

**ASSESSMENT OF AGRICULTURAL INFORMATION NEEDS IN
AFRICAN, CARIBBEAN & PACIFIC (ACP) STATES FOR CTA'S
PRODUCTS AND SERVICES**

Phase 1: Caribbean

Country Study: Antigua and Barbuda

Final Report

Prepared by: Roberta Williams and Sue Evan-Wong

on behalf of the

Technical Centre for Agricultural and Rural Cooperation (CTA)

Project: 4-7-41-204-4/c

August 2005

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List of Acronyms

ABAFY	Antigua Barbuda Agricultural Forum for Youth
ABS	Antigua Broadcasting Services
ACP	African Caribbean Pacific States
ACT	Antigua Computer Technology Co. Ltd
AED	Agricultural Extension Division
APUA	Antigua Public Utilities Authority
AT&T	American Telephone and Telegraph Company
CAGRIS	Caribbean Agricultural Information System
CAIS	Caribbean Agricultural Information Service
CARDI	Caribbean Agricultural Research and Development Institute
CARICOM	Caribbean Community
CARIFIS	CARICOM Fisheries Information Systems
CARISPLAN	Caribbean Information System for Economic and Social Planning
CBO	Community Based Organisation
CCSD	Communication Channels and Services Department
CFNI	Caribbean Food and Nutrition Institute
CIDA	Canadian International Development Agency
CITIES	Convention on International Trade in Endangered Species
CMC	Central Marketing Corporation
CSME	CARICOM Single Market and Economy
CRFM	Caribbean Regional Fisheries Mechanism
CTA	Technical Centre for Agricultural and Rural Cooperation
CTU	Caribbean Telecommunications Unit
DCA	Development Control Authority
EAG	Environmental Awareness Group
EC\$	Eastern Caribbean Dollar
ECCB	Eastern Caribbean Central Bank
ED	Environment Division
EDU	Environment Development Unit
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
FTAA	Free Trade Area of the Americas
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GPS	Geographic Positioning Systems
ICAT	International Commission for the Conservation of Atlantic Tunas
ICMSSD	Information and Communication Management Skills and Systems Department
ICT	Information Communication Technology
IDRC	International Development Research Centre
IICA	Inter-American Institute for Cooperation on Agriculture
ILO	International Labour Office
IOCARIBE	Inter-governmental Oceanographic Commission for the Caribbean and Adjacent Areas
IPSD	Information Products and Services Department
ITU	International Telecommunications Union
IWC	International Whaling Commission
LAN	Local Area Network
LRS	Licensing and Registration System

MOA	Ministry of Agriculture
MOE	Ministry of Education
MRS	Montgomery Radio Station, Barbuda
NGO	Non Governmental Organisation
OAS	Organisation of American States
OECS	Organisation of Eastern Caribbean States
PCS	Personal Communications Services
P&CS	Planning and Corporate Services
PROMIS	Production Marketing Intelligence Service
QAS	Question and Answer Service
ROE	Rate of exchange
SPAW	Special Protected Areas on Wildlife (Protocol)
TIP	Trip Interview Program
UK	United Kingdom
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
US\$	United States Dollar
USA	United States of America
USAID	United States Agency for International Development
USVI	United States Virgin Islands
UWI	University of the West Indies
UWI/SEDU	University of the West Indies/Sustainable Economic Development Unit
WECAFC	Western Central Atlantic Fisheries Commission
WTO	World Trade Organisation

Rate of exchange

ROE €1.00 = US\$1.29636 (May 13, 2005)

ROE US\$1.00 = EC\$2.70

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Executive Summary

Introduction

The Technical Centre for Agricultural and Rural Cooperation (CTA) works primarily through intermediary organizations and partners to promote agriculture and rural development. Through these partnerships CTA hopes to increase the number of African, Pacific and Caribbean (ACP) organizations capable of generating and managing information, and developing their own information and communication management strategies. The identification and selection of appropriate partners is therefore of great importance, and the improved targeting of partnerships and beneficiaries is one of the issues identified in CTA's current strategic plan. The CTA has also noted that the Caribbean could benefit further from their programs and activities.

Objectives of the study

The objectives of the study are to:

- identify agricultural information needs of key actors/beneficiaries for CTA products and services;
- identify needs of potential actors/beneficiaries of CTA activities and services in terms of building capacity for information and communication management;
- identify potential partners/beneficiaries for CTA activities and services;
- develop some baseline data to facilitate subsequent monitoring activities.

Methodology

The methodology used involved qualitative and quantitative rapid appraisal techniques incorporating a desk review to collect background data from available literature and other information sources. A country profile was prepared including a list with contact information, type and the roles of institutions involved in agriculture and rural development. A field study was conducted with relevant stakeholders and partners using "one on one" interviews based on a questionnaire. Potential CTA partners were identified and relevant data and information on the institutions was collected including the reasons for their selection as key actors.

Expected results

It is expected that the current study would serve to update earlier studies done between 1995 -1997 and thereby allow CTA and its existing and potential partners to provide more targeted assistance to beneficiaries in the Caribbean Region.

Findings

Since the last CTA/Caribbean Agricultural Research Development Institute (CARDI), Agricultural Needs Assessment Survey in 1998, little has changed in the accessibility, exchange and management of information in the agricultural sector. The main broker of agricultural information, the Ministry of Agriculture (MOA) and its divisions have failed for a number of reasons to maintain this role. No longer do they have an active documentation unit and trained information personnel. The Agricultural Extension

Division's (AED) communication support unit, which was responsible for the production and dissemination of information materials, is virtually non-existent. Organizations interviewed have demonstrated a need for varying types of information to carry out their work programs efficiently and effectively. However, the lack of current, accurate and local information continues to impact negatively on decision making and planning exercises. The capacity of institutions to cope with the profusion of information is restricted by limited human, physical and financial resources.

It was also found that little is known of CTA's products and services in Antigua and Barbuda among the potential partners and their stakeholders. Only a limited number of persons have been in the position to take advantage of the opportunities available.

Conclusions

There are still major constraints in the provision of agricultural information:

- Lack of information policies and strategies to address the need for resources required for effective information management.
- Lack of trained staff in ICM, and finances to hire additional staff
- Lack of space and equipment.
- Poor dissemination infrastructure.
- Limited availability of local information.
- Limited availability of current national data and statistics.
- Inadequate use of conventional communication tools, i.e. television, radio, press and theatre.

Recommendations

It was recommended that CTA's resources be provided for information policy formulation, training of staff in ICM, organizational management and networking, information assessments, and development of materials that meet special information needs of stakeholders. Specialized training was identified to meet selected institutions' needs in capacity and environmental assessments, relational databases and methodologies in conducting surveys. Innovative forms of collaboration were recommended for consideration in light of the serious financial restraints to hire additional staff.

Recommendations for local implementation, advised that the MOA create a position for an Information Manager who should have information and library management training. It was also recommended that an Information and Communication Support Unit be established in the MOA that would include the registry to facilitate comprehensive management of all the MOA's information sources.

Four potential partners who met the CTA's criteria for selecting partners were recommended. These criteria considered the relevance of the institutions' work to CTA's beneficiaries i.e. small farmers, women, youth; ability to deliver programmes and services efficiently and effectively; sustainability after CTA's exit; financial and technical capabilities. The Environmental Awareness Group (EAG), AED/MOA, the Fisheries Division of the MOA, and the Environment Division (ED) of the Ministry of

Public Works, Telecommunications and Environment fit this criteria.. Some beneficiaries suggested were: the Antigua Barbuda Agricultural Forum for Youth (ABAFY), the Central Marketing Corporation (CMC) and the Agricultural Science Department of the Ministry of Education (MOE).

1. INTRODUCTION

- 1.1** Under the Cotonou Framework Agreement, which came into effect in June 2000, CTA has the task of improving access to information on agricultural and rural development as well as strengthening the capacity of ACP countries for producing, acquiring, exchanging and utilizing this type of information. This task is guided by the results of a number of impact assessments, workshops and seminars on priority themes for ACP agriculture, and methodological developments in cross cutting issues, i.e. gender, youth, social capital and ICTs.
- 1.2** In 2002 CTA's Strategic Plan 2001-2005 was implemented. The CTA structure now includes three operational program areas/departments: Information Products and Services, Communication Channels and Services, and Information and Communication Management Skills and Systems. As a part of the modified structure of CTA, the Planning and Corporate Services (P&CS) was established with responsibilities for the "methodological underpinning of the work of the operational Departments" and for monitoring the ACP environment in order to identify emerging issues and trends that would then inform the work programmes of the operational departments (CTA Strategic Plan and Framework for Action 2001-2005). Consequently the objectives of this study are to:
- Identify agricultural information needs of key actors/beneficiaries for CTA products and services.
 - Identify needs of potential actors/beneficiaries of CTA activities and services in terms of building capacity for information and communication management.
 - Identify potential partners/beneficiaries for CTA activities and services.
 - Develop some baseline data to facilitate subsequent monitoring activities.
- 1.3** A combination of qualitative and quantitative rapid appraisal methods were used which included: a desk review of available literature and information sources, program evaluations, face to face interviews and questionnaire. In analyzing this information, four potential partners and four beneficiaries were selected. The potential partners selected were: EAG, the ED, the Fisheries Division/ MOA, and the AED/ MOA. The beneficiaries selected are the ABAFY, the CMC and the Agricultural Science/MOE.

2. COUNTRY PROFILE

2.01 Antigua and Barbuda is situated in the northeastern portion of the Leeward Islands of the Lesser Antilles. Its coordinates are 17.1°N: 61.5°W and 17.4°N: 61.9°W respectively. The total land mass is 440.3 sq. km and is divided into three geological and topographic regions, distinguished by different soil patterns and elevations. Approximately 31% of the total land area is considered arable. Roughly 1,863 hectares is presently being cultivated (FAO, 2004)

Antigua and Barbuda has an estimated population of 78,581 (Statistics Division, 2003), with 1,325 living in Barbuda. 15.2% are under 15 years of age and 31.9% between the ages of 15 to 64 years. The largest portion of the population is employed in the tourist sector (hotel and restaurant), followed by commerce and trade and construction (Statistic Division, 2005). However, relative to its small percentage contribution to the GDP of 4.0%, agriculture continues to provide 8% of the total labour force of 30,000 (ILO, 2004). It is estimated that there are approximately 2000 agricultural producers, the majority being part-time and over 900 fishers with approximately half being full-time (see annex II.1.1). Unfortunately, there are no available statistics on the number of youths in the sector, however, the AED/MOA based on their experiences have seen an increase in young men and women entering different agricultural disciplines, i.e. agro-processing, handicraft and service-related ventures such as landscaping/ grounds maintenance, land preparation, and nursery production. Some of this can be attributed to the work of a Non Governmental Organization (NGO), the Gilbert Agricultural and Rural Development Center (GARD Center) which targets youth and women in enterprise development. The Inter-American Institute for Cooperation in Agriculture (IICA) has also made a significant contribution in encouraging youth into this sector by establishing a regional network of agricultural youths.

2.02 The Antigua and Barbuda economy has experienced a relatively steady increase in GDP over the past fifteen years with the exception of two years in 1995 and 2001 when hurricanes and serious tropical storms, along with the repercussions from September 11th resulted in a sharp decline to -4.4 % and 1.5% respectfully. With an average increase of 7.5% in the GDP over this period, the provisional figure for 2003 was 5.75% (Statistics Division, 2004). This increase however was overshadowed by significant internal and external debt. The national debt before the change of government in March 2004 was approximately EC\$ 2.97 billion (€ 0.85 billion)¹. (Radio interview with Minister of Finance and the Economy, 2005). After a 28 year political reign of the Antigua Labour Party, a new government under the direction of the United Progressive Party has the challenge of managing a country that has been impacted by a number of socio-economic pressures which in turn has had serious implications on the environment.

¹ €1.00 = US\$ 1.29636, US\$ 1.00 = EC\$2.70 (May 13, 2005)

Unrestricted development, unsustainable development of the tourism, agriculture and manufacturing sectors, income disparity, poverty, and increasing competition over lands for housing and tourism have created many challenges (Antigua & Barbuda Environmental Management Strategy and Action Plan, 2004-2009).

2.03 In addition to these problems is Antigua and Barbuda's vulnerability to natural disasters. As previously stated the economy has been retarded by a number of hurricanes. Within a ten-year period Antigua and Barbuda has had five major hurricanes and several tropical storms. Of particular interest is the significant damage to crops, trees, livestock, agricultural buildings and loss of topsoil. The fisheries sector also experienced major losses in fishing equipment, boats and damage to reefs and coastal areas.

2.1 Agriculture, Fisheries and Forestry

2.1.1 Agriculture

2.1.1.1 Antigua and Barbuda historically pursued sugar and cotton mono-cropping systems. As a result of falling prices, erratic rainfall patterns and a number of other external factors, hundreds of hectares were left fallow and as a result became wastelands covered with shrub. Much of these lands was used for open grazing by livestock and some paddocks. With the construction of a number of mini dams and an increase in the use of irrigation in the early 1970's, the sector began to shift from traditional to commercial, more intensive farming of vegetable and fruit crops on average plot sizes of 1.1 hectares per producer. With a 3.95% contribution to the GDP against a backdrop of a growing import bill as high as Euros 52.11 million (2003), the sector faces many challenges in its role as a food provider in areas of production, marketing, processing, quality control and safety.. A number of constraints affects the ability of the sector to contribute more significantly to the economy these are: lack of an agricultural policy framework which has hindered development and effective programming and planning, lack of information and access to data pertinent for proper planning and decision making; inadequate support services in credit, investment programmes and marketing; poor linkages with other sectors, mainly tourism, and the negative perception that farming is all physical and not a business requiring technical skills. The MOA foresees future development in the sector to be affected by increased competition as a result of e.g. Global Trading Agreements, increase competition for labour, land and water and the vulnerability of the country to disasters.

2.1.1.2 The recently restructured MOA remains the leading institution that is the driving force for the agricultural sector. This ministry has changed portfolios several times, twice since the new government took charge. Its major function is the implementation of supportive policies and provision of technical and regulatory support services. The MOA will continue to be involved in some production, and marketing activities through its statutory bodies and agricultural stations.

2.1.1.3 The technical disciplines for which it is responsible are the following: agricultural extension, crops, veterinary and livestock, food safety, plant protection, research, cotton, horticulture, agricultural engineering, marine resources, chemistry and technology, surveys, lands, forestry and special projects. The statutory bodies include, the Agricultural Development Corporation, Antigua Fisheries Limited, Pesticide Board, Veterinary Board and the Central Marketing Corporation. Agricultural stations participate in production, research, demonstration and training activities.

2.1.1.4 There are several institutions and bodies which are involved in this sector through their contribution to areas such as research, rural education, training, financial services, information services and marketing. These include organizations such as CARDI, IICA, Plant Protection Unit and the Agricultural Research Department of the MOA, in research and development; St. John's Cooperative Credit Union, Antigua and Barbuda Development Bank and the National Development Foundation in financial services; the Agricultural Extension Division (AED) of the MOA and the Gilbert Agricultural and Rural Development Center in training and rural education.

2.1.1.5 The sector has a farming population of approximately 2000 producers (FAO Aquastat website and interview). No data is presently available concerning gender or number of youth in the sector. The last agricultural census was conducted in 1991. These producers have formed over eleven (11) agricultural groups and cooperatives, however, although many have constitutions with some being registered, they meet very irregularly and lack the necessary leadership skills and commitment to organize and maintain a strong membership. Most often these groups respond to a crisis and then collapse and do not function until the next crisis. The AED has for many years tried to encourage group formation, however, these groups develop a dependency on the very persons who are assisting them in their development.

2.1.2 Fisheries

2.1.2.1 It is estimated by the Fisheries Division of the MOA, that there are approximately 900 fishers with less than half of these being fulltime, and with over 90% being male fishers (ILO Caribbean website). The Fisheries Division is responsible for managing the fishery in Antigua and Barbuda which has a shelf area of 3,568 kilometers (Agriculture Sector Plan 2001-2005). This management includes licensing of fishing vessels, registration of fishers, monitoring of beaches, mangroves and coral reefs and training.

2.1.2.2 Antigua and Barbuda claimed an Exclusive Economic Zone (EEZ) in 1982, however the defined boundaries are still not known. Negotiations continue with neighboring states of St. Kitts and Nevis, Montserrat, Guadeloupe, St. Barthelmy and St. Martin. It is estimated from the most current data in 2000, the fisheries of

Antigua and Barbuda contribute 1.6% to the GDP (Caribbean Regional Fisheries Mechanism (CRFM, 2004). The Division is managed by a Chief Fisheries Officer and twenty-eight staff members.

2.1.3 Forestry

2.1.3.1 The Forestry Division of the MOA is responsible for the conservation and management of all forested areas, and the establishment of “green spots” in communities in collaboration with community groups and non-governmental organizations (NGOs). The forested areas in Antigua and Barbuda, which is estimated at 9000 hectares (United Nations Environment Programme (UNEP, 2004) provides an environment for the preservation of wildlife habitats and contributes to soil and water conservation. In addition, there is some economic value to be found in the woodlands, since they provide a resource for charcoal production, wattle harvesting for fish pots and eco-tourism.

2.1.3.2 The Forestry Division is drastically understaffed and poorly financed. It is presently being managed by an Acting Senior Forestry Officer, one Forestry Technician, 2 tour guides and 4 labourers.

2.2 Information and Communication Management Capacity

2.2.1 As the following research shows, since the CTA/Caribbean Agriculture Research Institute (CARDI) Agricultural Information Needs Survey conducted in 1998, very little has changed, and in some instances conditions have deteriorated, in terms of the capacity of institutions and various bodies to manage information and communication.

2.2.2 The MOA Documentation Unit which was the largest broker of agricultural information, established two branches, one at the Department of Agriculture at Dunbars, the other at the MOA headquarters. This unit unfortunately has not been maintained and as a result a significant number of publications have disappeared, particularly at Dunbars. This unit was managed by one trained staff and an assistant. The unit received funding which provided some capacity for organization and management functions. However, the trained staff member left a number of years ago and to date there has been no replacement. The unit at Dunbars has since greatly deteriorated. Some attempts are presently being made to assist the branch at the MOA headquarters in classifying materials according to subject areas. The Communication Support Unit of the AED is presently not functioning. This situation has had a serious negative impact on the availability of information for producers and for the officers themselves. The AED no longer publishes its newsletter, nor has it maintained its supply of various types of publications. According to the 1998 survey, 50% of farmers depended on MOA bulletins for information, followed by 44% on CARDI booklets (CARDI/CTA

Agric. Survey, 1998). The AED has continued a radio program which is virtually being organized and conducted by one officer with no assistance from this unit.

- 2.2.3** None of the institutions have any trained individuals to manage information. However, the ED, EAG and Fisheries Division each have documentation collections. EAG’s collection is more organized with approximately 1700 publications which have been classified, catalogued and indexed. A computerized database has been established using UNESCO’s WinISIS – the Windows version of the Computerized Information Service/Integrated Scientific Information System (CDS/ISIS). Volunteers are the backbone of this organization: a Peace Corp volunteer was trained to set up the database, and another volunteer, who is a qualified information specialist, is responsible for entering new data.
- 2.2.4** Three of the four key institutions, EAG, ED and Fisheries have relatively strong information management bases. As Table 1 displays, they do have some capacity to collect, store, analyze and consolidate information, in databases, documents and reports. In the cases of Fisheries and ED both have responsibilities for reporting and maintaining databases for international bodies such as the International Whaling Committee (IWC), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the United Nations Convention to Combat Desertification (UNCCD), Persistent Organic Pollutants (POPs) and several others. The EAG and ED both have websites, the Fisheries Division is presently making plans to design one. The EAG produces a newsletter entitled the EAGer. A very innovative television show for youth produced by the ED, entitled “Eco Zone” has recently been released on national television. AED/MOA produces a weekly radio program for producers. Photographs, maps, audio-visuals, reports and research papers are some of the other items that are generated by these institutions.

Table 1. Information Management Capabilities

Information Management Capabilities	AED	EAG	Fisheries	ED
Selection/Collection of data	X	X	X	X
Storage/analysis/consolidation		X	X	X
Public Education/Awareness Programs	X	X		X
Publish Newsletter		X		
Produce Radio program	X			
Produce TV program				X
Preparation audio-visuals, fact sheets, bulletins		X	X	X
Documentation unit		X	X	X
Produce reports	X	X	X	X
Collection of photographs/maps	X	X	X	X
Manage databases		X	X	X

• *Source: Interviews*

Table 2. ICT Capability

ICT Use	AED	EAG	Fisheries	ED
Computers (quantity)	(3)*	(3)	(8)	(13)
Access to internet	X	X	X	X
Software	X	X	X	X
LAN		X		
Website		X	**	X
GIS capability				
GPS capability		X		
Conference calls		X		X
e-group		X	X	X

**One operating, 2 in repair*

***currently developing a website*

2.2.5 Table 2 indicates that the institutions who were interviewed, all are in possession of several computers with access to the internet and are equipped with software such as, Access, Quick Books, Excel, Powerpoint, Adobe Acrobat, Microsoft Publisher. The Fisheries Division in addition, has the ARC View Mapping Program, Licensing and Registration Systems (LRS) and Trip Interview Program (TIP) which they use for collecting data from fisher folk. EAG has Geographic Positioning System (GPS) capacity which is managed by one of their Board members.

2.3 Agricultural Information Services

2.3.1 The key institutions seek information from a wide variety of sources. Table 3 below, displays some of the major sources that are consulted. It should be noted that CTA's bulletins and booklets are not included in the range of information sources for the two environmental organizations, the EAG and the ED. This is because CTA was not recognized for its focus on environmental subject matter. ED and EAG source information from other types of organizations such as the Caribbean Natural Resource Institute (CANARI), University of the West Indies/ Sustainable Economic Development Unit (SEDU) and the Caribbean Conservation Association (CCA). The AED/MOA on the other hand, greatly utilizes the information sources of CARDI, IICA and CTA, particularly on crop and livestock production, marketing, pest management, good agricultural practices, animal housing and organic farming. Spore is a popular magazine amongst the extension officers. CARDI's agricultural bulletins and fact sheets are widely used for training and advising agricultural producers.

2.3.2 These four institutions have very strong linkages with regional and international organizations such as the Flora and Fauna International, Eastern Caribbean Coalition for Environmental Awareness, Caribbean Regional Fisheries Mechanism (CRFM), the United Nations Food and Agriculture Organisation

(FAO), and the UWI. Information from these types of organizations is in the form of technical advice, computer databases, reports and e-groups.

2.3.3 Conferences and workshops (national, regional and international) are some of the best sources of information for these institutions which provide the opportunities to access documents, research papers and brochures as well as an opportunity for sharing information and experiences. Unfortunately, not all of this documentation collected is processed and stored properly to allow equal advantage for other staff members and stakeholders to access this information

Table 3. Sources of Information Consulted by the Key Institutions

Sources consulted	EAG	ED	MOA/AED	Fisheries Division
Organizations				
Universities	X	X	X	X
NGOs	X	X	X	
MOA	X	X	X	X
IICA		X	X	
CARDI		X	X	
International Research Institutions	X	X		X
Regional Research Institutions	X	X	X	X
Publications				
CARDI booklets/bulletins		X	X	
CTA booklets/bulletins			X	X
University books, bulletins	X	X		X
IICA booklets			X	
Newspapers	X	X	X	X
Other	X	X	X	X
Electronic media				
Radio programs		X	X	
TV programs		X	X	
Videos	X	X	X	X
Electronic information services	X	X	X	X
Other				
Networks	X	X		X
Fairs/exhibitions		X	X	
Technical advice	X	X	X	X
Conferences/Workshops	X	X	X	X

**Source: Interviews*

3. NEEDS ANALYSIS

3.1 Information Needs

3.1.1 The following sub-groups are used to discuss information needs:

1. Types of information required to execute work programs;
2. Types of information difficult or readily available to different user groups.

3.1.2 Types of information required to execute work programs

Interviews with the selected key institutions indicated that there was a wide range of information required to execute their work programs. The ED is the only one of the four institutions which had a five year plan. The EAG is in the process of completing a two year plan. The following types of information are therefore based on current work plans:

- Technical agricultural data on crops, livestock, pest and diseases, equipment, production systems, post-harvesting, forest varieties and fish species were of importance to all the MOA divisions.
- Natural resource data on soils, management of biodiversity/ecosystems and species identification, coral reefs and mangroves was required by the two environment organizations, as well as the Fisheries and Forestry Divisions.
- Data on production costs, food imports and consumption, marketing data, standards, quality control and production intelligence, is of special interest to the MOA divisions. This information is required for productivity analysis, the issuing of import licenses, developing “tech packs” for producers, identification of products with competitive advantage and other areas.
- Updates on trade issues and implications of international conventions was extremely important for the ED and Fisheries Division since these two organizations were responsible for collecting data and reporting to a number of these international conventions.
- Demographic data on farming and fishery population, gender and size of enterprises is critical for future planning and project development in the agricultural sector.
- Technical information on project design and management, methodologies in conducting surveys, capacity assessments, environmental assessments, legislation, and financial management is of particular interest to the EAG in their monitoring and evaluation programs of offshore islands and wetlands.
- Inventory of consulting services in the Region and funding agencies was identified by three of the four institutions. This type of information would

greatly improve the efficiency and effectiveness of the ED and EAG who are involved in a number of projects that require the hiring and funding of consultants with expertise not available in the country.

3.1.3 Types of information difficult or readily available to different user groups

The above information particularly demographic data on the agricultural sector, marketing intelligence, and current data on crop and livestock production costs are key areas cited by the AED/MOA which are often difficult to source reducing their productivity and efficiency in the execution of current work programs. For example, to date the 2001 Census has not been published and the last agricultural census was in 1984.

The Production Marketing Intelligence Service (PROMIS) Unit of the MOA is limited in the types and quantity of data it is capable of collecting. Data on some major crops such as hot peppers, lettuce, herbs and pineapples are still not collected and recorded.

3.1.4 All of the institutions indicated that most of the difficulty lies with access to national data which is often not current or available for dissemination. The CTA/CARDI Agricultural Needs Assessment: Antigua and Barbuda (1998) had similar findings. Accessing information on training programs/ courses and available consulting services in the Region were also identified as being difficult to locate by the EAG and the AED/MOA. The Fisheries Division found problems in sourcing current data on fish imports and consumption statistics. This information is extremely important to the unit in determining consumer consumption patterns. In their production planning for a new fish processing plant, this information would aid them in determining the types and quantities of products necessary for import substitution.

3.1.5 It is evident that there is a critical need for better storage, dissemination and sharing of information internally and externally throughout the various government departments and between government ministries and other organizations such as NGOs. An excellent example can be seen with the EAG, an NGO and a government department, the ED. Both have a major focus on the environment and environmental issues. The EAG conducts a number of research activities which generates valuable data. Both institutions serve on joint committees which lends to some degree of information sharing. However, there have been some cases of duplication of efforts and resources. As a result, there is a need for better information exchange and communication specifically in the sharing of activity plans.

3.1.6 The format for information that is available for the stakeholders of EAG, ED, Fisheries Division/MOA and the AED/MOA was examined. It is recognized that persons in the private sector such as farmers, handicraft artisans or agro-processors who do not have much time to leave their businesses to find information, would prefer fact sheet and flyers that are precise and contain easy to read points. On the other hand, researchers and other types of professional staff

could require more detailed information for example from a journal article, or information from a report. There is a need for more information that is readily available from these institutions in formats that cater to the needs of the different stakeholders.

3.1.7 In addition, key institutions do not fully utilize the opportunities available through the different communication channels. For example, there are four major radio stations and presently, only one agricultural radio program. There are no regular newspaper columns on agriculture and only three local agriculture/environment related websites between all the agricultural departments and organizations.

3.1.8 Stakeholders related to these key institutions are: farmers and farmer associations, NGOs, donor partners, youth and women groups, community based groups, fishers and fisher groups, professional and technical staff, private enterprises, researchers, trainers and educators, administrators, regional and international organizations.

There is genuine concern being raised by these stakeholders in conferences, meetings, radio/television talk shows and other forums addressing the difficulties in sourcing information and data in Antigua and Barbuda. It is a well known concern and has negatively impacted on decision making, market development, licensing, production and strategic planning exercises. An example of this is with the MOA's preparation of their Agriculture Sector Plan 2001-2005. It was indicated that it was a difficult exercise due to problems in sourcing information and data. As a result the document was not as comprehensive as planned. (Telephone interview, May 2005). The required information, such as demographics on the farming community, production, marketing records and other data was either not available or current.

3.1.9 Interviews with the key institutions as well as personal observations and experiences also indicates that in many cases information does exist, however it is scattered between different ministries and organizations and it is often in a format that is not very user-friendly.

3.2 Capacity-building needs

3.2.1 There is a "common thread" that is intertwined within the capacity needs of the key stakeholders in the agricultural sector. All the institutions were adamant that there is a critical need for human, physical and financial resources. None of the institutions had sufficient staffing or trained personnel that could manage the information needs of their institutions and their stakeholders. All the institutions require more spacious facilities in order to accommodate staff, equipment and space to house information in various forms while none of the institutions had budgets designed to meet their information needs.

3.2.2 Staffing and training needs

All of the institutions require additional staff to handle the volumes of information that need to be collected, processed and disseminated. Both the ED and the Fisheries Division have the important responsibility for collecting and managing specified information for implementation of Antigua and Barbuda's commitment to international conventions. Both Divisions are stretched to their limits in meeting the challenges of timely and comprehensive reporting, maintaining up-to-date databases and ensuring efficient dissemination of this information to the proper authorities. In addition to increasing the number of staff, these individuals require training in areas of planning, collection development, and organizing information. More specialized training is also needed by individuals of two of the institutions in the areas of film production, the use of relational databases and GIS. Training in organizational management, ICT, marketing and promotion and networking were other critical areas mentioned.

3.2.3 What became evident in these interviews is that there was limited understanding of the concept of information management and what it entails. It was also identified that there were staff members within some of these institutions that did not fully appreciate the value of information and the role it plays in all facets of development.

3.2.4 Financial needs

There is a need to budget for information and communication management. Interestingly, most documentation: books, journals, newsletters, catalogues, CDs, video-tapes, and reports, are donated to these institutions. Very rarely are these items expressly selected and purchased to meet the information needs of stakeholders. However, in some instances, selected project funds have been used for this purpose. As a result, shelves are filled with materials that are either outdated or irrelevant in both content and approach to the organization's work program. In all cases, institutions want to source funding to build their capacity to meet the information needs of their stakeholders. Lack of funds particularly in the case of the AED has drastically limited their effectiveness to carry out some of their major activities in the production and dissemination of technical information, marketing data and other pertinent information to farmers.

3.2.5 Infrastructural needs

With the exception of the Fisheries Division, who will be moving into new facilities built by the Japanese Government, all of the institutions interviewed found their buildings totally inadequate for their activities. The Environment Division was just recently relocated into smaller facilities than what they previously occupied. The EAG basically operates out of two small rooms no larger than 4.5m x 6m. The AED occupies two floors of a building, however, the present layout of the offices cannot facilitate a documentation unit or proper training facilities. The current room that housed the Communication Support Unit is totally inappropriate for storing equipment and documentation. As stated previously, the AED has three computers but only one is currently operating and

is being used in the administration unit for the whole office. This Division is poorly equipped for the duties carried out by Extension Officers. These duties include registration of farmers, monitoring of crop and livestock production, rentals of farm plots, reporting, production and dissemination of technical information for producers, training and demonstrations.

3.2.6 The ED is relatively well equipped with computers and hardware, while both EAG and Fisheries are in need of additional computers based on the number of employees or volunteers attached to work programs. However, EAG's limited space makes expansion difficult. There is a need for more software by all the institutions, particularly, GIS software.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

4.1.1 Extent of Key Problems in the Field

The “key problems” identified by CTA and addressed in their operational programs were in sync with the findings of this study. The four potential partners and a number of their stakeholders identified the following areas:

4.1.1.1 Information Products and Services

- limited access to national data and statistics which are often outdated;
- poor dissemination capabilities as a result of inadequate infrastructure;
- inability of key institutions to provide current information in a timely fashion;
- shortage of local information on a wide range of agricultural and rural development subject matter;
- limited locally published information that is available and packaged in a user-friendly format and that meets the needs of the different stakeholders.
- CTA’s products and services are not well known by many of the groups and institutions interviewed and are therefore not being utilized.

4.1.1.2 Communication Channels and Services

- limited awareness and appreciation for information and communication management systems;
- lack of information flow and exchange within the government ministries and between the ministries and civil society;
- failure to better utilize available communication sources for dissemination of agricultural and rural development information;
- limited access to information or national and regional consulting agencies or directories of national and regional professionals.

4.1.1.3 ICM Skills and Systems

- lack of information policies and strategies amongst all the key institutions;
- inadequate human resources to cope with the work load of managing information;
- lack of trained staff in information and communication management.

4.1.1.4 Other key problems

- limited finances to hire additional trained staff, to purchase equipment or to pay any other costs involved in the management of information and communication.

4.1.2 Information Needs

Based on the problems identified, information needs are as follows:

- The updating of national data and information to facilitate the execution of current and 2-5 year planning exercises of the key institutions and their stakeholders.
- Collection of relevant local information to be re-packaged with available information in a form that is user friendly for the stakeholders of the key institutions.
- Improvement in networking within and between government ministries and civil society organizations.
- Better use of the television, radio and websites as available communication resources to disseminate, educate and exchange information.
- Strengthening of the existing national networks to increase better communication and collaborative efforts between institutions and their stakeholders.
- Better exposure and promotion of CTA's products and services to potential partners and beneficiaries.

4.1.3 Capacity-building Needs

The following capacity needs were identified in this study:

- Skills training. Training in organizational management, information management, communication and networking was identified as priority by all the institutions.. There is a need for individuals of these institutions to better understand how organizations function and recognize the importance of networking and the advantages of the exchange and the interpersonal relationships that evolve. Persons must also be trained in how to effectively manage the institution's information resources and understand the role of communication and the effectiveness of the different types of communication tools.
- Training in specialized areas is needed by three of the institutions in the use of relational databases, film production, GIS, capacity and environmental assessments, biodiversity and natural resource management.
- Human resources. Additional staff was another priority stated by all institutions interviewed in this study. It is a requirement even if the present members all become trained. There just is not enough personnel to carry out the work activities of these institutions.
- Equipment. Additional computers, computer software, audio-visual equipment, printers and copiers have hampered the efficiency and the

effectiveness of most institutions in carrying out their current work programs as well as any future planning efforts.

- Funding. Financial assistance was also cited as a priority in meeting the needs by all the institutions from both internal as well as external sources for additional staff, equipment, infrastructure, training and education of staff members.
- Storage. More appropriate facilities are needed for proper storage and security for information and equipment.
- Information policies. Development of information policies and strategies is critical to the success of these organizations in providing the most appropriate services and practices that meet the needs of their stakeholders. A policy will enable these organizations to determine what resources are really necessary and justifiable.
- Infrastructural needs. The majority of the institutions required additional space to accommodate staff, equipment and information resources.

4.1.4 Potential Partners and Beneficiaries

Four institutions were selected as potential partners with CTA, the Agricultural Extension Division of the Ministry of Agriculture, Environment Division of the Ministry of Public Works, Telecommunications and the Environment, the Fisheries Division of the Ministry of Agriculture and an NGO, the Environment Awareness Group. These institutions meet CTA's criteria for selecting partners as is specified in the CTA Strategic Plan and Framework for Action 2001 - 2005.

4.1.5 All four institutions share some of the same beneficiaries as CTA with strong representation of farmers' organizations, fisher organizations, youth and women groups, as well as processors, policy-makers and researchers. There will be some level of financial contribution, mostly in-kind and technical support and they would have the capabilities to maintain these programs and services once CTA's support comes to an end. Each institution has a relatively good performance record, managing a number of projects and programs with other regional and international partners.

4.1.6 All of these institutions cater to a large number of beneficiaries allowing for a high multiplier effect. Their programs and projects for the past five years (refer to capture forms at Annex III.2) have demonstrated a high degree of complementarity with CTA priority themes.

4.1.7 Some other groups and institutions that do not meet the partner criteria at this time could serve as good beneficiaries of CTA's programs. These are:

- Antigua and Barbuda Agricultural Forum for Youth (ABAFY), is a dynamic group of young persons with an interest in agriculture. This is the only agricultural youth group in the country who need support to strengthen their group development and individuals skills through training

and networking. Recognizing the importance of having youth in agriculture and with CTA's focus on youth, the ABAFY makes an excellent beneficiary.

- The Central Marketing Corporation (CMC) is a statutory body under the MOA. Its mandate is to assist in the development of the agricultural sector through providing markets both internal and external, provision of inputs, statistics and the monitoring of production. The PROMIS unit which was mentioned earlier in this report was recently moved to the CMC. This organization is therefore responsible for some very critical information that needs to be collected, analysed, stored and disseminated. This organization is undergoing a restructuring process with a new General Manager at its helm and support from CTA would be very timely in terms of training in information management, information policy planning, technical training in post harvest, handling and storage.
- The Agricultural Science Department of the Ministry of Education (ME) has seventeen agricultural science teachers at six secondary and two primary schools. The schools are the breeding grounds for many of the upcoming agriculturists and agri-business persons. It is where youth are or should be given a positive image of agriculture as a business and not the traditional image "as a way of life". It is important that these teachers keep abreast of all the latest technologies and methodologies. They can benefit greatly from CTA's products and services as well as the students themselves.

4.1.8 In conclusion, it is very evident that one of the major drawbacks with all the existing and potential partners is the lack of information management skills. These skills are critical in order to manage the profusion of information being generated in this rapidly changing global environment and more specifically placing Antigua and Barbuda on the cutting edge of information. In addition, according to Peter Walton (2000), having the skills in all these areas will have little value without an appreciation for and the capacity to formulate and implement information policies. It is only with the commitment to develop sound information policies and strategies in place by government and private sector organizations that a culture for information sharing will evolve.

4.2 Recommendations

The following recommendations are made within the framework of CTA's three programs the IPSP, CCSP and the ICMSSP.

4.2.1 Information Products and Services Program

Resources should be provided to:

- fund development, production and circulation of a pamphlet explaining exactly what it means/entails to manage information and provide an information service;
- assist partners in developing information materials that are not available that will meet expressed information needs of stakeholders (i.e. factsheets, flyers, videos and other sources);
- assist partners in the initial selection and purchasing of a core collection to meet information needs of stakeholders. A budget item should also be established by the partners to maintain and update this collection;
- promote CTA's products and services to all potential partners and beneficiaries (i.e. Selective Dissemination of Information, CD-ROM/Internet databases);
- Information needs assessments must be carried out by the partners in order to fulfill these needs and bridge the existing information gaps.

4.2.2 Communication Channels and Services Program

- Develop effective networking between CTA partners within and between countries to ensure that systems/services are compatible and information can be easily exchanged. Development of regional networking was part of the International Development Research Centre's (IDRC's) funding during the 1980s to facilitated the setting up of regional sectoral information systems in the Caribbean such as the Caribbean Information System for Economic and Social Planning (CARISPLAN), the Caribbean Agricultural Information System (CAGRIS), and the Organisation of Eastern Caribbean States Information Network (OECS.INFONET).
- Provide information on the Seminar Support Program.

4.2.3 ICM Skills and Systems Program

Partners should be provided with resources to:

- facilitate the formulation of information policies and strategies for their organizations;
- train selected staff in ICM;
- train staff members at different levels in organizational management and networking;

- increase the capability in the development and management of digital databases to facilitate the work in fisheries and environmental management;
- train staff in specialized areas of relational databases, capacity and environmental assessments, methodologies in conducting surveys and biodiversity and natural resource management.

4.2.4 Other recommendations for potential partners and beneficiaries are:

- the selection of suitably qualified staff to manage and provide information;
- the creation within the MOA of a position for an Information Manager, trained in information and library management;
- the establishment of an MOA Information and Communication Unit as stated in their current Agricultural Sector Plan, (Antigua and Barbuda. Ministry of Agriculture, Lands and Fisheries, 2001);
- the integration of the MOA registry within the Information and Communication to allow for more efficient management of all information both internally and externally;
- the inclusion of all the institution's registry personnel in any information management training;
- innovative forms of collaboration to the limited pool human resources must be considered in light of financial restraints to hire additional staff.

ANNEXES

ANNEX I. TERMS OF REFERENCE

ASSESSMENT OF AGRICULTURAL INFORMATION NEEDS IN AFRICAN, CARIBBEAN & PACIFIC (ACP) STATES Phase 1: Caribbean

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 agriculture².

In January 2002, CTA's Strategic Plan (2001-2005) was implemented and CTA's activities were 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

A comprehensive regional information needs assessment was undertaken in the Caribbean region, by CTA and the Caribbean Agricultural Research and Development Institute (CARDI), over the period 1995-1997. This study detailed the information needs, habits and priorities, of eleven sub-groups of users relevant to the agricultural and rural development sector, presented in sixteen national reports and a regional overview. The results of the studies were followed by a series of

² Priority information themes for ACP agriculture have formed the basis of various several studies, workshops and seminars bringing together various stakeholders, organisations and institutions active in the field of agriculture and rural development. The documents (or extracts thereof) will be provided to the consultants.

national consultations, missions and regional meetings, as well as pilot studies in information and communications management all aimed at arriving at or designing a strategy to meet information needs within the sector. The strategy proposed the development of a Caribbean Agricultural Information Service (CAIS) with a two pronged approach to improving access to information within the Caribbean region:

- Working with institutions at the national level to improve capacity in various aspects of information and communication management (e.g. network development, training, sensitisation).
- Developing information products and services to meet specific information needs identified.

The CAIS strategy has been implemented since 2001. A number of capacity building exercises were executed including workshops and training courses; provision of technical assistance; network development, policies and systems. Since the implementation of this strategy in 2001, there have also been a number of changes within institutions in the region with respect to their awareness and use of information and communications tools and technologies.

2. Main issues

CTA works primarily through intermediary organisations and partners (non-governmental organisations, farmers' organisations, regional organisations, ...) to promote agriculture and rural development. Through partnerships, CTA hopes to increase the number of ACP organisations capable of generating and managing information and developing their own information and communication management strategies. The identification of appropriate partners is therefore of primordial importance.

The "Evaluation of the Implementation of the Mid-Term Plan (1997 – 2000)" emphasised the need for CTA to develop a more pro-active approach and elaborate criteria for decision-making with regard to the choice of partner organisations and beneficiaries. Based on this evaluation, the "Strategic Plan and Framework for Action – 2001 – 2005" identifies strategic issues for CTA being: improved targeting (including partnerships and beneficiaries), geographical coverage, decentralisation, regionalisation and thematic orientation. The Plan also expresses concern about: the extent to which CTA's activities are relevant to and reach the poor, gender awareness and how to identify potential partners especially in the independent sectors.

Besides partner identification and selection issues, the observation has also been made that, the Caribbean region could benefit further from CTA's programme and activities.

Finally, various national and regional partners with whom CTA has had a long-standing relationship have requested the current study which would serve to update the earlier studies done and allow them to provide more targeted assistance to their beneficiaries.

3. Objectives and scope of the study

The objectives of the study are as follows:

- to identify agricultural information needs of key actors / beneficiaries for CTA products and services;
- to identify needs of potential actors / beneficiaries of CTA activities and services in terms of building capacity for information and communication management;
- to identify potential partners / beneficiaries for CTA activities and services;
- to develop some baseline data to facilitate subsequent monitoring activities.

The study should assist the three operational departments of the CTA as well as its local representatives 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.

4. 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 country³ basis and may give rise to more in-depth studies as and when needed in the future.

5. Expected outcomes / output

One main report per country not exceeding 20 pages according to the following table of contents:

Main report

1. Executive summary
2. Introduction
3. Country profile – summary structure and economic characteristics with particular attention to agricultural sector (includes fisheries and forestry):
 - Summary of how agriculture, fisheries and forestry is organised in the country
 - Summary of the information and communication management capacity
 - The current source of agricultural information and services (synthesise Annex 3)
4. Needs analysis
 - Information needs
 - Capacity building needs (skills, training, media, ICT, equipment)
5. Conclusions and recommendations
6. References

Annexes

1. *Terms of reference*
2. *Country profile*
 - 2.1 General agricultural profile (from available documentation)
 - Size of agricultural population (male / female / youth)
 - Farmed land, forests, fishing areas
 - Agricultural systems

³ Out of 16 countries comprising the Caribbean ACP, only selected number will initially be the subjects of studies, with domestic consultants conducting country-specific assessments. Country selection will be done by CTA on the basis of specific criteria.

- Agriculture in the economy (percentage GDP)
- Main agricultural produce and secondary products
- Main export markets
- Trade agreements that include agriculture
- Sectoral policy related to agriculture, fisheries and forests

2.2 Socio-economic profile (from available documentation)

- Total active population, demographic breakdown
- Literacy level and languages
- Access to services (health, schools, electricity)
- Rural urban drift

2.3 Media and telecommunications (update / check)

- Newspapers, periodicals, magazines, radio stations, television channels,
- Telecommunication services (fixed, mobile, etc.)
- Computers and Internet access

3. *Profile of institutions*

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

It is also expected that the results of this study will lead to identification / update of some priority agricultural information themes which will feed into a possible priority-setting exercise in the region in 2004.

6. Reporting

The country reports will not exceed 20 pages (excluding annexes). The annexes should include a list of acronyms, of persons/institutions interviewed with addresses, phone, fax numbers, e-mail addresses (if any) as well as bibliography.

7. Timing

- Draft final report is to be submitted within three months after contract signature by CTA
- Final report due two weeks after receipt of comments from CTA.

8. Expertise needed

The expert 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. 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.

The overall coordination will be carried out by Ms Christine Webster, Deputy Head, Planning and Corporate Services CTA, assisted by Mrs. Lola Visser-Mabogunje, Project Assistant.

9. Implementation schedule (CTA)

- Preparation/Finalisation of ToR; Identification/ short-listing of (potential) consultants; Call for offers: February – June 2004
- Selection of consultants & contractual arrangements: July/August 2004

- Briefing: August 2004
- Start date of contract: 1 September 2004
- Implementation period 1 September – February 2005
- End date of contract: 28 February 2005

10. Key documents to be made available to consultants

Documents include:

- Cotonou Framework Agreement
 - Excerpts of relevant sections of CTA's Strategic Plan and Plan of Action (2001-2005)
 - Annual Reports
 - Documents on priority information themes identified for the Caribbean region
 - Documents on products & services provided by CTA
 - Information Needs Relevant Country and Regional Reports 1997
 - CAIS Stakeholders Meeting Reports
-

ANNEX II: COUNTRY PROFILE – ANTIGUA AND BARBUDA



Source: British Broadcasting Corporation (BBC) website.
<http://news.bbc.co.uk/>

II.1 General Agricultural Profile

Information included in the following agricultural profile is largely based on the Antigua and Barbuda Agriculture Sector Plan 2001-2005 entitled “Food Security, Natural Resources and Rural Development in Antigua and Barbuda” prepared by the Ministry of Agriculture, Lands and Fisheries in consultation with the Ministry of Planning, Implementation and Public Service Affairs, and the Inter-American Institute for Cooperation on Agriculture (IICA) (Antigua and Barbuda. Ministry of Agriculture, Lands and Fisheries, 2001). This is the most recent agricultural policy document available. There is little local documentation of current agricultural statistical data: the most recent Census of Agriculture was completed in 1984 (Antigua and Barbuda. Ministry of Agriculture, Lands and Fisheries, 1984), and IICA’s Agricultural Sector Analysis only contains data up to 1996 (IICA, 1999). Current data was therefore sourced through interviews with Ministry of Agriculture and Statistics Division Information Systems Section staff members, and from online data provided by United Nations organizations and the World Bank.

The sector’s role within the overall economy is primarily concerned with all aspects of food: its production, processing, marketing, nutritional quality, and safety. The sector is also concerned with the sustainable use and development of other natural resources. These encompass watersheds, forest, agricultural land, and coastal resources, including fisheries, wetlands, beaches, sea grass, and reef systems. The conservation and sustainable use of natural biological diversity, as well as crop and livestock biodiversity are also important concerns. The sector’s activities are primarily carried out in rural communities. Rural development is therefore an important and natural concern in efforts to maximize the potential of rural communities in food production, processing, marketing, and natural resource management.

The food import bill is high: between 2001 and 2003 the value of food and live animal imports grew from East Caribbean Dollar (EC\$) 130.65 million (Euros 37.33 million) to EC\$ 182.36 million (Euros 52.11 million). Local food habits and the demands of the tourism industry dictate the need for many food products, such as wheat and rice products, white potatoes and many temperate fruits, that cannot be grown successfully in Antigua and Barbuda. In addition, small market size and subsidized production in developed countries make the production of commodities such as cow's milk and animal feed uneconomic. Nevertheless, there is great scope for reducing the importation of tropical fruits, fresh vegetables, salad crops, herbs and spices, and several meats and meat products.

Exports of food products are low: total food and live animal exports for 2001 totaled only EC\$ 1.62 million (Euros 0.466 million). In 2002 the total was only EC\$ 0.99 million (Euros 0.28 million) while 2003 saw an increase: EC\$ 2.89 million (Euros 0.82 million).

The Ministry of Agriculture identifies the following constraints to the sector increasing its contribution to the national economy:

- Limited, unclear and inconsistent policy framework to guide development.
- Ineffective institutional framework for planning, programming and management.
- Inadequate water resources for irrigation.
- Inadequately developed marketing systems.
- An increased incidence and severity of tropical storms and hurricanes.
- Ineffective credit and investment programmes and facilities.
- Inadequate technology development, transfer facilities and mechanisms.
- Inadequate agricultural health support services mechanism
- Ineffective linkages between agriculture and other sectors.
- Inadequate technical and non-technical production assistance.
- Lack of adequate information and access to data of all types.
- High cost of production.
- The perception that agriculture is an occupation restricted to hard physical labour and involving little technical or business skill.

The Ministry of Agriculture considers that the following trends will impact on the future development of the agriculture sector in Antigua and Barbuda:

Threats

- As World Trade Organisation (WTO) related requirements come into force, increased competition from food imports.
- Increased competition from biotechnological advances in many areas of food production.
- Increasing concerns and requirements regarding product safety and health risks.
- Increasing competition for land and water.
- Increasing competition for labour as availability and costs change.
- More frequent extreme weather events.

Opportunities

- Expanding markets for tropical products of all kinds.
- Increasing tourist interest in local foods and products.
- Increasing tourist interest in experiencing the natural environment.
- Expanding markets for "safe" and "natural" foods.
- Advances in information and telecommunications technology.

II.1.1 Size of agricultural population

Relative to its small percentage contribution to GDP (see II.1.4 below), agriculture continues to provide a significant proportion of employment: 8% of the total labour force of 30,000. According to the International Labour Office (ILO) for the Caribbean, this translates into the following figures (ILO, 2004). No data was found for the number or percentage of youth employed in the agricultural sector:

Table 4. Employed Persons by Sex and Economic Activity

Agriculture, Hunting, Forestry and Fishery	1991	2000*	2001**
Both sexes	1,120	2,000 (estimate)	
Male	820		
Female	320		
Fishers – both sexes			985 (444 full time)

Sources: *ILO Caribbean website.* **FAO Aquastat website*
***Caribbean Regional Fisheries Mechanism website*

II.1.2 Farmed land, forests, fishing areas

II.1.2.1 Land

The total land area of Antigua and Barbuda is 440 square kilometers, Antigua being the larger island with an area of 280 square kilometers, and Barbuda having an area of 160 square kilometers. The Food and Agriculture Organisation of the United Nations (FAO) estimates that approximately 31% of the total land area (13,810 hectares) is considered cultivable. Within this area there is production on 1,863 hectares. Eighty seven percent of the cultivated area (1,618 hectares) is under annual crops, while the remaining 13% is under permanent crops (FAO, 2004).

II.1.2.2 Forests

The United Nations Environment Programme (UNEP) estimates that 20.5% of the land area (9,000 hectares) is forested (UNEP, 2004). Existing estimates vary substantially in a difference of both classification systems and interpretation of forest versus scrub cover. Land under tree cover – mostly small trees and scrub however, seems to have increased since the mid-sixties with the decline and ultimate closure of the sugar industry. Remaining tree growth is of little economic, but considerable environmental importance.

II.1.2.3 Fisheries

According to the Caribbean Regional Fisheries Mechanism (CRFM), fisheries in Antigua and Barbuda contributed 1.6% to GDP in 2000 (CRFM, 2004). The shelf fishing area is 3,568 square kilometers, while the full extent of the Exclusive Economic Zone (EEZ) is unknown: Antigua and Barbuda, including Redonda, is an archipelagic state. Negotiations with neighboring states: Montserrat, Guadeloupe, St. Kitts and Nevis, St. Barthelemy, and St. Martin with respect to the EEZ have not been completed.

II.1.3 Agricultural systems

Agriculture in Antigua and Barbuda is mainly open field extensive. There is some intensive agriculture, partly under shade: this mainly for herbs, spices, and lettuce. Livestock systems are open field and roaming, with some paddocks, but few feed lots. Poultry production focuses on egg production, and is done intensively using deep litter systems. (Antigua and Barbuda. Central Marketing Corporation, 2004)

II.1.4 Agriculture in the economy (percentage GDP)

Over the past 20-25 years, agriculture has recorded a steady decline in growth from 15% of GDP in 1980 (FAO, 2000) to 4% in 2002. Available statistical data is as follows:

Table 5. Contribution of Agriculture to the Economy

Year	% of Total GDP
1980	15.00
1996	4.5 *
1999	3.5 **
2000	3.8
2001	4.0
2002	4.0

Sources: *World Bank Development Indicators, 2002*

* *FAO Aquastat, 2004*

** *Antigua and Barbuda Agriculture Sector Plan 2001-2005*

II.1.5 Main agricultural produce and secondary products

Table 6. Main and Secondary Agricultural Products

Main products	Onions, tomatoes, carrots, cucumbers, melons, sea island cotton, sweet potatoes, squash. Hot peppers, lettuce, pineapple.
Secondary products	Hot pepper sauce, jams and jellies, some varieties of herbal teas

Source: *Antigua and Barbuda. Central Marketing Corporation. Interview with staff member.*

II.1.6 Main export markets

Main export markets and products exported for Antigua and Barbuda are as follows. Please note that the Production Marketing Intelligence Service (PROMIS) only records the amount of produce planted, not the amount harvested and sold:

Table 7. Main Export Markets

Country	Products
USA	Cherry tomatoes, melons (Grown for export only, amount and value not available)
UK	Cherry tomatoes, melons (Grown for export only, amount and value not available)
Japan	Sea island cotton (2003, 5,854 lbs/2,655 kgs, valued at EC\$ 117,085/Euros 33,451)

Source: *Antigua and Barbuda. Central Marketing Corporation, Gilbert's Agricultural and Rural Development Center. Interviews with staff members.*

II.1.7 Trade agreements that include agriculture

Antigua and Barbuda is a member of various sub-regional, regional, and international trade organizations including the Organisation of Eastern Caribbean States (OECS), the Caribbean Community (CARICOM), the Association of Caribbean States

(ACS), and the World Trade Organisation (WTO). The trade agreements to which Antigua and Barbuda is a signatory, and which impact on the agricultural sector are:

- The World Trade Organization (WTO) Agreement – Antigua and Barbuda is a founding member and participates actively in the WTO.
- The Free Trade Area of the Americas (FTAA) - As a member of the CARICOM, Antigua and Barbuda participates in FTAA negotiations through the Regional Negotiating Machinery, although human and financial resource constraints have prevented Antigua and Barbuda from attending any FTAA negotiating meetings and therefore from gaining experience in the various FTAA issues.
- The African Caribbean Pacific (ACP) – European Union (EU) Cotonou Agreement - This ACP-EU Partnership Agreement replaces the Lome Conventions and provides for WTO compatible trading arrangements, progressively removing the barriers to trade, and enhancing cooperation in all areas relevant to trade.
- The CARICOM Single Market and Economy (CSME). This arrangement will allow goods, services, people, and capital to move throughout the member states without tariffs and restrictions, and, by creating a regional trading block, enable the Caribbean to compete more effectively in the global economy.

The greatest impact on Antigua and Barbuda resulting from implementation of a trade agreement that includes agriculture may be the WTO negative ruling on the ACP-EU banana regime, and the resulting implications for future output and prices that will impact negatively not only on the balance of payments of the banana producing countries of the OECS, but also on those member states – including Antigua and Barbuda – that are not banana producers. This is because of the fixed exchange rate regime (EC\$ 2.70 to US\$ 1.00) that is in place in all states that are full OECS members: the spillover effects will be on the sub-region's holding of foreign reserves, and ultimately on the stability of the exchange rate system. (Antigua and Barbuda. Central Marketing Corporation, 2004; Antigua and Barbuda. Ministry of Foreign Affairs, 2003; IICA, 1999)

II.1.8 Sectoral policy related to agriculture, fisheries and forests

The Ministry of Agriculture has in the past identified a lack of a clear and consistent policy framework to guide the development of the sector as one of the major factors that impact negatively on the ability of agriculture to contribute more significantly to the national economy. The Agricultural Sector Plan 2001-2005, on which this agricultural profile is largely based, goes some way to correcting this situation. It is currently being revised to:

- Reflect changes in policy brought about by the new government administration: Antigua and Barbuda held elections in early 2004, which resulted in a change of administration for the first time in nearly 30 years.
- Incorporate more specific objectives to guide work plans and activities.
- Reflect the views and recommendations of civil society.

II.2 Socio-economic Profile

The economy of Antigua and Barbuda grew substantially during the 1990s, showing an increase in GDP averaging approximately 7.5% over the period. According to the Eastern Caribbean Central Bank (ECCB) growth was down in 2001 to 1.5% and then increased in 2002 to 2.1% (ECCB, 2003). The provisional figure for 2003 is 5.75% (Antigua and Barbuda. Statistics Division - Information Systems Section, 2004). The weaker performance in 2001 was largely the result both of the passage of hurricanes and storms, and the fallout from September 11. These events impacted negatively on all sectors, especially on tourism - the main engine of growth. The expansion in 2002 and 2003 was driven by a rebound in activity in the tourism industry and the banking and insurance sector, and growth in construction and government services.

II.2.1 Demographics

Antigua and Barbuda completed its most recent census exercise in 2001, but no reports of this census are as yet complete. The following population figures are produced by the Antigua and Barbuda Statistics Division, Information Systems Section. The 2002 and 2003 figures are the most current estimates of population and general figures for 1991 and 1992 have been included to show population change. (Antigua and Barbuda. Statistics Division, Information Systems Section, 2004a). Recent estimates of population within each parish: St. John's City, St. John's Rural, St. George's, St. Peter's, St. Phillip's, St. Paul's, St. Mary's, and Barbuda are not available:

Table 8. Male/Female/Total Population

Age Group	1991	2001			2002			2003		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
under 15					11,750	11,744	23,494	11,970	11,962	23,932
15-64					22,683	24,619	47,302	23,103	25,078	48,181
65 & over					2,757	3,593	6,350	2,809	3,659	6,468
Total	60,840	33,643	37,094	70,737	37,190	39,956	77,146	37,882	40,699	78,581

Source: Antigua and Barbuda. Statistics Division, Information Systems Section, 2004.

II.2.2 Literacy level and languages

The most recent estimate of literacy provided by the Antigua and Barbuda Ministry of Education for the Organisation of Eastern Caribbean States (OECS) is based on the completion of at least seven years of primary schooling of the population aged 15 years or more (OECS, 2002a):

Table 9. Literacy Level

Year: 1991	Male	Female	Total
	87.4%	85.9%	84.4%

Source: OECS Human Development Report, 2002.

English is the official language. A local dialect is also widely spoken. About 10% of the population comprises **Spanish**-speaking immigrants, mainly from the Dominican Republic (Great Britain. Foreign and Commonwealth Office, 2004).

II.2.3 Access to services

II.2.3.1 Health

The most recent statistics on access to health services were found on the United Nations Development Programme (UNDP) Human Development Indicators web page (UNDP, 2003), and the World Bank Antigua and Barbuda Data Profile web page (World Bank, 2004):

Table 10. Access to Health Services

	Year	%
Population with access to improved sanitation	2000	95
Population with sustainable access to an improved water source	2000	91
Population with sustainable access to affordable essential drugs	1999	50-79
One-year-olds fully immunized against measles	2001	97
	2002	99*
Births attended by skilled health personnel	1995-2001	100

Sources: UNDP Human Development Indicators, 2003.

<http://www.undp.org/hdr2003/indicator/>

World Bank. Antigua and Barbuda profile.

<http://devdata.worldbank.org/external/CPPProfile/>

* World Bank figure.

II.2.3.2 Education

There are no statistics available that specifically address access to education. Statistics for the percentage of relevant aged children enrolled in primary and secondary schools have therefore been used, the most recent figures available being for 1995. These are published in the OECS Human Development Report for 2002 (OECS, 2002b). Access to secondary education depends on ability to pass an examination on completion of primary education: the Common Entrance Examination. Students that fail the Common Entrance Examination enter a Post-Primary programme and are given a second chance to take the examination. A number of these fail to make the transition from primary to secondary education. Of those that fail the examination a second time, some go on to take advantage of the Youth Skills Training Programme, but a number do not go on to complete any further studies. Available data is as follows:

Table 11. Children Enrolled in Primary and Secondary Schools

Years	2002	2003
Pupil enrollment:		
Primary	8,812	8,017
Secondary	4,456	4,672
Special Schools	114	69
Other	2,054	2,031
% Passes in Exams:		
Primary	63.1	62.8
Post-Primary	40.3	30.6
Post-Primary Pupils Re-sitting Common Entrance Exam	516	496
Number of passes	158	196
Number unsuccessful	358	300

Sources: Antigua and Barbuda. Ministry of Education Examinations Division.
Antigua and Barbuda. Statistics Division. Information Systems Section

II.2.3.3 Electricity

95% of the population has access to the power supply provided by the Antigua Public Utilities Authority (APUA) (Antigua and Barbuda. Statistics Division. Information Systems Section, 2004b)

II.2.4 Rural-urban drift

No statistics were found that provide information specifically on rural-urban drift. The OECS Human Development Report 2002, however, provides figures for the 1990s of urban population as a percentage of population (OECS, 2002c). These figures show a small increase over the ten-year period:

Table 12. Urban population as percentage of total population

Year	%
1990	0.029
1994	0.038
1999	0.054

Source: OECS Human Development Report, 2002.

II.3 Media and Telecommunications

II.3.1 Newspapers, periodicals and broadcast media

II.3.1.1 Newspapers

The following is a list of newspapers published in Antigua and Barbuda:

Table 13. Newspapers Published

Name	The Antigua Sun
Ownership	Privately owned by Sun Printing and Publishing Ltd., a member of the Stanford Group of Companies
Circulation	Monday/Thursday 2,500 per day Friday/Saturday 3,000 per day
Focus on agricultural and/or rural development issues	No regular columns or features on agricultural and/or rural issues. Extent and frequency of copy on these topics in response to submissions by interested persons and organizations.
Website	http://www.antiguasun.com
Delivery outlets	Approximately 130 outlets throughout Antigua: street vendors, shops, hotels; no house-to-house deliveries with the exception of two housing estates. One vendor in Antigua sends on 5 copies daily to Barbuda.

Source: Telephone interviews with Sun Printing and Publishing staff members.

Name	The Daily Observer
Ownership	Privately owned by Observer Publications Ltd.
Circulation	4,000 per day
Focus on agricultural and/or rural issues	No regular columns or features on agricultural and/or rural issues. The extent and frequency of copy on these topics is in response to submissions by interested persons and organizations.
Website	http://www.antiguaobserver.com/
Delivery outlets	Newspapers are delivered to vendors and shops. A small number of local subscriptions are delivered house-to-house. Delivery in Barbuda is less than 100 a day.

Source: Telephone interview with Daily Observer sub-editor.

II.3.1.2 Periodicals

The following is a list of periodicals that are published regularly in Antigua and Barbuda:

Table 14. Periodicals Published Regularly

Name	Business Focus In 2005 the publication is to change its name to Essential Antigua and Barbuda . It will broaden its content but still have a business focus.
Ownership	Privately owned by Advertising and Marketing Services Antigua Ltd. Under its new title, will be owned by Home Grown Publications.
Circulation	1,200. Under new title circulation will expand to 2,400.
Focus on agricultural and/or rural development issues	No regular column, no articles published on agribusiness to date. Willing to publish on agricultural and/or rural development issues under the new title.
Website	None currently available. Website planned for new title.
Delivery outlets	Shops and supermarkets. Delivery for new title to be expanded to include airlines, where it is planned to use the periodical as an in-flight magazine.

Source: Telephone interview with Editor, Business Focus.

Name	The EAG'er
Ownership	Privately owned by the Environmental Awareness Group (EAG)
Circulation	170 Copies circulated to the membership of the EAG.
Focus on agricultural and/or rural development issues	No direct focus on agriculture or rural development, but addresses natural resource management relevant to the agriculture sector and rural development.
Website	None.
Delivery outlets	Sent as an email attachment.

Source: Telephone interview with EAG Executive Director

Name	The Network: the Voice of Non-profit NGOs
Ownership	Privately owned by the Non-Profit NGO Network
Circulation	90
Focus on agricultural and/or rural development issues	A regular quarterly column on agricultural issues.
Website	None.
Delivery outlets	Delivered to NGOs and other interested persons via mail or as an email attachment.

Source: Telephone interview with Non-profit NGO Network Secretariat staff member

Name	What's Up in Agriculture
Ownership	Government owned by the Ministry of Agriculture
Circulation	When publication started in 1996 circulation was 2,000. Publication was funded from the Ministry of Agriculture budget. In more recent years the Ministry of Agriculture has not been able to fund production of the newsletter as before, and circulation now stands at 500.
Focus on agricultural and/or rural development issues	Entire content focuses on agriculture and rural development.
Website address	None
Delivery outlets	When circulation was 2,000, was delivered to farmers, farmer groups, government departments, schools, business places and supermarkets. With less copies available, delivery is now restricted to farmers and farmer groups.

Source: Telephone interview with Ministry of Agriculture staff member responsible for production of What's Up in Agriculture.

II.3.1.3 Broadcast Media

II.3.1.3.1 Radio

The following is a list of local radio stations in Antigua and Barbuda:

Table 15. Local radio stations

Name	ABS Radio
Ownership	Government owned.
Broadcast hours	24 hours a day, seven days a week.
Focus on agricultural and/or rural development issues	Used to air a programme called “Agriculture in Action”, but this is no longer produced. Focus on agriculture and rural development is now only in response to a current news item.
Broadcast range	Antigua and Barbuda and the North-Eastern Caribbean: Montserrat, St. Kitts and Nevis, St. Marten.

Source: Telephone interview with Manager, ABS Radio.

Name	Crusader Radio
Ownership	Privately owned by Crusader Publications and Broadcasting Ltd. Shareholders are the United Progressive Party (UPP) and its members, the political party that is currently in power.
Broadcast hours	5.00 a.m. to 12 midnight daily.
Focus on agricultural and/or rural development issues	No regular programmes with an agricultural/rural development focus.
Broadcast range	Antigua and Barbuda and neighbouring islands.

Source: Crusader Radio website – <http://www.crusaderradio.com/>

Name	MRS Radio
Ownership	Privately owned by Ordrick Samuel, known as Jicky.
Broadcast hours	6.30 a.m. to 7.15 a.m. and, when necessary, in the afternoon
Focus on agricultural and/or rural development issues	Provides Barbudans with general news, village information etc. No regular programming on agriculture and rural development.
Broadcast range	Barbuda – broadcast from speakers on the roof of Mr. Samuel’s house.

Source: Barbuda - Jicky’s Latest News website: <http://www.barbudaful.net/jickyslatestnews.html>

Name	Observer Radio
Ownership	Privately owned by the Observer Group Ltd.
Broadcast hours	6.00 am – 12 midnight
Focus on agricultural and/or rural development issues	No specific programming for agriculture or rural development, but if there is current interest, discussion is incorporated in the regular talk shows which are aired from 7 – 9 a.m., 11a.m. – 2 p.m., and 6.30 - 8.00 p.m.
Broadcast range	Antigua and Barbuda, and Montserrat. Also available live on the Internet.

Source: Telephone interview with Observer Radio staff member.

Name	Red Hot Radio FM
Ownership	Privately owned by Burning Flames (a local music group).
Broadcast hours	24 hours a day
Focus on agricultural and/or rural development issues.	None. This station plays only music, focusing on the music of the Burning Flames.
Broadcast range	Antigua and Barbuda and neighbouring islands.

Source: Telephone interview with Red Hot Radio staff member.

Name	Sun FM Radio
Ownership	Privately owned by Grenville Radio Ltd.
Broadcast hours	24 hours a day, seven days a week.
Focus on agricultural and/or rural development issues	No regular programming, only in response to a related news item.
Broadcast range	Antigua and Barbuda, Montserrat, St. Kitts and Nevis, St. Martin, Dominica, Guadeloupe. Also available live on the Internet.

Source: Telephone interview with Sun FM Radio staff member.

Name	ZDK Radio
Ownership	Privately owned by Grenville Radio Ltd.
Broadcast hours	24 hours a day, seven days a week.
Focus on agricultural and/or rural development issues	No regular programming, only in response to a related news item.
Broadcast range	Antigua and Barbuda, Montserrat, St. Kitts and Nevis, St. Martin, Dominica, Guadeloupe. Also available live on the Internet.

Source: Telephone interview with ZDK Radio staff member.

II.3.1.3.2 *Television*

There is one local television station in Antigua and Barbuda:

Table 16. Local Television Stations

Name	ABS Television
Ownership	Government owned.
Broadcast hours	5.00 – 12 midnight.
Focus on agricultural and/or rural development issues	None at present. Used to carry a regular weekly agricultural programme for the Ministry of Agriculture.
Broadcast range	Antigua and Barbuda, Montserrat, and St. Kitts and Nevis.

Source: Telephone interview with ABS Television Programme Manager.

II.3.2 **Telecommunication services**

Before the liberalization of basic telecommunications under the General Agreement on Trade in Services (GATS) signed in 1997, telecommunication services were provided by the APUA, responsible for the installation of land lines, and the supply of local telephone services, and by Cable and Wireless, responsible for international telephone services. Liberalisation opened the market for additional players and, while APUA remains the sole provider of local land line telephone services, cellular phone services are now provided not only by APUA and Cable and Wireless, but also by American Telephone and Telegraph (AT&T) Wireless/Cingular: AT&T Wireless and Cingular have recently joined forces.

The following is a list of telecommunications companies operating in Antigua and Barbuda:

Table 17. Telecommunications Companies

Name	APUA
Ownership	Government owned
Type of service	Local, land line
Cost of 3 min. local call	EC\$ 0.15/Euros 0.043

Source: Antigua and Barbuda 2004/2005 telephone Directory

Name	APUA PCS
Ownership	Government owned
Type of service	Cellular

Name	AT&T Wireless/Cingular
Ownership	Privately owned by Antigua Wireless Ventures Ltd.
Type of service	Cellular.

Name	Cable and Wireless
Ownership	Privately owned.
Type of service	International.

Name	Cable and Wireless Caribbean Cellular (Antigua) Ltd.
Ownership	Privately owned.
Type of service	Cellular.

The number of land (fixed) lines in operation increased from just 16,000 in 1991 to about 38,000 in 2001 (APUA, 2004). Following the introduction of cellular phone services there has been some decrease in the number of land lines in operation – down to 33,730 in 2003 and a steady increase in cellular subscribers: from 25,000 in 2001 to 38,200 in 2002 (ITU, 2004).

Coverage of land lines is island wide in both Antigua and Barbuda, while coverage of cellular networks was 85% in 2002 (CTU, 2004). Areas with poor or intermittent coverage include Antigua's small offshore islands, and parts of the south of the island where land elevation (either valleys or hills) interrupts reception. In Barbuda, Codrington and surrounding beach areas have good coverage, but parts of the interior of Barbuda do not (Cable and Wireless, 2004). Recent statistical data for number of subscribers is shown in Table 15:

Table 18. Telephone Subscribers

	April 2001 to March 2002	April 2002 to March 2003	April 2003 to March 2004
Main telephone lines in operation	37,264	35,046	33,730
Cellular mobile telephone subscribers	25,000	38,205	45,000

Source: ITU website, 2004

II.3.3 Computers and the Internet

There are no available statistics on the number of computers per 1,000 people in Antigua and Barbuda.

Antigua and Barbuda has two Internet Service Providers:

Table 19. Internet Service Providers

Name	Cost of 10 hours per month dial-up Internet service
Cable and Wireless	EC\$ 35.00 (Euros 9.99)
ACT-Online	EC\$ 29.95 (Euros 8.56)

Sources: Cable and Wireless and Act-Online websites

In 2002 the number of Internet subscribers was given as 8,500 (CTU, 2004). Other statistical data sourced cites Internet **users** rather than **subscribers**. Details are as follows:

Table 20. Internet Subscribers/Users

	2001	2002	2003
Internet subscribers		8,500 *	
Internet users	7,000	10,000	13,000

Sources: ITU website

** CTU website*

ANNEX III. PROFILE OF INSTITUTIONS

Annex III.1 List of Institutions Involved in Agriculture and Rural Development

Name and contacts					Type	Role
Name: (Acronym)	Antigua-Barbuda Small Ruminant Breeders Cooperatives				AS-F	OT - lobbying
Postal Address:	Tyrells, Liberta, ANTIGUA					PS-P
Tel:	268-773-0222	Fax:	none	Email:	none	
Web site:						
Name: (Acronym)	Antigua-Barbuda Agricultural Forum for Youth (ABAFY)				AS-Y	TR, PS-P,
Postal Address:	c/o IICA, Box 1552, St John's, Antigua					OT - lobbying
Tel:	268-774-8820	Fax:	none	Email:	none	
Web site:						
Name: (Acronym)	Bethesda Womens Group				AS-F	PS-P
Postal Address:	Bethesda Village, St Paul's, Antigua					
Tel:	268-463-5316	Fax:	none	Email:	none	
Web site:						
Name: (Acronym)	Antigua Agro-Processors Association				AS-F	PS-P
Postal Address:	c/o Chemistry & Food Technology Unit, Dunbars, Box 1748, St John's, Antigua					
Tel:	268-462-4502	Fax:	268-462-6281	Email:	antiguachemistry@yahoo.com	
Web site:						
Name: (Acronym)	St John's Fisherman Cooperative				AS-F	OT - lobbying
Postal Address:	Keeling Point, Box 727, St John's, Antigua					PS-P
Tel:	268-462-0800	Fax:	268-460-9595	Email:	redcross@candw.ag	
Web site:						
Name: (Acronym)	Antigua -Barbuda Fishermen Alliance Inc.				AS-F	OT - lobbying,
Postal Address:	c/o Nunes Hardware, Box 1124, Church & Cross Streets, St John's, Antigua					PS-P
Tel:	268-462-1962	Fax:	268-462-3119	Email:	nunes@candw.ag	
Web site:						
Name: (Acronym)	Barbuda Fishermen Cooperative Society				AS-F	OT - lobbying,
Postal Address:	c/o Barbuda Council, Codrington, Barbuda					PS-P
Tel:	268-773-2548	Fax:	none	Email:	none	
Web site:						

Name and contacts					Type	Role
Name: (Acronym)	Wadadli Herbs & Spices Cooperative Society				AS-F	PS-P
Postal Address:	c/o Agricultural Extension Division, Box 1030, St John's, Antigua					
Tel:	268-460-2310	Fax: none	Email: none			
Web site:						
Name: (Acronym)	Antigua Lettuce Farmers Cooperative				AS-F	OT - lobbying, PS-P
Postal Address:	All Saints Village					
Tel:	268-461-3394	Fax: none	Email: none			
Web site:						
Name: (Acronym)	Antigua-Barbuda Livestock Improvement Cooperative Society				AS-F	OT - lobbying, PS-P
Postal Address:	Factory Road, St John's, Antigua					
Tel:	None	Fax: none	Email: none			
Web site:						
Name: (Acronym)	Antigua-Barbuda Beekeepers Cooperative Society Ltd (ABC)				AS-F	OT - lobbying, PS-P
Postal Address:	Box 3070, Belmont Estate, Antigua					
Tel:	268-562-2983	Fax: none	Email: alnov@candw.ag			
Web site:						
Name: (Acronym)	Antigua and Barbuda Poultry Farmers Association				AS-F	OT - lobbying, PS-P
Postal Address:	Box 446, St John's, Antigua					
Tel:	268-461-1383	Fax: 268-461-1383	Email: none			
Web site:						
Name: (Acronym)	Environmental Awareness Group (EAG)				NGO	IN, EX, RD
Postal Address:	Box 103, Long Street, St John's Antigua					
Tel:	268-462-6236	Fax: 268-462-6236	Email: eag@candw.ag			
Web site:						
Name: (Acronym)	Gilbert Agricultural and Rural Development Center				NGO	TR, RU
Postal Address:	Box W1675, Mercer's Creek, St Peter, Antigua					
Tel:	268-463-4121	Fax: 268-562-0084	Email: gardc@candw.ag			
Web site:	www.gardc.org					
Name: (Acronym)	High Quality Seedling Nursery				PRV	PS-S
Postal Address:	Seatons Village					
Tel:	268-774-4392	Fax: none	Email: none			
Web site:						

Name and contacts						Type	Role
Name: (Acronym)	Growell					PRV	PS-S
Postal Address:	Cashew Hill, St John's, Antigua						
Tel:	268-461-0579	Fax:	none	Email:	none		
Web site:							
Name: (Acronym)	Antigua Farm and Garden					PRV	PS-S
Postal Address:	Box 1236, Cross & Redcliffe Streets, St John's, Antigua						
Tel:	268-462-4945	Fax:	268-462-0225	Email:	none		
Web site:							
Name: (Acronym)	CPR Equipment Services Ltd					PRV	PS-S
Postal Address:	Box 1129, Cassada Gardens, St John's, Antigua						
Tel:	268-462-3339	Fax:	268-462-3341	Email:	none		
Web site:							
Name: (Acronym)	Central Marketing Corporation (CMC)					STA	PS-E TM
Postal Address:	Box 1202, St John's, Antigua						
Tel:	268-462-1491	Fax:	268-462-4723	Email:	cmc@actol.net		
Web site:							
Name: (Acronym)	Animal Health Centre					PRV	PS-S, EX
Postal Address:	Box 2187, Clare Hall, St John's						
Tel:	268-463-9449	Fax:	268-462-6833	Email:	gikonyok@candw.ag		
Web site:							
Name: (Acronym)	ARK Veterinary Clinic & Kennels					PRV	PS-S, EX
Postal Address:	Box 1155, Vivian Richards Street, St John's, Antigua						
Tel:	268-460-8852	Fax:	268-463-7837	Email:	none		
Web site:							
Name: (Acronym)	Cedar Veterinary Clinic & Kennels					PRV	PS-S, EX
Postal Address:	Box W300, Royals Estate, Hodges Bay, St John's						
Tel:	268-562-6838	Fax:	268-461-4910	Email:	none		
Web site:							
Name: (Acronym)	Island Veterinary Service & Supplies					PRV	PS-S, EX
Postal Address:	Box 357, Lunar Park, St John's, Antigua						
Tel:	268-562-2661	Fax:	268-460-8770	Email:	wattlake@candw.ag		
Web site:							

Name and contacts						Type	Role
Name: (Acronym)	Dr Helena Clare Jeffrey					PRV	PS-S, EX
Postal Address:	Box W152, Radio Range, St John's						
Tel:	268-560-4181	Fax: none		Email: none			
Web site:							
Name: (Acronym)	Pioneer Kennels					PRV	PS-S, EX
Postal Address:	Box 1520, Barth Lodge, St John's, Antigua						
Tel:	268-463-6794	Fax: 268-560-3017		Email: pioneer kennels@candw.ag			
Web site:							
Name: (Acronym)	National Development Foundation (NDF)					BNK	FS
Postal Address:	Box 502, St John's Street, St John's, Antigua						
Tel:	268-462-1704	Fax: 268-462-0342		Email: ndfab@candw.ag			
Web site:							
Name: (Acronym)	Antigua-Barbuda Development Bank (ABDB)					BNK	FS
Postal Address:	Box 1279, 27 St Mary's Street, St John's, Antigua						
Tel:	268-0838/9	Fax: 268-462-0839		Email: abdb@candw.ag			
Web site:							
Name: (Acronym)	Community First Cooperative Credit Union					BNK	FS
Postal Address:	Box 1632, Upper Newgate Street, St John's, Antigua						
Tel:	268-462-0729	Fax: 268-462-4015		Email: teachcu@candw.ag			
Web site:							
Name: (Acronym)	St John's Cooperative Credit Union Ltd					BNK	FS
Postal Address:	Box 555, All Saints Road, St John's, Antigua						
Tel:	268-462-3129	Fax: 268-460-7417		Email: stjohncu@candw.ag			
Web site:							
Name: (Acronym)	Antigua Fisheries Ltd					STA	PS-S
Postal Address:	Box 781, Market Street, St John's, Antigua						
Tel:	268-462-0512	Fax: 268-562-1904		Email: anufish@candw.ag			
Web site:							
Name: (Acronym)	Fisheries Division					GOV	EX, IN, RG
Postal Address:	c/o Ministry of Agriculture, Perry Bay Road, St John's, Antigua						
Tel:	268-462-6106	Fax: 268-462-1372		Email: fisheries@antigua.gov.ag			
Web site:							

Name and contacts					Type	Role
Name: (Acronym)	Production and Marketing Intelligence Service (PROMIS)				GOV	IN
Postal Address:	Box 1202, St John's, Antigua					
Tel:	268-462-1491	Fax:	268-462-4723	Email:	cmc@actol.net	
Web site:						
Name: (Acronym)	Veterinary and Livestock Division				GOV	EX, IN, RG
Postal Address:	Box 1282, Olivers, Antigua					
Tel:	268-460-1759	Fax:	268-460-1759	Email:	antiguavet@hotmail.com	
Web site:						
Name: (Acronym)	Soil and Water Conservation Division				GOV	EX
Postal Address:	Box 1282, Ministry of Agriculture, St John's, Antigua					
Tel:	268-462-1007/8/9	Fax:	268-462-6104	Email:	sirus1@candw.ag	
Web site:						
Name: (Acronym)	Forestry Division, Ministry of Agriculture				GOV	EX, TR
Postal Address:	Box 1282, Queen Elizabeth Highway, St John's, Antigua					
Tel:	268-462-1007/8/9	Fax:	268-462-6104	Email:		
Web site:						
Name: (Acronym)	Lands Division				GOV	EX, RG
Postal Address:	Box 1282, Queen Elizabeth Highway, St John's, Antigua					
Tel:	268-462-1007/8/9	Fax:	268-462-6104	Email:		
Web site:						
Name: (Acronym)	Planning Unit, Ministry of Agriculture				GOV	PP
Postal Address:	Box 1282, Queen Elizabeth Highway, St John's, Antigua					
Tel:	268-462-1007/8/9	Fax:	268-462-6104	Email:	neem@candw.ag	
Web site:						
Name: (Acronym)	Chemistry and Food Technology, Ministry of Agriculture				GOV	RD, EX, IN
Postal Address:	Box 1282, Dunbars, Friar's Hill, St John's					
Tel:	268-462-4373	Fax:	268-462-6281	Email:	moa@candw.ag	
Web site:						
Name: (Acronym)	Plant Protection Unit, Ministry of Agriculture				GOV	EX, IN
Postal Address:	Box 1282, Dunbars, Friar's Hill, St John's					
Tel:	268-462-0418	Fax:	268-462-6104	Email:	janilg@yahoo.com	
Web site:						

Name and contacts					Type	Role
Name: (Acronym) Postal Address: Tel: Web site:	Agriculture Development Corporation (ADC) Box 1282, c/o Ministry of Agriculture, St John's, Antigua 268-462- 1007/8/9	Fax: 268-462-6104	Email: none		STA	PS-E, PS-P
Name: (Acronym) Postal Address: Tel: Web site:	Bureau of Standards Box 1550, Redcliffe Street, St John's, Antigua	Fax: 268-462-1625	Email: abbs@antigua.gov.ag		GOV	IN, RG
Name: (Acronym) Postal Address: Tel: Web site:	Agricultural Science Department Ministry of Education, Government Office Complex, Queen Elizabeth Highway, St John's	Fax: 268-462-4970	Email: antiguaedu@ag.com		GOV	IN, TR
Name: (Acronym) Postal Address: Tel: Web site:	Statistic Division Ministry of Finance and Economy, Church Street, St John's, Antigua	Fax: 268-462-9338	Email: stats@antigua.gov.ag		GOV	IN
Name: (Acronym) Postal Address: Tel: Web site:	Veterinary Board Box 1282, Olivers, Antigua	Fax: 268-460-1759	Email: gikonyok@candw.ag		OTH - Board	PP
Name: (Acronym) Postal Address: Tel: Web site:	Pesticide Control Board c/o Chemistry and Food Technology, Ministry of Agriculture	Fax: 268-462-6281	Email: malv@lycos.com		OTH - Board	PP
Name: (Acronym) Postal Address: Tel: Web site:	National Parks Board Box 15, All Saints Post Office	Fax: none	Email: jvalerie@candw.ag		OTH - Board	PP

Name and contacts						Type	Role
Name: (Acronym)	Central Marketing Board					OTH - Board	PP
Postal Address:	All Saints Village						
Tel:	268-560-5947	Fax: none		Email: none			
Web site:							
Name: (Acronym)	Survey Board					OTH - Board	PP
Postal Address:	Box 1282, c/o Ministry of Agriculture, St John's, Antigua						
Tel:	268-462-3800	Fax: 268-462-4969		Email: none			
Web site:							
Name: (Acronym)	Fisheries Ltd Board					OTH - Board	PP
Postal Address:	Wireless Road, St John's, Antigua						
Tel:	268-462-1571	Fax: 268-560-1042		Email: none			
Web site:							
Name: (Acronym)	Caribbean Agricultural Research and Development Institute (CARDI)					REG	RD
Postal Address:	Box 776, Betty's Hope, Antigua						
Tel:	268-463-3755	Fax: 268-462-1666		Email: cardi@candw.ag			
Web site:							
Name: (Acronym)	Inter-American Institute for Cooperation in Agriculture (IICA)					REG	IN, RU, OT - Technical Assistance
Postal Address:	Box 1552, Fort Road, St John's, Antigua						
Tel:	268-462-6119	Fax: 268-462-6118		Email: iica@candw.ag			
Web site:							

Key - Type and Role of Institution

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

Annex III.2 Select List of Key Institutions

<p>Name of institution: Agricultural Extension Division</p>
<p>Objective/mission: There is nothing officially documented. none</p>
<p>Field of specialization: Gov, EX, IN, PP, RU, TR, OT: cooperative development, disaster mitigation, regulation-land use, conservation, farm appraisal for larceny.</p>
<p>Number of staff: 51 staff: 22 technical, 8 Administrative, 10 support staff, ie. Watchmen, cleaners, 5 seconded to other units, 6 part-time</p>
<p>Branches, other sites: None</p>
<p>Annual Budget: €1,184,640.00</p>
<p>Source of funding: Government, minor project funds from FAO, Canada Fund</p>
<p>Program/projects undertaken:</p> <ul style="list-style-type: none"> ▪ Caricom/Cariforum Food Security Project ▪ Female Farmers Cooperative Program ▪ Tree Crop Rehabilitation Program ▪ Dam and Pond Building Program ▪ Rehabilitation of Access Road Program
<p>Target audience: 2000 producers, --- women farmers, --- Tree Crop farmers</p>
<p>Extent of interaction with CTA:</p> <p>Receive Spore magazines, Officers have attended CTA courses/co-seminars with CARDI</p>
<p>Extent of collaboration/interaction with other institutions:</p> <ul style="list-style-type: none"> ▪ Ministry of Trade –collaboration/formulation of agricultural schedules for WTO ▪ CMC – training, information and marketing ▪ GARD Center- training, technical support ▪ EAG technical support ▪ ED technical support, program collaboration

<p>Name of institution: Agricultural Extension Division</p>
<ul style="list-style-type: none"> ▪ Ministry of Health- information source ▪ Ministry of Tourism- information source ▪ Ministry of Public works- program collaboration ▪ CARDI- technical support, research, training ▪ IICA- technical support, training ▪ FAO- funding, technical support ▪ UWI- information source, training ▪ OAS- training ▪ CFNI- program collaboration ▪ CIDA- funding ▪ Chinese embassy- training ▪ British High commission- funding ▪ Chilean Government- technical assistance for local projects ▪ USAID- funding
<p>How information needs are currently met /from where or by whom:</p> <p>Universities, Regional Technical Organizations, Networking with colleagues and other organizations, publications, electronic media, fairs/exhibitions, conferences, courses Subject areas: marketing, organic farming, pest management, irrigation, dryland farming, international trade negotiations, crop/livestock production, beekeeping</p>
<p>Main information needs not satisfied:</p> <p>Technical information on improved tropical varieties, current research on crop and livestock production, marketing, information on up-coming training programs and courses, demographic data.</p>
<p>Main problems faced in terms of information/communication management:</p> <p>Lack of resources in equipment, space for housing information materials and equipment, trained staff to manage information.</p>
<p>Why institution selected as a key:</p> <p>Relevant beneficiaries i.e. youth, farmers, extensionist, rural communities, accountable, can deliver on timely basis, can contribute both technical and in-kind finances, in a good position to continue program after CTA's exit. Projects are complementary with CTA's. Would have strong multiplier effect amongst the target groups.</p>

<p>Name of institution: Environmental Awareness Group</p>
<p>Objective/mission: The EAG has several related objectives which form its mission. These are:</p> <ol style="list-style-type: none"> 1. To raise public awareness about natural resources (values and threats to) and to promote sustainable management. 2. To promote / support civil society participation in environmental management and decision making. 3. Support and undertake conservation projects. 4. Advocate / support policies, legislation, programs which support sustainable use of natural resources.
<p>Field of specialization: NGO, EX, IN, RD, TR, OT: advocacy</p>
<p>Number of staff: 3 fulltime staff, active Board of management, nine (9) volunteers (members mostly).</p>
<p>Branches, other sites: None</p>
<p>Annual Budget: €144,000.00</p>
<p>Source of funding: External – Donor funded projects, regional and international.</p>
<p>Program/projects undertaken:</p> <ul style="list-style-type: none"> ▪ Offshore Island Conservation Project (OICP) ▪ Eco-Tourism Training Project ▪ Environmental Education Program ▪ Information gathering for wetlands conservation program ▪ Ministry of Agriculture - Fisheries Division <ul style="list-style-type: none"> - Forestry Unit ▪ Environment Division ▪ Ministry of Education ▪ Other NGOs – GARD Center ▪ Caribbean Conservation Association ▪ Flora and Fauna

<p>Name of institution: Environmental Awareness Group</p>
<ul style="list-style-type: none"> ▪ Black Hills ▪ Island Resource Foundation ▪ OAS ▪ Eastern Caribbean Coalition ...
<p>Target audience: Tour operators involved in marine and land based tours. Teachers, students, stakeholders who have a vested interest in offshore island ecosystems and wetland habitats i.e. Boat owners and operators, fisher folk, rural coastal communities.</p>
<p>Extent of interaction with CTA: None</p>
<p>Extent of collaboration/interaction with other institutions: AED/MOA, Forestry Unit ED – Min. of Public Works ME Other NGOs, e.g. GARD Center, Caribbean Conservation Association (Regional NGO) Flora and Fauna International/Durrell Wildlife Trust, UK (project partner) Black Hills State University, USA (project partner) Island Resource Foundation, NGO - USVI (project partner) OAS – funding agency Eastern Caribbean Coalition for Environmental Awareness - NGO</p> <p>Indicate the type of collaboration you have with the named institutions (e.g. joint projects, information exchange, etc.)</p> <p>Several types of collaboration. Joint projects / project partners Contracted services (training, surveys, etc) Membership – Access to information and other services</p>
<p>Why institution selected as a key: Relevant beneficiaries i.e. rural coastal communities, fisher folk, youth, accountable, can deliver on timely basis, can contribute both technical and in-kind finances, in a good position to continue program after CTA's exit. Projects are complementary with CTA's. Would have strong multiplier effect amongst the target groups.</p>

<p>Name of institution: Environment Division, Ministry of Public Works, Telecommunications and the Environment</p>
<p>Objective/mission: The environment division has not developed a mission statement or objectives, however, when formed in 1996 the division was mandated by cabinet to perform the following duties:</p> <ul style="list-style-type: none"> • produce a state of the environment report every 2 years, which gives comprehensive information on the health of the environment including impacts upon human health, i.e.: water, air pollution, chemicals in food. • produce a comprehensive natural resource map to identify major areas of importance to the health of the environment such as mangrove swamps and coral reefs. • develop and implement a national environmental awareness program including the introduction of environmental education into the school curriculum. • develop and implement projects related to the rehabilitation and protection of the environment. • identify and coordinate the implementation of Antigua and Barbuda's commitments to international environmental agreements. • coordinate the development of environmental legislation in all areas of environmental management. • develop and implement a program of beautification for the major highways of the country. • design and implement a program to protect and enhance the beaches. • provide advise to the general public and other government agencies on environmental issues. • coordinate the process of conducting environmental impact assessments for all major developments for both public and private sector, and request operational impact assessments for existing businesses. • develop and implement any other activity as directed by the cabinet, minister, or permanent secretary.
<p>Field of specialization: GOV, EX, IN, PP, RD, RG, RU, TR</p>
<p>Number of staff: 11 full-time staff</p>
<p>Branches, other sites: None</p>

<p>Name of institution: Environment Division, Ministry of Public Works, Telecommunications and the Environment</p>
<p>Annual Budget: €433,967.00</p>
<p>Source of funding: Government, Regional and international funding</p>
<p>Program/projects undertaken:</p> <ul style="list-style-type: none"> ▪ Environmental Cadet Program ▪ Eco Zone Television Show ▪ Science Books for schools Project ▪ OECS Protected Areas and Associated Livelihood Project ▪ Caribbean Regional Environment Program ▪ Adopt a Mile Program ▪ Persistent Organic Pollutants ▪ Ffryes Beach Project ▪ National Capacity for Self Assessment Project
<p>Target audience: Rural communities, school children, NGOs and community based organizations, general public , government and private sector</p>
<p>Extent of interaction with CTA: None</p>
<p>Extent of collaboration/interaction with other institutions:</p> <ul style="list-style-type: none"> ▪ UWI. SEDU – information exchange ▪ IICA – information exchange ▪ CARDI – information exchange ▪ MOA – joint projects, information exchange ▪ UNESCO – information exchange ▪ UNDP – GEF – information exchange ▪ UNEP – information exchange ▪ GARD CENTER – joint projects, information exchange ▪ EAG – joint projects, information exchange ▪ How information needs are currently met /from where or by whom: ORGANISATIONS: ▪ UWI. Sustainable Economic Development unit (UWI. SEDU) ▪ IICA ▪ CARDI ▪ UNESCO ▪ UNDP – GEF

<p>Name of institution: Environment Division, Ministry of Public Works, Telecommunications and the Environment</p>
<ul style="list-style-type: none"> ▪ UNEP ▪ EAG ▪ GARD CENTER <p>Publications: CARDI booklets/bulletins IICA booklets ministry of agriculture booklets newspapers personal collections</p> <p>Electronic media radio programs TV programs video presentations posters internet</p> <p>Other sources: fairs and exhibitions colleagues consultants</p>
<p>Main information needs not satisfied: Antigua and Barbuda program and project information – the generally poor flow of information within and between government organizations</p>
<p>Main problems faced in terms of information/communication management: Training in web site management, information management for registry staff</p>
<p>Why institution selected as a key: Relevant beneficiaries i.e. youth, rural communities, NGOs, accountable, can deliver on timely basis, can contribute both technical and finances, in a good position to continue program after CTA's exit. Projects are complementary with CTA's. Would have strong multiplier effect amongst the target groups.</p>

<p>Name of institution: Fisheries Division/MOA</p>
<p>Objective/mission: To manage the fishery of Antigua and Barbuda</p>
<p>Field of specialization: GOV, EX, IN, RD, RG, TR</p>
<p>Number of staff: Total 29 staff : Professional 5, Technical 7, Clerical 5, fish processing staff 12</p>
<p>Branches, other sites: None</p>
<p>Annual Budget: €478,923.00</p>
<p>Source of funding: Government</p>
<p>Program/projects undertaken:</p> <ul style="list-style-type: none"> ▪ Infrastructural Development Projects - Japan ▪ FAO – Updating legislation, Fisheries Act ▪ Strengthening instructions and quality control of seafood products
<p>Target audience:</p> <ul style="list-style-type: none"> ▪ Fisheries sector, fish processing, etc. ▪ Fishing sector ▪ Fish vendors (for export) ▪ 900 – 1200 fisher folk
<p>Extent of interaction with CTA:</p> <p>Receives Spore and other CTA publications. CTA training program for one staff member (project writing)</p>

Name of institution:
Fisheries Division/MOA

Extent of collaboration/interaction with other institutions:

Regional

- EDU – OECS – Technical advice and funding
- CRFM – Technical advice and funding
- WACAFC – Technical body to submit data
- CITIES – Regulatory to submit data and also provide technical advice
- IWC - Regulatory to submit data, also provide technical advice and assist with funding
- ICAT - Regulatory to submit data, also provide technical advice and assist with funding
- Convention on Climate Change – Training, funding and dissemination information
- IOCARIBE – Technical advice, training, submission of data
- RAMSAR – Training, funding and technical advice
- SPAW - Training, funding and technical advice

Local

- Antigua Coast Guard – Regulatory enforcement, surveillance
- Ministry of Agriculture – Technical advice, administration
- Environment Division – Collaboration on marine issues
- Development Control Authority – to provide technical advice on marine issues
- Ministry of Tourism – Conflict resolution
- Environmental Awareness Group – Collaborate on protected areas
- Fishermen groups – Technical support training and group dynamics development

How information needs are currently met /from where or by whom:

Organisations:

- CARICOM Regional Fisheries Mechanism
- FAO
- Caribbean Environment Health Institute
- CANARI
- UNEP

Publications:

- CTA booklet
- University books
- Bulletins
- Newspapers
- Electronic media

Other:

- Network
- Conferences / Workshops
- Courses (Fisheries Training Institute – Trinidad)

<p>Name of institution: Fisheries Division/MOA</p>
<p>Main information needs not satisfied: Internal –lack of fish import data to aid in planning; lack of national, current statistics</p>
<p>Main problems faced in terms of information/communication management:</p> <p>Poor data collection in other ministries, poor networking and information sharing. Training is needed in information management. Fisheries documentation unit requires cataloguing, indexing, data input for the creation of searchable database of the core collection.</p>
<p>Why institution selected as a key:</p> <p>Relevant beneficiaries i.e. small scale fishers, men and women, accountable, can deliver on timely basis, can contribute both technical and in-kind finances, in a good position to continue program after CTA's exit. Projects are complementary with CTA's. Would have strong multiplier effect amongst the target groups.</p>

ANNEX IV. LIST OF PERSONS INTERVIEWED *

Antigua Barbuda Agricultural Forum for Youth

Ika Fergus, President.

Central Marketing Corporation

Kathleen Forde, General Manager.

Environmental Awareness Group

Brian Cooper, Vice President, Board of Management

Mykl Clovis, Education in Protected Areas Coordinator

Ministry of Agriculture

Maudlyn Richards, Permanent Secretary.

Ministry of Agriculture. Agricultural Extension Division

Owolabi Elabanjo, Assistant Extension Officer

Ministry of Agriculture. Agricultural Extension Division

Jezeiah Maxim, Extension Officer, Technical.

Ministry of Agriculture. Fisheries Division

Cheryl Appleton, Chief Fisheries Officer.

Ministry of Agriculture, Fisheries Division

Mark Archibald, Fisheries Assistant

Ministry of Agriculture. Forestry Division

Adriel Thibou, Forestry Technician.

Ministry of Education. Agricultural Science Division

Oswald Joseph, Coordinator of Agricultural Science

Ministry of Finance and Economy, Statistics Division

Cari Tuckett, Information Systems Statistician

Ministry of Public Works, Telecommunications and Environment. Environment Division

Carol-Faye George, Environment Education Officer/Environment Information Officer.

* Refer to Annex III for contact information

ANNEX V. REFERENCES

- Antigua and Barbuda. Central Marketing Corporation. *Interview and email correspondence with Central Marketing Corporation staff member*. St. John's, Antigua, CMC, 2004.
- Antigua and Barbuda. Ministry of Agriculture, Lands and Fisheries. *Agriculture sector plan 2001-2005: food security, natural resources and rural development in Antigua and Barbuda*. St. John's, Antigua, Ministry of Agriculture, Lands and Fisheries, October 2001, ix, 51 p.
- Antigua and Barbuda. Ministry of Agriculture, Lands and Fisheries. *Census of Agriculture*. St. John's, Antigua, Ministry of Agriculture, Lands and Fisheries, 1984.
- Antigua and Barbuda. Ministry of Foreign Affairs, FTAA Hemispheric Cooperation Programme. *National strategy to strengthen trade-related capacity*. St. John's, Antigua, Ministry of Foreign Affairs, 8 October 2003, 53 p. (Derestricted FTAA.sme/inf/158/Rev.1, 27 May, 2004)
- Antigua and Barbuda. Ministry of Public Works, Telecommunications and the Environment. Environment Division. *Antigua and Barbuda Environmental Management Strategy and Action Plan 2004-2009*. St. John's, Antigua, Government of Antigua and Barbuda, August 2004.
- Antigua and Barbuda. Statistics Division. Information Systems Section. *A glance at statistics*. St. John's, Antigua, Statistics Division, 2004, pamphlet.
- CRFM. *CRFM website*. Georgetown, Guyana, CRFM, 2004, website <http://www.caricom-fisheries.com/members/antigua.asp>.
- CTA. *Annual Report 2003*. Wageningen, The Netherlands. CTA
- CTA. *Strategic Plan and Framework for Action 2001 – 2005*. Wageningen, The Netherlands. CTA.
- CTA-CARDI. *Regional Overview on Agricultural Information Needs*. Port-of-Spain, Trinidad. May 1997.
- CTA-CARDI. *Agricultural Information Needs Survey, Antigua and Barbuda*. Port-of-Spain, Trinidad. July 1998.
- ECCB. *Annual report and statement of accounts 2002/2003*. Basseterre, St. Kitts, ECCB, June 2003, pp.28-33.
- FAO. *Aquastat*. Rome, Italy, FAO, 2004, website http://www.fao.org/ag/agl/aglw/aquastat/countries/antigua_barb/main1.htm
- Great Britain. Foreign and Commonwealth Office. *Country profiles: Antigua and Barbuda*. London, England, FCO, 2004, website <http://www.fco.gov.uk/>.

- IICA. *Agricultural sector analysis: Antigua and Barbuda*. St. John's, Antigua, IICA, February 1999, 246 p.
- IICA. *The contribution of IICA to agriculture and the development of rural communities in Antigua and Barbuda: annual report 2002*. St. John's, Antigua, IICA, 2003, 10 p.
- ILO. Caribbean Office. *Caribbean labour statistics: employed persons by sex and economic activity, Antigua and Barbuda*. Port of Spain, Trinidad, ILO Caribbean Office, 2004, website <http://www.ilocarib.org.tt/digest/antigua/ant06.html>.
- Observer Radio. *Interview with the Minister of Finance and the Economy, Hon. Dr. Errol Cort*, 11 April 2005.
- OECS a. *OECS human development report 2002*. Castries, St. Lucia, OECS, 2002, p.95.
- OECS b. *OECS human development report 2002*. Castries, St. Lucia, OECS, 2002, p.192.
- OECS c. *OECS human development report 2002*. Castries, St. Lucia, OECS, 2002, p.184.
- UNDP. *Human development indicators 2003*. New York, USA, 2004, website <http://www.undp.org/hdr2003/indicator/>
- UNEP. *Earthwatch island directory*. Geneva, Switzerland, 1998, website <http://islands.unep.ch/CSA.htm>
- Walton, Peter "Rural Development Stakeholders in Specific ACP Countries: their roles information needs and response capacities", in *Information for agricultural and rural development in ACP countries: emerging stakeholders, new media and priority themes*, pp.182-212. by CTA. Wageningen, Netherlands, CTA, 2000.
- World Bank. *Antigua and Barbuda profile*. Washington, D.C., USA, 2004, website <http://devdata.worldbank.org/external/CPProfile/>
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