

So there is a limited “window of opportunity” for the development of telecentres: There is a space for their development in countries where connectivity is good enough not to frustrate potential users, but where it is not so cheap that many organisations establish their own connection, leaving the telecentre with too few users to recover their costs.

A similar reasoning can be followed for the political situation. Precondition for the functioning of telecentres is the largely uninhibited access to information. Where this is not given, telecentres cannot really function.

On the basis of these two variables (connectivity and political development), the following four scenarios can be formulated:

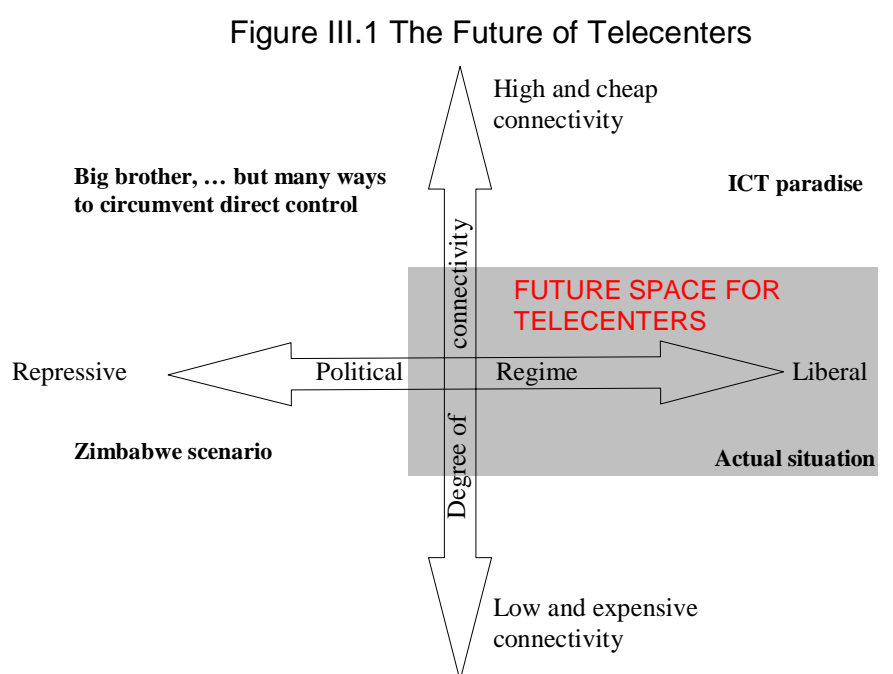


Figure III.1 illustrates that there is only a limited area in the total space of possible future developments in which telecentres would be viable.

IV. *Conclusion and suggestions*

The above list of preconditions to be fulfilled makes one thing clear: It is a long list, and if one or two preconditions are not fulfilled, a telecentre will not be viable. Probably, there are not many places where all preconditions are met.

This provides already an answer to one possible question: Should there be a large-scale program to “roll out” a large number of telecentres? Certainly not. Not only because the means of Hivos are limited, but also because the preconditions for a success are only present in a limited number of places, and finally, because this would only repeat the experience of the Acacia program which facilitated the creation of a relatively large number of telecentres. But these initiatives were coming from the outside, and they led to the creation of centres which were not sufficiently inserted into the social tissue of the local society and therefore had difficulties to survive, once the donor support came to an end.

If we look at the overall development impact of existing telecentres, this impact has probably been quite limited. Many centres had less visitors than expected, and the visitors who did come made little use of the available information to improve the living conditions in their own region. (The information may have improved their individual living conditions, - e.g. by providing access to information about educational facilities abroad or job openings elsewhere.)

But does it mean that the development impact is necessarily low? No, - many steps could be taken to improve the access of larger number of people around a telecentre and to make the available information more useful for the population of rural areas. Below, a number of measures are discussed which would help to fulfil at least some of the expectations behind the plans for telecentres. These measures are

- 1) Integrate ICT use into a wider context
- 2) Encourage cooperation between organisations
- 3) Increase the reach of telecentres
- 4) Pay attention to the whole chain of information
- 5) Concentrate investment in a region
- 6) Look for alternative ways to provide information
- 7) Spread information about the conditions of viability

1. Integrate ICT use into a wider context

It is not the use of ICT as such which contributes to development (although access to modern means of communication can give a boost to people’s self-esteem, can reduce the feelings of exclusion and can encourage people to take all kind of initiatives). It is the application of ICT to the whole range of development efforts which makes it useful. (This is also the main idea behind “mainstreaming ICT” in the Hivos ICT programme.)

If people are engaged in all kinds of development activities (from gardening, irrigation, crop improvement, zero-grazing to setting up small businesses, installing biogas-installations,

improving water management, expanding education, peace building, anti-corruption campaigns, etc.) they are curious to access relevant experience from others. So the more of these activities take place in a community, the more fruitful could be the establishment of a telecentre that provides support for the whole range of activities. If there are few of such activities, they probably will not be brought about by the establishment of a telecentre. The centre will remain empty (or only be filled by youth playing games).

Good examples of active communities which will probably lead to the installation of viable telecenters are the communities in Bwera in Uganda and in Insiza district in Zimbabwe. In Bwera, multiple user groups from civil society with all kinds of activities (from agricultural livelihood to budget monitoring) have been discussing for several months what they could do once they become connected to the Internet. A broad range of groups has been involved in this activity, and many applications of ICT have been discussed that would support the activities of the different groups. This is a very fertile ground for a telecentre. Many groups have discussed the possible uses and have made up their ideas. They have been involved in the planning and together have given shape to the project. On their way, they have probably developed routines of interaction that will allow them to solve most problems that they will encounter on their way to establish the centre, to run it, to make it sustainable, and to adapt it in the future to changing circumstances.

Another good example is the community in Insiza district, where the plans for a telecentre came out of a range of activities that were intended to help communities to cope with the consequences of extended periods of drought. The group started with gardening and drip-irrigation projects and then built biogas installations to cope with the increasing shortage of firewood. All these activities made the group conscious of the value of information which they could get from others. But the range of successful activities also made them aware of their own experience which they have accumulated which could help many communities elsewhere. The participation of large groups in the community in a broad range of common projects is a good indicator of the probable success of a telecentre in such a community. Many people could make use of the facilities, because many are involved in the different projects that have been started (from raising cattle to feed the biogas installations to the conservation of indigenous knowledge of local drought resistant grain varieties).

The CEEWA activities in Uganda that integrate ICT education into broader programs which enable women to set up and develop their own business is another good example of the integration of ICT use into concrete applications which create a larger group of people who could make a continuous use of the ICT facilities in the future, for their own benefit and the benefit of the communities in which they live.

2. Encourage cooperation between organisations

A telecentre is more relevant if it offers access to a broad range of information (in a range of different formats) and if it used by a great variety of groups (see above). In order to be able to offer a lot of information right from the start, a close cooperation with many different organisations would be helpful, - cooperation with local organisations, national organisations and organisations in other countries.

A good example would be a closer cooperation between SAFIRE/SADNET and Africa 2000+ in the field of knowledge of indigenous agricultural systems that can better cope with prolonged periods of drought. Both organisations actually build up a small network of

telecentres to exchange information in this field, and both could benefit enormously from cooperation with each other: SAFIRE has a longstanding experience with the documentation of agricultural practices in the region, and Africa 2000+ is well connected to the international UNDP network in 11 African countries that tries to capture indigenous knowledge of agricultural systems.

Another example is the range of publications which CEEWA has published on the production of different crops. Wherever I came after the visit to CEEWA, these booklets and leaflets were very much appreciated and could make an immediate contribution to the information that these other institutions offer to their own constituency. A much more intensive exchange of this kind of information would prove very helpful to all the organisations involved.

Good networks of cooperation are the precondition for an intensive use of telecentres. People have to know which other organisations have something useful to offer which could be of immediate relevance to their own current activities. An exchange of the material used could help to bring such cooperation about (and reduce costs for all involved, since it would be much cheaper to adapt existing material to the local context (translations) than to develop it from scratch.

Another form of cooperation between different types of organisations would be a closer cooperation between telecentres and schools. Often the installation of computers in schools and the planning for telecentres happens totally independent from each other. But it could decrease costs immensely and increase the use of the facilities if, for example, a computer laboratory at school could be used by other members of the community in the evening, or if a telecentre could be regularly used for computing classes by nearby schools.

3. Increase the reach of telecentres

One of the obstacles described above has been that the distance to a telecentre is much more limiting factor than often thought. Only people living relatively near to a centre can make a regular use of it. On the other hand, it is obviously not feasible to put a telecentre into every village. One of the big challenges is therefore to increase the reach of a telecentre beyond the immediate neighbourhood. Different means for that could be imagined.

a) Combination with Community Radio

One of the most important sources of information in many rural areas is Community Radio. Community radio could be combined with the telecentres (as happens in Nabweru and planned for Buwama). It would enable the programme makers to get access to relevant information and programmes from all over the world and disseminate the information much more widely. It would also make people in the community more aware of the telecentre and its services. And the programmes could stimulate curiosity for further information and in this way increase the use of the telecentre facilities.

b) Creation of "satellite centres"

Another way to increase the reach could be to install computers in different villages (or circulate a laptop among different villages), where people would write their messages off-line

or formulate the queries for which they would surf the Internet, and somebody else feeds this into a computer at a central telecentre which has an Internet connection. This would help avoid that more people have to commute over larger distances to get access to the information in which they are most interested.

A similar effect might be realised in regions with mobile phone coverage by calling to a telecentre and have somebody there looking up the information required. This would also help to make the services available to a larger group.

Different experiments with measures that could extend the reach of rural telecentres under different conditions might be stimulated and need to be documented in order to make these experiences available to a larger audience.

c) Cooperation with youth groups as “couriers”

Another way to extend the reach was practiced at a rural telecentre in Tanzania where the centre cooperated with a youth group which would disseminate relevant information from the centre to the farmers on bicycles. As a compensation for their services, the youngsters then got some time to surf on the Internet themselves.

Different kind of social arrangements like that would increase the usefulness of telecentres to a larger group of people who live too far away from the centre to make a regular use of it, - and at the same time intensify the social tissue of relationships around a centre which might give rise to additional initiatives.

4. Concentrate investment in a region

Most organisations that stimulate and support the creation of telecentres try to achieve a good spread over a large territory. Both SAFIRE and Africa 2000+, for example, have started telecentres at locations far away from each other. Sometimes, political reasons (a fair spread over different communities, regions, provinces, and tribes) may encourage that.

From a logistical point of view and from the point of view of creating networks, it may be less suitable. The person who provides support to the three Africa 2000+ network will have to travel a whole day into a different direction to reach any of the three centres supported by the organisation. Regional differences may be such that the exchange of information may be less fruitful, because different circumstances do not allow applying experience from elsewhere. Differences in local languages may impede the exchange as well. Since most networking activities function much better among people who can meet face-to-face now and then, networking will be inhibited by large distances between the centres that will make personal meetings very expensive.

We know from the experience of highly industrialised countries that the majority of emails is exchanged with people within a beam of not more than 5-6 kilometres, - often people whom we see regularly as well. It would be worthwhile to experiment with telecentres which are not situated too far from each other (e.g. 10 km) in order to see whether this could lead to a more intensive exchange of information and experience.

5. *Pay attention to the whole chain of information*

An important obstacle to the success of telecentres in rural areas very often is that the information which would be most relevant to local farmers cannot be found on the Internet. This might be, for example, information on market prices at nearby markets, on diseases of local varieties of cattle, on possibilities of transport to nearby markets, on traditional ways to grow specific crops, on the availability of seeds, etc.

As a result, more and more projects for telecentres also incorporate programs to put relevant information on the Internet. A frontrunner in this respect is SAFIRE that has over the years accumulated a treasure of information which can be relevant for local farmers in different regions.

In general, institutions involved in the support of telecentres should have a close look at the availability of relevant information and participate in solving eventual bottlenecks. In many cases, some information is available on the Internet, but it may be in a language which would be inaccessible to farming groups, either because it is a foreign language, or because it is formulated in an academic style which makes it also unintelligible to local user groups.

6. *Look for alternative ways to provide information*

A lot of information that local use groups are looking for is not the most up to date information on market development and the availability of certain products, but is information of the “How to do it” type (on materials, crop varieties, agricultural practices, treatment of animal diseases, legislation, etc.), which does not change from day to day.

Where farmers do not have an Internet connection in their neighbourhood, a kind of intermediary could be helpful, - an organisation (farmers association, schools, research institute, NGOs) which repackages the information to put it on a CD-rom (where computers are available) or prints out the most relevant information in a way that can reach the constituency. This re-packaged information would also be relevant for places which do have an Internet connection. The connection may be down when the information is needed, or the information can not be understood without an intermediary. In many cases, the dissemination of information in a more traditional way may be much more cost-effective than the installation of a telecentre.

Until connectivity becomes easier, SAFIRE e.g. could meet the priority information needs of the community at Gala Upole with a selection of material (e.g. on groundnuts and natural pesticides), put on a CD-Rom, to experiment with ways in which the information can be put to use in the community.

Much of the information needs of rural communities can also be satisfied in another way (rather than via access to the Internet). Often, a telephone call to the market town will provide the information desired. For regular information needed (e.g. on market prices), a kind of SMS service might be established.

The community in Insiza district in Matabeleland, for example, has been able to get information over environmentally friendly construction technology and over biogas

installations without direct access to the Internet. Some information can also be asked to members of the community that go to a larger town and can consult the Internet there (or to students who go to a high school where they may have access), - in the same traditional way as most other information gets to the villages. Not to have a direct Internet connection, therefore, does not mean not to have access to the information on the Internet. A large number of people regularly travel longer distances and may be able to provide the information looked for.

7. Spread information about best practices

It could be a task of Hivos (in cooperation with its strategic partners and other development organisations) to distribute information on best practices on how to establish and how to run a telecentre in a rural area.

It would be very helpful for the organisations involved if they could get access to business plans of other telecentres so that they can get ideas about tariff structures, the partition of costs among different cooperating organisations, public subsidies, maintenance costs, standard contracts with telecentre managers, training schemes for future managers, and the like.

The agreements that telecentres conclude with schools or other organisations for the common use of facilities could also be interesting and inspiring for other communities. The same holds true for similar kinds of arrangements, e.g.

- with local authorities
- with community centres
- with groups responsible for local community radio
- with youth groups
- with universities (for the cooperation in capturing indigenous knowledge)
- with research centres (for the dissemination of their results)
- with farmers associations and other partner organisations
- with NGOs (on risk sharing, contributions, content creation, etc.)

It might also be a good idea to create a community of interest among organisations responsible for telecentres to exchange this type of information and to discuss best practices. But perhaps, such a community does already exist. Otherwise, the existing D-group (c3net) might be used for that.

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