

Village Information and Communication Centers (VICs) in Rwanda

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1. Poster
2. Digital photography exhibition: *VICs and rural communities in the Rwandan context.*

Abstract

International agricultural research organizations have made efforts to ensure their research products reach the intended beneficiaries, in order to reduce poverty and to improve rural livelihoods. Examples exist of initiatives to transfer technologies (research institution to farmer) and to facilitate the information sharing processes. These initiatives include participatory approaches, capacity building processes, and, in various cases, have utilized new information and communication technologies (ICT). These ventures have also been a step in the process of participation and democratisation of farmers in what has been called the information society. There are still limitations hindering the participation of farmers in many technology transfer projects however. Often farmers are unable to access the “media” of information sharing, or they may find the information is not useful, irrelevant, or in an unfamiliar language. These problems are compounded by a lack of awareness and skills in ICTs such that the possibility of feedback to, and communication with, research organizations can seem very remote.

Village Information and Communication Centers (VICs) in Rwanda are public spaces where farmers can share knowledge, access information in their own language, and other community services (shop for sale of agricultural inputs, amalgamation of products for getting better prices, cooperative banks, training points, community meeting places and so forth) in their own place.

Free access and democratization of information are key principles in organization and operations of VICs. Organized farmer groups in a form of farmer association is the basic requirement of establishing the centers to ensure institutional support backing, hosting and managing the VICs, including cost share the running of the centers.

From the initial stage of establishing the VICs it should be clear that the centers are demand-driven and address the information needs and priorities of the rural and marginalized communities (women and men, youth, sick, elderly and disabled). In other words VICs should be organized in manner that there is broad ownership base as the objective is to benefit the maximum number of farmers on wider and diversified issues related with agriculture and rural development. Efforts should also be made to ensure that VICs promote multidirectional flows of information and communication between different stakeholders, R&D partners, farmer’s associations and other communities groups, including sharing of expert as well as traditional knowledge of communities. The long term sustainability of VICs lies in community empowerment which also demands a strategic vision, basically developed in partnership with farmers to invest in human resources, in the physical condition of the VICs, and in training.

In this way VICs can be an economic and effective mechanism for research organizations to disseminate to farmers the products of their research and to facilitate a feedback about the process and results of the research.

Key words: village information and communication center; information and knowledge sharing; agriculture; technology transfer; learning communities; Rwanda; Africa.

1. Introduction

This report presents the findings of the assessment of a sample of Village Information and Communication Centers (VICs) founded by the Agricultural Technology Development and Transfer (ATDT) project managed by the International Center for Tropical Agriculture (CIAT) and the Institute of Agronomic Sciences of Rwanda (ISAR) with the support of the United States Agency for International Development (USAID). It is a rapid assessment using focus group discussions, intensive informant interviews and an analysis of the strengths, weaknesses, opportunities and threats (SWOT) of the VICs in Rwanda

1.1. Background

Rwanda, like many developing nations is heavily reliant on agriculture, for both domestic consumption and exports, and 88.6 percent of the population¹ depends on agriculture for their livelihoods. Starting in 2003, the ATDT Project initiated thirty² VICs in Rwanda as a mechanism of information sharing for improved livelihood and investment in natural resource management (NRM). In Rwanda, farmers are commonly organized in a nested hierarchy of associations. Every association has agriculture and livestock production as their main activity and a farmers' association hosts each VIC.

Village Information and Communication Centers had their origin in the late 1990's as part of an Integrated Pest Management (IPM) project with bean growers in Hai district, northern Tanzania. This was a pilot experience of technology development and dissemination process; with the involvement of farmers groups who creatively developed different dissemination mechanisms, while researchers developed printed materials about agricultural technologies³. Farmers in Hai district visited the research station looking for information, but they encountered many difficulties and had to walk long distances on bad roads. Consequently, the project decided to take the information closer to them and established a Village Information and Communication Center (VIC).

All VICs in Rwanda have been equipped with reading and training materials on extension, crop, livestock and nutrition that farmer associations, community extension officers and other trainers can use to share information and knowledge with members of the community. In the Rwandan context therefore, VICs are structured as public places where there are shelves, tables, and some books, posters, extension leaflets, booklets or other publications for farmers to read and share the information with their co-farmers and other complementary service providers.

¹ Total population is 8,128,553 people: Rwandan development gateway: http://www.rwandagateway.org/article.php3?id_article=137, 2006

² The figure given by Technology Transfer Unit (TTU) of ISAR is 33 VICs formed throughout the country. This figure does not conform to the actual existence of the VICs as monitored by ATDT coordination.

³ See Highlights. CIAT in Africa: Village Information Centers. No. 16 December 2004.

1.2. Conceptual framework of VICs: Empowering rural communities through sharing information and knowledge

Management of information and knowledge are a very important issue for all organizations, but is often poorly understood within the same institutions. Andrews and Herschel (1998) argue that the concepts of information and knowledge are often considered synonymous; the authors challenge this notion and instead contend that knowledge is a step beyond information: *“Information does not always lead to understanding. In contrast to information, knowledge goes beyond the facts, connecting and explaining them. Knowledge further refines information and seeks to reconcile seemingly disparate findings. It is knowledge, not information that can best contribute to empowerment”* (Andrews and Herschel, 1998:4).

Farmers can get a variety of information in VICs and this access to information itself is a component of empowerment and efforts to increase access, (Champman et al, p17) contribute to empowerment. At the same time, processes of sharing information and knowledge in VICs can promote empowerment of farmers in terms of allowing them greater freedom, autonomy and self-control over their work, and responsibility and involvement for decision making. (Mullings, 2005)

Farmers feel confident in applying information and getting new knowledge about agricultural technologies and other subjects that help to improve their livelihoods. They can apply this knowledge in their daily work in order to produce better results and in the process of solving individual and common problems and generate new knowledge through socialization with other farmers, among others. In this respect, empowerment enables them to utilize the knowledge and information acquired. (Andrews and Herschel, 1994).

VIC users share the information that they find in the Centers (explicit or codified knowledge, transmittable in systematic language) and also share knowledge which they have as individuals (tacit or individual's knowledge acquired by experience, a personal quality), creating between them new knowledge through a communication process. (Polanyi, 1966). In the level of the associations this knowledge is “organizationally” amplified by their members and crystallized as part of the knowledge network of the farmer association and the process of institutionalization.

The process of sharing information and knowledge using informational materials of the VICs is gradually translated, through interaction and a process of trial and error, into different aspects of tacit knowledge. The interaction between tacit and explicit knowledge tends to become larger in scale and faster in speed as more actors in and around the organization become involved. Thus, organizational knowledge creation can be viewed as an upward spiral process, starting at the individual level moving up to the collective (group) level, and then to the organizational level, sometimes reaching out to the inter-organizational level. (Nonaka, 1994: 20).

2. Methods and materials

2.1. Sampling framework

Data were collected in eight of the thirty VICs⁴ (see figure 1) set up in Rwanda, these are identified by the district in which they are found. The criteria for selection include representation of the three agro-ecological zones of the country, geographic location (north, south, central, east and west of Rwanda) and demographic variations. Each VIC is hosted by a farmers association.

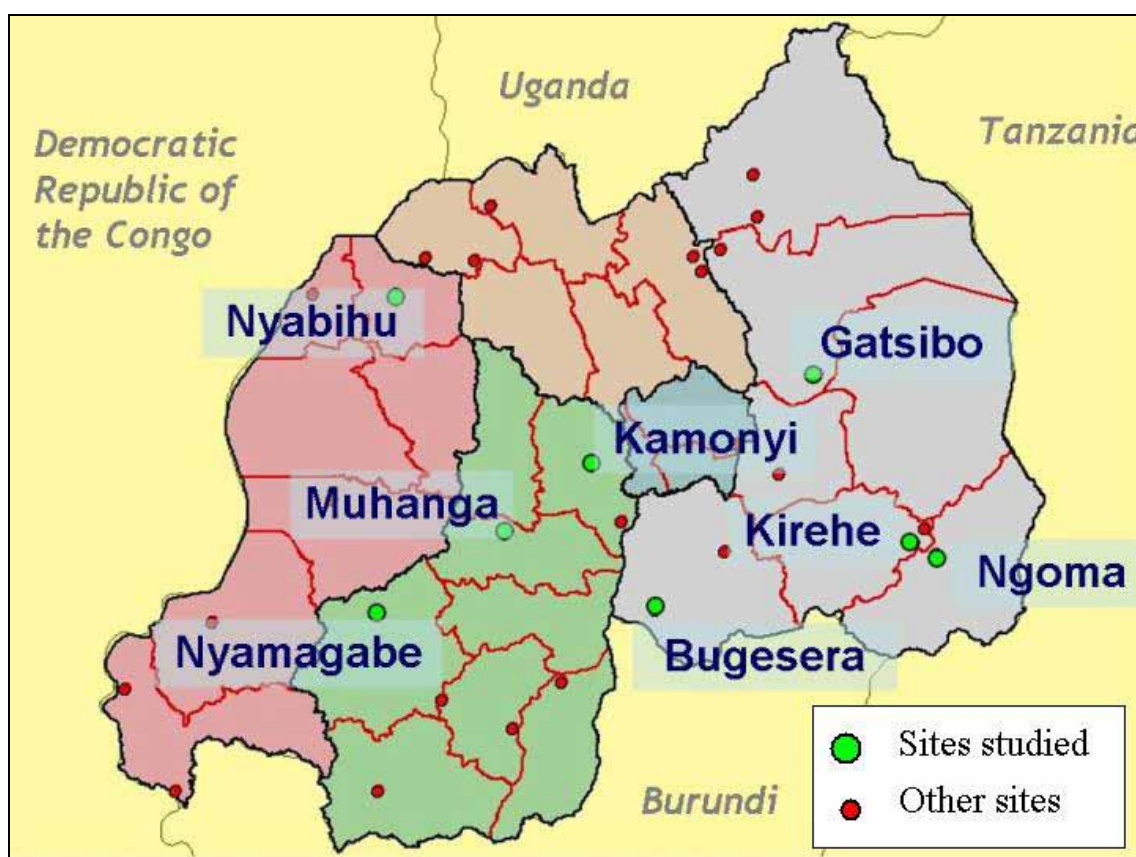


Figure 1. Sample of VICs visited in Rwanda (Andrew Farrow, CIAT)

The ATDT Project selected the host associations based on three criteria: 1) willingness to host the information center; 2) strength of the association in terms of organizational structure, and; 3) the physical capacity to host a VIC (having a minimum space where to put the shelves and having other activities which attract many people mainly the agriculture input selling stores). All the associations visited in this study (*Table 1*) have extensive experience of associated work, capacity building and knowledge of community needs; which possibly makes them effective organizations to promote VICs.

The total of potential users of 7 VICs in the associations is 13,785, of whom 7,941 are women and 5,874 men (*Table 1*). This represents a target group that the 7 VICs are offering their services to. It was observed that, while the VIC in Bugesera is covering a potential user community of 4,353 members of the Abahujumugambi Farmers

⁴ In the VIC of Ngoma no focal group was convened because the VIC had been closed.

Association, there are two VICs located in Ngoma and Kirehe, covering a potential user community of just 82 members of the Tuswanyanzara Association.

Table 1. Membership of the eight farmers associations hosting the VICs where focus groups were convened

Association/ cooperative	VIC in district	Total Membership	Women	Men
Impabaruta	Kamonyi	2,524	1,484	1,040
Impakomu	Muhanga	2,530	1,596	934
Abahujumugambi	Bugesera	4,353	2,256	2,097
Tuswanyanzara	Ngoma and Kirehe/ old Kibungo	82	47	35
Cooperative Urunana	Gatsibo	1,230	930	300
Abajyinama	Nyabihu	2,235	1,232	1,003
Indangamirwa	Nyamagabe	861	396	465
Total /Potential VIC users		13,785	7941	5874

2.2. Data collection

The data collection methods employed in this rapid assessment are largely qualitative and the main instrument was focus group discussions guided by checklists, supported by key informant interviews with selected farmers (women and men). In addition to these instruments a semi-structured questionnaire was used to collect quantitative data on issues such as VIC activities, usefulness of the information, association membership, etc., disaggregating on gender⁵.

In using the focus group approach I refer to Krueger and Casey (2000), Pini (2002) and Shortall 2002) who recommended this participatory and dynamic approach for the identification of important issues associated with a particular theme or situation. Focus groups are often used before a more structured survey in order to understand a range of issues as diverse as empowerment, gender relations, HIV/AIDS (*see Pool et al, 2001*) and urbanization (*see Bah et al, 2003*). Each focus group constitutes users of VICs, members of user communities, and some members of management teams of farmers associations that host the VICs, and the person in charge of a VIC. Efforts are made to ensure full participation of women and members of different groups of the community. The discussions covered: 1) uses of VICs; 2) type of information users require; 3) type of printed materials found in VICs; 4) usefulness of the materials; and, 5) records that are being taken (VIC profile). Users of VICs were also asked about the main economic activity in their respective communities, the groups or associations that exist, the decision-making processes, levels of participation, and profiles of communities in terms of gender and equity (communities and association profiles).

As part of the methodological tool to understand farmers' own perception of organization and institutional arrangement users of VICs were asked to draw on paper the structures and positions of their respective groups. The idea was to have their own

⁵ Further collection and analysis of quantitative data may be required in future evaluation and impact study of the VICs.

description of organizational structures and to get information about the decision-making processes and flow of information and communication. The discussions on the drawings informs more about the direction of communication flow in an organization depends on the structure of the organization; however, changes in the direction of communication flow, intentional or otherwise, can alter the shape of the organizational structure (see Andrews and Herschel, 1998).

In the study of VICs, levels of farmers, user groups, partners and technicians contact networks and interactions, process of decision-makings, and the flow of information and communication, and ways of feedback are examined.

Indeed, farmers and user groups predominantly speak *Kinyarwanda* (*with its own local dialect as spoken by Rwandese*). English and French are the official languages but are largely spoken by people in key professional sectors and students in training institutions. High levels of illiteracy further limited the use of some data collection instruments.

2.3. Data Analysis Methods

Data from the focus group discussions and questionnaires are first used to describe and characterize each VIC. This is followed by an analysis of the strengths, weaknesses, opportunities, and threats (SWOT) of the VIC concept and implementation in Rwanda. In addition photography is used as a means of enriching the data and for the purpose of triangulation.

3. Findings

In general, VICs serve as meeting and contact points for dissemination of information on broader subjects other than agriculture. Following demand from the rural communities there are information materials on health, food security, education, gender, development, strategic planning of interventions, institution building, leadership and management of associations. This study revealed that there are more than 6, 600 farmers that have visited one particular VIC in 2005 for accessing information on new technologies and training materials.

VICs are community places where farmers can find many resources for their work in one place. These resources include: information and knowledge, shop of agricultural inputs, amalgamation of products for getting better prices, cooperative banks, training centers, community meeting places, among others.

Discussions in the focus groups revealed an information gap about gender and equity in the VICs. Majority of the population in Rwanda are women (4,249,105 female and 3, 879,448 male). This ratio is also reflected in the membership of farmers associations in the study sample (*Table 1*). Women are a power to reckon with in the farmers associations by dint of their number, especially where decisions are made democratically. Women are also a powerful labour force. They are empowered through self-support amongst themselves and that received from their respective associations. Most associations have a principle of gender balance, which facilitates the process of empowerment.

In Bugesera VIC, women are especially expanding their agricultural production capacity, through the use of new agricultural technologies which they access through the VIC and share amongst themselves. They are not just producing for sale in the market; they are also producing for the consumption of their families, thus ensuring a better food security. They are increasing their income and are becoming more independent of men economically and more confident about their own capacities.

Men said they like VICs because they can read books about different crops and check crop diseases. Women said they wanted to get new techniques about agriculture, plantation, information about seeds and field extension; and that they had learnt about the use of various drugs for livestock. They learnt about fish-farming and maize production and treatment. In addition, they have improved their nutrition through such experiences like the kitchen garden in Gatsibo district.

3.1. Strengths

Users have said that VICs are places where their communities have access to useful information and share knowledge that could transform people's livelihoods, increase their income, provide food security and improve nutritional standards. *"Information is useful only if it is available, if the users have access to it, in the appropriate form and language-i.e., if it is communicated, if it circulates among the various users with appropriate facilities, if it is exchanged"* (Mundy and Sultan, 2001:1). They have found that the informational materials at VICs are understandable, educative and translated into the local language.

All users consider the VIC as a very important tool to build new knowledge. They said they have gained new knowledge that they didn't have before. They said also that they have improved skills. The information at VICs is shared and used by farmers associations. Members of some associations share the information and knowledge in formal training using materials from the VIC. Some farmers share the information and knowledge with their families, friends, and neighbors; agricultural teachers do the same with their students. This supportive environment of sharing knowledge is a phenomenon called *community of practice* (see Hildredth *et al.*, 2000; Wenger 1998). This access to information itself is a component of empowerment and efforts to increase access, (Champman *et al.*, p17) contribute to empowerment. Wenger says that communities of practice are an organization's most resourceful and dynamic knowledge source for the center of an organization's ability to know and learnt. Learning is wished-for to bring new knowledge to the organization, allowing people to create new and better results; in other words, to innovate.

VICs are hosted by organizations that have a horizontal structure, knowledge of community needs, and a sense of community and solidarity. Members of organizations are involved in participatory processes of decision making about community problems. VICs are public (community) places where farmers can find many resources for their work in one place and community services (as training, savings), which also represent some benefits and savings in time and money when they don't need to go very far to supply some necessities.

3.2. Weaknesses

A major weakness identified in this study is the lack of a clear definition of a VIC. The principles underlying the VIC are not defined, yet necessary for the process of institutionalization by farmers associations. VICs started without defining the basic resources for their implementation. VICs have limited financial resources for building capacity and development, and so their sustainability could be affected.

The flow of information and communication with regard to the organizational structure was consistent in all the VICs studied (Figure 2). In general the flow is multidirectional; however this becomes unidirectional at the level of the research organizations. The USAID/CIAT/ISAR/ATDT project is facilitating a process of information sharing, but does not appear to have built in a capacity to receive and respond to feedback from users of VICs.

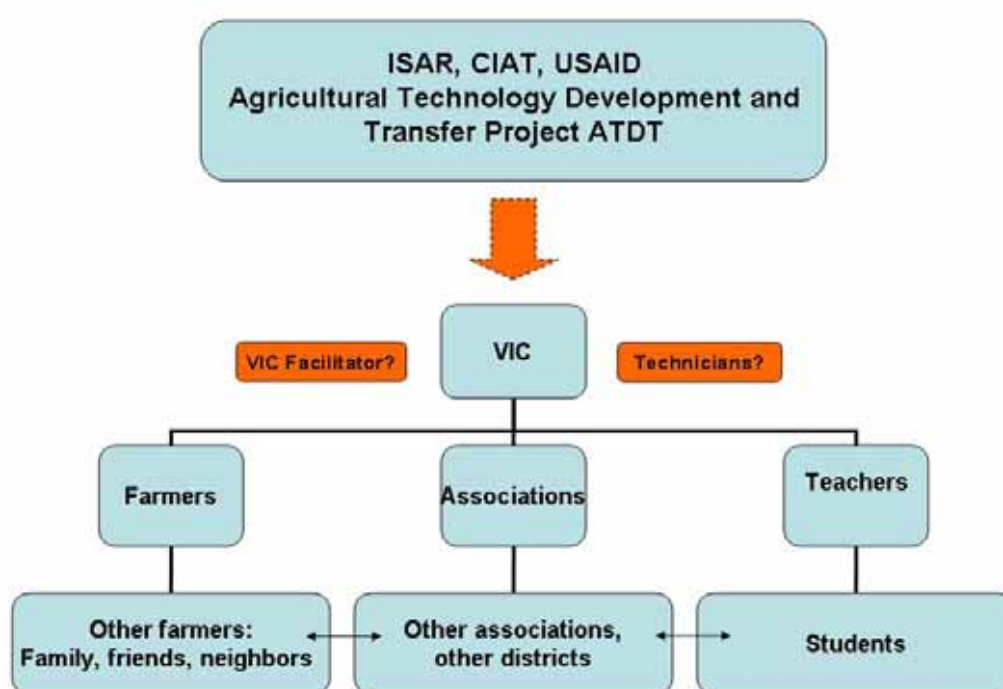


Figure 2. Flows of information and communication between VIC users and agricultural R&D organizations

VICs do not have a training program about necessary skills for their management, for example, information management.

3.3. Opportunities

VICs can be an important source of feedback and very useful for the work of organizations that are focusing on livelihood improvement and investing in natural resource management. VICs can consolidate a strategy that uses an integrated system of information and communication that values the community local knowledge and capacity, and promotes its own ways or means of sharing information and communication. Communities can design an integrated information and communication

system complementing existing materials in VICs and utilizing other available media. Communities can systematically use VICs to share their information and experiences with other communities and R&D organizations.

VICs can reinforce cooperation, participation, communication, sharing of knowledge and involvement of different members within organizations and communities. VICs can be a tool for social development of marginal and poor communities. Some associations have started an institutionalization process of VICs to convert some printed materials into formal training resources.

It was suggested to VIC users to share their experiences (bad ones and good ones) that they have acquired through the VIC, using different media available in the community to reach more people and share knowledge, to convert tacit knowledge to explicit knowledge (Polanyi, 1966 p.4).

3.4. Threats

Possibly the biggest threat to the realisation of the opportunities envisaged above is the general limited human and financial resources such as facilitators in VICs, and technicians visiting VICs. This is particularly relevant given the uncertain/unstable financial environment for the ATDT project.

Other threats include changes in the administration at various political levels – this was shown clearly in the former district of Kibungo where a change in boundaries has resulted in a VIC unable to offer services.

4. Conclusion

Encouraging communities to invest in an information facility and sharing knowledge of whatever kind, targeted towards helping them to meet their own vision of improved and sustainable livelihood can eventually lead to empowerment of the rural and marginalized communities. VICs should therefore be understood as organized public space where they can have availability of information and sharing knowledge and other community services (shop for sale of agricultural inputs, amalgamation of products for getting better prices, cooperative banks, training points, community meeting places and so forth).

Free access and democratization of information are key principles in organization and operations of VICs. Organized farmer groups in a form of farmer association is the basic requirement of establishing the centers to ensure institutional support backing, hosting and managing the VICs, including cost share the running of the centers.

From the initial stage of establishing the VICs it should be clear that the centers are demand-driven and address the information needs and priorities of the rural and marginalized communities (women and men, youth, sick, elderly and disabled). In other words VICs should be organized in manner that there is broad ownership base as the objective is to benefit the maximum number of farmers on wider and diversified issues related with agriculture and rural development. Efforts should also be made to ensure that VICs promote multidirectional flows of information and communication between different stakeholders, R&D partners, farmer's associations and other communities

groups, including sharing of expert as well as traditional knowledge of communities. The long term sustainability of VICs lies in community empowerment which also demands a strategic vision, basically developed in partnership with farmers to invest in human resources, in the physical condition of the VICs, and in training. The more information is available and internalized by users it dramatically influences “the way organizations are structured, the ways people lead and attempt to share power with others, and the very nature of organization and organizational communication” (Andrews and Herschel, 1998:2).

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