Los Telecentros (CACTs) un puente para el desarrollo agricola y rural del Caribe

Telecentres, bridges to agricultural and rural development in the Caribbean

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CTA Fundación Taigüey Indotel CNSIC CACTs-DOM

"TELECENTERS, BRIDGES TO AGRICULTURAL AND RURAL DEVELOPMENT IN THE CARIBBEAN"

Workshop and Prize-giving Ceremony

Dominican Republic, 28-29 April 2011

WORKSHOP REPORT (draft2)

In 2010, CTA, in partnership with the Taigüey Foundation (ICT for development association from the Dominican Republic), launched a contest on the services offered in Caribbean Telecenters to support agricultural and rural development. Following that, a workshop was organized from 28 to 29 April 2011 in Santo Domingo (Dominican Republic) in partnership with other institutions on telecenter services for ARD. In parallel to that event, the prize giving ceremony of the contest was held on 28 April. The following is a report of these last two activities.

Working document

Outline of the content

The meeting was held in *Hotel Santo Domingo*, in Santo Domingo. It gathered 65 ICT and development practitioners from 9 Caribbean countries, representing national and key regional institutions such as the Caribbean Agricultural Research and Development Institute (CARDI), the Inter-American Institute for Cooperation on Agriculture (IICA), the Caribbean Farmers Network (CAFAN), the Caribbean Institute of Media and Communication (UWI/CARIMAC), the Caribbean Telecommunication Union (CTU) as well as the National Commission on the Information Society (CNSIC, Dominican Republic), the national telecommunications regulator (INDOTEL[1]) and the Dominican telecentre network. Apart from Taigüey Foundation, CTA's main partner for the event, the last three institutions also collaborated, in particular INDOTEL, of which multi-faceted support greatly contributed to the success of the workshop. The presence of institutions from various sectors (including the private sector) was also a key factor.

Day 1: Opening ceremony, Presentations and prize giving ceremony

1. OPENING CEREMONY

- **WELCOME WORDS, Yacine Khelladi, Executive Director, Fundacion Taiguey**

In his opening remarks, Mr. Khelladi welcomed participants and sponsors. He observed that the stakeholders of the Digital Divide were present and the task at hand was how to translate to the work already done in ICTs to bridge the gap in education, social development and the rural-urban divide.

- **WELCOME WORDS, Neil Checo, Managing Director, INDOTEL**

Mr. Checo outlined the work that the Dominican Institute of Telecommunications (INDOTEL) was undertaking to provide equitable access to the rural areas of the Dominican Republic. He said that the organization was happy to be working with the CTA and other sponsors on the current workshop and that the expectation is to continue working with the government and partners to put in place ICTs so as to reach the remote areas and support agriculture which accounts for 11.5% of the country's GDP. Farm work is mainly done individually or collectively, on a small scale in communities far from each other and from urban centers. This means that they are either lacking, or limited in access to information to facilitate their work, improve their processes, operation capabilities and negotiations with other stakeholders. Without adequate information on prices and fees, processing of raw materials in the world, new trade patterns or the status of the transport and infrastructure, the farmer is at a significant disadvantage to maintain their business and compete against aggressive internationally competitive practices. It is for this reason that telecenters are an essential tool to help the agricultural sector, and this is the reason behind Indotel's commitment to guarantee farmers access to ICTs.

- **WELCOME WORDS - Ken Lohento-** ICT4D programme coordinator CTA

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[1] It has to be noted that INDOTEL, which joined in the last moment the organization of the event, helped for contacting some key national stakeholders and supported the costs of photo and video coverage of the meeting the whole two days.

Mr. Lohento stated that the CTA was happy to be working with the INDOTEL, and Fundacion Taiguey to host this workshop. He provided background information on the CTA which was currently working in 79 countries, through regional networks such as the Caribbean Agricultural Research and Development Institute (CARDI) and Caribbean Farmers Network (CAFAN). He briefly informed about CTA's new 2011-2015 strategy which are now focused on agricultural policy, value chain and information and communication. The current activity falls within CTA's "ICT for Rural Development" Programme" and under third Strategic Goal which aims at "Strengthening the information, communication and knowledge management capacities of the ACP countries". An overview of some themes and activities under this goal were provided.

An overview of the workshop objective and the contest was provided. Mr Lohento informed that discussion outcomes and recommendations will help CTA in his on-going process to finalize its new strategy implementation plan.

- **WELCOME WORDS: Cesar Guerrero, Vice Minister of Agriculture, Dominican Republic**

Mr. Guerrero explained that telecenters are places for meeting, learning and communication with the use of ICTs and offer the opportunity to improve living conditions in disadvangtaged areas. The presence of telecenters have been increasing in Latin America for example in Chile, Colombia, Guatemala, Mexico and Brazil. In Colombia, there is a National Telecenter Portal, and Guatemala recently opened the Telecenter Academy, and also has the LAC Telecenter Network of Networks. In the DOMINICAN REPUBLIC, INDOTEL has installed a large number of access sites for ICTs, some of which are used as telecenters. In several developing countries, telecenters face critical challenges to their sustainability and their potential contribution to development. These include infrastructure, energy issues, weak community ownership, the insufficient supply of services, the high cost of connectivity and inadequate managerial skills. To support agriculture, telecenters can contribute to sustainable development and innovative agricultural and livestock production for small and medium level producers, through training, extension, production of information and technology transfer through contact with agricultural trade associations. The Ministry of Agriculture is committed to anything that supports the transfer of technology and upgrading of producers. The Ministry recently signed an agreement amounting to $30 M for IFAD II, a continuation of the project PRORURAL WEST (IFAD I). The project will target more than 19,000 farmers in eleven border provinces and organizations in the poor rural areas of central and eastern parts of the country. Telecenters can facilitate the achievement of the project objectives. The Ministry of Agriculture, headed by Mr. Salvador Jiménez, is committed to all farmers but especially medium and small farmers, who are the majority, to support them raising their standard of living, and increasing their income. Mr Guerrero closed by wishing participants and sponsors a fruitful workshop.

KEYNOTE SPEAKER – Mr. Jaime Moreno, Senior Facilitator of the Dominican National Competitiveness Council for Clusters/Vice President of Helados Bon

The National Competitiveness Council which was created less than 15 years ago, is geared toward improving business competitiveness in the Dominican Republic, particularly through Public-Private sector partnerships. The creation of an appropriate business climate is intended to support improved governance systems, and ensuring that the private sector is an active participant. It includes a tripartite dialogue. Innovation and entrepreneurship is

necessary to establish systems to generate ideas and long term systems to support these. Productivity, efficiency, competitive product delivery and value added are needed. Government cannot be effective working from top down - this is the value of Clusters which can translate the necessary concepts such as certification etc., to the field level. The strength of branding is shown in the example of the Parma cheese which takes its name from the area in Italy where it is produced. The product and its quality have become synonymous with the brand. This is an example of how society can take on quality control and add value through networks. There is need for inclusion and cohesion, and agendas and priorities must be defined. This calls for participation and communication which brings empowerment. It was noted that the workshop was then a great opportunity offered not only to promote dialogue among stakeholders, but also because it gives opportunity to participants to share ideas and recommendations of how to improve community lives, efficiency of telecenters plat-forms, innovation in agricultural business, using new communication technology.

2. INFORMATION AND COMMUNICATION NEEDS AGRICULTURE AN RURAL DEVELOPMENT STAKEHOLDERS IN THE CARIBBEAN

Moderated by Noesterling Diaz, Director of Information, Ministry of Agriculture

- [Information and communication needs of agriculture and rural stakeholders in the Caribbean](), **Opal Morris, Librarian, Caribbean Agricultural Research and Development Institute**

Given the importance of agriculture to the Caribbean region, CARICOM has established an Agricultural policy which seeks to:-maximise regional agricultural production; promote Food and nutrition security; minimise poverty; promote sustainability by establishing agriculture as a Business; facilitating agro-processing and other value–added production. Information flow is critical to stakeholders and feedback is needed from the field to guide research. The New Agriculture system: spans the entire value (food and *non*-food) chain; makes use of technology and is market / information driven; calls for better skilled agri-entrepreneurs and is linked to other sectors such as tourism, health, education, trade and environment. Within this sphere, there are specific Information and communication needs including Production Systems /Methods (Traditional methods & Latest Technologies); Marketing; Environmental /Climate; Guide to agencies & providers of agricultural services & products; computer literacy. The role of telecenters in agriculture is significant and can serve to: Improve dissemination of R&D information to stakeholders; Improve coordination and integration of agricultural stakeholders, and utilisation of R&D outputs; and Improve access to marketing and climate information. Telecenters therefore play a key role in the "New Agriculture" framework by developing the technical, marketing and information skills of the Caribbean's agri-entrepreneurs and improving access to vital information resources for sustainable development.

- [Perspectives of the Caribbean Farmers Network (CAFAN)](), **Keeley Holder, CAFAN Technical Officer**

CAFAN is a network of 500,000 farmers in 13 countries. It is in fact a network of networks with active communication channels, a culture of sharing & capacity building, youth succession and action. The challenge of communication among members is addressed in several ways; email, Internet Telephony (Skype, Internet Chat, Video Conferencing w/ specialised software, Social networks (Facebook, twitter), Mobile, Calls, SMS , Smart phone connectivity, Mobile Chats e.g. BBM, Whats App. Mobile telephony is particularly popular

given the high penetration of mobile telephony in the region and the wide usages of cell phones. The reduction of transaction costs of Information-Intensive activities is importance to the network if information driven agriculture is to be supported. At the farmer level there is need to educate, inform and train farmers; reach members regularly; present information in farmer-friendly manner, and allow farmers to provide feedback. In addition, it is necessary to learn, adjust and adapt, provide accurate information; solve farm problems; and to understand how to receive information. A number of factors affect usage including age (farmers are between 50-60); complexity of farm; availability of Information; personality and approach to Learning; external support; network time and experience. ICTs are critical to production, marketing, farm administration. ICT access in rural areas can be supported by telecenters, Portable ICTs, Mobile Phone Apps, E-readers Graphic tablets. The benefits of portable units are that they are in demand, easily updated, have storage capacity, and it appeals to kinesthetic people.

- [Information needs and access to relevant content in rural areas](#), **Federico Sancho, Head of the Inter American Information Center for Agriculture (IICA)**

One of the statements from the Jagdeo Initiative on Agriculture, prepared for CARICOM in 2007 was that Caribbean agriculture was affected by: "Weak and non integrated information and intelligence systems and linkages and participation in growth markets." There is a lack of standards and policies for the management of relevant information; lack of funding or resources for information services; lack of trained personnel in information management; little use or misuse of ICTs; and inadequate content production. There are various categories of information users including decision makers, students, and farmers and agricultural information is necessary to make decisions, solve problems and to inform on prices and markets, appropriate technologies and warnings. An innovative approach is seen in the Panguipulli Farmers Project, in southern Chile. Under the project, the Panguipulli Public Library uses community radio and a mobile unit to enable farmers in remote areas to access and share knowledge and information and support. The rate of growth of the Internet has been significant, doubling every 12 months. The internet is an important global library with 10 billion sites; 7 million documents; 183 billion emails; 1000 new science books. Caribbean organizations /institutions place information on the internet at various rates. The number of agricultural publications from the LAC region is modest. The overall rate of Internet usage in the region has been growing since 1999 and the volume of internet users in the Dominican Republic is growing faster than anywhere else in the LAC region. Statistics show that there is a difference between the number of internet users and number of internet subscribers. In the Dominican Republic, there are 17.2 internet users per 100 inhabitants, but only 2.7 internet subscribers per 100 inhabitants. This demonstrates the importance of public access points. There are also much more mobile subscribers than telephone land lines. People's information needs demand workable services where quality is more important than quantity. Training is needed to find and use information and specialised services are required to facilitate location of relevant specialised information, and provision of ICT content and support. Mr Sancho concluded by wishing that discussions help to have updated information on the current situation of telecentres in the region and on how they can best support agricultural communication.

The **comments** that follow these presentations stress the need for adequate and customized technology to support farmers' information and communication.

3. ICT ACCESS IN RURAL AREAS IN THE CARIBBEAN: SITUATION, PUBLIC POLICIES

Moderator, Ken Lohento, CTA

- [Case of the Dominican Republic](), **Edwin san Roman, ICT consultant and coordinator or the rural bandwidth project of INDOTEL**

INDOTEL's promotes competition among telecommunications providers and also provides incentives through subsidies for the private sector to invest in the development of telecommunications in rural areas. As a result of these policies, investment in the sector exceeded U.S. $ 2.600billion in the period from 1993-2010. At the end of 2010, the sector accounted for 17.3% of GDP, one of highest shares by any sector in the country. In addition mobile teledensity is at 91.3%, fixed teledensity at 10.3% amounting to a total teledensity of 101.6%. The Rural Connectivity Project Phase I involves the installation of infrastructure to support access to broadband Internet and basic residential telephone services in communities without these services. The subsidy offered was U.S $4.M, however Codetel was awarded the contract and did not request the subsidy to implement the project. As of March 2011, 440 locations are in operation; 15 are under construction and 51 in process. Difficulties encountered include; problems with land acquisitions and difficulties in obtaining building permits for various locations. A pilot was also implemented to test the functionality of the technology in the towns of Guayabal (Azua), Palmar Grande (PuertoPlata), Las Piedras (Santiago) and Isla Saona (La Romana). Isla Saona is the largest of the islands adjacent to the Dominican Republic. The island of 200 inhabitants is fairly isolated and is part of Parque Nacional del Este. To communicate, the villagers established a call center in the treetops as the connectivity could only be had from there. People have fallen out of the tree at night trying to make a call. At INDOTEL's request, CODETEL installed wireless phones with external antennas on houses in Mano Juan as well a pay phone powered by solar panels. Internet connection was provided by installing a modem with access to the CLARO-CODETEL's UMTS network on the premises of the Ministry of Environment. Immediately persons could use their Blackberrys, and connecting to the WiFi network was now available. Other residents came and were able to use their laptop to get internet connection. A cell phone signal repeater was also installed at the restaurant which adjoins the Ministry of Environment. The receiving antenna used after the completion of the tests was placed in an existing tower on the premises of the restaurant. Residents were now able to connect with their own equipment without having to climb 800 ft up in a tree. The critical thing now is whether the service can be maintained over time and paid for by those responsible.

- [Case of Jamaica](), **Ayanna Samuels, Independent of ICT4D Consultant and technology policy specialist, ICT4D Jamaica**

The most recent study undertaken on ICT access in Jamaica was completed in early 2011 and included 2200 responses representing a response rate of 80%. Data was provided on household access to media and ICTs; factors constraining availability of internet; the activities of persons using the internet, the ways they access the internet and so on. Efforts regarding provision of ICT access in rural areas were being met through the establishment of telecenters. The government supported by i) an IDB loan facility and ii) the Universal Access Fund (UAF) has established a number of telecenters around the country, a number of which were in rural areas. Several more telecenters are to be established under the UAF.

Telecenters such as the one run by the Jeffrey Town Farmers Association access online produce prices via the Internet, and use community radio to share relevant information with farmers. In the past, telecenters in regional agricultural networks such as those supported by CTA include Caribbean Coastal Area Management Foundation and Bluefields Peoples Community Assoc. have contributed to discussions on fisheries. Emerging public policies are needed to address policy and regulatory framework for increasing broadband rollout; support for increasing competition through new converged ICT Business models; infrastructure sharing; facilitating growth of content and application providers and better integration of ICT into development strategic planning for all sectors, education, banking, commerce, health. Policy support for broadband access to telecenters is necessary, but lobbying has been difficult, and there is no success to date. Some recommendations were: Public education is needed to increase understanding of the value of Internet access; more research is needed to support increased use of mobile connectivity; telecenters have to take information to the people, become community "champions; stakeholders need to lobby government to support lower cost of connectivity at telecenters.

- [Public private partnerships for ICT access and expansion](#) , **Bernadette Lewis, Secretary General of the Caribbean Telecommunications Union**

The Caribbean Telecommunications Union (CTU) was established by CARICOM in 1989 with a mandate to create an environment in partnership with members to optimise returns from ICT resources for the benefit of stakeholders. CTU membership includes all the CARICOM states as well as a number of regional and national organisations. Fundamentally, the CTU undertakes ICT Policy Formulation, ICT Capacity Development, representation at international fora and industry watch through a variety of strategic partnerships. There is a need for developing countries to take control of their own development and not become dependent on Aid, but rather use their intellectual resources to think, research, plan and act. Public private partnerships are critical to this process, but require mutual trust, complementary strengths, reciprocal accountability, joint decision making and information exchange to be successful. In addition, there must be mechanisms to measure and monitor performance, and provide for shared perceptions, transparency, mutual support and constructive advocacy. Most importantly, partnerships require "People", thus we should talk of "Public, Private, People, Partnerships" to achieve better ICT Access and expansion. The People Model provides for cooperative approaches, for example with organisations like Credit Unions which can provide valuable support for telecenters. This exemplifies people contributing to a cause; supporting innovation and reaping benefits; understanding needs; education to build awareness of ICT and finally, monetary gains.

Questions and Answers

Qu 1. How do we across various islands get a tangible idea of what ICT usage is like (similar to the statistics produced in Ms. Samuels's presentation), so that we can capitalize on the potential of ICTs?

Ayanna S.: Have interest groups (i.e. those who would like to obtain these ICT statistics) speak with relevant groups expressing an interest in obtaining the data of interest. Relevant groups would span research and development institutions, universities, agricultural extension agencies (such as the Rural Agricultural Development Authority - RADA - in Jamaica, etc)., development NGOs, government agencies with development mandates etc.

The interest groups should impress upon these agencies that possession of the data would assist in strengthening development efforts underpinned by ICTs for all concerned.

Bernadette L: Interest groups should lobby for census exercises across our various islands to include ICT usage questions in order to obtain the data required.

Comment Conference participant was pleased to see consensus from all of the presenters that prospects for development for the region should not be seen as solely a function of the amount of money had. She was thus pleased to find in contrast that there was consensus that a positive attitude, a willingness to be creative and innovating with limited resources combined with a passion to succeed can determine the success our telecenters or CACTs[2] will achieve within the region.

Qu 2 and 3: Questions were asked by two different conference attendants of Mr. Edwin S. Roman regarding when Indotel was going to establish connectivity in various communities that had not yet been outfitted with connectivity.

The 2nd conference attendant who spoke to this matter suggested that it is the communities who lack connectivity that should determine what form of assistance would be best.

Edwin S. Roman: Mr. Roman indicated that he would speak after the panel with the persons who raised the queries in order to understand their plight further. He further stated that he would then move forward in order to render assistance.

A participant wishes that preferential rates and costs are designed for farmer organizations' access to ICTs. Another one indicated there should be more communication between INDOTEL and the other Dominican Republic governmental institutions, in particular the Ministry of Agriculture, in order to improve the development services in ICT access points put in place.

4. STATE OF THE ART OF CARIBBEAN TELECENTERS AND OPPORTUNITIES

Moderator, Roderick Sanatan, Consultant

- [Telecentres in the English speaking Caribbean: relevance, sustainability and services](#), **Valerie Gordon, Consultant**

Telecenters appeared in the English speaking Caribbean in the late 1990's.The 2009 survey undertaken as part of the ACTivate project looked at the types of organisations, legal status, length of time established, location, socioeconomics and population of the community, main target groups the development objectivities, the various activities, facilities and services offered and factors affecting sustainability. It was found that only 25% of centers could meet their expenses, and for these, the most important source of income came from selling services. There is a high fall out of government initiated centers which are not grounded in community structures. The conclusions are: centers continue to be relevant, and are located in areas that need them most; they provide services that are in demand in marginalised populations; usually, the stated development objectives are different from what is delivered

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[2] CACT "Centros Acceso Comunitario a las TICs" stands for telecenters in particular in the Dominican Republic.

(market driven); breaking-even in poor areas is more difficult; staff skills is skewed toward ICTs, however there is no shortage of development/social expertise. There continues to be a tension between meeting development objectives and financial sustainability. It was clear that important work does not necessarily lead to sustainability e.g. Jeffrey Town is struggling to make ends meet, and largely driven by passion, as is the Container project another innovative initiative also facing financial challenges. Recommendations: Upfront work has to be done to ensure community ownership, especially where initiatives are government sponsored; more training should be done on Development Entrepreneurship, forging and maintaining strategic alliances; Networking and mentorship are particularly important for fledgling telecenters.

- **The situation of Telecenters in the Dominican Republic** -The CACTs Monographic Study : Vicky Apolinario, Fundación Taigüey
The survey undertaken in 2007 provides an overview of the Collective Access Technology Centers (CACTs) driven and / or supported by the state, their coverage, operational performance, users, weaknesses, best practices and lessons learned. Some initiatives with which the CACTs are involved are: The Community Technology Centers (CTC); Computer Training Centers (ITC); Labs Open to the Community School (LAB) / CTC; the Virtual Classroom (AVE), and the Youth Information Centers. The National survey identified the main challenges and lessons learned as follows: economic sustainability- in all of the centers, the costs of providing services do not cover operating costs; employees often leave the telecenter after being trained (leading to a high turn-over rate); there is a little production of content, and people related to agricultural and rural development are not exploiting the potential of the centers, and the CACTs are not exploiting the attention span of these users. The question is whether the centers are only producing a new generation of "digital labourers". Many telecenters managers do not have business training, but need this.. Recommendations are: The country must seek to produce relevant content to keep telecenter users engaged; a better understanding of what sustainability really means is heeded, and this should be applied to ensure success.

- The situation of Telecentres in the Dominican Republic, **Mirna González, INDOTEL**
This component of the presentation focussed on the work of INDOTEL and its project to support the establishment of telecenters in the DOMINICAN REPUBLIC. Indotel has set up 862 Telecenters in 32 of the poorest provinces across the country; 69% of these locations have Internet and there are 65 WIFI projects in rural communities. The number of computers in each center range between 5 and 30, and the centers provide basic services such as homework assistance etc. Partnerships and collaborations have been established with various institutions such as city halls, religious institutions, jails, military institutions and police departments. Indotel has also linked with the Technological Institute of the Americas to undertake distance learning initiatives. The challenges faced by the centers are similar to those faced in other countries such as financial constraints and poor electricity supply. The electricity issue is particularly challenging as the lack of power means centers can be without electricity for up to 8 hours. Generator batteries often do not get to recharge fully which results in a short shelf life for them, and replacement costs are quite high. Conclusion: The programme has brought significant benefits to the country because it has provided access to ICTs for large segments of the Dominican population; it is necessary to promote initiatives based on the National Development Strategy of the Dominican Republic and the guidelines

of the National Commission for Information Society and Knowledge, to ensure better use of the centers.

- [Innovative Service Opportunities for Development; the Role for Telecentres in CARIFORUM](): **Telly Onu, Consultant**

CARIFORUM includes English speaking Caribbean countries plus the Dominican Republic and Cuba. Generally, telecenters in the region are commencing operations without first doing the necessary due diligence, i.e. identifying community needs. In terms of identifying needs one can look to the Millennium Development Goals, and determine how their achievement can be facilitated by telecenters. "Innovation involves the extraction of value from things that we already know", she said. It starts from people, with the hub being the community. Within new innovative service models, telecenters can serve communities through support for cooperative services, provision of linkages and connections as infomediaries, for example a photo of pests can be transmitted by the telecenter to units where the pest can be identified and the method of elimination provided. The telecenter can also provide entrepreneurial support if they understand what their client's activities involve. Telecenters can also act as intermediaries and provide institutional support and capacity building. Although there is a feeling that middle agencies should be removed from the value chain in the process of telecenters realizing their goals, it must be noted the telecenters cannot be expected to successfully carry out each duty required to fulfil all their objectives. As such middle agencies are still needed along the value chain, and partnerships such as with e-Services or Govt services should be forged. In the new innovative model, service drivers include Bottom of the Pyramid, Technology and Social Responsibility. There are service models and revenue potentials for telecenters (through service cost and commissions) for each category of community Asset , for example: in support of Financial Assets, there are models such as the Inuka Model and the KIVA platform from which funds for entrepreneurial activities can be solicited; for Social Assets, the Bhoomi computerised land record system is an example; for Human Capital assets there are various the online education and learning models like the Agri-Environment Learning Programme [http://www.intelitek.com](); the GIZ E-Academy; E-Learning Development and Implementation (ElDI) and for Physical Capital Assets (Health) there is Episurveyor- M – Health. Telecenters can make tools such as these accessible and thus facilitate information interchange; capability enhancement and empowerment, foster innovation, Connections and -Local Networks.

QUESTIONS AND ANSWERS

Qu 1: What is the current status of telecenters in the DOMINICAN REPUBLIC and how are they assisting with agricultural development?

Mirna G: Indotel has not yet had any inclusion of the agricultural sector in their work with telecenters. However, discussions to this end have begun.

Qu 2: Do you believe that we need to reframe how we think about ICTs and the means by which they should contribute to development?

Telly O: CLCs must be encouraged to remember that development concerns should always be at the heart of their work. There is a new mindset centred around sharing rather than the old paradigm of withholding information. This should be encouraged and participants are encouraged to continue in this way. CLCs must take an audit of themselves and reorient

processes as necessary to take best advantage of how government works. Finally, CLCs must see themselves as tools for empowerment.

Qu 3: Mirna detailed that Indotel has set up 862 CACT across the DOMINICAN REPUBLIC. However what is the value added of all these centers? How many persons are being trained? What will happen after the training being conducted by Indotel?

Mirna G: Project originally intended to only set up 50 centers but have expanded to 862. Training programmes have not yet being set up in all of them due to human resource constraints. They are currently trying to encourage the respective communities to take ownership of the CACTs established but a significant problem being faced is that community members lack the technical skills to take full ownership. Indotel is now focused on seeking to make these communities efficient.   INDOTEL is also trying to upgrade the sorts of services offered (moving up from just assistance with homework for example.)

Qu 4: How is it that centers that offer free services sustain themselves?

Valerie G: The few telecenters which are able to do this are fully government supported.

Vicky A.: Both telecenters that have free and for payment models offer the same services.

5. CONTENT AND SERVICE DEVELOPMENT FOR AGRICULTURE IN TELECENTERS

Moderator,   Amparo Arango, CNSIC/INDOTEL

- **Case study 1:** Coffee Traceability initiative/Cap Rouge **Kurt Jean-Charles, Solutions S.A, Haïti**

The Haiti- Cap Rouge Nimerik Project brought together partners with different needs: the Universite d'Etat d'Haiti, through their MBDS joint ICT masters program wanted a prototype ICT application aimed at rural areas; the French company, Cafes Malongo, wanted to improve their business and the Haiti National Federation of Coffee Farmers (20,000 strong and owners of the Haitian Blue label) wanted to improve farmers' capacity and demonstrate impact of coffee growing in communities. Coffee was appropriate as a subject for the prototype because of cultural tradition of growing in deep rural areas; impact on the environment and the high quality and demand for Haitian coffee. Project objectives were: to define and automate "traceability" processes; provide connectivity between rural communities to share data and make decisions; provide information in an innovative but intuitive way. Targeted users are small coffee producer communities, industrial production managers and final consumers. By using RFID[3] enabled mobile devices and the telecentre, information on coffee traceability were collected and shared. The project was launched in 2008. Challenges that prevent it to be fully operational today includes the accessibility of the location where the telecenter is set up (remote area which needs several hours of route travel), the high cost of electricity and internet connectivity, maintenance, the natural disaster faced by Haiti (including the 2010 earth quake), need of more funding and partnership. Among the ambitions for the future are to: replicate the model at the country level; adapt the traceability model to any agro industry requirements by making it flexible and product agnostic; help rural communities produce their own content on their web sites; combine rural community radio with internet access to test new community services; develop new applications (mobile phone target) aimed at the rural needs in Haiti.

- **Case Study 2:** Jeffrey Town Farmers Association,**, Ivy Gordon, Jamaica**

The farmers' association was established in Jeffrey Town, St Mary, a small community in rural Jamaica by a group of returning residents in 1991. Since then, the Association has undertaken a number of activities including the installation of a community water supply system; a dairy project which lasted for more than five years; a goat rearing project which lasted for three years; maintenance of the Jeffrey Town Clinic which has now been rebuilt; purchasing of planting material, and training in organic farming. The organisation has benefitted from support from a number of organisations including the Local Initiative for the Urban Environment (LIFE), the Inter American Foundation (IAF), ICT4D Jamaica which helped to support the establishment of a telecenter. The presence of the telecenter attracted a number of young people to the Association. A community radio station, JET FM 88, was later established with support from UNESCO and launched in 2008. Training in radio programming was supported by Commonwealth of Learning (COL) and CARIMAC; support from the Environmental Foundation of Jamaica recently assisted the Association to purchase

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[3] Radio Frequency Identification

and install solar panels which has reduced to cost of electricity for the telecenter and radio station. The organization continues to grapple with very high internet connectivity costs however. The radio is instrumental in disseminating information to the community through programmes such as the "Me and mi baby" series. For its work, the JFTA has been awarded several awards.

- **Case study 3:** Some experiences of Community Technology Centers**, Joyner Darío, Office of the First Lady of the Dominican Republic**

The Community Technology Centers were conceptualised and created by President Fernandez in his first term (1996-2000). Subsequently a group of trustees were named to oversee the operation of Rural Technology Centers Little Intelligent Communities Project for the Dominican Republic (LINCOS-RD). The objective of this project is Sustainable Human Development, which seeks to reduce the digital divide and connect underprivileged remote communities with access to information technologies, using this medium to educate in areas of social and economic development. Educational services have been incorporated with the centers' services into a wide range of courses, workshops and activities in various programs. Among these is the Program Opportunities for Employment through Technology in the Americas (POETA) which provides ICT access and training for persons with disabilities, to improve their education and job opportunities, and to participate more actively in community life. The literacy program and numeracy program, Ready to Compete (PPC) is aimed at young people and adults excluded from the formal education system and who feel the need for knowledge to improve their living conditions. The website www.ctcvirtual.org describes the initiative.

- **Case study 4:** The roles of the " Joven Club Computación y Electrónica" in rural communitie**s, Santiago Mesa Camacho, Director JCCE Regional Office of Pinar del Rio**

The Youth Club of Computing and Electronics (JCCE) is a country- wide program that was initiated by President Fidel Castro in 1987. Its objective is to provide computer literacy to the community targeting children and youth. The project has grown from 106 facilities in 86 municipalities with just 800 workers, to a current network of over 600 facilities with more than 5 300 workers. Most provide connection and allow domestic navigation access to information on more than 3500 Cuban sites. Training courses are geared toward the demands and needs of the community where the Club is located and these are the services in highest demand. In support of agriculture, there are partnerships with the Municipal Agricultural Development Support (PADAM) which exists in several municipalities and make contributions to the Youth Clubs, while receiving support from that project. The Clubs facilitate and promote access to the site **www.actaf.co.cu** which hosts agricultural information. There is coordination with the Cuban Association of Agricultural and Forestry Technicians to link agricultural development with ICTs to ensure a targeted vocational training to the needs of rural areas. The Digital Library service is also important in remote areas. The materials, articles, bibliography, etc, are routinely updated and enriched according to the needs and requests of the community. The Joven Club also has banks of software that can be used by agricultural production cooperatives and other companies to ensure better management of their processes.

QUESTIONS AND ANSWERS

Qu 1. What were the lessons learned from the experiences with the (CAP Rouge) project?
Kurt J-C: Lessons - To use technology, but also be technology proof. The key success point lies in leadership within the community. In 2008, there was no harvest but each person brought something. This is not charity, but an investment. The community was chosen for leadership and commitment.

Bernadette L. Development is not conferred but comes from within. It starts with leadership and vision. Aid is good within the context of a vision owned by the community eg JFTA.

Qu 2. (Directed at Jeffrey Town) Have you given thought of developing a stable administrative structure instead of depending on volunteers? How do you avoid the culture of dependence? What is the possibility of commerce outside of Jamaica to support sustainability?
It was suggested that a cluster of islands could come together to market produce in support of food security and that the concerned cooperative could support that with the necessary technology tools.

Ivy G: There is a problem with turnover as young people stay one year and then leave; services are sold such as internet time, printing and training. The idea about commerce outside of Jamaica is a great one. The installation of the solar panels at the JFTA center was an effort to bring the electricity bills (and overheads) down. As a result, the electric bill has been reduced a great deal. The JFTA is aiming for electrical independence.

Qu 3 Why did the First Lady project take so long to get to some communities? Why did it not implement the same strategy as INDOTEL? What will happen if there is a new First Lady?
The CACTs are working toward sustainability to ensure their existence over the long term.

Qu 4. What area is the (Haiti) project located in?
The Haiti project is in the Jacmel area.

Comment: The Cuban model is a good one and should be shared with other countries

Santiago C: Declared that the project was willing to share information. There are interesting possibilities and the work is about inclusion. There is need to create a platform to support people helping each other.

6. PRIZE-GIVING CEREMONY OF THE TELECENTER CONTEST

In opening the Prize Giving Ceremony, Mr Ken Lohento provided a background to the Contest. The contest "Telecenters, bridges to rural development in the Caribbean" was staged by the CTA, in collaboration with Fundacion Taiguey with, the objective to identify and promote innovative services implemented in Caribbean telecenters to support agricultural and rural development. Awards were given in 2 categories: Category 1 "Initiatives in operation" I and Category 2 "Innovative projects". A panel of 3 independent jurors, Ms. Araxanta Aramburu-Hamel, Ms. Amparo Arango Echeverri and Ms. Telojo (Telly) Valerie Onu judged the entries received.

Ms Telly Onu, presented the Judges' report. She reported that 18 proposals were received: 11 from the Dominican Republic, 5 from Jamaica, 1 from Saint Kitts and Nevis, and 1 from the Republic of Haiti. The projects were evaluated according to the following criteria:

- Relevance in the sub category ("activities and services directly linked to the agriculture" or "non-agricultural activities or services ");
- Innovativeness
- Quality of the submission
- Local capacity strengthening
- Replication potential
- Coherence of the intervention logic
- Sustainability (service capable of generating resources and / or demonstrate strong local ownership that ensures its sustainability).

In Category 1, the winner was the **Jeffrey-Town Multimedia Centre, Jamaica**. The project was selected as it has impacted farmers in the Jeffery town area through a successful community radio programme, which has an extensive listenership amongst the farmers. The group has also built trust among the farmers and the telecenter is seen as the resource hub for the residents of the area. It was felt that the initiative could be further developed to provide relevant content to the farmers at the right time.

In Category 2 the winners were as follows:

- **CTC Juan de Herrera, Dominican Republic**. The project was selected due to its innovative use of geo-informatics to address the problems of lack of information on soil fertility which affects the livelihoods of famers especially those migrating to organic agriculture. This service is also an innovative new service for the telecenter.

- **CTC-Juan-Santiago, Dominican Republic**. The project was found to be relevant in introducing agriculture producers to new marketplaces via the web. The project is also innovative as it seeks to train producers in engaging in trade utilizing market places.

- CAREL- El Limon, Dominican Republic. This project was considered relevant to the target group as it seeks not only to just merely deliver information, but involves knowledge transfer relating to documenting real life stories, empowering women on many levels. i.e practical skills empowerment, self confidence empowerment and fosters their social inclusion in society.

The report noted that there were additional projects worthy of mention but that did not meet the criteria for various reasons. It concluded that there were difficulties with proposal formulation and design. Where the intervention logic of proposals was good, there were problems with preparing the budgets. The participation of the telecenters of the English speaking Caribbean was very low.

It further **recommended** that the CTA should provide more training in Project Design and Management (Project Cycle Management). If possible CTA should identify trainers as well as training telecenter managers, to support the use of a shared resource of sample project proposals, to facilitate ongoing support. Also complimentary e-learning courses could be provided to support the existing trained network and support life-long learning. CTA could also research the existence, structuring and functioning of telecenters in the English speaking Caribbean to assess their lack of participation.

Following the report, prizes were handed out to representatives of the winning organisations. All the winners would receive €5000 each to support their projects.

Neil Checo of INDOTEL handed the Prize for Jeffrey Town Farmers Association to representative Ivy Gordon; Bernadette Lewis of the CTU handed the prize for Carel El limon to representative, Marcie Boyd; Opal Morris of CARDI handed the prize for CTC Juan Santiago to representative Manuel Bocio Vicente; and Federico Sancho, of IICA handed the prize for CTC Juan Herrera to representatives Johanna J. Ureña Taveras and Juan Francisco Nova.

Day 2: WORKING GROUP DISCUSSION RESULTS

1. Theme 1: Towards more relevant telecenter service to agriculture and rural development stakeholders

Participants were divided into 2 groups and asked to discuss the following questions:

1. Examples of relevant services to be developed in relevant cases
2. With which stakeholder to establish strategic partnerships for adequate service development and how to favour effective collaboration?
3. How to ensure appropriation and impact?
4. What are needed capacities/skills?

Results of discussions

GROUP 1

Services	Stakeholders	Fostering Effective Appropriation and Impact	Capability and Skills
1.Telecenters should be handled with a business focus, in addition to chat,etc, rent their center 2.Facilitate communication, fax, internet, telephone 1. Training in the introduction to computer 2. Digital literacy 4. Cyber café 5. Consulting services. 6. Overview 7. Software specializes in agric. issues. 8. Territorial marketing to sell products. 9. Banking 10. Web Training	• The educational sector • State institution • Cooperatives • INDOTEL • Ministry of Agriculture. • Business. • Municipalities or state government • Central governments • City • International cooperation • Local businesses with social responsibility for social development with a focus on agriculture. • Community leaders. • Church • Infotep(Inst. Nat'l Vocational training) • Embassies • Agricultural Institutions	• . Involving all entities for ownership of the topic in agricultural development • Services are appropriate, with interest to the community • Monitoring, evaluation, participation of Key stakeholders, involvement and sustainability • Roadmap.	• Leadership • Criterion own • Capacity in agricultural development • Knowledge and technical training and information technology and communication for development • Technology infrastructure • Task Force (technology) • Access to population • Dissemination Plan • Organizational capacity and Executi

GROUP 2

Services	Stakeholders	Fostering Effective Appropriation and Impact	Capability and Skills
•Production of and facilitating information dissemination: • Production Techniques • Trends • Technologies • Inputs GAPs • Databases of pests (visuals) • Interactive Q&A service using visuals (pictures) and texts • Access to Market Intelligence Location, prices, trends, quarantine information • Weather, climate and natural hazards and Alerts • Access to Social Networks • Technical and Vocational Training and Certification • Fisheries Information Databases	• Extension Services • Research and Development Institutions • Market Associations • Standards/certification bodies • Quarantine Control • Faith based groups as appropriate. • Regulators • Service providers and Technology providers • Community /general media	• Language appropriate interventions • Engagement of stakeholders • Understanding needs/ requirements • Public awareness and education • Case studies – impact of information in appropriate comprehensible language	• Administrative skills • Accounts Management • Record Keeping • Innovation and entrepreneurship • Networking and information mining • Technical competence • Sensitivity to community needs/ social and cultural mores • Leadership • Training • Community media • Universal access

GROUP 3

Services	Stakeholders	Fostering Effective Appropriation and Impact	Capability and Skills
• Training Questions and Answers • Marketing and Promotion • Business Support • Innovation • Infomediary • Technology Transfer • Leadership development/community building.	• Ministries of Agriculture • Creative Associations • Universities • Incubators • Community Experts • Community based orgs • Research institutions • International Agriculture organisations • Media • Donors	• Create revenue generation opportunities • Service Business Modelling/Planning • Networking • Moderating community	• The ability to organize • Communications skils • Teaching/e-learning skills • Expert content • Knowledge Management • Agribusiness/management skills • Innovation/entrepreneurial skills

GROUP 4

Services	Stakeholders	Fostering Effective Appropriation and Impact	Capability and Skills

• Technical training
• Commercialization management
• Data base with technical content-market information (prices, demand. export statistics, input suppliers
	Strategic alliances
	• Ministry of Agriculture
	• Peer institutions
	• Agricultural schools and agricultural associations
	• Civil Society, private sector/ business
	2. Initiatives are effective and are actually manifesting itself to the satisfaction of the Agricultural sector and its environment
		The interests of all agricultural sectors of the community are represented in projects	• Formation of a committee to facilitate:
			  - Technical advice
			  - Administrative advice
			  - Training of social practitioners (centered on the community)

2. Theme 2 - Community telecenters networking and partnerships

Introduction of the working groups and methodologies

Working groups to answer and discuss:

1. Current situation of community telecenter networking
2. How to strengthen community telecenter networks?
3. How to set up effective strategic partnerships, including Private Public Partnership?
4. How to strengthen network exchange: virtual/inter-institutional operators / support institutions / multi-stakeholder, local/national/regional
5. Partnership and mutual support to address connectivity and technical challenges

Results of discussions

GROUP 1

Methods of participation: emails, databases, platforms, specific programmes.

Key recommendations:

- Make persons in CACTs responsible for dealing with specific issues and the use of the network and add pages and links to the organizations which they are using.

- Each telecenter should manage a conversation on the online platform on a weekly basis thus engendering telecenter ownership

- Where there is social media, use it to promote the page

- Make the virtual community more engaging and motivating for users to use through the use of colours, usability etc. Make sure it facilitates the interests of each group

- Establish and implement a dissemination plan so people know about the network

- There should be accountability for updating pages- each CACT should be responsible for collecting information and updating its page

- Work with social networks to promote sites

- Users need to appreciate the value of the network – the telecenters need to support socialization of it

- Create platforms and ensure that user can obtain information of their interest

- Appoint a formal delegate from each telecenter who would be responsible for updating information about their telecenter.

GROUP 2

Key recommendations:
1. The institutions that are directly linked to the telecenters need to see this network as necessary to information exchange and ideas flow to optimize the management services and telecenters.

2. Awareness of the telecenter needs to be raised so that they can see clearly the purpose and the importance of the network with people have to obey them or for general interest.
3. CACTs should update content constantly to give security to the user that it is not a page with outdated content.
4. Providing the answers as soon as possible to the concerns that may arise in discussion forums.
5. Enable an application that allows users to send e-link with the answer to the question left by this in a forum.

The group ended with a reminder that each member has the potential to motivate (following the workshop and in each telecenter network).

GROUP 3

Key recommendations:
1. Promote inter-telecenter networking

2. Facilitate Public Private partnerships

3. Facilitate network exchange

4. Clearly identify stakeholders and beneficiaries and be creative about motivating and engaging them

5. Use U-tube as a strong tool for engaging youth

6. Use a multiple channel approach to networking

7. Establish a telecenter wiki for which each telecenter could take pride in building their own page

8. Each telecenter should conduct an audit of themselves to look at human resource capacities re: moderation, education etc.

9. Appoint someone from each telecenter to be responsible for updates from that telecenter

10. The group reinforced that telecenters must be reminded that content generation is key

GROUP 4

Current Situation

Unrealistic expectation that enthusiasm will not wane and that participation will be sustained. Usually in past endeavours, the Level of interest is not maintained because:

- Benefits are not clear and apparent

- There are apparent incentives for participation

- Participation costs time and money

Strengthening Community Telecenter Networks

- Relevance of information for immediate benefit

- The needs of the telecenters are being addressed and the work of the telecenter resonates with the needs of the community and evolves as these needs evolve.

- Addressing compelling needs on a progressive basis as communities evolve

- Need to understand group dynamics to ensure that people are able to participate- if too much time is spent and the benefit is not obvious then it's a problem

- Need to have cross fertilization of telecenters so that lessons/ best practices from one is available to others- can this be linked to revenue of income generation? If so, then this will ensure participation

- Developing means for establishing sustainable group dynamics and how best to facilitate interactivity and participation

Establishing Strategic Partnerships
- Determination of the Vision and Champions at national level

- Clearly articulated goals, equitable distribution of costs and benefits, performance indicators and mechanisms to measure and monitor performance, clear delineation of responsibilities and shared perceptions and a notion of mutuality with give-and-take;
- Understanding, sensitisation of needs, rights and resources available

- Building mutual trust, complementary strengths, reciprocal accountability, and a two-way exchange of information;
- Advocacy and Negotiation Training

- Educating stakeholders on challenges and business practice, benefits for all groups

- Identification of benefits to all parties

- Engaging Cooperative societies or Telecenter acting as a broker between the community and Government/ Private sector/ other

- Leverage the work/principles of Cooperative societies

Partnership and Mutual support to address connectivity and technical challenges

- Make use of existing available technology – amateur radio

- Many technical resources are available. Our Governments subscribe to international organizations and conventions that support/provide options for connectivity. We need to educate ourselves and take advantage of what is available and possible.

- Caribbean Knowledge Learning Network (CKLN) – is designed to link educational institutions across the Caribbean. Can telecenters be included?

SUMMARY, COMMENTS, QUESTIONS AND ANSWERS FROM THEMES 1 & 2

Summary Comments – Yacine Khelladi:
Cross Caribbean partnerships and multi stakeholder partnerships hold much value. The conference participants must seek to capitalize on this.

COMMENT 1
- There is a need for farming communities to be able to conduct business with farming communities across the Caribbean, telecenters can assist in facilitating online access to the markets with which farmers could do business. For instance, fruits and vegetables could be sold across islands. CACTs can be agents to sell agricultural products. The CACTs can act as intermediary and generate income for themselves.

- While this is so, there may need to be training of telecenter managers to take on a task such as this.

COMMENT 2
To ensure the viability of telecenter networks such as the online network Yacine introduced, it is essential to ensure users get feedback to general questions they may post. One conference participant reported having posted a question to an online group and the lack of a response was discouraging. He urged that this not be the reality for the telecenter online platform.

COMMENT 3
The same participant provided suggestions for 1) how the online telecenter platform could be better marketed and 2) how those managing the online platform could make it more in line with the interests of the agricultural community.

His suggestions were as follows:
a) Whenever there is communication with the telecenter group and it is desired to give users a way to provide feedback, make contact etc…always refer them to the website instead of say giving them an email address to provide feedback etc.

b) Provide information on, for example, pest control from the online telecenter portal

There is a need to maintain focus on rural development rather than agriculture only. This will enhance the relevance of telecenters.

3. Closing words

Ken Lohento - CTA

The CTA has learned a lot from the workshop and thanks all who participated and supported. He expressed the desire to follow- up with persons who submitted project ideas so that more can be learnt from that process. The report that will be produced with the findings will be shared with all.

Neil Checo- INDOTEL

The situation of telecenters in countries are similar and we can learn from the sharing experiences offered by the workshop, and should continue to do so. INDOTEL's work in the communities will benefit from knowing what happens somewhere else, It is necessary to continue to ensure the empowerment of communities, and use them as a living space where people can go and improve their development by learning and using the technologies. The approach is interesting from the Ministry's perspective especially in working with INDOTEL. INDOTEL intends to be at the disposal of all state agencies, and would like the counterparts to feel the same.

Yacine Khelladi- Fundacion Taiguey

He extended thanks to CTA for the partnership and urge participants and telecenters to keep in mind that they are the owners of the process. "It's necessary to better organize ourselves".

3. Key points and recommendations of the workshop

3.1. Key points

The individual presentations and groups' findings highlighted some common themes and conclusions, the main being the following:

I. Overall
1. Rural development in general and agriculture in particular are very important to the economic development of Caribbean countries.
2. Agricultural development is a critical component of poverty reduction programmes
3. Important policies for agricultural development in a competitive world must include: methods of improved production; sustainability by promoting environmentally sound, value-added production and establishing agriculture as a Business; and information flow that supports production, market decisions and research.
4. Regional agricultural networks such as CAFAN and CARDI exist that provide various types of support to farmers and the agricultural sector.
5. Telecenters can play a significant role in sustainable development and innovative agricultural and livestock production through the provision of information and technology transfer through contact with agricultural trade associations.
6. The current situation is that few telecenters are offering consistent support to agriculture in the Caribbean.
7. Coverage for connectivity and support for telecenters in the Dominican Republic is significant due to the efforts of INDOTEL and the First Lady Project.
8. Far less extensive and consistent support for telecenters is found in the English speaking Caribbean
9. Many telecenters target youth, providing opportunities for skill training, further education, and literacy and numeracy
10. Inadequate knowledge of connectivity options which may be available based on international conventions acceded to by Caribbean countries
11. People and communities should more be put at the center of each technological initiative from the start; people should more put at the center of Public Private partnerships.
12. Development is not something conferred on us. It is something we do for ourselves;
13. AID does not necessarily foster development – it often breeds dependency.
14. "It's not just about money, it's about changing mindset and innovation".

II. Critical challenges for telecenters

Telecenters face critical challenges to their sustainability and their potential contribution to development.

Main challenges are:

1. Inadequate, unreliable and non affordable energy supply
2. Weak community ownership
3. Over dependence on external aid
4. Unreliable and non-affordable broad band connectivity
5. Inadequate financial resources to attract and keep qualified staff
6. Dependence on volunteers who leave after a short time
7. Inadequate managerial, business management and entrepreneurship skills among telecenter staff
8. Lack of content creation and value added services being provided at centers
9. Due to delivering mainly basic IT training, telecenters are at risk of producing just digital laborers instead of contributing to developing a knowledge society
10. Inadequate capacity among telecenters to prepare fundable project proposals
11. Inadequate networking and sharing of experiences

III. Best Practices
Some innovative uses and best practices exist among some telecenters despite challenges. These are demonstrated to various extents in the winners of the contest, but also among others such as the Joven Club, the Cap Rouge project, and Guanabanet.

The main characteristics are:
1. Strategic partnerships and alliances and/or various types of supporting networks
2. A common vision, leadership, community ownership and long term commitment
3. Responsiveness to community needs through the innovative use of technology

3.2. Recommendations

The main recommendations identified from discussions during the workshop can be categorized in the 4 sections below:

Overall recommendations

1. Telecenters should have a business focus, in addition to their basic services
2. Necessary up front work needs to be undertaken to ensure community buy-in and ownership of telecenters. This requires raising community awareness regarding the value and potential of the telecenter and ICTs, community obligations and responsibilities prior to establishment of the telecenter
3. The community needs (economic, social, cultural) should be clearly defined, and the telecenter objectives developed based on meeting these needs.
4. Telecenters should be linked to permanent community structures (organisations Cos, NGOs) and they should identify strategic partners such as local financial institutions like credit unions, development agencies, academia, training institutions etc; which can help further the development vision of the telecenter while promoting financial sustainability;

5. Promote linking to regional agricultural networks as a means to providing content to national telecenters.
6. Develop strategic alliances with government to facilitate delivery of e-services, information dissemination to field; with development agents to support community development; private sector
7. Promote initiatives which reflect the national development objectives and those in keeping with ICT policy as far as they coincide with community priorities.
8. Appropriate roadmaps or action plans should be developed to guide the work of telecenters. This should include plans/strategies for sustainability, information dissemination and public awareness to promote the work of the telecenter.
9. Monitoring and evaluation systems should be established to provide feedback on the work of the telecenter.

Regarding Telecenter Service Delivery, especially for agriculture

1. Telecenters can be intermediaries between various agencies (trade associations, government, privates sector, research centers, certification authorities) and end users (farmers, residents in rural areas);
2. Telecenters can facilitate online access to markets to promote selling produce across the region;
3. There are opportunities for farming communities to conduct business with other farming communities;
4. Effective partnerships between organizations that set up telecenters and traditional rural development organization such as those involved in farming must be put in place to ensure that telecentre to support agricultural and rural development needs. Strategic alliances should be established involving stakeholders such as the Ministry of Agriculture, Agricultural schools and agricultural associations, extension services, research and development institutions when required.
5. Databases with technical content and market information for agriculture (prices, demand. export statistics, input suppliers, etc.) can be created;
6. Interactive Q&A service using visuals (pictures) and texts and be delivered in telecentres;
7. Innovative telecenter services supporting agriculture should be more discussed and promoted.

Regarding telecenter networking and partnerships

1. Virtual networks should be engaging and motivating for people to use. This can be achieved through
   a. Inclusion of relevant content which is regularly updated
   b. Establish sustainable group dynamics and how to best facilitate interactivity and participation
   c. Create platforms and ensure that users can obtain information that meet their interest

   d. Making members (telecenters) responsible and accountable for updating a specific and defined section; Appoint a formal delegate

from each telecenter who is responsible for updating information about their telecenter

    e. Have telecenters manage a conversation on the online platform on a weekly basis thus engendering ownership

    f. Use platform to facilitate cross fertilization between telecenters so that lessons/best practices can be shared

    g. Raise awareness of the page, and where there is social media, use it to promote the page

    h. Use attractive colours on platform, and ensure that it is user friendly

    i. Use the technologies available eg wiki, Utube, etc.

2. In establishing strategic partnerships, the following are important to ensure:

    a. Clearly articulated goals, equitable distribution of costs and benefits, performance indicators and mechanisms to measure and monitor performance, clear delineation of responsibilities and shared perceptions and a notion of mutuality with give-and-take;

    b. Mutual understanding, sensitisation of needs, rights and resources available

    c. Mutual trust, complementary strengths, reciprocal accountability, and a two-way exchange of information

Capacity Building needs

Examples include:

1. Business management, entrepreneurship and ICT for development skills
2. Leadership and community animation/ engagement
3. Awareness of ICT resources to support agricultural activity (ie networks, databases, research centers, online platforms, help desks)
4. Preparation of project proposals for funding support
5. Content development and management
6. Advocacy and Negotiation

4. Appendices

4.1. List of participants

	Name	Organisation	Position	Country
Mr	Neil Gomes	Gilbert Agricultural & Rural Development Center	Director GARDC Board	Antigua
Ms	Valerie Gordon	Consultant		Atlanta
Ms	Keeley Holder	CAFAN network	Managing Director	Barbados
Mr	Adrian Trotman	Caribbean Institute for Meteorology and Hydrology – CIMH	Chief, Applied Meteorology and Climatology (Ag.)	Barbados
Mr	Federico Sancho	The Interamerican Information Center for Agriculture, IICA	Head	Costa Rica
Mr	Santiago Mesa Camacho	Joven Club de Computación y Electronica de Cuba	Msc. Nuevas Tecnologias para la Educacion/Director Provincial/ Joven Club Pinar del Rio	Cuba
Ms	Nidia de los Santos	Agro Red / USAID		Dominican Rep
Ms	Jon Katz	Carel El limon		Dominican Rep
Ms	Marcie Boyd	Carel El limon		Dominican Rep
Ms	Ysabel Margarita Jiménez Silverio	CCI Rios de Fe y Esperanza		Dominican Rep
Mr	Alinson Mateo Moquete	Centro de Capacitacion de Informatica		Dominican Rep
Mr	Wilson Suero	Centro de Capacitacion de Informática -CCI AZUA		Dominican Rep
Ms	Johanna J. Ureña Taveras	Centro Tecnológico Comunitario (CTC) Juan de Herrera		Dominican Rep
Ms	Yocelin García	Clúster de Invernaderos de Jarabacoa	Director Ejecutivo	Dominican Rep
Mr	Martín Peña	Clúster del Banano	Director Ejecutivo	Dominican Rep
Mr	Andred Peralta	Cluster Organicos		Dominican Rep
Ms	Elsie Doñe	Cluster Organicos		Dominican Rep
Mr	Juan Rodríguez	Clúster Zafarraya	Director Ejecutivo	Dominican Rep
Mr	Jaime Moreno	Consejo Nacional de Competitividad		Dominican Rep
Mr	Juan Francisco Nova	CTC Juan Herrera		Dominican Rep

Mr	Manuel Bocio Vicente	CTC Juan Santiago		Dominican Rep
Ms	Yesica Duran	Despacho de la Primera Dama		Dominican Rep
Mr	Antonio Luciano	Federación de Caficultores y Agricultores para el Desarrollo de San Juan (FECADESJ)		Dominican Rep
Mr	Andred Bello	FEDOMU		Dominican Rep
Mr	Cesar Rodriguez	FONOCOJ		Dominican Rep
Ms	Maria Altagracia Camilo	Fundación Loma Quita Espuela	Directora	Dominican Rep
Ms	Angela Lora	INDOTEL		Dominican Rep
Mr	Edwin San Roman	INDOTEL		Dominican Rep
Mr	Evan Gonzalez	INDOTEL		Dominican Rep
Mr	José Bencosme	INDOTEL		Dominican Rep
Ms	Kenia Vásquez	INDOTEL		Dominican Rep
Mr	Margarita Ferreira	INDOTEL		Dominican Rep
Ms	Mirna Luz Gonzalez	INDOTEL	Coordinadora region Sur	Dominican Rep
Mr	Randy Ortiz	INDOTEL		Dominican Rep
Ms	Patricia Sanchez	Junta Agroempresarial Dominicana (JAD)		Dominican Rep
Mr	Agrón Cesar Guerrero	Ministerio de Agricultura	Viceministro de Planificación	Dominican Rep
Mr	Fernando Fernández	Ministerio de Agricultura	Director de Evaluación y seguimiento	Dominican Rep
Mr	Leonardo López	Ministerio de Agricultura	Director del CIDER (audiovisuales	Dominican Rep
Mr	Noesterling Diaz	Ministerio de Agricultura	Director de Planificación	Dominican Rep
Mr	Luis Ortega	Ministerio de Economia		Dominican Rep
Mr	Manuel de Jesus Ramirez	Sur Futuro		Dominican Rep
Mr	Nolys Presinal	Telecentro El Limon		Dominican Rep
Mr	Yordany Ramírez	Telecentro Guanaba.net		Dominican Rep
Mr	Mayol, Virgilio	The Interamerican Information Center for Agriculture, IICA		Dominican Rep
Mr	Messina, Manuel	The Interamerican Information Center for Agriculture, IICA		Dominican Rep
Mr	Marcelino de Jesús	Visión Mundial		Dominican Rep

Ms	Cinthia Castellanos	POETA / Trust For the Americas - OEA	Coordinadora Regional C.A y Republica Dominicana	El Salvador
Mr	Kurt Jean Charles	SOLUTIONS S.A.	CEO	Haiti
Mr	Lloyd Johnson	Caribbean Agricultural Research and Development Institute (CARDI)		Jamaica
Mr	Roderick Sanatan	Consultant		Jamaica
Ms	Ayanna Samuels	Information & Communications Technologies for Development (ICT4D) Jamaica	consultant	Jamaica
Ms	Ivy Gordon	Jeffrey Town Farmers Association- Multimedia Centre		Jamaica
Ms	Michelle Desgouttes	Spring Village community multimedia training center and radio station / Spring Village Development Foundation	Spring Village community multimedia training center and radio station	Jamaica
Mr	Patrick Prendergast	The Caribbean Institute of Media and Communication at the University of the West Indies Mona.	Lecturer	Jamaica
Ms	Telly Onu	Consultant		St Kitts and Nevis
Ms	Opal Morris	Caribbean Agricultural Research and Development Institute (CARDI)	Librarian	Trinidad
Ms	Bernadette Lewis	CARIBBEAN TELECOMMUNICATIONS UNION	SECRETARY GENERAL	Trinidad
Mr	David Dolly	Department of Agricultural Economics and Extension, School of Agriculture, University of the West Indies Saint Augustine		Trinidad
Mr	Geury Guzman	FEDOMU		
Mr	Dario Cordero	INDOTEL		
Mr	Neil Checo	INDOTEL		
Organisation				
	Amparo Arango	CNISC		Dominican Rep
	Ken Lohento	CTA		Holland
	Yacine Khelladi	Fundacion Taiguey		Dominican Rep
	Vicky Apolinario	Fundacion Taiguey		Dominican Rep
	Carmen Balbuena	Sevices Travel		Dominican Rep

4.2. Agenda

	Day 1 – 28 April

09:00 am
 	
10:00 am
	Opening ceremony:
	• Welcome words of organizers and partners:
	   ○ Yacine Khelladi, Executive Director, Fundación Taïguey
	   ○ Neil Checo, Managing director of the Telecommunications Fund of the Instituto Dominicano de las Telecomunicaciones (INDOTEL)
	   ○ Ken Lohento, ICT4D programme coordinator CTA
	• Welcome words: Ing. Cesar Guerrero, Vice-Minister of Agriculture, Dominican Republic.
	• Keynote Speaker: Mr. *Jaime Moreno*, Senior Facilitator of the Dominican National Competitiveness Council for clusters, and Vice *President* of Helados Bon,

10:00 am
 	
11:00 am
	Information and Communication needs of agriculture and rural development stakeholders in the Caribbean
	• Information and communication needs of agriculture and rural stakeholders in the Caribbean:
	   ○ Opal Morris, Lecturer, Caribbean Agricultural Research and Development Institute (CARDI)
	• Perspectives of the Caribbean Farmers Network (CAFAN):
	   ○ Keeley Holder, CaFAN Technical Officer
	• Information needs and access to relevant content in rural areas.
	   ○ Federico Sancho, Head of the Inter American Information Center for Agriculture. Inter American Institute for Cooperation in Agriculture (IICA)
	
	Moderator: Noesterling Diaz, Director of Information, Ministry of Agriculture (Dom Rep)

11:00 am 11:15 am	**Coffee break**

11:15 am
12:45 am
	ICT access in rural areas in the Caribbean: situation, public policies, issues and perspectives
	• Case of the Dominican Republic
	   ○ Edwin San Roman, ICT consultant and coordinator of the rural high bandwidth project of INDOTEL
	• Case of Jamaica
	   ○ Ayanna Samuels, Independent ICT4D Consultant and Technology Policy Specialist", ICT4D Jamaica
	• Public private partnerships for ICT access and expansion:
	   ○ Bernadette Lewis, Secretary General of the Caribbean telecommunication Union CTU
	
	Moderator : Ken Lohento, ICT4D programme coordinator CTA

12:45 am 2:00 pm	**Lunch**

2:00 pm
3:00 pm
	State of the Art of Caribbean telecentres and opportunities
	• Telecentres in the English speaking Caribbean: relevance, sustainability and services
	    o Valerie Gordon, Consultant
	• The situation of Telecentres in the Dominican Republic:
	    o Mirna González INDOTEL and Vicky Apolinario, Fundación Taigüey,
	• Innovative Service Opportunities for Development; the Role for Telecentres in CARIFORUM:
	    o Telly Onu, Consultant, member of International Association of Agricultural Information Specialists (IAALD) and the CTA ICT Observatory
	
	Moderator: Moderator: Roderick Sanatan, Consultant

3:00 pm
4:30 pm
	Content and service development for agriculture in telecentres
	• Case study 1: Coffee Traceability initiative/Cap Rouge
	    o Kurt Jean-Charles, Solutions S.A, Haïti
	• Case Study 2: Jeffrey Town Farmers Association
	    o Ivy Gordon, Jamaica
	• Case study 3 : Some experiences of Community Technology Centers
	    o Joyner Darío, Office of the First Lady of the Dominican Republic
	• Case study 4: The roles of the " Joven Club Computación y Electrónica" in rural communites
	    o Santiago Mesa Camacho, Director JCCE Regional Office of Pinar del Rio, Cuba
	Moderator : Amparo Arango, CNSIC / INDOTEL

4:30 pm 4:45 pm	**Cultural interlude**

4:45 pm
6:00 pm
	Prize giving ceremony of the Telecentre Contest
	• Presentation of the contest,
	    o Ken Lohento, CTA
	• Contest results' presentation
	    o Mrs Amparo Arango, Jury Member
	• Handing out of Prizes

6:00 pm 6:30 pm	**Cultural show with the " Teatro Popular Danzante" and Cocktail**

Day 2 – 29 April	

9:00 am
11:00 am
	Group discussions
	
	Theme 1: Towards more relevant telecentre services to agriculture and rural development stakeholders
	
	▪ Introduction the working groups and methodology
	▪ Issues to discuss
	    ▪ Examples of relevant services to be developed in relevant cases
	    ▪ With which stakeholder to establish strategic partnerships for adequate service development and how to favour effective collaboration?
	    ▪ How to ensure appropriation and impact?
	    ▪ What are needed capacities/skills?
	• Presentation in plenary and discussions

	Facilitation: Yacine Khelladi and Valerie Gordon
11:00 am 11:15 am	**Coffee break**

11:15 am
1:00 pm
	Group discussions
	
	Theme 2 - Community telecentres networking and partnerships
	
	    5. Introduction the working groups and methodology
	    6. Issues to discuss:
	        ▪ Current situation
	        ▪ How to strengthen community telecentre networks?
	        ▪ `How to set up effective strategic partnerships including PPP?
	        ▪ how to strengthen network exchange: virtual/inter-institutional operators / support institutions / multistakeholder, local/national/regional
	        ▪ Partnership and mutual support to address connectivity and technical challenges
	    7. Presentation in plenary and discussions
	
	Facilitation: Yacine Khelladi and Valerie Gordon

1:00 pm
1:30 pm
	Closing remarks:
	    ○ Yacine Khelladi, Executive Director, Fundación Taïguey
	    ○ Amparo Arango, Representative of CNSIC/Indotel (Dom Rep)
	    ○ Ken Lohento, ICT4D Programme Coordinator, CTA

1:30 pm 2:30 pm	**Lunch**

2:30 pm
4:00 pm
	Side Meeting of the Dominican Telecentre network (CACT-Dom)
	    ▪ Inter-Institutional roundtable
	    ▪ Operators virtual community