

**ASSESSMENT OF AGRICULTURAL INFORMATION NEEDS IN
AFRICAN, CARIBBEAN & PACIFIC (ACP) STATES**

EASTERN AFRICA

Final Overview Report

Prepared by

**Yawo Assigbley
&
Gashaw Kebede**

On behalf of the

Technical Centre for Agricultural and Rural Cooperation (CTA)

Project: 4-7-41-255-8

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Disclaimer

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Acronyms

ACP:	African, Caribbean and Pacific
AGORA:	Access to Global Online Research in Agriculture
ARC:	Agricultural Research Corporation (Sudan)
CIDST:	Centre d'Information et de Documentation Scientifique et Technique (Madagascar)
CSO:	Central Statics Office
CTA:	The Technical Centre for Agricultural and Rural Cooperation
DORA:	Dissemination of Reference Books on Agriculture
EASSy:	East African Submarine System
EIAR:	Ethiopian Institute of Agricultural Research
FAO:	Food and Agriculture Organisation of the United Nations
FARC:	Food and Agriculture Research Council (Mauritius)
GDP:	Gross Domestic Product
HINARI	Health Internetwork Access to Research Initiative
HIV/AIDS:	Human immunodeficiency virus/ Acquired immune deficiency syndrome
ICM:	Information and Communication Management
ICT:	Information and Communication Technologies
ISP:	Internet service provider
KARI:	Kenya Agricultural Research Institute
LAN:	Local Area Network
MAFC:	Ministry of Agriculture, Food Security and Cooperatives (Tanzania)
NaCRRRI:	National Crop Resources Research Institute (Uganda)
NAROs:	National Agricultural Research Organizations
NGO:	Non-governmental Organization
OARE:	Online Access to Research in the Environment
PICOM:	The Projet d'Infrastructure de Communication (Madagascar)
QAS:	Question and Answer Service
SDI:	Selective Dissemination of Information
SUA:	Sokoine University of Agriculture (Tanzania)
TEEAL:	The Essential Electronic Agricultural Library
UNDP:	United Nations Development Programme

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EXECUTIVE SUMMARY

Background

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area.

Since 2003, CTA has been systematically conducting needs assessment studies across the Pacific, Caribbean and Africa regions. These studies have been in direct response to calls for CTA, in various evaluations of its products, services and programmes, to be more strategic in its choice regarding the setting of its own agenda and reacting to demand. This report gives an overview of the needs assessment studies conducted in 13 Eastern Africa countries, namely, Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Sudan, Tanzania and Uganda as a part of CTA's needs assessment studies in ACP countries. National consultants from each of these countries conducted the needs assessment studies and produced country reports from May to December 2008 in Djibouti, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Sudan, Tanzania and Uganda, and July to December 2009 in Burundi and Comoros. The studies in Eritrea and Rwanda were conducted in 2006 as a part CTA's needs assessment study of post conflict countries. A total of 257 institutions in the 13 countries were interviewed for the study. This overview report is therefore based on the 13 country reports submitted by the national consultants from the 13 Eastern African countries.

Objectives of the study

The overall objective of the needs assessment study in Eastern Africa is to improve the collaboration strategies with ACP agricultural organisations and the relevance of CTA's support to African ACP countries. The study should assist CTA to improve and better target interventions and activities aimed at potential partners and beneficiaries (including women, youth, private sector and civil society organisations) to have a more informed picture of their needs and help in the elaboration of a strategy and framework of action. The study should also highlight where there are specific needs for CTA's products and services thereby enabling improvement in the delivery of the same.

Methodology

The methodology of the study consisted of desk study and interviews using a uniform interview guide, provided by CTA, across the countries studied. The focus of the desk study was to obtain background information for the preparation of the country profile, a list of institutions involved in agriculture and a preliminary list of select institutions to be interviewed. The interview was used to collect primary information on the information and capacity-building needs of institutions involved in agriculture and rural development. The interview was also used to obtain data on the current status of infrastructure,

information services and ICM capacity of the institutions and their views about CTA products and services. The study commenced with a briefing meeting of the national consultants, the regional coordinators, and the CTA overall coordinator of the project. Throughout the study period, two regional coordinators, one for the Anglophone and another for the Francophone countries, provided guidance to the national consultants on technical and editorial issues, while a CTA overall coordinator provided an overall guidance, including on technical and editorial issues. The country reports were prepared by the respective national consultants using a uniform template prepared for the study by CTA.

Expected results

The study aimed to provide insight on:

- The status of infrastructure, information services and ICM capacity of institutions involved in agriculture and rural development;
- Information and capacity building needs in the area of ICM identified for key institutions and potential CTA partners involved in agriculture and rural development;
- Potential strategic partners for CTA activities and services identified (paying special attention to e.g. print media, editors, radio, TV and journalist networks); and
- Baseline data on the status of ICM and ICT in agriculture and rural development compiled for monitoring purposes and improved outreach.

Assumptions and Limitations

As most of the national consultants were not information management specialists with a good knowledge of ICM concepts and strategy, the Regional Coordinators had to provide them with regular guidance to ensure uniformity in the needs assessment studies. The quality of the working documents produced at the briefing meetings helped to harmonize the level of the National Consultants.

A major problem encountered in December 2008, is the unfortunate death of the consultant responsible for the Burundi and Comoros' studies. This delayed the drafting of the finalisation of both country studies and also the preparation of the overview report. Two replacement consultants for the Burundi and Comoros studies were identified and briefed in the first quarter of 2009, allowing the study process to be completed by the end of 2009.

Another limitation that needs to be mentioned is that the needs assessments of Eritrea and Rwanda were completed in 2006, consequently, these reports do not cover the same time period as the others. These differences are significant with respect to some of the issues covered by the overview report such as the status of ICTs in agriculture and rural development which is changing rapidly. Both reports also follow a slightly different format and, as result, some times lack information that is available in the other reports.

Conclusions

Conclusions from Country Reports

Information Needs

The need in agricultural information contained in the country reports vary from one institution to another. Within the wide range of information needs documented in the country reports, one can easily recognise a large overlap particularly in priority information needs of the different institutions covered by the study. The priority information needs common across most of the institutions include market information, farm problems, post-harvest technology, non-farming livelihoods, crop varieties, grading systems, affordable credit for farmers, sources of processing equipment, government and international regulations, conferences and meetings, the development and funding of programmes, commodity profiles, and crop insurance systems.

Similarly, nearly all country reports have identified scientific journals and materials in appropriate languages and formats as the most difficult-to-access information formats. A good number of institutions have also identified statistical data, materials for mass distribution, and visual/ pictorial information as difficult-to-access information format.

Capacity-building needs

Almost all institutions need to develop capacity in:

- Basic and advanced computing and Internet skills among the staff and end-users (non-ICM staff, target audience);
- Repackaging and disseminating agricultural and rural development information in appropriate languages and format;
- Formulating and implementing ICM policies and strategies for agriculture and rural development sector;
- Providing information sources in a variety of formats;
- Making available adequate computing resources;
- Accessing reliable and fast Internet connection; and
- Funding their ICM activities and programmes.

A number of institutions have also expressed a need to develop capacity in assessment of information resources and capacities on a regular basis. The need for establishing printing facilities is also brought out directly or indirectly by most of the institutions. A few institutions also need to establish new library/documentation units.

The need for developing the skills of the ICM staff particularly revolves around developing and managing websites, databases, and networks; hardware maintenance; application of ICTs in agricultural communication; packaging of information in a language and format appropriate to target audiences; and the development and implementation of ICM policies and strategies. Basic computing skills for the non-ICM staff and clientele aims at proving them with the computing and Internet skills that they require to use the ICT resources and services provided by the institutions.

Each country appears to have institutions with relative strengths with respect to training, generating agricultural content, reaching the wider segment of rural and agricultural communities and qualified ICM staff for CTA to collaborate with in helping build the ICM capacities of the respective countries.

Overview of CTA's products and services

The number of institutions receiving CTA products and services vary from country to country. While almost all institutions in the Francophone countries did not know CTA before the survey, not more than half of the institutions in the Anglophone group have had contacts with CTA. Moreover, only a few institutions in each country actually know or make use of the full range of CTA products and services. Only Kenya and Sudan have reported to have institutions familiar with and using more than three CTA products and services. Some of the country reports have further noted that some important CTA products and services are not known by the target beneficiaries at all, such as the Rural Radio Packs in Tanzania and the web services in Mauritius.

Spore is received by all institutions, either directly or through their employees who subscribe to the magazine on individual basis. In the Francophone countries where CTA products and services are relatively well known, such as Burundi, Madagascar and Rwanda, the institutions have reported not having benefitted sufficiently from CTA's products and services. Consequently, the institutions have expressed the desire to establish partnership with CTA in order to benefit from its products and services, particularly from the training course and seminar support programme.

CTA products and services are appreciated by those who use them as responsive to a wide range of agricultural and rural development needs, very practical among grassroots communities, and useful for extension works.

Potential strategic partners

Taking into consideration the criteria defined in the project documents, namely, the mandate in the agricultural area and the rural development, the target audience, the quality of activities conducted and the spatial coverage of the institutions – and according to the strengths and weaknesses of the institutional analysis, the national consultants have proposed institutions that could serve as potential and strategic partners to CTA in their respective countries. This number varies from country to country and is in the range of 2 institutions for Kenya to 24 institutions for Madagascar (Annex 2).

Regional Coordinators' Conclusions

Information Needs

Each institution has a wide range of information needs. The information needs of the institutions vary with the type, activities, target audience, and focus of each institution. It is also possible to generalise that their information needs are further influenced by global trends such as climate change. The need for market information by all the countries, for instance, can largely be explained by the growing adoption of market economy by the countries and the emerging global environment that favors least developed countries to export their agricultural products to the developed world. The variety of needs expressed for agricultural information prove that all the institutions face serious difficulties in meeting these essential needs for the accomplishment of their activities.

There seems to be a wider recognition that each country already has some information that can be used to meet the needs of the agriculture and rural development communities. This can be discerned from the fact that the majority of the national consultants have recommended for establishment of national and regional networks of agricultural and rural development institutions with the aim of facilitating the sharing of information and other resources within each country and among the countries.

Capacity-building needs

It is evident that almost all institutions are short of human, financial and technical resources. The different capacity-building needs expressed in the country reports should lead to the training of the personnel in ICM/ICT and repackaging of information, to the capacity building of the institutions through the supply of adequate equipment and technical advice and, above all, to assisting the countries put in place ICM policies and strategies.

It is also to be noted that the main areas of capacity building identified by the country studies (ICM skills, ICM policies and strategies, publishing, improved access to agricultural and rural development information) are within CTA's mandate or specialisation, making CTA a key player in bringing about improvements in ICM in the countries.

Difficulties in accessing and using scholarly journals in the face of freely available online resources such as AGORA require further investigation. The difficulty faced by the majority of the institutions in providing existing information in appropriate languages and formats is also a critical stumbling block in reaching the agricultural and rural communities of the countries. This should provide more impetus for the countries and CTA to work together more closely as the farmers are also the ultimate beneficiaries of CTA's products and services.

Overview of CTA's products and services

While it has a wide range of products and services tuned to the requirements of ACP countries, CTA is not sufficiently known by the majority of the institutions interviewed. This should motivate CTA to increase its visibility in all the countries through concrete actions of sensitisation of its products and services. In this connection, it is encouraging to note that CTA products and services are rated as very useful/useful by those who knew the products and services.

Potential strategic partners

The range organisations proposed by the national consultants of each country should give CTA adequate option to select from for partnership. The partnerships will also allow CTA to be more known and used in each country. These potential partners are chosen in each country based on their role and the potential contributions they could bring in helping meeting the information needs of the rural communities.

Recommendations

Recommendations by Country Consultants

The national consultants have put forward a long list of recommendations to address the identified information and capacity building needs as well as issues raised in connection

with feedback on CTA products and services and CTA partnerships. The recommendations are directed to CTA as well as the governments of the respective countries. The syntheses of the recommendations are as follows:

Information needs

In connection with the information needs expressed by the institutes, most of the national consultants have recommended that:

- a) CTA sensitises government officials of the countries to support the strengthening of information services within the national and regional institutions in charge of agricultural and rural development;
- b) CTA and respective governments facilitate access to information on market and market-related data, commodity profile, postharvest technology, climate change, agricultural statistics, grading systems, affordable credit for farmers, sources of processing equipment, government and international regulations, commodity profiles, and crop insurance systems;
- c) CTA provides information regularly on upcoming training courses, seminars, conferences, meetings, and funding and training opportunities;
- d) CTA and respective governments help establish networks of agricultural and rural development organisations within each country and among the countries with the aim of sharing information and related resources. It is also recommended for CTA to help these national networks link with similar other networks outside the region;
- e) CTA and respective governments help develop capacity of institutions in the area of repackaging of existing agriculture and rural development information in appropriate languages and formats to ensure that available information reaches target audiences;
- f) CTA and respective governments provide training opportunities to the different categories of agricultural and rural development professionals in their respective areas of subject specialisations on a regular basis;
- g) CTA helps institutions have improved access to the difficult-to-access formats such as scientific journals.

Capacity-building needs

In connection with capacity building needs, most of the national consultants have recommended that:

- a) CTA and respective governments provide basic and advanced trainings in computing and Internet use for ICM staff and end-users (non-ICM staff and farmers and other clientele). The specific areas of training identified for ICM staff include:
 - i. website development and maintenance;
 - ii. database development and administration;
 - iii. application of alternative extension communication technologies such as mobile phones, radio and web-based facilities;
 - iv. preparation and production of interactive radio and video programmes for targeted audiences;
 - v. desktop publishing; and
 - vi. hardware maintenance.

- b) CTA provides technical, training and financial support to enable local institutions repackage existing information in appropriate languages (such as local languages) and format to target audiences (farmers, policy makers, extension workers, and the general public);
- c) CTA provides technical, training and financial support to facilitate local institutions to formulate and implement ICM policies and strategies for the agriculture and rural development sector. It is also recommended that respective governments create the necessary environment for the development and implementation of ICM policies and strategies and provide the necessary finance;
- d) CTA and respective governments supply the necessary ICT equipment (computer, Internet browsing, LAN, bandwidth);
- e) Respective governments provide regularly adequate budget for the functioning and the financing of the ICM activities and programmes;
- f) CTA and the respective governments provide the financial and technical support to allow countries to conduct information and capacity needs assessments at national levels on a regular basis;
- g) CTA helps establish new ICM facilities such as libraries, documentation units, training facilities, and printing facilities for those institutions who expressed need to have such facilities; and
- h) Respective governments improve the work conditions of ICM staff.

CTA's products and services

In connection with CTA products and service, most of the national consultants have recommended that CTA:

- a) Organises targeted and increased sensitisation actions on its activities, programmes, products and services in every country in order to increase its visibility;
- b) Puts in place a policy of a systematic spreading of its products and services to all institutions interviewed and notably of the *Spore* Magazine, the publications distribution service (PDS), Question and Answer Service (QAS), DORA, and SDI service;
- c) CTA publicises and promotes the whole range of its products and services among agricultural and rural development institutes even in countries where it is relatively widely known; and
- d) Ensures that its products address emerging topics and issues such as climate change, bio-fuels, HIV/AIDS, biotechnology, market information, and entrepreneurship. In this connection, it is also recommended that CTA partners with local institutions with proven capacity in identifying and compiling the information on the emerging topics.

Potential strategic partner institutions

The national consultants have also recommended that:

- a) CTA reinforces its collaboration with the institutions with which is already partnering;
- b) CTA immediately initiates collaboration with the other institutions recommended by the national consultants for CTA partnership,

- c) CTA expands the type of institutions that it collaborates with to include institutions involved in agriculture and rural development in broader sense, such as institutes working in the area of HIV/AIDS;
- d) CTA enters into formal partnerships with officials of institutions and not individual employees of institutions so that the partnership does not suffer when there is change or movement of staff; and
- e) CTA works with the media through providing materials suitable for publication and broadcasting and staff training especially on agricultural journalism.

Regional Coordinators' recommendations

To complete the recommendations expressed in the country reports and taking into account the strategies developed and the action plans suggested by the national consultants, the Regional Coordinators put forward the following recommendations specifically to CTA:

- a) Assist the countries to conduct in-depth information and capacity building needs of the main actors of rural development;
- b) Assist the different potential partner institutions through their respective governments in formulating and putting in place coherent ICM policies and strategies in order to increase the role of the information in decision making process. The assistance could be through training, technical advice, and/or funds as necessary;
- c) Motivate partner institutions to form and/or energize national networks of agricultural information for a free circulation and spread of information and the sharing of experiences and knowledge. CTA's contributions in this connection could include provision of e-platforms and training in support of the national and regional networks of agriculture and rural development institutes;
- d) Assist the countries that are still formulating their ICT policies to finalize them and put them to work;
- e) Provide for the renewal of some ICT equipment that are obsolete in some partner institutions;
- f) Facilitate training on how to identify and use free-to-access electronic sources of information on agriculture and rural development such as AGORA. Along with this, assist in initiating and managing member-managed directory of e-resources and/or links to facilitate the ease of access to the free-to-access e-resources;
- g) Provide an electronic directory of information on training, funding, and project opportunities. This can also be largely member-managed;
- h) Provide desktop publishing and technical editing training to ICM staff to address their difficulties in repackaging and disseminating information in appropriate languages and formats to target audience;
- i) Assist at least one institute in each country to have a functioning printing facility to help in producing materials in print format for targeted as well as mass distribution and similar other purposes;
- j) Promote CTA products and services by being represented at the major agricultural and rural development events in each country
- k) Give adequate coverage to the emerging topics (such as climate change) in CTA's publications, seminars, and so on;
- l) Facilitate access to the information types identified as needed by the majority of the institutes in the study; and
- m) In the area of marketing, the following are also recommended:

- i. Designate a focal point that will be in charge of coordinating the national activities and those of the CTA, of facilitating subscriptions, collecting users opinions in order to respond to the concerns regarding the search of information on the products and services of CTA;
- ii. Elaborate a global marketing strategy of CTA that will lead to an appropriate marketing plan. Putting in place this marketing plan will enable CTA to reposition its different programmes, projects, products and services and give them a new marketing orientation vis-à-vis the specific needs of its real and potential partners in order to maximize and increase their satisfaction levels;
- iii. Develop a coherent strategy of communication including concrete actions of promotion, publicity, and public relations through the media and in using the ICTs to: (1) make its products and services known in all ACP countries; (2) reach and increase CTA customers in all ACP-EU countries; (3) sensitise decision makers and governors on the important role of agricultural information management in the expansion of the agricultural production of their countries;
- iv. Conduct an information audit of resources and capacity to discover what information resources and organisational capacity for ICM exists in the countries; and
- v. Organise seminars and training workshops in the marketing of agricultural information for the personnel in charge of information in its different partner institutions.

1. INTRODUCTION

1.1 Background

1. The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area.
2. Since 2003, CTA has been systematically conducting needs assessment studies across the Pacific, Caribbean and Africa regions. These studies have been in direct response to calls for CTA, in various evaluations of its products, services and programmes, to be more strategic in its choice regarding the setting of its own agenda and reacting to demand. The Centre's new strategic plan covering the 2007 – 2010 period places emphasis on: (1) improving CTA's efficiency and increasing the Centre's outreach by addressing the problem of difficult or insufficient access to information in ACP countries; (2) and further defining the niche where the Centre has a comparative advantage. Consequently, to reach more beneficiaries and to strengthen CTA's partnership networks, it is important that ICTs and ICM strategies are made more widely available.

1.2 Objectives of the Study

3. The overall objective of the needs assessment study in Eastern Africa is to improve the collaboration strategies with ACP agricultural organisations and the relevance of CTA's support to African ACP countries. The study should assist CTA to improve and better target interventions and activities aimed at potential partners and beneficiaries (including women, youth, private sector and civil society organisations) to have a more informed picture of their needs and help in the elaboration of a strategy and framework of action. The study should also highlight where there are specific needs for CTA's products and services thereby enabling improvement in the delivery of the same.

1.3 Methodology

4. The methodology of the study consisted of desk study and interview using a uniform interview guide, provided by CTA, across the countries studied. The needs assessment in Eastern Africa began by a briefing meeting held in Kampala, Uganda from 21 to 24 April 2008 which was attended by the CTA's overall Coordinator, two

Comoros), Ethiopia, Kenya, Mauritius, Seychelles, Sudan, Tanzania and Uganda.

5. Despite attempts made by the CTA's overall Coordinator, national consultants from two francophone countries - Madagascar and Djibouti - were not identified. With the help of some National Consultants attending the Kampala meeting, a list of potential Consultants for these two countries were prepared by the Francophone Regional Coordinator who finally proposed to CTA the name of National Consultants for Madagascar and Djibouti. After their selection by CTA, the Francophone Regional Coordinator organised their briefing meeting respectively in Djibouti from 14 to 15 July and in Tananarive from 18 to 19 July 2008.
6. Country studies were then conducted by national consultants in each of the eleven countries in two periods: over the period of May to December 2008 for the Consultants attending the Kampala meeting and over the period of July to December 2008 for the Consultants from Madagascar and Djibouti.
7. The studies on the field were going well when suddenly, the CTA's overall Coordinator got the sad news of the death of the National Consultant for Burundi and Comoros in December 2008. This situation disrupted the study in Burundi and Comoros. In order to avoid a breakdown of the study process in Eastern Africa, CTA's Overall Coordinator in collaboration with the Francophone Regional Coordinator, recruited two new National Consultants for Burundi and Comoros in February 2009. The studies in these two countries started immediately with the briefing session which was done remotely by the Francophone Regional Coordinator in March 2009 and the needs assessments were then conducted up to December 2009.
8. With the various working documents, the National Consultants went onto the field and started the study by executing a desk study: collection of background information and data and preparation of the country profile, a list of institutions involved in agriculture and a preliminary list of institutions selected for the interview. They also established contacts with the institutions to be involved in the field study and interviewed a total of 257 institutions. The country reports were then prepared according to the outline set up during the period of May to December 2008 for Djibouti, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Sudan, Tanzania and Uganda, and July to December 2009 for Burundi and Comoros. Throughout the study, the Regional Coordinators provided guidance, by email and telephone, to the National Consultants on technical and editorial issues.
9. This overview report is based on country reports from 11 countries – Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Mauritius, Seychelles, Sudan, Tanzania and Uganda – subject to the present study and from two reports – Eritrea and Rwanda – which were done in the previous post conflict countries study in 2006.

10. The study aimed to provide insight on:
- Status of infrastructure, information services and ICM capacity of institutions involved in agriculture and rural development;
 - Information and capacity building needs in the area of ICM identified for key institutions and potential CTA partners involved in agriculture and rural development;
 - Potential strategic partners for CTA activities and services identified (paying special attention to e.g. print media, editors, radio, TV and journalist networks); and
 - Baseline data on the status of ICM and ICT in agriculture and rural development compiled for monitoring purposes and improved outreach.

1.5 Assumptions and Limitations

11. As most of the National Consultants were not information management specialists with a good knowledge of ICM concept and strategy, the Regional Coordinators had to provide a regular guidance to the national consultants to ensure uniformity in the needs assessments. The quality of the working documents produced at the briefing meetings helped to harmonise the level of the National Consultants.
12. A major problem encountered in December 2008, is the unfortunate death of the consultant responsible for the Burundi and Comoros' studies. This delayed the drafting of the finalisation of both country studies and also the preparation of the overview report. Two replacement consultants for the Burundi and Comoros studies were identified and briefed in the first quarter of 2009, allowing the study process to be completed by the end of 2009.
13. Another limitation that needs to be observed is that the needs assessments of Eritrea and Rwanda were done in 2006 and as a result the reports of these two countries do not cover the same time period as the others. These differences are significant with respect to some of the issues covered by the overview report such as the status of ICT in agriculture and rural development which is changing rapidly. The two reports also follow a format that is slightly different from the others and as result the two reports some times lack information that is available in the other reports.

2. AGRICULTURAL PROFILE – EASTERN AFRICA

2.1. Brief Description of Agriculture and Recent Developments in the Sector

14. The countries studied in Eastern Africa include 8 Anglophone countries (Eritrea, Ethiopia, Kenya, Mauritius, Seychelles, Sudan, Tanzania and Uganda) and 5 Francophone countries (Burundi, Comoros, Djibouti, Madagascar and Rwanda).
15. The countries have extremely varying population size, Comoros with only 576, 000 on one extreme and Ethiopia with about 77 million on the other extreme (Table 1). The projected average population growth rate of the countries lies between 2.1 and 3.2 % per annum. In total, there are more than 260 million people living in the 13 countries. The age structure of the countries shows that a large proportion of their population is young (below 25 years of age). The size and composition of the population in these countries has a direct impact on the resource requirements to overcome poverty and meet their development goals.
16. Except for Djibouti, Mauritius, and Seychelles, the overwhelming majority of the population of the countries is located in the rural areas. Nine of the countries have about 80% of their population in the rural areas (Burundi, Comoros, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Tanzania, and Uganda), while one has 60% of its population in rural areas (Sudan). Ten of the countries also rely heavily on the agricultural sector for economic growth, employment creation and foreign exchange generation (Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda). This has have implications on the importance of the study, agriculture and rural development issues and solutions in bringing about social and economic development in the countries.
17. Several local languages are spoken in each country (For example, 9 local languages in Eritrea and 120 languages in Tanzania). In terms of international languages spoken, 8 of the countries use English language at least as a working language (Eritrea, Ethiopia, Kenya, Mauritius, Seychelles, Sudan, Tanzania and Uganda), 5 countries use French, 4 countries both English and French languages (Mauritius, Seychelles, Rwanda and Burundi), and 2 countries English and Arabic languages (Sudan and Eritrea), and 2 countries French and Arabic languages (Comoros and Djibouti). Swahili is also reported to be spoken in Kenya, Tanzania, and Uganda. The existence of multiple local languages in each of the countries implies the need to repackage existing agricultural and rural development information in order to fully serve the agriculture and rural communities. This in turn makes dissemination of agricultural and rural development information more challenging as the information may need to be repackaged in all the local languages to meet the needs of the members of the different language groups.
18. Except for Comoros (46.5%) and Djibouti (43%), all the countries have a literacy rate of 50% and more. However, the literacy level is much lower in the rural areas of the countries, making dissemination of all types of agricultural information to the majority

2.1.1 Agriculture

19. As indicated earlier in this report, the economies of ten of the countries are highly dependent on agriculture where the agriculture sector contributes between 25% and 50 % of their respective GDPs. Only Djibouti, Mauritius and Seychelles are the countries where the GDP share of agriculture is very low (3, 4.75 and 2.5, respectively).
20. Agriculture is the main employer in the majority the countries, with the exception of Djibouti, Mauritius, and Seychelles where only 15%, 9%, and 8% respectively of the populations are employed by the sector. The sector provides between 60% and 90% of employment in the remaining 10 countries. Agricultural products also constitute the main exports of almost all the countries. Tea, coffee, cotton and flowers are among the agricultural products exported by most of the countries. Cereals, maize, sorghum, millet, cassava and potatoes are among the crops produced in almost all of the countries. Agriculture is the main component of the trade agreements of the countries studies.
21. Agriculture is primarily subsistence and smallholder with very limited large scale and mechanized farming in all the countries. The use of fertilizers, improved varieties and other modern agricultural technologies are in general very low. The low levels of use of agricultural technologies can be attributed mainly to non-affordability of the technologies or inadequate supply of the technologies in the countries. This indicates, among others, the importance of interventions for transferring agricultural knowledge and technology to the agricultural an rural communities of the countries.

Table 1: Size of total population, agricultural/rural population, and contribution of agriculture to GDP of studied countries

Countries	Total Population	Percentage of Size of agricultural/rural population (%)	Percentage of contribution of agriculture to GDP
Eritrea	3, 900,000	80	35
Ethiopia	77, 000,000	86	40
Kenya	37, 100,000	69	25
Mauritius	1, 200,000	NA	4
Seychelles	81,755	NA*	3
Sudan	37,000,000	60	39
Tanzania	38,670,000	80	33
Uganda	29,600,000	85	32
Madagascar	18,000,000	82	28
Djibouti	734,000	15	3
Rwanda	8,200,000	87	47
Burundi	8,100,000	90	50
Comoros	576,000	85	40
Total	260,161,755		

* The national report states there are no agricultural/rural population

22. During the last decade, all the countries have developed and projects to modernize and improve their agriculture and rural sectors. All of the countries have organisational structures responsible for Agricultural and rural development: ministries, research institutes, and parastatals. Negative impact of the civil war on the agricultural development of countries such as Burundi, Rwanda and Eritrea was evident.

2.1.2 Fisheries

23. Almost all countries studied have access either to seas (2 out of 13), or oceans (6 out of 13), or lakes (6 out of 13) or rivers with reasonably abundant potential fish resources. However, the fisheries is not as organised and modern as the other agricultural activities in most of the countries. In general, fisheries provides employment to few people, the highest being in Burundi with 300,000 people employed by the sector. Domestic consumption of fish is low in most of the countries and is limited to the capital and main cities where there are better distribution outlets and among the fishing communities and people living around the production sites surrounding the lakes, seas, and oceans. Fisheries are largely artisanal in almost all of the countries, while a few have industrial level fisheries alongside the artisanal, such as Kenya, Mauritius, Seychelles, and Madagascar. Lake Victoria is the main source of fish for Burundi, Kenya, Rwanda, Tanzania, and Uganda. Four of the countries are landlocked: Burundi, Ethiopia, Rwanda, and Uganda.

24. Generally fisheries fall under the responsibility of the governments and there are government ministries and research institutes that oversee the fisheries activities in all of the countries. Population displacement, which is one of the consequences of the civil war, has a negative impact of fishery development of the countries such Burundi, Eritrea and Rwanda.

2.1.3 Forestry

25. Forestry is one of the rapidly declining resources in most of the countries studied. Clearing forest for more productive agricultural and grazing land, settlement and overharvesting for firewood, charcoal, and house construction coupled with drought are the main reasons for the rapid decline in forest cover of these countries. Wood products are especially for domestic consumption, to build houses (roofs and furniture) and often to cook meals.

2.1.4 Livestock/Pastoralism

26. Livestock is the second main engagement of the majority of the population of the countries, next to crop production. The main animal species found in the countries are cattle, sheep, goats, chicken, and pigs. Chicken is the dominant poultry product in Mauritius while cattle are most popular in Ethiopia, Kenya, and Djibouti. Sheep and goats are also dominant in Eritrea, Djibouti, and Comoros. The main livestock products of the countries include meat, milk, eggs, while hide and skins and constitute the main source of protein for the population. During the civil wars, livestock was practically non-existent in Burundi, Eritrea and Rwanda.

Kenya, Sudan, (limited), and Uganda (limited). te
between 20% and 25% of the population in Eritrea and 70% of the rural population of
Sudan. While their size in Ethiopia is not specified, pastoralists are recognised as
one of the most economically important segments of the population. The pastoralists
are also reported to be the main source of livestock in Eritrea, Kenya, and Sudan.
Subsistence/ backyard livestock rearing is also common among the rural and urban
population of most of the Eastern Africa countries studied.

2.2 Brief Description of the Status of ICT Infrastructure and Recent Developments in the Sector

28. ICTs are understood to include computers, telecommunications (phones, the Internet and other types of networks), and the electronic media such as the radio and TV. Development of the ICT sector has been one of the most active in the countries over the past 10 years. All countries have witnessed unprecedented efforts by their respective governments and development partners to make available and exploit ICTs for development. Particularly governments and NGOs have taken measures to increase the availability and use of ICTs as one of the tools to help transform the economies of the countries. The main ICT developments in the different countries studied are presented in Annex 4 of this report. Except for Eritrea that has not reported, all countries have put in place institutional frameworks to facilitate the deployment and exploitation of ICTs in support of their socioeconomic development. The countries have either enacted or are in the process of enacting national ICT policies and strategies. As a part of implementation of their policies, some of these countries have deregulated/liberalised the ICT sector, although their governments still play a major role, particularly in expanding ICTs into the rural areas where the private sector sees little incentive to invest. Unfortunately, only few of the respondents seem to be aware of their national ICT policies or be able to point out the impact of the policies on ICM in their countries.
29. The number of people with access to computers (household and/or work place or through other public access such as telecentres and Internet cafes) has also increased dramatically in all the countries. Most of the countries have also witnessed an exponential increase in availability of private and community radio and TV.
30. A steady growth in telecommunications infrastructure and services is another area witnessed in the countries. All countries have shown an increase in teledensity, particularly as a result of the fast expansion in the use of mobile telephone. Compared to the increase in mobile phone, there is a general trend of a gradual decline in fixed phone subscription in almost all of the countries. The waiting time for getting fixed line connection has also gone down. The cost of mobile apparatus has also gone down which is believed to be one of the factors for rapid expansion of mobile telephony.
31. The cost of telephone services and others involving telephone connections have been decreasing gradually in all the countries in general and remarkably so in countries where the telecommunications market has been deregulated/liberalised fully. The cost of telecommunication, including that of data communication, is

32. The number of Internet users is increasing steadily, if not the number of subscribers. Broadband Internet connection, alongside the dial up, is fast expanding in all the countries. Wireless and satellite-based Internet connections are also emerging. Internet cafes, community telecentres, and telephone kiosks are also playing a key role in enabling access to computers and Internet services to the majority of the people who do not subscribe to the Internet services at home or at work place. Internet cafes and work places are the main means of accessing the Internet for the majority of the users in some countries. According to the country reports, only Ethiopia has a full government monopoly of the telecom sector.
33. International projects to improve the capacity and reliability of the bandwidth of the Internet connection within the countries as well as their connections with the rest of the world are also underway. East African Submarine System (EASSy) and Pan-African E-Network projects are the main initiatives aimed to improve the connection of the African countries through satellite and underwater fiber optics. Expansion of training programmes to meet the needs of trained manpower in ICTs as well as to increase the computer literacy of the society in general are also on the increase in all of the countries.
34. However, much of the development in ICT in general, is concentrated in the urban areas, leaving the rural areas where the majority of the population of the countries live, poorly served. The coverage of the telecommunications infrastructure, the ICT services (such as Internet cafes), radios and TV stations,, and the news papers are largely limited to the main cities. Internet services in the majority of the countries also suffer from low bandwidth connection and poor electric power supply. All countries have not yet met their requirements for qualified and skilled ICT/ ICM personnel. In response to this low penetration rate of the telecommunications infrastructure and the ICT services, the governments of the countries along with the private sector and NGOs are putting concerted efforts into ensuring that the rural areas are also benefitting from the developments in ICTs. According to the country reports, the governments of Ethiopia, Kenya, Madagascar, Mauritius, Sudan, and Uganda have constituted a special fund, mostly in collaboration with the private sector involved in telecommunications business and international donors, to specifically expand the ICT infrastructure and services.
35. According to the country reports, ICT utilisation of the countries is characterized by the following:
 - Computers used largely for limited applications (office applications such as word-processing);
 - Low bandwidth Internet connection;
 - Computers and Internet access and use concentrated in the main cities;
 - Telephone (mobile and fixed), radio and TV concentrated in the main cities
 - Cost of Internet still expensive for the general public;
 - Very few telecentres providing ICTs and Internet access to the rural population;
 - Internet or cyber cafes emerging as the main means of access to Internet connection and other ICTs.

36. Recent developments in the ICT sectors of the countries

- Institutional frameworks to facilitate the deployment and exploitation of ICTs to support the socioeconomic development (except for Eritrea and Seychelles who did not report on the issue);
- International projects to improve the capacity and reliability of the bandwidth of the connection such as EASSy Project (Eastern Africa Submarine System) and the Pan-African E-Network to connect some 53 African countries by electronic routes through satellite and optic fibers;
- Emergence of Internet cafes in urban centers and telecentres in rural areas as a major means of Internet and ICT access (Burundi, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda);
- Process of formulating or enacting national ICT policies and strategies (except for Burundi, Eritrea, and Sudan who did not report on the issue);
- Rapid development in telecommunication Infrastructures (fixed telephone and et mobile);
- Increase in the number of radio and TV stations;
- Multiple ISP (except for Ethiopia);
- Lowering of cost of telephone services; and
- Lowering the wait time for telephone services.

A summary of ICT utilisation and recent development in ICT in each country is presented in Annex 4 of this report.

3. STATUS OF INFORMATION AND COMMUNICATION FOR AGRICULTURE AND RURAL DEVELOPMENT

3.1 Institutional and Regulatory Policy Framework

37. None of the countries have national ICM policies specifically for the agriculture and rural development sector. Instead, information and communication for agriculture and rural development is broadly guided by the national ICT policies of the respective countries or other related national level policies such as the press laws, education policies, agriculture policies, and the overall national development policies of the countries. On a positive note, these related national level policies, particularly for the national ICT policies, give priority to the development of ICTs in the rural areas of their respective countries. These national level policies have also been had significant positive impacts on information and communication for agriculture and rural development, including lowering of costs of acquiring computing and communication hardware, expanding access to the Internet, and improving the institutions' ability to efficiently exchange information with their target audiences. None of the country reports have indicated the existence of any policy or regulation restricting acquisition, dissemination and use of information on agriculture and rural development.
38. However, interviewees in some of the countries have observed that the absence of ICM policies and strategies specifically for agriculture and rural development have created a vacuum that cannot be filled by the other policies currently covering the sector. In Kenya, for example, respondents have indicated that lack of a clear ICT policy in the sector in past has led to the use of disparate ICT systems that are now difficult to integrate and modernise. Furthermore, most of the respondents in each country are not aware of the relevant policies to take full advantage of the provisions in the policies. For these and other reasons the need for a specific information and communication policy both at institutional and national levels is recognised by the majority of the respondents.
39. In terms of institutional arrangements, almost all of the countries have national institutions to coordinate the development and application of ICTs across the different economic sectors. The media in general, and the state owned broadcast media in particular in all countries but for Comoros and Djibouti are also mandated to facilitate the dissemination of information on agriculture and rural development issues at varying degrees.
40. According to the country reports, six of the thirteen countries (Ethiopia, Kenya, Madagascar, Mauritius, Sudan, and Uganda) also have institutionalised special national ICT development funds to be used across the sectors, including agriculture and rural development. Again the strength of these funds in the context of this study is that they all give priority to developing the ICT infrastructure in the rural areas of

and Tanzania have not reported whether there are special national funds earmarked for ICT development.

3.2 Operational Aspects

3.2.1 Description of Agricultural Information and Services

41. Research organisations and tertiary education institutes with agriculture faculties are the main generators and disseminators of agricultural information in the Anglophone countries studied. However, in the Francophone countries such as Burundi, Djibouti, Madagascar and Rwanda, the most important agricultural information and services are provided by the Ministry of Agriculture and some of the National representatives of international organisations like the FAO and UNDP. The research institutes, comprising NAROs and private research enterprises, are the primary sources of agricultural information and technologies. The tertiary institutes are involved, in addition to research, in transferring agricultural information, knowledge and skills through formal education and the publications they produce in the form of students' theses and scientific journals. Research institutes and professional societies are also involved in producing scholarly agricultural journals and other related publications in all the countries, except for Eritrea where no mention is made of the contribution of professional associations is made. Scholarly journals in general are produced in seven of the countries (Ethiopia, Kenya, Madagascar, Mauritius, Sudan, Tanzania, and Uganda). The existence of electronic databases of local agricultural information is reported in Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Sudan and Tanzania. NGOs are also involved in limited research, extension and training of farmers in all countries. CSOs are the main sources of official statistics of the respective countries including on agriculture.
42. The broadcast media of radio and TV are important means of dissemination of agricultural and rural development information in all countries. The radio in particular is identified as the most appropriate and effect means of reaching the rural community, mainly due to the possibilities of transmitting the information in local languages of the rural population. The print media is reported to contain regular features and occasional newspaper supplements on agriculture and rural development in most of the countries (for example, Eritrea, Ethiopia, Kenya, Madagascar, Sudan, Tanzania, and Uganda). Mauritius and Uganda have a newspaper each specifically for the farming community. The print media, however, is reported to be of less importance to the rural population in general mainly due to their low literacy level of literacy.
43. Local governments are responsible for extension services in Burundi, Madagascar, Tanzania and Uganda. Institutional structures for the collection and dissemination of market information exist in Uganda, Ethiopia, Mauritius, and Kenya. Open days (or farmers' day or agriculture and horticulture shows) are also used by research and tertiary education institutes to transfer agricultural knowledge and technologies through awareness creation and demonstration in all of the Anglophone countries, except in Mauritius where whether such an event takes place is not reported.

responsible for collecting, processing, and disseminating agricultural and rural development information. Some level of computerisation of the agricultural information processing and dissemination, including the use of institutional websites are also reported in the country reports of the Anglophone countries. Internet cafes and telecentres are reported to have emerged as an important means of disseminating agricultural and rural development information and skills in Burundi, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda. .

3.2.2 Information Sources

45. The Internet, universities, research institutes, colleagues, the Ministry of Agriculture and country offices international organisations are the most widely used information sources among the studied countries. The Internet, in particular, seems to aiming more popularity as a means of accessing agricultural information available outside of one's country. There is low level of use of the Internet reported in Eritrea probably because Internet was not as popular in general in 2006 when the study was conducted in Eritrea. Considering the lead role that universities and research institutes have as generators and disseminators of agricultural information, it is not surprising to see them among the most widely used (useful) sources of agriculture and rural development information. Locally produced publications (reports, booklets, leaflets, and so on) are also identified among the most widely used information sources.

3.2.3 Information Products and Services Provided

46. The institutions interviewed stated they provide a range of information products and services to their clientele. The most widely provided agricultural information products and services are publications of all sorts, workshops/seminars/trainings, extension services, libraries, and databases. Open days (farmers' days, exhibitions, and trade fairs) are also one of the widely used mechanisms for dissemination of agricultural information and technologies, particularly in the Anglophone countries.

47. The radio is used by a limited number of organisations in Ethiopia, Kenya, Mauritius, Seychelles, Sudan, Tanzania, and Uganda, despite the recognition that radio programmes, particularly in local languages, are one of the most suitable mechanisms for disseminating agricultural information to the rural population. Only a few institutions are reported to have web presence, and the websites are characterised by static content. This indicates that improved exploitation of ICTs to the service of the agricultural and rural population of the countries has a long way to go.

48. Constraints in accessing and using scientific journals is reported in all countries, despite the availability of global databases on agriculture and rural development (such as AGORA, OARE, HINARI) to users of these countries free-of-charge. Market information, which has been identified as one of the most needed information type, is reported to be provided through a designated national institute only in Ethiopia, Kenya, Madagascar, and Uganda. Information provision to farmers through SMS is emerging in Kenya, Mauritius, Seychelles, and Uganda. Information provision through e-mail is also reported from Kenya, Mauritius, Seychelles, and Uganda.

49. Overall, all the institutions included in the study face constraints in most aspects of ICM capacity. Within the individual countries, the studied institutions show variations in different aspects of ICM capacity. On a positive note, almost all institutions interviewed have computers, access to the Internet, and a relevant unit responsible for ICT, or ICM or both. Almost all institutions in the Anglophone countries and Madagascar have a library or documentation unit where published resources are collected and made available to clientele. The majority of the institutions interviewed also have reported the existence of organisational LAN.
50. On a negative note, none the institutions have adequate qualified staff, computing resources, budget, and information resources. Quite a large number of institutes in each country do not have their own regular budget and usually fall under the financial budget of other departments. This results in uncertainty about the availability and the amount of funds that is allocated to them each year. Most of these institutions have their budget merged with that of larger departments or get financial input from the core budget of their respective institutions. All institutions are short of adequate ICM/ICT staff in terms of number and qualification; while quite a number of them in fact have no qualified staff in ICM/ICT at all. All are also in need of adequate computing resources (computers, accessories, applications and so on) in terms of quantity and quality. Low Internet bandwidth is also reported in all of the countries covered in this study. Computerisation of house keeping activities (such as cataloguing a indexing) is not reported by any of the country reports, although some of the institutions have databases of mainly bibliographic and full text sources of agriculture and rural development information usually provided by international or commercial firms. Only one institution is reported to have formal knowledge management strategy (Uganda).

3.3 Interventions Supporting Information and Communication for Agriculture and Rural Development

51. A number of government, public-private, and donor supported interventions are underway in each country to address directly or indirectly the constraints in information and communication for agriculture and rural development. The respective governments are engaged in unprecedented efforts to increase the telecommunication capacity of the country, with particular emphasis on improving the rural connectivity or minimize the gap between rural and urban connectivity. Basic telecommunications infrastructures are being expanded to connect the rural areas and to accelerate the development of the key economic sectors except in Comoros and Djibouti who did not report on the issue. Such interventions include the following:

	Country	Information and Communication interventions for Agriculture and Rural Development
1	Ethiopia	<ul style="list-style-type: none"> • Sector specific networks development, namely, Wordanet, Agrinet, Schoolnet and healthnet
2	Kenya	<ul style="list-style-type: none"> • Digital Village Project which aims to level out the existing disparities in distribution of ICT facilities between urban and rural areas (government-public-private partnership) • The Kenya Transparency Communication Infrastructure Project which aims to generate growth and employment by leveraging ICT and public private partnership • Camel mobile libraries initiative for pastoralists and “Book Box” pilot project for rural schools
3	Madagascar	<ul style="list-style-type: none"> • Projet d’Infrastructure de Communication (PICOM) aimed at developing and promoting Internet connectivity
4	Mauritius	<ul style="list-style-type: none"> • A series of public-private partnership-based projects to make Mauritius a regional ICT hub (business parks, e-services on the web or on phone, public Internet access points in post offices) • Establishment of Mauritius Agricultural Resource Information system
5	Sudan	<ul style="list-style-type: none"> • Farmer Field School; e-government realisation project • Implementation of telecentres to provide urban, rural, and businesses with ICT services and applications • Computer for Every Household project
6	Uganda	<ul style="list-style-type: none"> • Rural Communication Development Fund; provision of subsidized laptops to civil servants • SchoolNet programme that aims to introduce computer training in schools

52. The rural areas of most of the countries are benefiting particularly from the introduction of telecentres (or similar arrangements such as e-centers in Kenya, public Internet access points in Mauritius, Ward Resource Centers in Tanzania) to bring telecommunications infrastructure and ICT facilities, services, support, and training within close distance of the rural community.

53. There are also regional level ICT interventions which have a direct impact on information and communication in agriculture and rural development. The main one is EASSY which is an undersea fiber optic cable (9900 km long) that promises to link the East African countries among themselves and to the rest of the world. Some of the countries covered in the current study are also covered by the Pan-African E-Network which aims to connect some 53 African countries by electronic routes through satellite and optic fibers. Interventions of a global scale are also reported in each of the countries covered, including the participation of the countries in the global agricultural information network that aims to facilitate access to and availability

Such networks include AGORA, TEEAL, HINARI, and OARE.

54. The national ICT policies enacted in the majority of the countries are the other major interventions as they entail creation of an enabling environment for developing and harnessing ICTs to create new socio-economic opportunities, including in the agriculture and rural development sector (Annex 4). One of the positive impacts of the national ICT policies and strategies reported is the liberalisation of the telecommunications sector.

4. OVERVIEW OF INSTITUTIONAL NEEDS

4.1 Information Needs

55. The various institutions require a wide range of types of information in order to execute their respective work programmes. The types of information needed vary with the type, activities, focus and primary target audience of the institutions. It is also evident that their information needs are also influenced by global trends such as climate change. The most common types of information required (at least by more than half of countries) include information on:

- market prices;
- postharvest technologies;
- market identification;
- farm problems;
- government and international regulations;
- regional and international agricultural/development networks;
- development and funding programmes;
- credit and micro credit, social development issues, and equipment sourcing.

Higher learning institutions in particular need almost all types of information as they are usually involved in teaching and research in quite extensive areas of knowledge and issues.

56. All institutions face difficulties to meet some of their information needs for different reasons, including lack of funding to acquire the needed information and unavailability of the information in formats and languages suitable to their clientele. The most common types of information identified by the institutions (at least by more than half of countries) as difficult to acquire include information on development and funding programmes, postharvest technologies, gender issues, market information/market identification, and social development issues. The overlap between the type of information needed and the type of information identified as difficult to acquire indicates the importance of the identified types of information for the majority of the institutes covered in this study.

57. Similarly, almost all country reports have identified journal articles and materials in appropriate/local languages as the most difficult-to-acquire information formats. A large number of country reports have also identified statistical data, materials for mass distribution and visual/pictorial information format as difficult to acquire. From the discussion of the most common difficult-to-acquire information formats, it can be generalised that the scientific and the farming communities are the groups whose information needs are the least met. Despite the availability of free-to-access global online databases on agriculture and rural development, the prevalence of the problem of access to journal articles warrants further investigation. Difficult-to-acquire information formats have not been reported by Eritrea.

58. The institutions studied are at different levels of institutional capacity to identify and fulfill their information needs. Each has deficiencies as well as strengths in the different aspects of institutional capacity relevant for identifying and fulfilling their information needs. Almost all institutions have reported a need to build capacity to address deficiencies related to (Table 3):

- Qualified staff in ICM/ICT;
- Qualified staff, funds, and printing facilities to repackage agricultural and rural development information in languages and format appropriate to target audience (farmers, policy makers, extension workers, and so on);
- Computing and Internet equipment or infrastructure (such as computers, printers, software, broadband connections);
- Information sources such as journal articles;
- ICM policies and strategies for agriculture and rural development at institutional and national levels; and
- Regular budget.

Table 3: Synthesis of the main capacity building needs by country

Areas capacity building needs	Country Reports*												
	BI	KM	DJ	ER	ET	KE	MG	MU	RW	SC	SD	TZ	UG
Basic and advanced training on ICM/ICT	X	X	X	X	X	X	X	X	X	X	X	X	X
Packaging different agricultural information to suit the needs of different user groups	X	X	X	X	X	X	X	X	X	X	X	X	X
ICM Policy formulation and implementation	X	X	X	X	X	X	X	X	X	X	X	X	X
Development of institutional libraries	X	X	X	X	-	?	X	X	X	-	-	-	-
Regular budget and funds for ICM activities and programmes	X	X	X	X	X	X	X	X	X	X	X	X	X
Computing equipment (computers, broadband Internet connection, LAN)	X	X	X	X	X	X	X	X	X	X	X	X	X
preparation and management of agricultural information materials/sources for mass distribution	-	-	-	-	X	X	-	X	-	X	X	X	X
Assessment of Information resources and capacity	X	X	X	X	-	-	-	-	X	X	X	-	-
Computerisation and management of documentary resources	-	-	-	X	-	-	X	X	-	X	X	-	-

* BI : Burundi ; KM : Comoros ; DJ : Djibouti ; ER : Eretria ; ET : Ethiopia ; KE : Kenya ; MG : Madagascar ; MU : Mauritius ; RW : Rwanda ; SC : Seychelles ; SD : Sudan ; TZ : Tanzania ; UG : Uganda

Madagascar, Mauritius, and Rwanda), the implementation of CIA's QAS (Burundi, Comoros, Djibouti, Madagascar, and Rwanda) have also been reported as areas for building capacity.

60. From among equipment-related capacity building needs, in-house printing facilities/capabilities is the most cited need. Document and archives management software have also been identified by Mauritius and Tanzania. In connection with developing adequate qualified ICM staff, diverse areas and levels of trainings have been documented by the different country reports. The training areas in ICM identified as needed by the majority of the institutions interviewed are:

- Basic and advanced training on ICM/ICT, including ICT maintenance (13);
- Packaging different agricultural data and information to suit the needs of different user groups - farmers, policy makers, extension workers and so on (13);
- Policy formulation and implementation (13);
- Preparation/translation and management of agricultural information materials/sources in appropriate languages and format for the rural community-publication, radio, TV/video and other pictorial/visual format (10); and
- Preparation and management of agricultural information materials/sources for mass distribution (7).

61. A few countries have also identified the following training areas as important:

- Computerisation and management of documentary resources (Eritrea, Madagascar, Mauritius, Seychelles, and Sudan);
- Assessment of information resources and capacity (Burundi, Comoros, Djibouti, Eritrea, Rwanda, Seychelles, and Sudan);
- Basic computer training to all – ICM staff, non ICM staff and target audience (Burundi, Comoros, Eritrea, Rwanda, Sudan, and Tanzania);
- Application of communication technologies in extension services (Ethiopia and Tanzania);
- Preparations of extension materials, particularly multimedia, production (Ethiopia and Mauritius);
- Training materials production (Ethiopia and Sudan);
- Editing and print publication management (Sudan and Tanzania);
- Use of participatory tools (Sudan and Tanzania) .

62. There are training areas that have been identified by not more than one country but sound relevant for the majority of the countries, based on what the countries have identified as areas constraining their ICM efforts:

- Organisation and dissemination of agricultural information (Eritrea);
- Awareness and understanding of the importance of ICM among all (Eritrea);
- Agricultural and rural development communication for journalists and reporters (Ethiopia);
- Techniques of literature review (Seychelles); and
- Development of media programmes (Seychelles).

the following areas: training of extension personnel (the higher learning institutions and mid level training institution), generating agricultural content, reaching the wider segment of rural and agricultural communities, institutional Internet access, access to a reasonable number of agricultural databases, willingness to share information and resources, reasonable linkage with international institutions, participation in regional/international agriculture and rural development related networks, adequate number of qualified staff in ICM or ICT and availability of computers for use for ICM. It can be generalized that each country in the study has institution(s) that can take a lead or collaborate with CTA and similar institutions in developing skills, ICM policy or specifications for ICM equipment. Eritrea did not report on specific institutional ICM capacity, except for remarking on the absence of ICM units in general among its institutions.

4.3 Feedback on CTA's Products and Services

64. *Spore* magazine is the most widely accessed CTA product in all the countries, except for Eritrea and Rwanda who have not reported on the issue. The proportion of respondents who have received training (either organised or sponsored by CTA) also ranges from 36% of respondents in Uganda to 5% of respondents in Seychelles, while five of the Francophone countries and Mauritius did not report on their participation in CTA training. Respondents who are familiar with CTA's products and services rated them as "very useful" (the majority) and "useful". No respondent from the five Francophone countries and Eritrea reported to have rated the CTA products and services.
65. Seven of the countries appear to have at least one institution that is serving as a national focal point or that is having a high level of interaction with CTA or that is having access to most of the products and services provided by CTA: EIAR (Ethiopia), KARI (Kenya), CIDST (Madagascar), FARC (Mauritius), ARC (Sudan), MAFC and SUA (Tanzania), and NaCRRI/NARO (Uganda).
66. The country reports have identified a number constraints that they face in utilizing CTA's products and services: delayed arrival of the products, irregularity of the distribution of the products, disruptions of distribution or access to the products and services, rigid criteria used by CTA in determining which institutions should have access to its products and services (especially in seminars and training) and distribution of products and services through individual members of the institutions involved leading to the disruption of the flow of products and service if the individuals leave their institutions.

5. CONCLUSIONS

5.1. Conclusions from Country Reports

5.1.1 *Information Needs*

67. The need in agricultural information contained in the country reports vary from one institution to another. Within the wide range of information needs documented in the country reports, one can easily recognise a large overlap particularly in priority information needs of the different institutions covered by the study. The priority information needs common across most of the institutions include market information, farm problems, post-harvest technology, non-farming livelihoods, crop varieties, grading systems, affordable credit for farmers, sources of processing equipment, government and international regulations, conferences and meetings, the development and funding of programmes, commodity profiles, and crop insurance systems.

68. Similarly, nearly all country reports have identified scientific journals and materials in appropriate languages and formats as the most difficult-to-access information formats. A good number of institutions have also identified statistical data, materials for mass distribution, and visual/ pictorial information as difficult-to-access information format.

5.1.2 *Capacity building needs*

69. Almost all institutions need to develop capacity in:

- a) Basic and advanced computing and Internet skills among the staff and end-users (non-ICM staff, target audience);
- b) Repackaging and disseminating agricultural and rural development information in appropriate languages and format;
- c) Formulating and implementing ICM policies and strategies for agriculture and rural development sector;
- d) Providing information sources in a variety of formats;
- e) Making available adequate computing resources;
- f) Accessing reliable and fast Internet connection; and
- g) Funding their ICM activities and programmes.

70. A number of institutions have also expressed a need to develop capacity in assessment of information resources and capacities on a regular basis. The need for establishing printing facilities is also brought out directly or indirectly by most of the institutions. A few institutions also need to establish new library/documentation units.

developing and managing websites, databases, and e-learning tools; hardware maintenance; application of ICTs in agricultural communication; packaging of information in a language and format appropriate to target audiences; and the development and implementation of ICM policies and strategies. Basic computing skills for the non-ICM staff and clientele aims at providing them with the computing and Internet skills that they require to use the ICT resources and services provided by the institutions.

72. Each country appears to have institutions with relative strengths with respect to training, generating agricultural content, reaching the wider segment of rural and agricultural communities and qualified ICM staff for CTA to collaborate with in helping build the ICM capacities of the respective countries.

5.1.3 Overview of CTA's products and services

73. The number of institutions receiving CTA products and services vary from country to country. While almost all institutions in the Francophone countries did not know CTA before the survey, not more than half of the institutions in the Anglophone group have had contacts with CTA. Moreover, only a few institutions in each country actually know or make use of the full range of CTA products and services. Only Kenya and Sudan have reported to have institutions familiar with and using more than three CTA products and services. Some of the country reports have further noted that some important CTA products and services are not known by the target beneficiaries at all, such as the Rural Radio Packs in Tanzania and the web services in Mauritius.

74. *Spore* is received by all institutions, either directly or through their employees who subscribe to the magazine on individual basis. In the Francophone countries where CTA products and services are relatively well known, such as Burundi, Madagascar and Rwanda, the institutions have reported not having benefitted sufficiently from CTA's products and services. Consequently, the institutions have expressed the desire to establish partnership with CTA in order to benefit from its products and services, particularly from the training course and seminar support programme.

75. CTA products and services are appreciated by those who use them as responsive to a wide range of agricultural and rural development needs, very practical among grassroots communities, and useful for extension works.

5.1.4 Potential strategic partners

76. Taking into consideration the criteria defined in the project documents, namely, the mandate in the agricultural area and the rural development, the target audience, the quality of activities conducted and the spatial coverage of the institutions – and according to the strengths and weaknesses of the institutional analysis, the national consultants have proposed institutions that could serve as potential and strategic partners to CTA in their respective countries. This number varies from country to country and is in the range of 2 institutions for Kenya to 24 institutions for Madagascar (Annex 2).

5.2.1 Information Needs

77. Each institution has a wide range of information needs. The information needs of the institutions vary with the type, activities, target audience, and focus of each institution. It is also possible to generalise that their information needs are further influenced by global trends such as climate change. The need for market information by all the countries, for instance, can largely be explained by the growing adoption of market economy by the countries and the emerging global environment that favors least developed countries to export their agricultural products to the developed world. The variety of needs expressed for agricultural information prove that all the institutions face serious difficulties in meeting these essential needs for the accomplishment of their activities.
78. There seems to be a wider recognition that each country already has some information that can be used to meet the needs of the agriculture and rural development communities. This can be discerned from the fact that the majority of the national consultants have recommended for establishment of national and regional networks of agricultural and rural development institutions with the aim of facilitating the sharing of information and other resources within each country and among the countries.

5.2.2 Capacity-building Needs

79. It is evident that almost all institutions are short of human, financial and technical resources. The different capacity-building needs expressed in the country reports should lead to the training of the personnel in ICM/ICT and repackaging of information, to the capacity building of the institutions through the supply of adequate equipment and technical advice and, above all, to assisting the countries put in place ICM policies and strategies..
80. It is also to be noted that the main areas of capacity building identified by the country studies (ICM skills, ICM policies and strategies, publishing, improved access to agricultural and rural development information) are within CTA's mandate or specialisation, making CTA a key player in bringing about improvements in ICM in the countries.
81. Difficulties in accessing and using scholarly journals in the face of freely available online resources such as AGORA require further investigation. The difficulty faced by the majority of the institutions in providing existing information in appropriate languages and formats is also a critical stumbling block in reaching the agricultural and rural communities of the countries. This should provide more impetus for the countries and CTA to work together more closely as the farmers are also the ultimate beneficiaries of CTA's products and services

82. While it has a wide range of products and services tuned to the requirements of ACP countries, CTA is not sufficiently known by the majority of the institutions interviewed. This should motivate CTA to increase its visibility in all the countries through concrete actions of sensitisation of its products and services. In this connection, it is encouraging to note that CTA products and services are rated as very useful/useful by those who knew the products and services.

5.2.4 *Potential Strategic Partners*

83. The range organisations proposed by the national consultants of each country should give CTA adequate option to select from for partnership. The partnerships will also allow CTA to be more known and used in each country. These potential partners are chosen in each country based on their role and the potential contributions they could bring in helping meeting the information needs of the rural communities.

6. RECOMMENDATIONS

6.1 Recommendations by National Consultants

84. The national consultants have put forward a long list of recommendations to address the identified information and capacity building needs as well as issues raised in connection with feedback on CTA products and services and CTA partnerships. The recommendations are directed to CTA as well as the governments of the respective countries. The syntheses of the recommendations are as follows:

6.1.1 Information Needs

85. In connection with the information needs expressed by the institutes, most of the national consultants have recommended that:

- a) CTA sensitises government officials of the countries to support the strengthening of information services within the national and regional institutions in charge of agricultural and rural development;
- b) CTA and respective governments facilitate access to information on market and market-related data, commodity profile, postharvest technology, climate change, agricultural statistics, grading systems, affordable credit for farmers, sources of processing equipment, government and international regulations, commodity profiles, and crop insurance systems;
- c) CTA provides information regularly on upcoming training courses, seminars, conferences, meetings, and funding and training opportunities;
- d) CTA and respective governments help establish networks of agricultural and rural development organisations within each country and among the countries with the aim of sharing information and related resources. It is also recommended for CTA to help these national networks link with similar other networks outside the region;
- e) CTA and respective governments help develop capacity of institutions in the area of repackaging of existing agriculture and rural development information in appropriate languages and formats to ensure that available information reaches target audiences;
- f) CTA and respective governments provide training opportunities to the different categories of agricultural and rural development professionals in their respective areas of subject specialisations on a regular basis;
- g) CTA helps institutions have improved access to the difficult-to-access formats such as scientific journals.

6.1.2 Capacity-building Needs

86. In connection with capacity building needs, most of the national consultants have recommended that:

computing and use for ICM staff and end-users (non-ICM staff and farmers and other clientele). The specific areas of training identified for ICM staff include:

- i. website development and maintenance;
 - ii. database development and administration;
 - iii. application of alternative extension communication technologies such as mobile phones, radio and web-based facilities;
 - iv. preparation and production of interactive radio and video programmes for targeted audiences;
 - v. desktop publishing; and
 - vi. hardware maintenance.
- b) CTA provides technical, training and financial support to enable local institutions repackage existing information in appropriate languages (such as local languages) and format to target audiences (farmers, policy makers, extension workers, and the general public);
 - c) CTA provides technical, training and financial support to facilitate local institutions to formulate and implement ICM policies and strategies for the agriculture and rural development sector. It is also recommended that respective governments create the necessary environment for the development and implementation of ICM policies and strategies and provide the necessary finance;
 - d) CTA and respective governments supply the necessary ICT equipment (computer, Internet browsing, LAN, bandwidth);
 - e) Respective governments provide regularly adequate budget for the functioning and the financing of the ICM activities and programmes;
 - f) CTA and the respective governments provide the financial and technical support to allow countries to conduct information and capacity needs assessments at national levels on a regular basis;
 - g) CTA helps establish new ICM facilities such as libraries, documentation units, training facilities, and printing facilities for those institutions who expressed need to have such facilities; and
 - h) Respective governments improve the work conditions of ICM staff.

6.1.3 CTA's Products and Services

87. In connection with CTA products and service, most of the national consultants have recommended that CTA:

- a) Organises targeted and increased sensitisation actions on its activities, programmes, products and services in every country in order to increase its visibility;
- b) Puts in place a policy of a systematic spreading of its products and services to all institutions interviewed and notably of the *Spore* Magazine, the publications distribution service (PDS), Question and Answer Service (QAS), DORA, and SDI service:

agricultural and rural development institutes even in countries where it is relatively widely known; and

- d) Ensures that its products address emerging topics and issues such as climate change, bio-fuels, HIV/AIDS, biotechnology, market information, and entrepreneurship. In this connection, it is also recommended that CTA partners with local institutions with proven capacity in identifying and compiling the information on the emerging topics

6.1.4 Potential Strategic Partner Institutions

88. The national consultants have also recommended that:

- a) CTA reinforces its collaboration with the institutions with which is already partnering;
- b) CTA immediately initiates collaboration with the other institutions recommended by the national consultants for CTA partnership,
- c) CTA expands the type of institutions that it collaborates with to include institutions involved in agriculture and rural development in broader sense, such as institutes working in the area of HIV/AIDS;
- d) CTA enters into formal partnerships with officials of institutions and not individual employees of institutions so that the partnership does not suffer when there is change or movement of staff; and
- e) CTA works with the media through providing materials suitable for publication and broadcasting and staff training especially on agricultural journalism.

6.2 Regional Coordinators' Recommendations

89. To complete the recommendations expressed in the country reports and taking into account the strategies developed and the action plans suggested by the national consultants, the Regional Coordinators put forward the following recommendations specifically to CTA:

- a) Assist the countries to conduct in-depth information and capacity building needs of the main actors of rural development;
- b) Assist the different potential partner institutions through their respective governments in formulating and putting in place coherent ICM policies and strategies in order to increase the role of the information in decision making process. The assistance could be through training, technical advice, and/or funds as necessary;
- c) Motivate partner institutions to form and/or energize national networks of agricultural information for a free circulation and spread of information and the sharing of experiences and knowledge. CTA's contributions in this connection could include provision of e-platforms and training in support of the national and regional networks of agriculture and rural development institutes;
- d) Assist the countries that are still formulating their ICT policies to finalize them and put them to work;
- e) Provide for the renewal of some ICT equipment that are obsolete in some partner

- ation on agriculture and rural development such as AGORA. Along with this, assist in initiating and managing member-managed directory of e-resources and/or links to facilitate the ease of access to the free-to-access e-resources;
- g) Provide an electronic directory of information on training, funding, and project opportunities. This can also be largely member-managed;
 - h) Provide desktop publishing and technical editing training to ICM staff to address their difficulties in repackaging and disseminating information in appropriate languages and formats to target audience;
 - i) Assist at least one institute in each country to have a functioning printing facility to help in producing materials in print format for targeted as well as mass distribution and similar other purposes;
 - j) Promote CTA products and services by being represented at the major agricultural and rural development events in each country
 - k) Give adequate coverage to the emerging topics (such as climate change) in CTA's publications, seminars, and so on;
 - l) Facilitate access to the information types identified as needed by the majority of the institutes in the study; and
 - m) In the area of marketing, the following are also recommended:
 - i. Designate a focal point that will be in charge of coordinating the national activities and those of the CTA, of facilitating subscriptions, collecting users opinions in order to respond to the concerns regarding the search of information on the products and services of CTA;
 - ii. Elaborate a global marketing strategy of CTA that will lead to an appropriate marketing plan. Putting in place this marketing plan will enable CTA to reposition its different programmes, projects, products and services and give them a new marketing orientation vis-à-vis the specific needs of its real and potential partners in order to maximize and increase their satisfaction levels;
 - iii. Develop a coherent strategy of communication including concrete actions of promotion, publicity, and public relations through the media and in using the ICTs to: (1) make its products and services known in all ACP countries; (2) reach and increase CTA customers in all ACP-EU countries; (3) sensitise decision makers and governors on the important role of agricultural information management in the expansion of the agricultural production of their countries;
 - iv. Conduct an information audit of resources and capacity to discover what information resources and organisational capacity for ICM exists in the countries; and
 - v. Organise seminars and training workshops in the marketing of agricultural information for the personnel in charge of information in its different partner institutions.

ANNEXES

1. Introduction

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. Since 2000, it has operated within the framework of the ACP-EC Cotonou Agreement.

CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area. CTA's programmes are organised around three principal activities: providing an increasing range and quantity of information products and services and enhancing awareness of relevant information sources; supporting the integrated use of appropriate communication channels and intensifying contacts and information exchange (particularly intra-ACP); and developing ACP capacity to generate and manage agricultural information and to formulate information and communication management (ICM) strategies, including those relevant to science and technology. These activities take account of methodological developments in cross-cutting issues (gender, youth, information & communication technologies – ICTs, and social capital), findings from impact assessments and evaluations of ongoing programmes as well as priority information themes for ACP agriculture.

CTA's activities are currently distributed among three operational programme areas / departments:

- Information Products and Services;
- Communication Channels and Services;
- Information and Communication Management Skills and Systems.

These operational departments are supported by Planning Corporate Services (P&CS) which is charged with the methodological underpinning of their work and monitoring the ACP environment in order to identify emerging issues and trends and make proposals for their translation into programmes and activities. This current exercise, therefore, falls within the mandate of P&CS.

2. Background

Since 2003, CTA has been systematically conducting needs assessment studies across the Pacific, Caribbean and Africa regions – the regions it has been mandated to serve. These studies have been in direct response to calls for CTA, in various evaluations of its products, services and programmes, to be more strategic in its choice regarding the setting of its own agenda and reacting to demand. In putting together its Strategic Plan and Framework for Action 2001 – 2005, CTA took a pragmatic view and opted to develop a strategy combining the benefits of both approaches, whereby the need to address the expressed demands of its stakeholders and the potential long-term advantages of developing programmes that address future needs were combined.

improving CTA's efficiency and increasing the Centre's outreach by addressing the major bottleneck of difficult or insufficient access to information in ACP countries; (ii) honing CTA's profile and further defining the niche where the Centre has a comparative advantage. Consequently, reaching more beneficiaries and further strengthening CTA's partnership networks is key as well as the thrust to make ICTs and ICM strategies more widely available.

3. Main issues

CTA works primarily through intermediary public and private partners (research centers, extension services, libraries, NGOs, farmers' organisations, regional organisations and networks, ...) to promote agriculture and rural development. Under the new strategic plan, the organisations targeted will be extended to include print media, editors, radio, TV and journalist networks in order to further maximize outreach. Through these partnerships, CTA hopes to increase the number of ACP organisations capable of accessing and combining modern and conventional ICTs, generating and managing information and developing their own ICM strategies. The identification of appropriate partners is therefore of primordial importance, whilst bearing in mind issues such as geographical coverage, decentralisation, regionalisation, thematic orientation and transparent and objective criteria and procedures for partner selection.

4. Overall Objective

Collaboration strategies with ACP agricultural organisations and relevance of CTA's support to African ACP countries improved.

5. Scope of the study

The study will focus on:

- providing an overview of main agricultural services and actors existing in the country (information supply side) in terms of their strengths, weaknesses and opportunities for collaboration with CTA;
- identifying agricultural information and ICM capacity building needs of key actors / key strategic partners for CTA products and services;
- identifying potential strategic partners for CTA activities and services (paying special attention to e.g. print media, editors, radio, TV and journalist networks);
- developing some baseline data on the status of ICM and ICTs in the country to facilitate subsequent monitoring and updating activities.

The study should assist CTA to improve and better target interventions and activities aimed at potential partners and beneficiaries (including women, youth, private sector and civil society organisations) to have a more informed picture of their needs and aid in the elaboration of a strategy and framework of action. The study should also highlight where there are specific needs for CTA's products and services thereby enabling improvement in the delivery of the same.

6. Expected results

The expected results of the study are as follow:

- status of infrastructure, information services and ICM capacity of institutions

- institutions and potential CTA partners involved in agriculture and rural development;
- baseline data on the status of ICM and ICT in agriculture and rural development compiled for monitoring purposes and improved outreach.

The study should therefore also provide updated country profiles on the status agricultural information services, the status of ICM/T in the country, which will allow CTA to make informed decisions re type and mode of intervention as well as partner selection. This will be summarized in one (1) main report per country not exceeding 30 pages excluding annexes (cf. section 8 below).

7. Methodology

The consultant will use a combination of qualitative and quantitative rapid appraisal methods including:

- the desk review of available literature and information sources including the findings of programme evaluations;
- the conduct of face-to-face interviews with relevant stakeholders / concerned parties;
- the limited use of questionnaires.

The rapid appraisal approach will allow a general overview of the key issues and company / organisational profiles on a per country basis and may give rise to more in-depth studies as and when needed in the future.

8. Reporting

The country reports will not exceed 30 pages (excluding annexes) and is broken down as follows:

Main report

Acknowledgements

List of Acronyms

Executive summary

1. Introduction

2. Country profile

2.1 Brief description of agriculture and recent developments in the sector:

2.1.1 Agriculture

2.1.2 Fisheries

2.1.3 Forestry

2.1.4 Pastoralism / Livestock (where applicable)

2.2 Brief description of the status of ICT infrastructure and recent developments in the sector

3. Status of information and communication for agriculture and rural development

3.1 Institutional, regulatory and policy framework

Status of national and/or other sectoral policies on information and communication for agriculture and rural development; definition of main strategic focus and principal characteristics; opportunities and threats posed by the political, institutional and regulatory environment

- 3.2. Description of agricultural information and services (main actors in the area of information and communication for agriculture and rural development)
- 3.2.2 Information products and services provided
- 3.2.3 Information and communication management capacity
- 3.3 *Interventions supporting information and communication for agriculture and rural development*
Examine the main interventions undertaken, planned or foreseen by the State, donor agencies, private sector (e.g. telecommunications sector) to respond to identified needs paying particular attention to the priorities and means mobilised. Lessons learnt should also be addressed in this section
- 3.4. *Needs analysis (Main bottlenecks and shortcomings)*
 - 3.4.1 Information needs
 - 3.4.2 Capacity building needs (IC policies & strategies, sensitisation, networking, skills, training, media, ICT, equipment)

4. Conclusions and recommendations

- 4.1 Conclusions
 - 4.1.1 Information Needs
 - 4.1.2 Capacity Building Needs
 - 4.1.3 Potential Strategic Partners
- 4.2 Recommendations
 - 4.2.1 Capacity Building Needs
 - 4.2.2 Information Needs
 - 4.2.3. Potential Strategic Partner Institutions

5. Proposed CTA Intervention Strategy and Action Plan

From the above analysis, establish a link between the needs which are not currently met or for which complementary actions are needed and CTA's supply (products and services). This should lead to an overall and coherent strategy for CTA and an action plan in priorities are identified and an implementation schedule defined.

Annexes

1. Terms of reference

2. Country profile

- 2.1 *General agricultural profile (from available documentation)*
 - 2.1.1 Size of agricultural population (male / female / youth)
 - 2.1.2 Farmed land, forests, fishing areas
 - 2.1.3 Agricultural systems
 - 2.1.4 Agriculture in the economy (percentage GDP)
 - 2.1.5 Main agricultural produce and secondary products
 - 2.1.6 Main export markets
 - 2.1.7 Trade agreements that include agriculture
 - 2.1.8 Sectoral policy related to agriculture, fisheries and forests
- 2.2 *Socio-economic profile (from available documentation)*
 - 2.2.1 Total active population, demographic breakdown
 - 2.2.2 Literacy level and languages
 - 2.2.3 Access to services (health, schools, electricity)
 - 2.2.4 Rural urban drift
- 2.3 *Media and telecommunications (update / check)*

- channels,
- 2.3.2 Telecommunication services (fixed, mobile, etc.)
- 2.3.3 Computers and Internet access

3. Profile of institutions

3.1 List of all main institutions involved in agriculture and rural development activities, including private sector and civil society organisations, with name, contact details, type and role of institution

3.2 Select list of key institutions involved in agriculture and rural development, with extensive data and information on the institution, the problems faced and why it is considered a key actor

4. List of institutions / persons interviewed (to include full contact details)

5. Bibliography

9. Timing

The draft final report is to be submitted within three months after contract signature by CTA; the

final report is due two weeks after receipt of comments from CTA.

10. Expertise needed

The **national consultant** should have a university degree or equivalent by experience. In addition, he/she should have at least 10 years experience in field of agriculture, rural development or social / economic sciences. He/she must have in-depth knowledge of the agricultural sector in his/her country and be able to identify key players and institutions / organisations active in this area. Some knowledge of information sciences would be an added advantage. The ability to communicate and write clearly in English is essential, while knowledge of at least one of the local languages for communication / interview purposes is an added advantage.

In addition to the skills above, the **regional coordinator** is expected to be fluent in English, have some knowledge of the 9 countries forming the object of this study, have demonstrated experience in coordinating studies with several consultants and in producing synthesis reports.

The overall coordination of the exercise will be carried out by Ms Christine Webster, Deputy Head, Planning and Corporate Services CTA.

11. Implementation schedule (CTA)

- Preparation/Finalisation of ToR; Identification/ short-listing of (potential) consultants; Call for offers: October 2007 – January 2008;
- Selection of consultants & contractual arrangements: February – March 2008
- Briefing: April 2008
- Start date of contract: March/April 2008
- Contract implementation period: March – November 2008
- End date of contract: November 2008.

12. Key documents to be made available to consultants

- Executive Summaries of previous evaluation reports including ITAD, OPM, etc.
 - CTA's Strategic Plan (2007-2010)
 - Annual Reports
 - Examples of reports of previous needs assessment studies
 - Documents on products & services provided by CTA
 - Review preliminary country reports and findings and send comments back to local consultants
 - Send edited draft final country reports to CTA for feedback
 - Coordinate and ensure consistency of country reports
 - Prepare the overall report taking into account the findings and recommendations of all the country reports (table of contents to be agreed).
-

NEX 2: LIST OF POTENTIAL PARTNERS RECOMMENDED BY NATIONAL CONSULTANTS

Country	Institutions	Type	Role
Burundi	1- Faculté des sciences Agronomiques du Burundi (FACAGRO) 2- Institut des sciences agronomiques du Burundi (ISABU) 3- Centre nationale de Technologie agro alimentaire (CNTA) 4- Collectif des associations et ONGs féminines au Burundi (CAFOB) 5- Confédération des associations des Producteurs Agricoles pour le Développement (CAPAD) 6- Radio télévision Nationale du Burundi (RTNB) 7- Office Nationale des Télécommunications (ONATEL) 8- Direction des statistiques et Informations agricoles (DSIA) 9- Direction Générale de la mobilisation pour l'Auto développement et la Vulgarisation Agricole (DGMAVA)	EDU GOV GOV NGO GOV NGO TE TE GOV GOV	TR RD, RU RD, RU RU RU, TR IN IN PP, RU PP, RU
Comoros	1- l'Institut national de recherche pour l'agriculture, la pêche et l'environnement (INRAPE) 2- Direction nationale des Stratégies agricoles et de l'élevage 3- Union des chambres de Commerce, d'Industrie et d'Agriculture (UCCIA) 4- Le Campus numérique Francophone (CNF) 5- Fédération des acteurs pour le développement économique et social de l'île de Mohéli (FADEZIM) 6- Syndicat national des agriculteurs des Comores (SNAC) 7- Office de Radio et télévision comorienne 8- RADIO Télévision Anjouan	GOV, STA GOV, STA STA, TE AS-F, NGO, EDU AS-F, NGO MED, GOV, STA MED, GOV	EX, RD, IN EX, RD, IN IN EX, PS-M, RD EX, IN, PS-E IN, EX IN, EX

Country	Institutions	Type	Role
Djibouti	<ol style="list-style-type: none"> 1. Direction Nationale de la Pêche (DNP) 2. Direction Nationale de l'Élevage et des Services Vétérinaires (DNESV) 3. Service de Programmation de Suivi et de la Communication (SPSC) 4. Sous-direction Régionale de l'Agriculture (SDR) du MAEM-RH 5. Laboratoire de Biologie Végétale (LBV) 6. Direction Générale de l'Agriculture de la Sylviculture et de l'élevage (DGASP), 7. Représentation nationale de la FAO 8. Autorité Intergouvernementale pour le Développement (GAD) 9. FEWS-NET (FSNET) 10. Radio Télévision de Djibouti (RTD) 11. Le Journal la nation 12. Société Anonyme de Djibouti Télécom (DJIBTEL) 13. Réseau des Coopératives Agricoles de Dikhil (RCAD) 14. Union Nationale des Femmes Djiboutiennes (UNFD) 15. Mouvement Associatif des Journalistes de Djibouti (MAJD) 	<p>GOV GOV GOV GOV GOV, STA GOV STA REG, STA STA MED, GOV MED, GOV TE NGO, AS-F NGO, AS-W MED, NGO</p>	<p>PP EX, IN, PP EX, IN, PP RU, EX, TR EX, RU, RD EX, RU RU, IN, PP EX, RU IN, RU IN PS-S EX, RU, PS-S RU, EX, IN IN</p>
Egypt	<ol style="list-style-type: none"> 1. National Agricultural Research Institute 2. Ministry of Agriculture, Division of Planning and Statistics 3. Elabried Estate 	<p>GOV GOV PRV,</p>	<p>RD PP, IN PS-M, PS-P</p>
Ethiopia	<ol style="list-style-type: none"> 1. Ethiopian Institute of Agricultural Research (EIAR) 2. Ethiopian Information and Communications Technology Development Agency (EICTDA) 3. Ethiopian Radio and Television Agency (ERTA) 4. Faculty of Journalism and Communications (FJC), Addis Ababa University 5. Ministry of Agriculture and Rural Development (MOARD) 	<p>GOV GOV MED GOV GOV</p>	<p>RD, IN PP, RD, RG, TR IN EDU EX, RU, IN, PP, RG</p>
Kenya	<ol style="list-style-type: none"> 1. Agricultural Information Resource Centre (AIRC) 2. University of Nairobi - College of Agriculture and veterinary (UON-CAV) 	<p>GOV, TE GOV</p>	<p>EX, IN, TR TR, RD, EX, IN</p>

Country	Institutions	Type	Role
Madagascar	<ol style="list-style-type: none"> 1. Centre Technique Horticole de Toamasina (CTHT) 2. Centre de Promotion Rurale Saint Benoît (CPR) 3. Chambre de Commerce d'Industrie (CCIA) 4. Organisation des jeunes ruraux Catholiques à Madagascar (FTMTK) 5. Association ILO 6. Maison des paysans 7. Bureau de liaison des formateurs ruraux (BIMTT) 8. Centre d'Information Technique et Économique (CITE) 9. Centre des Ressources des Médias (CRM) 10. Groupement de Coopérative Koloharena CNKH 11. Union Matanjaka 12. GREEN 13. Radio Mampita 14. Radio Haja 15. Télévision Malgache (TVM) 16. Radio Télévision du Vakinankaratra (RTV) 17. Centre National de Recherche Appliquée au Développement Rural (FOFIFA) 18. Ecole d'Application des Sciences et Techniques Agricoles (EASTA) 19. Programme de Soutien pour le Développement Rural (PSDR) 20. Service de la Communication, de la Documentation et de l'Information (SCDI) 21. Direction Régionale du Développement Rural Diana (DRDR) 22. Tranoben'ny Tantsaha 23. Centre d'Information et de Documentation Scientifique et Technique (CIDST) 24. Service des Statistiques Agricoles (SSA) 	<p>REG NGO STA AS-Y AS-F AS-F AS-F PRV PRV AS-F AS-F AS-F MED, PRV MED, PRV STA, MED MED GOV, STA STA GOV STA GOV STA, GOV STA, GOV STA, GOV GOV</p>	<p>TR, EX, RU RU IN RU, EX TR IN, RU IN IN, TR IN IN, EX, RU RU, IN IN, RU, EX IN IN IN RU IN, RD, TR TR IN, EX IN RU RU, EX EX, RU IN, RU, RD IN</p>
Mauritius	<ol style="list-style-type: none"> 1. Albion Fisheries Research Centre (AFRC) 2. Association Professionnelle des Producteurs/Exportateurs de Produits Horticoles de Maurice (APEXHOM) 3. Agricultural Research and Extension Unit (AREU), 	<p>GOV AS-F, NGO</p>	<p>EX, IN, PP, RD, TR IN, PP, RG, TR, TM, OT</p>

Country	Institutions	Type	Role
	4. Commission for Agriculture, Natural Resources Rehabilitation and Water Resources (CAR) 5. Central Statistics Office (CSO) 6. Food and Agricultural Research Council (FARC) 7. IVTB- (Industrial and Vocational Training Board) Le Chou Multi Purpose Training Centre - Rodrigues Branch 8. Ministry of Agro Industry and Fisheries, Agricultural Information Division (MAIF-AID) 9. Forestry Service of the Ministry of Agro-Industry and Fisheries (MAIF-FS) 10. Mauritius Sugar Industry Research Institute (MSIRI), 11. Small Planters Welfare Fund (SPWF)	GOV, STA GOV GOV GOV, STA, TE EDU GOV GOV STA, OT GOV, STA	EX, IN, RD, RU, TR EX, IN, PP, PS-S, RD, RG, RU, OT IN, TR IN, PP, PS-S, RD IN, TR IN EX, IN, PS-P, RD, RG EX, IN, PP, RD, RG EX, IN, PP, RU, TR
Rwanda	1. Rwanda Agricultural Development Authority (RADA) 2. l'Institut des Sciences Agronomiques (ISAR) 3. Syndicat Imbaraga 4. Centre de formation coopérative IWACU 5. Pro-Femmes Twese Hamwe 6. Union des Coopératives Rizicoles au Rwanda (UCORIRWA)	GOV, STA STA, GOV AS-F AS-F AS-W AS-F	RU, EX RU, RD IN, RU TR RU, IN In, RU
Seychelles	1. Natural Resources Department, Ministry of Environment, Natural Resources and Transport 2. Seychelles Farmers Association (SeyFa) 3. Seychelles Fishing Authority (SFA) 4. Seychelles Agricultural and Horticultural Training Center (SAHTC)- Ministry of Education	GOV NGO STA GOV	EX, IN, RG EX, IN, RD PP, RD TR
Tanzania	1. Federal Ministry of Agriculture and Forests (MoA) 2. Agricultural Research Corporation (ARC)	GOV STAT	EX, IN, PP, RU, TR EX, IN, RD, TR
Tanzania	1. Agricultural Council of Tanzania (ACT) 2. Finance and Advice in Development Assistance and Marketing Linkage (FAIDA-MALI)	PRV NGO	EX, IN, PP RU, TM

Country	Institutions	Type	Role
	3. Foundation of Civil Society (FCS)	NGO	IN, PP, RU, TR
	4. Institute of Rural Development Planning (IRDP)	EDU	TR, EX, IN, PP, RD, RU
	5. Commission of Research and Extension services also known in Kiswahili as "Kamisheni ya Kilimo, Utafiti na Elimu kwa Wakulima (KUEW)	GOV	RD, EX, IN, PP, RU
	6. Ministry of Agriculture, Food Security and Cooperatives (MAFC) (DRT)	GOV	RD, PP, TR, EX, RU
	7. Mixed Farming Improvement Programmeme (MIFIPRO)	NGO	EX, RU, TR
	8. Ministry of Livestock Development and Fisheries (MLDF)	GOV	PP, RD, TR, TX RU
	9. Moshi University College of Co-operative and Business Studies (MUCCoBS)	EDU, STA	EX, IN, RD, RU, TR
	10. Mtandao wa Vikundi vya Wakulima Tanzania (National Network of Small-scale Farmers Groups in Tanzania) (MVIWATA)	NGO	RU, EX, OT
	11. Participatory Ecological Land Use Management (PELUM)	NGO, AS-F	
	12. Same Agricultural Improvement Trust Fund (SAIPRO)	NGO	EX, RU, IN, RD
	13. Sokoine University of Agriculture (SUA)	EDU	EX, RU EX, IN, RD, RU,
	14. Tanzania Fishery Research Institute (TAFIRI)	SE	TR RD, EX, IN, TR
	15. Tanzania Food Processors Association of Women Entrepreneurs (TAFOPA)	AS-W	RU EX, IN, TR
	16. Tanzania Forest Research Institute (TAFORI)	GOV	
	17. Tanzania Association of Non-governmental Organisations (TANGO)	NGO	EX, IN, RD EX, IN, PP, RU,
	18. Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA)	CCI	TR
	19. Tanzania Irrigation and Environment Development Organisation (TIP)	NGO	PP, EX, RD, TR EX, RU, TR
	20. Tanzania Meteorological Agency (TMA)	GOV	
	21. Tropical Pesticide Research Institute (TPRI)	GOV	IN, RD, RG
	22. Tanzania Standard Newspapers Ltd (TSN)	MED	EX, RD, TR
		NGO	IN, RU, TR, TM

Country	Institutions	Type	Role
	23. Zanzibar Farmers and Fishermen Development (ZAFFIDE)		TR, RU, IN, EX
Uganda	MAAIF URDT FRI NEMA Farm Radio International / Future Project: African Farm Radio Research Initiative (FRI) Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) National Environment Management Authority (NEMA) Uganda Rural Development and Training Programme (URDT)	NGO, REG GOV STA NGO	IN, RD, RU PP RG, EX, IN EX, IN, FS, PS-S, RD, RU, TR

Legend and Role of Institution

F	Farmers' association (includes co-ops)	EX	Extension and outreach
W	Women's association	IN	Information services
Y	Youth association	FS	Financial services
K	Bank or credit institution	PP	Policy and planning
I	Chamber of commerce and industry	PS-E	Exporter (fresh, frozen and dried produce)
U	Church-based group	PS-M	Manufacturer (e.g. tannery, bottler, refiner, roaster)
J	Educational institution	PS-P	Producer (e.g. commercial farm, fishing company)
V	Government department / ministry	PS-S	Supplier (e.g. chemicals, seeds)
O	Non-government organisation	RD	Research and development
V	Private enterprise, company	RG	Regulation (compliance, standards)
G	Regional organisation or network	RU	Rural Development
A	Statutory body	TR	Training (tertiary and vocational level)
	State enterprise	TM	Trade and marketing (include development)
	Other (define)	OT	Other (define)

ANNEX 3: LIST OF NATIONAL CONSULTANTS

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Burundi	Leonard NTAKIRUTIMANA	BP: 1870 Bujumbura Burundi Tel. : +257 77 790218 +257 22273550 +257 22273352 Email: leonard.ntakirutimana@yahoo.fr
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Seychelles	Mrs. Mermedah Moustache	P.O. Box 166, Victoria Grand Anse, Mahe SEYCHELLES Telephone: +248 723461 Fax: +248 378428 E-mail: pgr@intelvision.net
Sudan	Dr. Yashir Gasm Elseed Adam Bashir	Agricultural Research Corporation campus Street N° 9, House P.O. Box 126 Wad Medani SUDAN Telephone: +249 1222 44712 Fax : +249 511 843213 E-mail: yasir_bashir@hotmail.com
Tanzania	Mrs. Mary Shetto	Magomeni Mukimi Area Plot N° 169 Makumbusho Street P.O Box 76220 Dar es Salaam TANZANIA Telephone: +255 754372887 E-mail: mcsheetto2007@yahoo.co.uk
Uganda	Mrs. Alice Mango	Plot 610 Sir Apollo Kagwa Road Makerere Kampala UGANDA Telephone: +256 772 466862 E-mail: alkmango@yahoo.com

ANNEX 4: SUMMARY OF ICT UTILISATION AND RECENT DEVELOPMENTS IN THE FIELD BY COUNTRY

Countries	ICT utilisation	Recent Developments in ICT
Burundi	<ul style="list-style-type: none"> - Disparity of the Internet utilisation in the Public administration - High cost of Internet material and connection (ADSL) - Fast expansion in the use of mobile telephone - Internet Utilisation concentrated in Capital and main cities - Low use of Internet in rural areas - No qualified and skilled ICT/ ICM personnel - 	<ul style="list-style-type: none"> - Rapid development of Internet cafes, community telecentres, and telephone kiosks in main cities ICT - Institutional frameworks to facilitate the deployment and exploitation of ICTS to support the socioeconomic development - International projects to improve the capacity and reliability of the bandwidth of the connection -
Comoros	<ul style="list-style-type: none"> - High cost of Internet and fixed & mobile phone - High cost of Internet material and connection (ADSL) - Internet Utilisation concentrated in Capital and main cities - Low use of Internet cafes and telecentres in Capital and main cities - High cost of Internet Connection - ADSL without optic fiber since 2006 	<ul style="list-style-type: none"> - Institutional frameworks to facilitate the deployment and exploitation of ICTS to support the socioeconomic development. - Process of enacting national ICT policies and strategies - International projects to improve the capacity and reliability of the bandwidth of the connection - Rapid development of telecommunication Infrastructures (fixed telephone and et mobile) since 2003
Djibouti	<ul style="list-style-type: none"> - Outdated and lack of ICM/ICT infrastructure and equipment - Improved Internet connectivity into the city area in the private sector - Use of Rural telephone in progress - High cost of Internet and fixed & mobile phone - High cost of Internet material and connection (ADSL) - Low of Internet cafes and telecentres in Capital and main cities 	<ul style="list-style-type: none"> - Institutional frameworks to facilitate the deployment and exploitation of ICTS to support the socioeconomic development. - Process of enacting national ICT policies and strategies - International projects to improve the capacity and reliability of the bandwidth of the connection - Lack of national ICT policies and strategies - Process of enacting national ICT policies and strategies - International projects to improve the capacity and reliability of the bandwidth of the connection
Eritrea	<ul style="list-style-type: none"> - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - the cost of acquisition and use of ICT is high 	<ul style="list-style-type: none"> -

Countries	ICT utilisation	Recent Developments in ICT
Ethiopia	<ul style="list-style-type: none"> - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - the cost of acquisition and use of ICT is high - Very few telecentres to provide ICT and Internet access to the rural population - Internet or cyber cafes providing the main means of access to Internet connection and other ICTs 	<ul style="list-style-type: none"> - The establishment of Ethiopian Information and Communication Technology Development Agency (EICTDA) - Formulation and initiation of the implementation of a national ICT development policy and strategy - Establishment of key national networks and infrastructure in the main sectors, i.e., health, education, agriculture, and governance (such as Weredanet - district level networks, Schoolnet, Healthnet, Agrinet) - Development of the telecommunication infrastructure including in the rural area - Rapid expansion of telephones, both wireline and mobile, particularly in rural areas - Increase in the number of national and regional radio and TV stations - Expansion of tertiary level ICT education - Lowering of cost of telephone services - Lowering the wait time for telephone services
Kenya	<ul style="list-style-type: none"> - Internet has become a de facto source of news - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - The cost of acquisition and use of ICT is high - Very few telecentres to provide ICT and Internet access to the rural population - Internet or cyber cafes providing the main means of access to Internet connection and other ICTs 	<ul style="list-style-type: none"> - A far reaching Government reforms of key areas of information and communication including information technology, broadcasting, telecommunication, postal services, radio frequency management and universal access - Formulation and initiation of the implementation of ICT policies, strategies and related legislation - Expansion of TV and radio stations, leading to 60% and 90% of the population having access to television and radio services respectively - The creation of 11 market segments by the government, including (1) Fixed lines operators, (2) Mobile phone operators, (3) Satellite / VSAT operators, (4) Data network operators, (5) Internet service providers and (5) Value added services among others. - Increase in the number of mobile phone operators and coverage and decrease in the cost of making mobile phone calls - Emergence of Internet cafes in urban centers and telecentres in rural areas as a major means of Internet and ICT access - Deregulation of the telecom sector - Multiple ISP - Lowering of cost of telephone services - Lowering the wait time for telephone services
Madagascar	<ul style="list-style-type: none"> - Improved Internet connectivity into the city area - Liberalisation of ICT sector (Radio & TV stations, Computers) 	<ul style="list-style-type: none"> - Rapid recent developments in the ICT sector - Adoption of a national ICT policy - Institutional frameworks to facilitate the deployment and exploitation of ICTS to

Countries	ICT utilisation	Recent Developments in ICT
	<ul style="list-style-type: none"> - Affordable cost of Internet in the Capital city and main cities - Good penetration of ICT and Internet in public administration and private sector - Increase use of Internet cafes and telecentres in Capital and main cities 	<ul style="list-style-type: none"> - support the socioeconomic development - Expanding ICTs into the rural areas - Exponential development of private and community radio and TV stations - Multiple ISPs - Rapid development of Internet cafes, community telecentres, and telephone kiosks in main cities; - International projects to improve the capacity and reliability of the bandwidth of the connection - Implementation of national ICT policies and strategies
Mauritius	<ul style="list-style-type: none"> - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Use of Internet still expensive for the general public - The cost of acquisition and use of ICT is high • use the SAFE/SAT3/WASC submarine fibre optic cable system, which provides high bandwidth international connectivity 	<ul style="list-style-type: none"> - Government initiated project to make Mauritius Cyber Island with ICT as the 5th pillar of the economy through the development of IT Enabled Services, including software development, Disaster recovery centres, call centres and Business Process Outsourcing (BPO). - Introduction of business parks, such as the Ebene Cybercity, equipped with Cyber Towers and ultra modern features - National connection to the SAFE/SAT3/WASC submarine fibre optic cable system, which provides high bandwidth international connectivity. - Deregulation of the telecommunications sector - Enacting of a conducive legal and regulatory framework, appropriate legislations on data security, protection against cyber crimes, the liberalisation and regulation of telecommunications and data protection have been enacted - Establishment of Information and Communication Technologies Authority (ICTA) to regulate the ICT sector, - Government sponsored training initiatives to increase ICT training, including the introduction of Internet and Computing Core Certification (<i>IC3 Training Initiative</i>), which is focussed on developing an ICT literate labour force - Participation in global ICT initiatives such as EASSy Project (Eastern Africa Submarine System) and the Pan-African E-Network, (MOU Mauritius/ India) to connect some 53 African countries by electronic routes through satellite and optic fibres. - The evolvement of ICT industry in Mauritius towards export-oriented services - Implementation of a National ICT Strategic Plan (NICTSP) 2007-2011, - Deregulation of the telecom sector - Multiple ISP - Lowering of cost of telephone services - Lowering the wait time for telephone services
Rwanda	<ul style="list-style-type: none"> - Institutional frameworks to facilitate 	<ul style="list-style-type: none"> - Expansion of training programmes to meet

Countries	ICT utilisation	Recent Developments in ICT
	<p>the deployment and exploitation of ICTS to support the socioeconomic development</p> <ul style="list-style-type: none"> - Process of enacting national ICT policies and strategies - Internet Utilisation concentrated in Capital and main cities - Low bandwidth and high Internet cost 	<p>the needs of trained manpower in ICTS</p> <ul style="list-style-type: none"> - International projects to improve the capacity and reliability of the bandwidth of the connection - Rapid development of Internet cafes, community telecentres, and telephone kiosks in main cities;
Seychelles	<ul style="list-style-type: none"> - More than 90% of the population uses mobile phone - Uses 3rd generation (3G) and 2.5G mobile networks. - More Broadband subscribers than dial-up - Computers are being used largely for limited applications (office applications such as word-processing) - Use of Internet still expensive for the general public - the cost of acquisition and use of ICT is high 	<ul style="list-style-type: none"> - Liberalisation leading to the price for fixed line and mobile telephone and Internet services becoming more affordable for the general population. - The launching of the National ICT Policy in 2008, - The covering of all the inhabited islands by fixed line service as well as 90% of the population with mobile phones - Deregulation of the telecommunication industry - The launching of the 3rd generation (3G) and 2.5G mobile networks - Deregulation of the telecom sector - Multiple ISP - Lowering of cost of telephone services - Lowering the wait time for telephone services
Sudan	<ul style="list-style-type: none"> - The Internet services are available in cities (more than 75% coverage); others use national calls or VAST stations - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - the cost of acquisition and use of ICT is high 	<ul style="list-style-type: none"> - Privatisation the telecommunication sector - Establishment of the Sudan Internet Society (SIS) whose main objectives of SIS are to increase local Internet awareness, help develop polices and Internet technologies and suggest some regulations with respect to Internet usage in the country - Introduction of ICT-Funds have been earmarked for ICT infrastructure development such as building e-government, establishing multi-purpose telecentres to provide urban, rural and remote areas with ICT services in addition to securing a computer for every household - Multiple ISP - Lowering of cost of telephone services - Lowering the wait time for telephone services
Tanzania	<ul style="list-style-type: none"> - Internet or cyber cafes providing the main means of access to Internet connection and other ICTs - ICT use in agriculture has been limited to research and market information, partly because primary stakeholders in agriculture (peasants) don't have the purchasing power - Internet has become a de facto source of news - Low Internet bandwidth - Computers are being used largely 	<ul style="list-style-type: none"> - The promulgation of National Information and Communications and Technologies (ICT) Policy - Rapid growth in the ICT sector, i.e., rapid growth in Telecommunication use, access to Computers and Internet, Print media particularly in advertisement, and increase in availability of Radio and Television particularly community radios (currently estimated at 47 radio stations - The removal of VAT on ICT equipment has generally lowered prices. - Deregulation of the telecom sector

Countries	ICT utilisation	Recent Developments in ICT
	<ul style="list-style-type: none"> for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - The cost of acquisition and use of ICT is high - Very few telecentres to provide ICT and Internet access to the rural population 	<ul style="list-style-type: none"> - Multiple ISP - Lowering of cost of telephone services - Lowering the wait time for telephone services - Emergence of Internet cafes in urban centers and telecentres in rural areas as a major means of Internet and ICT access
Uganda	<ul style="list-style-type: none"> - Internet usage has continued to grow as a result of private and government initiatives in the deployment of wireless access infrastructure based on WiFi/ WiMax hot spots - Low Internet bandwidth - Computers are being used largely for limited applications (office applications such as word-processing) - Computers and Internet access and use concentrated in the main cities - Telephone (mobile and fixed), radio and TV concentrated in the main cities - Use of Internet still expensive for the general public - the cost of acquisition and use of ICT is high - Very few telecentres to provide ICT and Internet access to the rural population - Most growth has been in narrow band and concentrated in urban areas, leaving rural areas without adequate ICT infrastructure and services 	<ul style="list-style-type: none"> - the enactment of the Communications Act (1997), to liberalise and privatize the telecommunication sector - Introduction of tax exemption on imported ICT equipment leading to reduced costs of providing services - Introduction of zero licence fees for the provision of public communication services leading to a vibrant industry in telephone kiosks and Internet café services - Introduction of Universal Services Fund (USF), known as the Rural Communications Development Fund (RCDF), the first in Africa that mainly targets the rural population and aims at providing access to basic communication services within a reasonable distance to all the people in Uganda - Introduction of e-governance infrastructure for voice and data services in 27 government ministries and departments - Expansion of coverage of optic fibre networks - Deregulation of the telecom sector - Multiple ISP - Lowering of cost of telephone services - Emergence of Internet cafes in urban centers and telecentres in rural areas as a major means of Internet and ICT access - Lowering the wait time for telephone services

Source: Recapitulation from country reports

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