

**EVALUATION OF THE IMPACT OF INFORMATION
AND COMMUNICATION TECHNOLOGIES (ICTs)
ON POVERTY IN EASTERN AFRICA***

(* Includes Kenya, Rwanda, Tanzania and Uganda)

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**CONSULTANCY REPORT
ON THE APPRAISAL MISSION TO
RWANDA**

Submitted By

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1.0 INTRODUCTION

1.1 Background

This is a report about the mission to Rwanda that was aimed at assessing the country's readiness for the study on ICTs and Poverty in Eastern Africa. The Mission to Rwanda was a follow-up of a regional workshop, organized by IDRC in Nairobi in January 2005 to brainstorm and prepare a research agenda to examine the nature and types of linkages between ICTs and Poverty. Following the Nairobi workshop, efforts to develop a comprehensive regional research project on ICTs and poverty reduction were initiated with each of the four countries (Kenya, Rwanda, Tanzania and Uganda) required to form a national research team.

The country research teams had the responsibility of producing a concept note on the nature of the study within each individual country. The different concept notes would then inform the development of the overall proposal in line with the research agenda, which is the provision of empirical evidence for enriching debates as well as policy design in the area of ICTs and Poverty. Specifically, IDRC has concerns that specialists in ICTs and poverty are not having adequate interaction, which is critical for the realization of the potential of ICTs in poverty reduction strategies. Consequently, a primary expectation of both the workshop and the proposed study was the sharing of experiences and capacity building on issues concerning the linkages between ICTs and poverty reduction.

The research project will involve an initial phase of literature review, conceptualization of the nature of the relationship between ICTs and poverty reduction, enhancement of capacity and design of a methodology and field research instruments. This will be followed by two phases of data collection and analysis, and report writing and dissemination.

1.2 Objective for the Rwanda Mission

The mission to Rwanda was conducted, between 1st and 4th June 2005 to identify a possible country research team and an institution to lead the coordination. The visit had the following terms of reference:

- 1) Share the concept of the proposed study, initially with pre-identified persons (contacts made earlier) and with any other persons (who may be identified through initial contacts), and who may be having the potential and ability to play a role in the study.
- 2) Based on discussions held with the different categories of people in No. 1 above, assess the country's readiness and ability for the study on ICT and poverty.
- 3) Identify individuals with interest and commitment who could form the Rwanda team for the study.

- 4) Together with the identified team, come up with an initial concept that could be developed for the specific country study.
- 5) Get a feel of strengths and abilities of various institutions with a view of identifying an entity to host the country node for the research.
- 6) Write out a report to be shared with IDRC Nairobi for making a final decision.

1.3 Methodology

The methods used to achieve the objectives of this mission varied from web searches, interviews, observations and document reviews. Web research was used to obtain background information on both the country and several institutions and was later collaborated with interviews and review of documents where available.

Initial contacts were made with Mr. Albert Nsenguyumva of National University of Rwanda (NUR), who was the Rwanda team leader during the January Nairobi workshop¹. Contacts were made and meetings set with the people who attended the Nairobi workshop, and others who were deemed to have a great potential to participate in the study in various capacities. A list of people and their respective institutions is attached to this report as appendix 1.

The meetings focused on realizing the TORs and begun with introduction of the proposed research, sharing of the interviewee's activities (both individual persons and institutions) and how such activities may be relevant for the study, and a discussion of what the study could focus on in Rwanda. Any documents available about the institution and/or what it does were collected for review and support of documentation of this report. Both hard copies and electronic copies, where available, were collected.

The rest of the report is arranged as follows: Section 2 presents a brief about Rwanda as a country highlighting the poverty reduction strategies being put in place and the state of ICT policy and infrastructure. Section 3 is comprised of the findings from the interviews and materials collected from the various institutions. Conclusions and recommendations are presented in section 4. The report ends with an appendix.

¹The contacts were made by Dr. Fred Muhumuza and Ms Edith Adera of the IDRC office in Nairobi

2.0 BACKGROUND TO POVERTY REDUCTION STRATEGY AND ICT POLICIES

2.1 Poverty Reduction Strategies

Rwanda's main aim of the MDGs and Vision 2020 is to enable Rwandans to emerge from under-development and poverty status by achieving economic growth objectives in combination with social indicators objectives. One of the key aspects of these goals is to eradicate extreme poverty and hunger. The country finalized her poverty reduction strategy paper (PRSP) in 2002 in line with a long-term vision of reducing the proportion of people living below the poverty line from 60% to 25% and raise per capita incomes from \$250 to above \$1,000.

Rwanda's economic structure is characterized by an overwhelming majority of population being employed in agriculture. The scarcity of land calls for a reduction of the number of people depending on agricultural activities and use of highly productive technologies. Policies that promote education for all and especially professional trainings are needed to shift people from agricultural sector to any other sector in industry or services. The country has 26, 338 sq. Km of total area, of which 24, 950 sq. Km (94.7%) is made up of land and 1, 388 sq. Km (5.3%) of water. Of the total made up of land, only 8, 600 sq. Km (32.7%) are suitable for cultivation.

The overall poverty reduction strategy (PRS) framework is comprised of the following three broad areas: macroeconomic environment, public finance management, and monitoring and evaluation. Within the PRS are six broad priority areas: agriculture, human development (education and health) economic infrastructure, human resource and capacity building, private sector development and good governance.

Economic infrastructure development has been identified as an important requirement for a PRS that is based on sustainable development of productive capacities and better quality of life. This includes ICTs, transport, energy and water. The development of ICT is being looked at as a cornerstone of the government's Vision 2020. Already, certain priorities of the National Information and communication Infrastructure (NICI) 5-year Plan are being implemented.

2.2 Background to ICT Policy Processes

The formal ICT policy process in Rwanda begun in 1998 with a national workshop on "Information and Communication Technology Strategy." This was followed by a series of reports including: "An Integrated Socio-Economic and ICT Policy and Strategies for Accelerated Development", in 2000, and "An Integrated ICT-led Socio-Economic Development Policy and Plan for Rwanda: 2001 - 2005", in 2001. The later report represents the second phase of the plan process

and summarizes the ICT policy that was previously tabled with the 1st of the four NICI plans².

Although the ICT sub-sector in the country is still embryonic and accounting for a relatively small share of the economy's output, there is evidence of rapid growth, and substantial progress has been made in all the key sectors of the economy. As can be seen from table 2.1 below, there is more usage of ICTs within the national government sub sector compared to the local government and the private sector.

Table 2.1: ICT Usage in Rwanda (Percentages)

Sector	Non ICT	CT only	Basic ICT	Networked ICT	Intensive ICT
National Government	0	20	33	47	0
Local Government	58	36	5	1	0
Large Businesses	39	44	10	5	2
SMEs	16	58	15	10	1

Source: RITA

From the table, only large businesses and SMEs have elements of intensive usage of ICTs while national level government institutions dominate the use of basic and networked ICTs. These observations appear to be a result of physical access to services and affordability.

The government is committed to use ICTs to provide the country with an opportunity to leap-frog the industrialization stage and build an information and knowledge-based economy. A lot of efforts are being made to extend connectivity to rural areas through various initiatives including the USAID Telecentre program, the SchoolNet – WorldLinks program, and the International Telecommunications Union (ITU) Telecentre project.

The penetration and utilization of ICTs in the various sectors of the national economy will help to combat development challenges such as³:

- Improving education and health care,
- Improving governance,
- Building an economy capable of creating new job opportunities and feeding its population,
- Increasing Rwanda's competitive advantages in the global market and
- Ensuring sustainable development through poverty alleviation projects and enable them compete in the global market.

² Rwanda Development Gateway: E-Readiness Report, August 2003.

³ rwandagateway.org

It is, therefore, clear that the country intends to utilize ICTs in her poverty reduction strategies. However, in pursuing this objective the country is faced with a number of constraints, which include:

- Insufficient infrastructure including unreliable energy
- An inadequate stock of human resources as there is a small number of suitable technicians and lack of vocational schools.
- The financial resources are inadequate compared with the cost required to develop the necessary infrastructure at affordable terms.
- There is lack of an organized private sector and limited interactions between the private and the public sectors.

3.0 MAIN FINDINGS

3.1 Background to the Findings

This section reports on the findings of the interviews and document reviews about the various organizations and personalities. The discussions mainly related to the following:

- A brief introduction of the project on evaluating the role of ICTs in poverty reduction (Fred)
- The activities done by the organization/institution, more specifically in the areas of poverty and ICTs. (Horst person)
- The potential area where the institution could play a role in case an interest to participate is established.
- Areas of policy and policy implementation where the study could be conducted.

3.2 Ministry of Finance and Economic Development

Contact: Naphtali and Robert Cook

A visit was made to the main PRSP unit to, among others, understand the economic and, specifically, the poverty policy processes, obtain policy documents on poverty policy implementation and monitoring, and assess the possibility of involvement in the research project.

The two officials had a good knowledge of the country's PRSP process and poverty processes and availed one of the PRSP review reports. As would be expected, the Unit, possibly, has the best understanding of the country's policies with regard to poverty reduction and also has good documentation on monitoring and evaluation reports, which could be vital for the study. For example, relevant information was provided about future activities such as: revision of the PRSP in November 2005 and conducting of a household survey in 2006.

Specifically, the Unit indicated willingness to do the following in this study:

- Work with the team to review central government level policies, and policy and institutional frameworks to establish the linkages and gaps with regard to ICT and poverty.
- Provide relevant documents for review with regard to poverty reduction policies and strategies.

3.3 United Nations Development Program

Contact: Richard Musinguzi.

Mr Musinguzi has worked on a number of ICT related projects with UNDP in various capacities in Africa. Specifically, he worked with a UNDP sponsored

project in Southern Africa before joining the Rwanda program office. He is very conversant with the country's development policy and agenda and has good networking arrangements with a number of development agencies in Rwanda and abroad.

The UNDP has a large involvement in the country's ICT and poverty programs, which includes the following:

- The UNDP has supported the feasibility study on e-government and the e-documentation center. A comprehensive e-governance project was yet to be funded.
- The UNDP planned to select a component of the ICT policy that is of priority to the government and support its implementation. Specifically, the component of Improving Access to Information was to be supported by setting up information centers in each ministry and in the different provinces to provide information on services, regulations, etc.
- Provision of funding support for Rwanda's preparations to exhibit at the WSIS Summit in Tunis in 2005. The funding will cover preparatory committee expenses, generation and branding of products, demonstration stands and the delegation.
- Initial funding for an ICT advisor to the Minister in charge of the infrastructure.
- Participate in the resource mobilization processes for the country's development programmes.

An earlier study that was conducted by the UNDP could not be availed at the moment as a reply was still awaited from the regional office in Senegal. However, it was noted that the study was still in a very preliminary state as there had been no validation workshop or meetings or any comments received.

Concerning the possibility of hosting the research project, it was noted that the UNDP could play a leading role in coordinating the project in collaboration with the lead researcher. The organization has experience in coordinating projects and would, whenever necessary, provide an operation desk to the lead researcher. Discussions on possibilities of co-funding with IDRC were to be carried forward between Ms Edith Adera and Mr. Richard Musinguzi.

3.4 Rwanda Information Technology Authority (RITA)

Contact Person: Moses Bayingana

Mr. Bayingana, who is a Director – Private Sector, Education and Community Programmes, was at the time, the acting Director of RITA as the new replacement person was not yet in the office. He has worked with RITA for some time and had good knowledge and understanding of both ICT policy and practice in the country. He was also conversant with the ICT and Poverty research project

having been part of the team that attended the January Workshop in Nairobi Kenya.

The main responsibility of RITA is to catalyze and articulate the national and sectoral ICT strategies and to coordinate their implementation. RITA is supposed to provide a clear trajectory towards the realization of Rwanda's vision of a knowledge-based society and economy in line with Vision 2020. In her poverty reduction strategies, Rwanda views ICT as having a catalytic and leveraging effect on improving access to basic services, creating global markets and earning opportunities for wealth and job creation.

RITA coordinates the cross-ministry technology framework that includes deployment of common network backbone infrastructure using fiber optic, common messaging protocols, information sharing policies and security standards. Some of the major ICT projects in the country include:

- The rural telephone project, which is aimed at bridging the communication gap by providing affordable telephones to the countryside.
- A fiber optic cable that was being laid to connect all the major government institutions, hospitals and schools in the country. This is a private sector initiative and was to be marketed by the operators to private sector firms for connectivity.

With regard to the research project, Mr. Bayingana committed himself and RITA to participate in the following ways:

- Provision of documents and the necessary data for analysis
- Explanation of ICT policy, institutional and implementation processes
- Make linkages to the necessary people and institutions

3.5 Kigali Institute for Science and Technology and the E-Documentation Centre

Contact: Mr. Jerome Gasana and Ms Aline Uwamwiza

The Kigali Institute for Science and Technology (KIST) is a government university that was started in 1997 and offers training in range of fields including: ICTs, Mathematics, Engineering and Management. In addition to regular students the university offers short courses in ICTs to government employees from various sectors and departments both at the central and provincial levels of government.

Mr. Gasana is a Senior Lecturer at KIST in the area of ICTs. He has mainly been engaged in teaching various courses, both to fulltime students and short courses to government and private sector employees. Consequently, he retains good contacts and relationships with practitioners within the two sectors. Ms Uwamwiza was the head of the E-Documentation Centre and could be a good resource for information about programs and projects and their effects on the population with regard to the set project objectives.

At the time of interviews, it was noted that the former Director of the ICT section at the university had recently been appointed to head RITA while the new Acting Director was still on leave.

With regard to involvement in the project, KIST could provide a good input in establishment of linkages with practitioners and general implementation of the methodologies especially in the selection of sample areas.

3.6 National University of Rwanda

A number of persons from various departments and institutions were interviewed at the National University of Rwanda (NUR). These included the Secretariat of the OSSREA chapter in Rwanda, the Rwanda Development Gateway, the Department of ICT and the Research Commission. Courtesy calls were also made on the University Rector and the Vice Rector.

3.6.1 Faculty of Economics, Social Sciences and Management, and OSSREA Chapter, and the Department of ICT

Dr. Mushahara and Haba Sharon, who are lecturers in the faculty, were also the President and Vice President of OSSREA respectively. The team also includes two members from the University of Kigali. OSSREA, which begun in 2000, has largely been focused on poverty research. The team, which has produced a series of reports on the relevancy of policy to poverty reduction, noted that ICT has been given significant attention in Rwanda though questions still remained about the effectiveness of the linkages between ICT and the rest of the sectors. It was recognized that a needs assessment for the various research and analytical capacities was required in order to meet the capacity gaps.

A number of examples where ICTs have been used to impact on people's lives were suggested as possible focus areas for the study. These included the Telecentre, Local Radios and Village phones. The Telecentre has been used in the export of coffee to link farmers directly with traders in the United States. Apart from eliminating the effect of middlemen, there have been substantial improvements in the flow and speed of information about market opportunities and demands in terms of both quantity and quality. The effect of these processes on the poverty status of the participating farmers could form a good component of the study. Secondly radios have been used to deliver information on production and marketing to the farmers, and on demographic trends to the communities.

Dr. Felix, head of the ICT department indicated readiness to participate in the design of instruments and analysis.

3.6.2 Rwanda Development Gateway

The origin of the Rwanda Development Gateway (RDG) is linked to the initiative of using ICT for progress through provision of information on new and improved opportunities. The project has a three-year funding from the government and, therefore, has concerns about future sustainability. Activities in the first year included setting up the project and building capacity.

The overall objective of the project is to promote the use of technology in general and ICTs in particular for community development. In line with the above objective, RDG is working towards developing and availing information content that effectively and adequately responds to people's needs in the whole country. The project intends to provide information agriculture, tourism, trade and investment, ICT and development, environment, and gender. The information is to be provided in many ways including websites that bring together on-line services, resources and information for people in various sectors.

To this end, RDG had a good report on the E-Needs of key segments of the community such as: farmers, traders, women, health workers, education (teachers and students in primary and secondary schools) and local leaders.

In the initial stages, the RDG has focused on collection and dissemination of information in the following three selected areas of interest:

- Indigenous knowledge comprising of Gacaca Jurisdictions and Pharmacopoeia – traditional medicines.
- Sector promotion to empower Coffee, Tea, and Tourism sectors partly through provision of marketing and management information.
- Telecenters to contribute to improving access to rural areas and making research on new ways of deploying ICTs in rural areas.

In order to provide quality services, the RDG identified key partners in government, private sector, civil society and donor community who will also help to provide content with regard to their areas of involvement.

The main challenges included:

- Identification of more people that need to be reached, and devising the means and ways of reaching them in a sustainable manner.
- Development of content that is customized to the needs of rural areas and in a friendly way in order to overcome techno phobia. This followed observations that a lot of attention had been put on setting up the infrastructure at the expense of content.

The RDG had a great potential to contribute to the project in terms of provision of data on ICTs and linkages to various sectors of the economy. In addition, involvement in the project would help to build capacity within the project for

detailed analysis of linkages and processes that will help to integrate ICTs in poverty reduction ventures.

3.6.3 Research Commission

The commission, which is headed by Emile Bienvenu, was started in 1998 and is supported by Sida/SAREC. It provides research grants, minor equipment, and conduct workshops/seminars for dissemination of research findings. The commission has good experience in project management that could be tapped and incorporated in the coordination unit.

3.7 On the Frontier

Contact Persons: Ms. Lydie Hakiziman and Eric

On the Frontier (OTF), which is a US based firm for providing strategic consultancies to help countries develop competitiveness, was introduced in Rwanda in 2002. It has since been providing cluster analysis to help unlock the potential in the tourism, coffee and tea sub sectors. OTF is seeking to help the country to apply ICT as a tool that will make the rest of the economy more productive.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions mainly relate to objectives No. 2, assessment of the country's readiness and ability to be part of the study; and objective No. 3, identification of individuals with the readiness and commitment to the study.

4.1 Readiness of the country

- Considering the country's policies and commitment to the use of ICTs for national development and poverty reduction, Rwanda provides a fertile ground for good case studies that will enrich the results of the study.
- There was a lot of interest among several people to have the study conducted in Rwanda and potential to build a team for the study.
- The country has a few technical people in a number of areas, especially in the field of poverty analysis. However, as noted above the team could benefit from the proposed design of the study, which involves capacity building and interaction with regional and international experts to establish a credible team for the study.

4.2 Possible areas of study

The conclusions relate to the areas of study, the study team members and respective areas of involvement, and coordination.

- In line with the broad concept of the study, and recognition that there were still conceptual gaps in Rwanda on the linkages between ICT and poverty, a number of projects in the country could provide focus to the study. These include:
 - The Telecentre project,
 - Local (FM) radio stations and
 - Village phones

Projects within the Rwandagateway areas of operation and the E-documentation Centre at KIST would provide areas for initial targeting of drawing sample areas. Note that details of these will now be used in the ongoing development of the project proposal.

4.3 Proposed Research team

- Given that there was a critical minimum for the study team, a relatively large team is recommended such that different persons are drawn into the process at the moment they will provide the best contribution to the project. Five (5) of the members will play a fulltime role while another 5

will only come in at certain critical points. It should be noted that the size of the team compares fairly with the other countries.

Table 4.1: Proposed Members of the Team

	Name	Area	Status
1	Sharon Haba	Poverty	Coordinator/Fulltime
2	Dr. Mushahara	Poverty	Fulltime
3	Albert Nsengiyumva	ICT	Fulltime: Strategic oversight
4	Felix	ICT	Methodology and Analysis
5	Jerome Gasana	ICT	Sample design and Methodology
6	Philbert Nsengimana	ICT	Fulltime
7	Naphtali	Poverty	National level poverty analysis
8	Robert Cook	Poverty	National level poverty analysis
9	Moses Bayingana	ICT	Fulltime
10	Baloko Makala	Policy	Policy and other strategic linkages

4.4 Horst Institution

- There was no clear conclusion made on the coordination of the project though two options are recommended for consideration.
 - 1) The OSSREA office, which is horst to the national coordinator, could be used a coordination unit and work closely with the Research Commission within NUR. This is the preferred option since it is the seat of the recommended country coordinator.
 - 2) The UNDP office expressed willingness and offers another viable option for coordination. This option would be a hybrid whereby the national coordinator would be facilitated by the UNDP, which may also provide additional funding. As noted, this option was to be further discussed between the IDRC office in Nairobi and the UNDP office in Kigali.

Appendix 1: List of Contacts and Respective Institutions

Name	Title	Institution	Contact
Bayingana Moses	Director	RITA	moses@rita.rw
Baloko Makala	Director: ICT	Min of Infrastructure	baloko@yahoo.com
Bienvenu Emile	Executive Secretary	Research Council - NUR	ebienvenu3@yahoo.com
Coco Rulinda	ICT Coordinator	GIS - NUR	rulinda@yahoo.fr
Cook Robert	Economist	Min of Finance	Robert.cook@minecofin.gov.rw
Gasana Jerome	Senior Lecturer	KIST	jerome@kist.ac.rw
Eric		On The Frontier	
Hakizimana Lydie	Senior Analyst	On The Frontier Group	lhakizimana@otfgroup.com
Naphtali	Planer	Min of Finance	
	Vice Rector (Academics)	NUR	
Felix	Head of Program	MSC Prog (NUR)	
Haba Sharon	Lecturer and Vice President of OSSREA	Fac of Econ, Social Sci & Mangt OSSREA - NUR	sharonhaba@yahoo.com shaba@unr.ac.rw
Musinguzi Richard		UNDP	Richard.musinguzi@undp.org
Mushahara	President of OSSREA	OSSREA - NUR	
Nsengimana Philbert	Project Coordinator	Rwanda Dev Gateway	nsengimana@yahoo.com
Nsengiyumva Albert	ICT Coordinator	NUR	albert_nsengi@yahoo.com
Uwamwiza Aline	IT Specialist	E-Documentation Centre	Uwamwiza21@yahoo.fr
		Rector	NUR