

Assessment of agricultural information needs in African, Caribbean and Pacific (ACP) States for CTA's Products and Services

Phase 1: Pacific (Tonga)

Final Report

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on behalf of the

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ABBREVIATIONS

ACP	- African, Caribbean and Pacific
CTA	- Technical Centre for Agricultural and Rural Cooperation
DAC	- District Agricultural Committees
EEZ	- Exclusive Economic Zone
FAO	- Food and Agriculture Organisation of the United Nations
GDP	- Gross Domestic Product
ICM	- Information and Communication Management
ICT	- Information Communication Technologies
IRETA	- Institute for Research, Extension & Training in Agriculture
ISP	- Internet Service Provider
JICA	- Japan International Cooperation Agency
JOCV	- Japan Overseas Cooperation Volunteers
MAFF	- Ministry of Agriculture Forestry and Food
MLCI	- Ministry of Labour, Commerce and Industries
MOE	- Ministry of Education
MOF	- Ministry of Fisheries
NGO	- Non-Government Organisation
OBN	- Oceania Broadcasting Network
PSSC	- Pacific Senior School Certificate
RED	- Research and Extension Division
SPC	- Secretariat of the Pacific Community
SPREP	- South Pacific Regional Environment Programme
TBC	- Tonga Broadcasting Commission
TBN	- Trinity Broadcasting Network
TCC	- Tonga Communications Corporation
TNYC	- Tonga National Youth Congress
T\$	- Tongan \$ (Pa'anga = 0.48 <i>Euro</i> , Oct.2004)
UNEP	- United Nations Environment Programme
USP	- University of the South Pacific
VRS	- Vaini Research Station

Executive Summary

Introduction

The Technical Centre for Agricultural and Rural Cooperation (CTA) commissioned a local consultant to carry out this study in Tonga as part of an assessment of agricultural information needs in ACP States. The study covers a country profile, information needs analysis and capacity building needs, and identifies areas where CTA and other donors may assist.

Objectives of the study

The objectives of the study as contained in the terms of reference are as follows:

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

Methodology

Data for the study was collected in three ways:

- i. desk review of available literature, publications of regional organisations (FAO, SPC, IRETA) and information sources of including the findings of programme evaluations;
- ii. the conduct of face-to-face interviews and the use of questionnaires with relevant stakeholders;
- iii. group meetings with village level representatives on each of the main island groups to collect information on their agricultural information needs.

Expected result

The expected result was a one main report not exceeding 20 pages according to the format provided.

Findings

Results of this study show that there is little awareness, particularly at the village (farmers/fishermen) level, of CTA's activities in Tonga. Although there is increased awareness and receipt of CTA publications as well as an increased number of persons attending training courses and seminars sponsored by CTA at the national level group consisting of local NGOs and private enterprises, awareness is still considered low. The main information required is basically of technical nature for farmers, fisher-folk and the private sector. The national level groups require technical, market and statistical information, whereas at the government level, information needs are wider and include statistical information. Most government information needs are met through the various reports and documentation available.

The information and communication management capacity in MAFF has improved greatly over the years, however a lot more improvements in areas of expertise, manpower and equipments are needed. Capacity in MoF is weaker and in desperate need of manpower and expertise. MAFF through its radio and TV programmes and also its extension service is the

main source of information and in some areas the only source of technical information on crop and livestock production and management, for rural communities. However, the capacity to improve on this is limited due to financial constraints.

Conclusions

The study identified information needs in seven key areas, namely:

- Statistical data – These are needed at government level for various reasons including planning and policy formulation. Data are stored at each government ministries; however these are not readily available for other ministries.
- Marketing- information on new and possible markets, prices both local and overseas, seasonality, supplies, quarantines requirements etc.
- Agricultural chemicals – types to use for a particular pest or disease, safe use including proper way of mixing, applying and waiting period, protective gear, current available gear s are too hot and what are the alternatives, obsolete chemicals how to rid of these safely, dispense of containers whether they be burned, buried etc.
- Chemical weed control – with increased cost of labour, use of herbicides increased and information on cost related issues such as types to use, rates, timing and safety are needed.
- Fertilizers and its proper use – increased interest on cash cropping and lower yield due to reduced fallow periods and lower soil fertility led to increased interest on fertilizer use.
- Irrigation – Cash cropping led to increased need to maximise production. During seasons of low supply and high prices, which are usually during the hot dry periods, farmers tend to irrigate. Cost of irrigation is high and farmers need information on cheaper methods and its proper use.
- Soil improvement – Intensive cropping led to poor soil condition and low yield. Farmers noted these and need information on better management, cover cropping, organic manuring, etc.

In terms of capacity building, the following needs were identified:

- Staff training - there is a need for formal specialised training in IT to the level of university qualification, on-the-job training on information systems management and use also on library management by an experienced trainer, attachment to a suitable organisation overseas, or through participation in short IT and library training courses.
- Equipment: MAFF Information Section, which is the main source of agricultural information for farmers, is in need of critical equipments such as video camera, tape recorders, computers, multimedia projector and designer software packages and other software programmes and proper storage for these sensitive equipments. Books and publications other than those normally sent by CTA are also needed.

Recommendations

The study recommends the following, which relates to each of CTA's three operational programmes.

GENERAL RECOMMENDATIONS

- Strengthen government institutions that facilitate information production and dissemination

- Improve communication systems and infrastructure in Tonga
- Strengthen linkages at all institutional levels and with external organisations

For INFORMATION PRODUCTS AND SERVICES:

- CTA should increase its distribution of its publications in Tonga and the assist MAFF Information Section to publish local materials.
- CTA may assist MAFF Information Section with needed equipment so as to improve the services it provides via e.g. QAS.
- CTA should assist the MAFF library with materials such as books and publications.

For COMMUNICATION CHANNELS AND SERVICES:

- CTA to continue providing assistance towards regional meetings, workshops and study visits of stakeholders.
- CTA to continue the funding for mass media production and distribution of agricultural information and activities.

For ICM SKILLS AND SYSTEMS:

- CTA should provide assistance to convene a regional workshop/training to help ministries of agriculture design appropriate information and communication management policies and strategies.
- CTA could support training to increase the information and communication management capacity of all MoF and MAFF Information and Extension staff.
- CTA should assist the MAFF library with the training of a librarian.
- CTA should support linkages at institutional levels and with external organizations such as advice on setting up of LAN, WebPages and other networks.

1. INTRODUCTION

1. This report is an assessment of the development and management of agricultural information, communication management strategies and needs in Tonga as part of an overall assessment of these issues in the Pacific commissioned by the Technical Centre for Agricultural and Rural Cooperation (CTA).

2. The Cotonou Agreement describes the mission of the Technical Centre for Agricultural and Rural Cooperation (CTA), as being “to strengthen policy and institutional capacity development and information and communication management capacities of ACP agricultural and rural development organisations”. In this context, CTA is requested, “to develop and provide information services and ensure better access to research, training and innovations and develop and reinforce ACP capacities to produce, acquire, exchange and utilise information for agriculture and rural development”.

3. In ACP States, including Tonga, there is a need to improve policies concerning information and communication management (ICM). The revolution in information and communication technologies (ICTs) is a key challenge.

4. It has been reported that, traditionally, the Pacific and Caribbean regions have not received sufficient attention in CTA’s programmes and activities. This is, for example, highlighted in the statistics on:

- i. the numbers receiving CTA publications or attending in workshops and training courses
- ii. lack of basic data for the Pacific region reported in CTA documents.

5. The current study has been requested by various national and regional partners with whom CTA has had relationship, in order to provide more targeted assistance to their beneficiaries. The objectives of this 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.

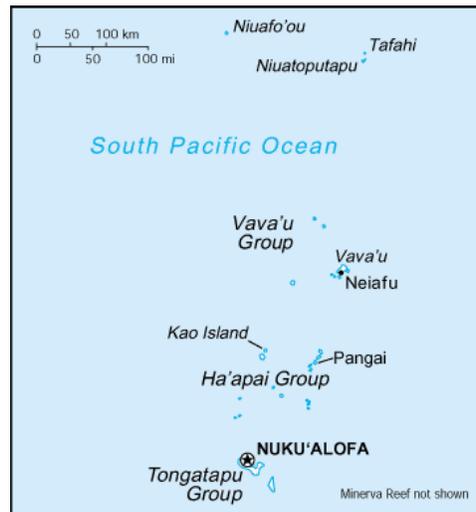
6. The study should assist the three operational departments of the CTA namely; Information Products and Services, Communication Channels and Services and Information and Communication Management Skills and Systems, as well as its local representatives to improve and better target interventions and activities aimed at potential partners and beneficiaries; 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.

2. COUNTRY PROFILE

Geography

7. The Kingdom of Tonga is located at 20° S and 175° W, lying North East of New Zealand and South East of Fiji. It consists of 169 islands 36 of which are inhabited. The main island groups are Tongatapu, Vavau, and Haapai while 'Eua, Niuatoputapu and Niuafuou, are minor island groups. The island groups scattered in a north - south bound distribution along two distinctive rows of volcanic islands to the west and coral islands to the east. Coral islands were formed from uplifted coral limestone base with a thick layer of fertile volcanic ash on top. It has a total land area of 718 km² of which only 23.6% is arable land. The climate is tropical and favourable to agriculture, and characterised by two main seasons – a warm wet season in December – May and a cool dry season in May – December. The hurricane season is from October – April every year, and the island kingdom has been severely hit by several strong tropical hurricanes.

Figure 1: Map of the Kingdom of Tonga



The People

8. Tongans belong to the Polynesian ethnic group. About 96% of the population are pure Tongans, 2% is part-Tongan while 2% belong to other ethnic groups (Population Census 1996). The estimated population growth rate is 2.94%. Estimated average birth rate in 2004 is 24.9 per 1000 population and average death rate is 5.5 deaths per 1000 population. Life expectancy at birth is 69.8 years for males and 71.7 years for females. Christianity with Free Wesleyan Church, a version of the Methodist Church, is the dominant religions followed by the Roman Catholics. The 10 years period of population census, which last conducted in 1996 showed that 98.5% of pure Tongans and part-Tongans aged 6 years and above are literate. This high literacy rate of Tongans is attributed to its well-established educational system where education is compulsory for every young Tongan between the ages of 6 and 14 years. Primary schools are free and most villages throughout the kingdom have or have access to a primary school. The Government has built high schools on every island group and most churches, like Free Wesleyan Church, Roman Catholic, Church of Tonga, Mormon Church, Anglican, and Seventh Day Adventist Church also run mission high schools in almost every

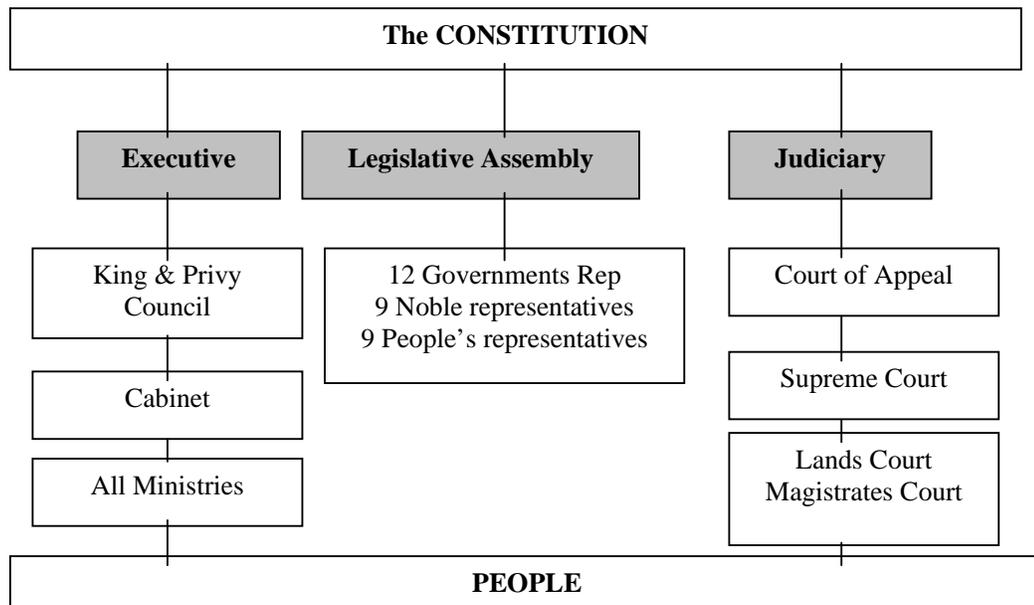
island group. However with the exception of Mormon high schools, the government pays a subsidy to all mission high schools for every student enrolled.

9. With regard to health care, each island group has a general hospital. However, other health centres have been built in rural areas and outer islands in Tongatapu, Vavau, and Haapai. Private health clinics are also operated in Tongatapu and Vavau.

Government

10. Tonga has a hereditary Constitutional Monarchy form of government and thus the only remaining Polynesian kingdom existing today. The current head of state is King Taufaahau Tupou IV. Tonga was a protectorate state of the British government until it gained Independence on 4th June 1970. The 'Founder of Modern Tonga', His Majesty King George Tupou I, gave the present constitution, based on British law, on 4th November 1875. The government is divided into 3 main bodies, which are the Executive, Legislative Assembly and Judiciary. The Executive consists of the Privy Council, headed by the King, and the Cabinet, headed by the Prime Minister, and including the two governors of Vavau and Haapai.

Figure 2: Tonga Government Structure



11. In the Executive, all government activities and services are administered through its public services and ministries. The Legislative Assembly (the Parliament) consists of 9 representatives from the 33 Nobles, 9 representatives of the People and 12 members (ministers) from government (Executive). Noble and people representatives are elected to the Legislative Assembly every three years by respective members of the nobles and the people. However, the King appoints the prime minister, the governors of Vavau and Haapai and Ministers of the realm. All of them are also members of the Legislative Assembly. Main responsibilities of the Legislative Assembly are to pass the Annual Budget and discuss and debate on bills initiated by the Executive before submitting to the King for signature to become a government law. Judiciary consists of the Supreme Court, Court of Appeal, Lands Court and Magistrate Court.

Economy

12. Tonga's economy has traditionally been dominated by agriculture with lesser contributions from fisheries, tourism and manufacturing. It has a narrow export base of agricultural produce, mainly of squash, coconuts (fresh and dry), vanilla beans, kava, root crops (yams, taro, alocasia, and cassava), sandalwood, aloe vera, watermelon, and nonu. Agricultural exports make up two-thirds of the total exports. Main export countries are Japan, New Zealand, Australia and USA. Import partners are New Zealand, Australia, Fiji, USA and China. Tourism is the second source of hard currency earnings; however, the country is extremely dependent on foreign aid and remittances from overseas Tongan communities to offset its trade deficit. GDP per capita is T\$2,200, which is slightly lower than the neighbouring islands of Fiji and Samoa.

2.1 Primary Productive Sectors

2.1.1 Agriculture

13. Agriculture and fisheries have remained the primary productive sectors in Tonga and contributed significantly to the kingdom's economy as a major source of food, cash earnings for families, employment opportunities, foreign exchange and GDP. About 91 % of farmers are classified as either subsistence or subsistence with cash crops. In the year 2001/2002, agriculture contributed 27.7% of the GDP comprising the highest contributor to the economy. It bypasses manufacturing activities (4.6%) commerce, restaurants and hotels (14.2%), construction (9.3%), finance and other services (17.5%), government services (17.2%), transportation and communications (7.6%), electricity and water (1.9%).

14. Until 1985, agriculture, forestry and fisheries were all incorporated into what was called the Ministry of Agriculture, Forestry and Fisheries (MAFF), one of the government principal ministries. As fisheries increasingly became a significant contributor to the kingdom's economy and in order to extend its services to cater for Tonga's vast area of exclusive economic zone (EEZ), a separate ministry was established - the Ministry of Fisheries (MOF). Forestry's contribution to Tonga's economy is insignificant and thus remains under the ministry now known as the Ministry of Agriculture, Forestry and Food (MAFF).

15. MAFF is under the control of the Minister of Agriculture, Forestry and Food and has 6 main divisions, namely the Corporate, Research and Extension, Quarantine and Quality Management, Forestry, Livestock and Food divisions. These divisions reflect the main functions and services of the entire ministry. The Corporate division, located at the main MAFF headquarters is responsible for the overall administrative activities of the whole ministry in terms of financial management, policy and planning, and human resource management. All financial matters and management activities are handled in this division. A major restructuring of the Ministry in 1998 saw the Research and Extension divisions merged into one to facilitate collaboration. Most technical works are carried out in this division where agricultural research is dominant. Farm technologies are explored through the use of appropriate agricultural technology. Experiments and field trials are carried out in various agricultural systems that would facilitate the development of agriculture, increase yields and generate higher incomes for the growers.

16. The Quarantine and Quality Management division is an important trade entity within the country. Its main aim is to protect Tonga's shores from exotic living pests and diseases that might become threats to Tonga's agriculture and environment. Such a division is also a requirement from trading partner countries as it has the authority to state that exports are free from pests and diseases.

17. The Livestock Division deals with all livestock management and provides assistance to livestock farmers in the form of training. This division also provides free livestock health

treatment services and is responsible for protecting domestic livestock from exotic diseases and therefore has quarantine services functions for animals and animal products.

18. The Food Division has been a very recent development and is responsible for exploring food processing techniques of local food products and controlling quality of food hazards.

19. Within the economic productive sector, agriculture has been the dominant sector with a higher percentage of the population actively involved. The 2001 Agricultural Census revealed 61,186 households were involved in agriculture, with an average of 51.9% males and 48.1% females in the different agricultural systems including subsistence farming which is practiced mainly in smaller islands and remote areas of the main islands, semi-commercial and fully-commercial farming, are practiced mainly in the main islands of Tongatapu and Vava'u where there is easy access to transportation and markets. In terms of farmers' age, 36.7% were 15 years of age or below and 55% between 15 – 59 years, and 8.8% were 60 years or older. This indicates that younger age people have started to look to agriculture as their principal income source. Higher percentages of young people are actively involved with agriculture while a decline is noted as people approach old age.

20. A high percentage (58.2%) of the farming population engages in subsistence farming which indicates the high proportion of the population that depends on their farm for food. Only 39.3% grow excess crops for food and for cash earnings. However, the portion of commercial farmers is at 2.5%, indicating that only few people truly make their living from agriculture (Annex 2).

21. Imports of agricultural supplies as well as exports of agricultural commodities are carried out by the private sector. Exporting companies have a close relationship with MAFF on matters related to production and post-harvest handling of produce. For example, a private company first introduced squash pumpkins for the Japanese market. This would have failed, but together with a lot of research and advice by MAFF on this new crop it has turned into a multimillion-dollar industry for Tonga.

22. Agriculture as well as fisheries activities is supported by regional and international Institutes such as the Secretariat of the Pacific Community (SPC), Food and Agriculture Organisation (FAO) and Australian Centre for International Agriculture Research (ACIAR) Technical Centre for Agricultural and rural co-operation (CTA) with funds as well as technical support and information.

2.1.2 Fisheries

23. Fisheries in Tonga is a separate Ministry under the control of the Minister of Fisheries and has the objective of increasing the effectiveness of the living aquatic resource sector's contribution to the sustainable development of Tonga. It has about 90 staff members with some placed throughout the main island centres. Only 32.6% of the active population is involved in fishing despite Tonga having a vast area (about 700,000 km²) of EEZ. This has been attributed mainly to lack of proper fishing equipment and boats for commercial deep-sea fishing. Most local fishermen can only access shallow water and reef fishing. Registered foreign vessels which sell their catch in overseas markets make up more than 50% of those that carry out pelagic fishing. Tonga is party to the Pacific Tuna Commission with its Headquarters in Ponape.

24. Two fishing companies, namely Alatini Fisheries and Sea Star Fishing Company Ltd. are the main exporters of fresh fish and other marine products. Seaweed farming as well as harvesting from the wild is a new and fast growing industry run by four private sector companies. All seaweed is semi processed and exported to Japan

25. Fishing equipment is supplied to local fishermen mainly by EM Jones Stores and FIMCO Store. Equipment includes fishing nets, lines, hooks, spears, diving gear, etc.

2.1.3 Forestry

26. The Forestry Division is part of the Ministry of Agriculture, Forestry and Food. Its main objective is to facilitate the conservation of local forest areas, promotes the planting of trees and agro-forestry systems, local fruit trees, coconuts, traditional and medicinal plants. There are not much natural forests remaining in Tonga, which is estimated to be between 3000 – 8000 hectares. The Government owned pine plantation of 750 hectares on the island of Eua is currently being harvested and milling is confined to this and coconut timber. There is no export of timber, except for about 100 tons of sandalwood exported annually

27. There is a renewed interest on replanting of culturally important and medicinal plants. The production of seedlings for this as well as of fruit trees make up the main activities of the Forestry Division of MAFF. Seedlings of these plants are sold to the public at a low price to encourage its planting.

3. OVERVIEW OF INFORMATION AND COMMUNICATION MANAGEMENT ISSUES: CAPACITY, SERVICES AND NEEDS

3.1 Information and Communication Management Capacity

28. Before the splitting of Fisheries from the Ministry of Agriculture, Forestry and Fisheries (MAFF) in 1985, the information and communication activities were under the Extension Division. The Ministry of Fisheries (MOF) has since set up its own information and communication channels. Agricultural information and communication activities remained with the Extension Division in MAF, until 1998, when there was a major organizational restructuring to merge the Research and Extension Divisions into one. Realising the significant roles of information as the vital link between the research and extension, the Information Section was established at the MAF's Vaini Research Station (VRS), as one of the 4 major sections of the Research and Extension Division (RED). Forestry information is handled together with other agricultural information as a function of the MAF Information Section.

29. The Extension Section brings research results to the farmers. The extension worker is the main source and in some areas, the only source of agricultural information for farmers. Extension centres are located at each of the main districts, and each district forms its own District Agricultural Committee. These committees play a vital role in getting information to farmers through the organisation of village meetings together with the agricultural extension worker and also through the informal kava circle where information can be given over a bowl of kava.

30. The MAF Information Section was established under the Research and Extension Division. With its own information and communication management policy, it is divided into 3 main units. Eight staff are currently working full time in this section where most of whom have no formal training in information services, except for attending various short training courses in media and publication locally and overseas. Staff members have a substantial agricultural background but lack the quality required for information services. It is apparent that staff members need specialized training on specific information services (Table 1).

Table 1: MAFF Information Staff Capacity and qualifications

Job Title	Qualification
Head of Information Section	B.Sc (USP); M.Sc. in Agr. Sci. (Denmark)
Assistant Head of Information	B. Agr. Sc. (USP)
Publication Officer	Dip. in Agr. (Tonga)
Radio Programmer	Dip. in Agr. (Tonga)
Graphic Designer	Trade Cert. in Graphic Design (Fiji)
Radio Programmer	PSSC
Computer Operator	Dip. Agr. (Tonga)
Librarian	Cert. in Librarian (USP)

31. The MOF Information section is under the Personnel and Administration Division and has 6 staff (Table 2). Obviously, there is a lack of the required skills essential for the information services, which consequently hinders the advancement of the information services within the productive sector.

Table 2: MOF Information Section Staff Capacity qualifications

Job Title	Qualifications
Head of Information Section	Dip. in Info. Tech. (Australia)
Acting Head of Information Section	PSSC
Computer Operator	PSSC
Media	PSCC
Media	Dip. in Comp. Sci. (Tonga) Dip. in Info. Sys. (Tonga)
Librarian	PSSC

32. A key factor that could have contributed to the success of the information activities is its annual budget. MAFF and MOF have an annual budget around T\$30,000 and T\$10,000 respectively, mainly covering operational costs. Information equipment is deemed adequate in a sense but is fragile and very costly when replaced or serviced due to limited local budget. Both Ministries have benefited from assistance provided by international and regional organizations such as the SPC and JICA, which has donated some of the equipment and tools. JICA had contributed to the development of an excellent media laboratory at the MOF Headquarters but which was ruined in a fire in 2002. It was a major tragedy for the MOF information services as only few equipment and tools were saved.

33. An ADB project provided MAFF Information Section with some equipment and tools in 1999 namely: 1 computer and printer, 1 server computer, 1 LCD projector, 3 audio mixers and 4 portable tape recorders. SPC also provided 1 computer for database management. With this donated equipment, MAF staff under the Information Section were able to repackaging information received in a more digestible version to farmers and clients.

Table 3: MAFF Information Resources

Unit	Main resources
Management	1 Computer, 1 very old vehicle
Publication and Library	2 Computers, 1 Laser Colour and 1 inkjet Colour printer 2 digital cameras (one old and one new) 1 Computer, 1 Printer, 1 Photocopier
TV and Visual Aids	3 recording tapes 1 sound mixer 1 TV Screen, 1 video and 1 DVD decks PA system 1 LCD Projector for Power Point presentation
Computer	1 Server computer

34. The telephone communication system was identified as a setback in the present location of MAFF. With only 2 lines connected to the Vaini Research Station, communications with outside world was totally hampered. Access to telephone, fax and Internet was very difficult despite a request placed with TCC a few years ago. Recently new telephone lines have been opened up at the VRS and the Information Section now has one exclusive connection line. The Internet connection was then placed on an existing computer network however the high cost of the Internet service is seen to be a problem. Although MOF had good telephone connection and Internet service, the high cost of these services (as for MAFF) limits their use. It is anticipated that with good Internet connection and access would open new opportunities to explore having a web page in the near future for both ministries.

3.2 Agricultural Information and Services

34a. Rapid development in communication technology has been reflected in improved information services. Prior to the electronic and computer technology, information services were seen to be very ineffective and slow due to great distance and isolation of island communities, which becomes a communication barrier. There were very few active NGOs, few farmer groups and association establish. Linkages between government ministries and private sector were poor. There were more farmers relying on subsistence farming with little pressure for commercial farming. Information service was inadequate and very limit, however, it was not significantly valuable due to the low economic situation of the country. As the economy of the country develops, there was also the pressure for economic activities, leading to a slow but steady shift from subsistence farming to semi-commercial and full-commercial farming. Information services become very important in such situation as to develop farming technologies. More people involve in farming activities and farming groups and associations were established in village level, and national groups were formed. Information services become very important for its role in economic development of farming activities.

35. Most technical information gathered comes from local sources such as local farmers and fishermen, research institutions, annual crop survey reports and on-going project reports. Technical information is predominantly shared at village level in social events such as meetings, kava parties, and formal training courses conducted by the MAFF extension services. Farmer contact and information gathering is impeded by the lack of resources and facilities. For example, MAFF Information Section's transportation currently relies on an old land-cruiser, which is more than 15 years old and frequently breaks down.

36. The MAFF library is a significant source of agricultural information and is available to all clients. Books and library documents can be borrowed for a specific period. Many extension workers and students are seen to use the library frequently. MAFF library computer is installed with Pro-cite software, database software specifically used for library classifications and management. The library subscribes to technical research and survey reports from regional and international organizations, scientific journals and even electronic CD-ROMS. Tropag & Rural and CAB CD-ROM are subscribed to on a monthly basis. The library has yet to establish a link to other regional libraries in order to facilitate book loans and the exchange of library information.

37. The use of media and communication technology is seen to be very effective in disseminating information in Tonga, despite the limited skills acquired by staff and the expensive costs related to high technology media equipment. Tonga's scattered and remote islands are a challenge for information dissemination services. Printed materials, including text books, posters, leaflets, fact sheets, technical reports, technical bulletins, etc. remain the most used and simple form of conveyance and communication with clients. More than 80% of the information is documented in printed materials such as leaflets, fact sheets, bulletins, and reports. Both MAFF and MOF have a library to manage these printed materials and make it available to all persons needing information.

38. MAFF Information Section produces leaflets, fact sheets and newsletters, which are designed using Adobe PageMaker and Adobe Photoshop software. Technically, it is recognized that there is a lack of mass publication due to the lack of knowledge in the pre-press procedure before sending to printing shops for mass printing. Leaflets and printed material production is limited to the effectiveness of the current printers and the expensive costs of coloured ink and toners. Printing companies have specific requirements for picture quality and colour management before printing.

39. Radio broadcasts have been a long-established tradition in Tonga and are considered to be a good source of agricultural information. All outer islands can be reached through radio broadcasts however; it has the disadvantage the predominance of Tongatapu-based radio programmes. None of the outer islands have recording equipment to record radio programmes and the budget does not allow information officers to travel frequently in order to record radio programmes from outer islands. Radio programmes are in the form of farmer interviews, panel discussions, and advisory packages. MAFF has 5 fifteen minute radio programmes every week, of which one focuses on women's development programmes, one on local and overseas market information while 3 are on general agriculture. MOF has 2 radio programmes per month.

40. The recent establishment of 2 new television stations, the Trinity Broadcasting Network (TBN) and TonFon, together with the two prior stations, Tonga Broadcasting Commission (TBC) and Oceania Broadcasting Network (OBN) brings the total TV stations to 4 in Tongatapu. TV is seen to be an opportunity for an efficient way of disseminating information. TBN is strictly for religious fellowship programmes and is run exclusively from overseas sources. TonFon TV service only broadcasts foreign commercial programmes without local programmes, while both TBC and OBN have local and commercial programmes. TBC is owned by the government but operated by a government appointed board. A foreign businessman privately owns OBN. Unfortunately, current television broadcasts are restricted to Tongatapu and Eua due to long distance transmission problems. A recent survey indicates that 75 – 80% of persons in Tonga own or has access to television (Tohi, K. 2004). The survey also indicates that of all TV owners of Tongatapu, 95% have access to TBC programmes and 5% for OBN only. Only 1% of those having access to TV are also access to TonFon. TonFon is a pay-TV hence the low viewing rate. Only those with strong interest in sports, pay for the TonFon service. OBN has established a station in Vavau and has its own commercial programmes. Television is seen to be a very effective means of conveying information in Tonga. Currently, MAFF has 2 TV programmes broadcasting with on the TBC TV station, each month.

41. A Computer Unit was established within the Information Section, to maintain, support, and control the use of computer network resources at the MAFF Research and Extension Division (RED). A computer network has been set up but is rarely used by the staff. The problem is that not many staff members know how to use the network to share, exchange and back-up data onto the server. Most staff use computers as stand alone terminals. Furthermore, Internet access has been handicapped by a lack of telephone lines and few people know how to use the Internet. Each section has its own Internet and e-mail account and used to use the sole available telephone line. If, however, the telephone line was being used to surf the Internet or to send e-mails, other staff members could no longer access the outside world. This problem has been solved recently with the connection of two new telephone lines with one dedicated to Internet access. Such network connections should facilitate the sharing of resources and avoid extra expenditure on individual software and hardware purchases. Since early 2004, all MAFF extension offices throughout Tonga have Internet connection.

42. The MOF information service has an almost similar structure to that of MAFF but with fewer staff members. Prior to the fire in 2002, MOF had recorded some training videotapes with the assistance of JOCV volunteers. Information is passed through similar channels as MAFF does. MOF has acquired a new set of equipment and started rebuilding its information service.

43. The newly established MAFF Information Section has yet to see formal Policy Guidelines for its activities. This is a serious issue in Tonga despite its being highlighted during the first Meeting of Ministers of Agriculture of Pacific ACP Countries in 1996 (Walton 2000). There have been major concerns recently after the amendments to Tonga's constitution regarding the legalisation of newspaper and information services in Tonga. All

newspapers and printing documents for the public are wholly government controlled and every publishing agent has to apply for a permit to publish any printed materials. MAFF publications are also subject to such government laws.

44. When looking at how the current information needs are met at these levels, one sees that most Government ministries received information directly from annual reports, local research, survey reports as well as regional and international organizations statistical and other reports. They have stronger linkages to regional and international organizations and hence receive information directly from these organizations. The government level has better access to Internet and intranet systems. Government ministries are highly interested in both statistical and technical information such as trade figures, data from other ministries, market information. The village level group focus more on technical information including agricultural chemicals, pest and disease control, chemical weed control, fertilizers, irrigation, local market supply and prices, also there is strong interest on daily weather reports.

45. The national level group (this refers to a working group or organisation, either government or non-government, which works or acts on a national capacity e.g. National Food Committee, etc.) receives information largely from Government ministries and other essential information is obtained from regional and international organizations as well as other sources. The village level group relies primarily on government ministries for their information. MAFF and MOF are the dominant information sources for these village level groups through their respective extension service linkages. MAFF Extension services have set up village as well as District Agricultural Committees (DAC) throughout Tonga. These committees act as central point of contact between MAFF and farmers. The system is a success and has worked well under Tongan conditions. Sharing of information, particularly technical information, between partners within the group is often seen at this level in terms of meetings and informal discussions. The village level group has less access to the Internet for information capture, but the information received largely comes in the form of printed materials. The village receives Internet information through family members who either work for the government or one of the bigger firms in town. Information is also acquired through radio and television broadcasts. Sometimes specific technical information requirements cannot be met and considered unavailable, particularly with local cultural information that is inherited through skilled farmers.

3.3 Needs Analysis

46. The information needs of all partners in the agricultural, forestry and fishery sectors were assessed through group meetings, face-to-face discussions and a questionnaire survey of relevant personnel from the government, NGOs, private sector enterprises, farming groups, youth groups, church groups and women groups in Tongatapu, Vavau and Haapai. The results categorized the working groups into 3 levels. They are the village level, the national level, and the government level groups. The village level group consists of village farmers, women, youth, and church groups. These groups operate mainly in village communities and information use focuses on its group members only. The national level groups consist of local NGOs and private enterprises, which operate more or less in a national manner. It has wider range of clients than the village level group. The Government level consists of all government ministries.

3.3.1 Information needs

47. The information needs of the different groups differ depending on the scope of their operation and interest. The government sector has wider interest to serve, and on a directive basis. Its information needs are mostly on statistical data and complete project reports. Information from research and survey reports is mostly required at government level for

policy regulation guidelines. Local statistical information and data are required for planning and policy development. However, government required improved technical information for its development strategies. It requires technical research information from regional and international sources for comparison with local activities and for new technological innovations. Sharing of this information from abroad between ministries is a weak link and is often overlooked, leading to relevant ministries not being informed of some important issues. The office of the Prime Minister has set up an Information Unit to help information flow within government and across the government to the public.

48. The national level groups need information for their own development as well as for that of their clients. This group needs from government information on policies, new regulations, development issues and technical information that may directly or indirectly affect their operations.

49. At the village level group, they mainly require local technical and market information. The type of market information required concerns the availability of crops and prices in local and overseas markets while exporters to overseas market need information on the kind of produce required. Their technical information need is based mainly on procedural information i.e. "how to". However, they may also be interested in detailed descriptive information with regards to a particular problem. This is indicated by the high demand of training needs by the various village groups; farming, fisheries, livestock, youth, women, and church groups. They also highlighted the need for technical agricultural information such as: safe use of agricultural chemicals, chemical weed control, fertilizers, irrigation and soil improvement.

50. All three levels expressed the need for up-to-date information as some of the local information is out of date and comes from old publications.

3.3.2 Capacity-building needs

51. More than 80% of the persons surveyed stated that poor staff skills in information and communication management and a lack of resources is the dominant feature of information services in Tonga. It is necessary to explore the level of training required at each institutional level, with regards to the resources they currently have. MAF Information service is staffed by persons trained in agriculture; there is need for specialised training in IT. Training can be in the form of formal study for a qualification, secondments or visiting specialists. Libraries in Tonga house a wealth of information however their usefulness is extremely limited by the lack of trained staff. The library service is a very important source of information in Tonga and training of library workers is critical for its effectiveness. SPC is assisting MAF to set-up its library and there are plans to link the MAF and the SPC library. Comments on how small the return over the years from assistance given by SPC, CTA and PRAP to MAF library and the analysis that, typically, too much is expected of ill-trained or untrained staff and that they are managed by individuals with limited awareness of the role of ICM are fully supported here. This highlights two important points: (1) the need for training of involved staff on information and communication management; (2) assistance by donors and others involved in capacity- building projects should start and build from the level of local staff and thus consolidate basic skills on ICM before moving up to other areas.

52. The increasing volume of materials in electronic form poses handling and storage problems with untrained information management staff. Also, the hot and high humidity condition is a major challenge for storage. Proper storage of these materials as well as of sensitive equipment in a temperature and humidity controlled area is critical.

53. All TV programmes of both MAFF and MoF are limited to panel discussions and there is a need for more variety to make them attractive. More field pictures and less talking will go a long way. The subject matter of these programmes varies from a disease outbreak on

watermelon to the agricultural show and the opening of the new Agriculture library at Niua. This is an area that needs to be developed by training MAFF information staff to produce effective TV programmes. Staffs need to be trained how to take pictures in the field and edit them to produce professional TV programmes. These TV programmes could then be broadcast on local TV stations and be copied onto electronic media for storage and for distribution to outer islands that do not have TV access.

54. Limited availability of essential and appropriate resources impedes the smooth flow and proper management of information. Resources are either donated by donors or are privately funded by each institution. A vital linkage between these institutions can be made if there is an efficient communication structure in place. Local communication companies, TCC and TonFon, have plans to and started to improve their technology services to meet those standards required for efficient communication. Each of the larger institutions should and some have started to establish local area network (LAN) in order to share resources and make it easier to link to other networks and to share information. For example, the Ministry of Finance has established linkages with all other ministries for financial management purposes, however there is opportunity to extend this network to include sharing of other information amongst government ministries. MAFF headquarters as well as the Research and Extension Division based at the Vaini Research Station each has its own network. Although there are plans to link these networks, it may still take some time before this happens.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

55. Government institutions have the common setback of a lack of skilled staff and appropriate resources for information services. Developing staff capacity through training and the recruitment of information specialists can facilitate a more efficient information system. Overseas experts and information specialist consultants can work in government institutions that are involved in information services. This can be in the form of overseas volunteers' scheme and programmes. Japanese JOCV and US Peace Corps have been actively providing volunteers to assist with the development of various projects including information in Tonga. While CTA however, cannot work directly with these organisations, as both do not have ACP-EU mandate, possible synergies may be examined.

56. As national and village level groups primarily depend on government institutions for information, appropriate training strategies are required to strengthen the current capacity of government institutions' information services. A strategic plan for formal training in information services is definitely required. However, on-the-job training and apprentice jobs at regional or overseas institutions may be effective to meet training needs in the short-term. Government institutions annual budgets need to be increased to cater for the increase in services they are currently responsible for. This seems to be a common problem throughout the Pacific. Perhaps other Pacific Island Countries may support a regional approach for an EU funded project. The present local budget is not sufficient to cover present operational costs and more funds are needed for new resources. There are few institutional libraries on the outer islands to serve information needs; moreover, they have very poor linkages to other libraries. There is a need for a good library service through improved linkages to regional and international libraries.

57. There are poor linkages between current communication channels. Besides being expensive, telephone line connections and services are inadequate to facilitate an efficient communication, particularly on outer islands.

4.1.1 Current information needs

58. The study identified the following as the top seven priority areas of information needs at the village, national and government levels:

- Statistical data – These are needed at government level for various reasons including planning and policy formulation. Data are stored within each government ministry; however these are not readily available for other ministries. Sharing of information with other ministries is often difficult at this level as some ministries tend to regard certain kinds of information as their own property. Export data on agricultural commodities are shared between ministries but is not readily available.
- Marketing information on new and possible markets, prices both local and overseas, seasonality, supplies, quarantine requirements, etc. This information helps the farmer make informed decisions what crop to plant when and how much of each crop to plant.
- Agricultural chemicals – types to use for a particular pest or disease. Their safe use including the proper way of mixing and applying has economic effects as it will reduce wastage of an expensive input. The waiting period, protective gear (current

available gear is too hot) and what are the alternatives, obsolete chemicals how to dispose of them safely, how to dispose of containers (should they be burned, buried etc.,) are safety issues and farmers are starting to consider risks involved.

- Chemical weed control – with the increased cost of labour, use of herbicides increased and information on cost related issues such as types to use, rates, timing and safety are needed.
- Fertilizers and their proper use – increased interest on cash cropping and lower yield due to reduced fallow periods and lower soil fertility has led to increased interest on fertilizer use.
- Irrigation – cash cropping has led to the increased need to maximise production. During seasons of low supply and high prices, usually the hot dry periods, farmers tend to irrigate. The cost of irrigation is high and farmers need information on cheaper methods and its proper use.
- Soil improvement – intensive cropping has led to poor soil condition and low yields. Farmers have noted this and need information on better management, cover cropping, organic manure, etc.

4.1.2 Current capacity-building needs

59. With regard to capacity–building needs, the following has been identified:

- Staff training – there is a need for formal specialised training in IT to the level of university qualification, on-the-job training in the field of information systems management and use also on library management by an experienced trainer, attachment to a suitable organisation overseas, or through participation in short IT and library training courses.
- Equipment – the MAFF Information Section, which is the main source of agricultural information for farmers, is in need of critical equipment such as video cameras, tape recorders, computers, multimedia projector and designer software packages and other software programmes and proper storage for sensitive equipment.

4.2 Recommendations

4.2.1 General recommendations

60. The recommendations made here are those needed for improvement of agriculture information services in Tonga. Although some are beyond the scope of CTA’s assistance, nevertheless they are considered critical for development of the information service. Implementation of most is the responsibility of the Government of Tonga, however, CTA may assist in areas where it can and relevant to its mandate.

- Strengthen government institutions that facilitate information production and dissemination
 - Have appropriate training for staff in information services, either formal or secondment to overseas institutions to operate and manage sophisticated equipment and to produce attractive information packages for farmers and stakeholders. Training should be at appropriate level for skills development.

- Recruit overseas consultants or volunteers that have information specialist background to assist in the development of information services. This is normally too expensive for developing countries and assistance is needed from outside donors.
- Supply the MAFF Information Section with appropriate technical equipment to effectively carry out information services. Sourcing these locally will take too long as it has to compete with other needs for the small budget allocation.
- Establish an efficient network system (LAN) in government institutions to facilitate sharing of information and resources.
- Develop a strategic policy for all information activities;
- Establish own TV programmes and video productions.
- Regularly update information.
- Improve communication systems in Tonga. TCC and TonFon, should improve their services as they provide the communication channels:
 - Improve access to internet and e-mails.
 - Improve telephone and fax communication channels in outer islands.
 - Reduce the high costs of internet and e-mail.
- Strengthen linkages at all institutional levels and with external organizations:
 - Conduct more technical trainings based on information needed for village and national level groups as well as for the information and extension services.
 - Establish a common web page in the Internet. The village level groups can access to a web page where most of the information with regard to appropriate institutions should be hosted. National and Government institutions can afford to have their own web pages.

4.2.2 Specific recommendations for CTA

61. The study recommends the following, which relates to each of CTA's three operational programmes.

62. For INFORMATION PRODUCTS AND SERVICES:

- CTA should increase its distribution of its publications in Tonga and to assist MAFF Information Section to publish local materials.
- CTA may assist MAFF Information Section with needed equipment so as to improve the services it provides via e.g. QAS.
- CTA should assist the MAFF library with materials such as books and publications.
- CTA should assist with the set up of an information network to link government level, national level and village level groups

- CTA to assist with the set up of a web site that would facilitate posing information into the internet

63. For COMMUNICATION CHANNELS AND SERVICES:

- CTA to continue providing assistance towards regional meetings, workshops and study visits of stakeholders.
- CTA to continue the funding for mass media production and distribution of agricultural information and activities.

64. For ICM SKILLS AND SYSTEMS:

- CTA should provide assistance to convene a regional workshop/training to help ministries of agriculture design appropriate information and communication management policies and strategies.
- CTA could support training to increase the information and communication management capacity of all MoF and MAFF Information and Extension staff.
- CTA should assist the MAFF library with the training of a librarian.
- CTA should support linkages at institutional levels and with external organizations such as advice on setting up of LAN, WebPages and other networks.

5. REFERENCES

- ACP-EC Technical Centre for Agricultural and Rural Cooperation 2001. Strategic Plan and Framework for Action 2001-2005. Wageningen, The Netherlands.
- SPC Land Resources Division 2004. Strategic Plan 2005-2008. Suva, Fiji
- Technical Centre for Agricultural and Rural Cooperation 2003. Terms of Reference. Assessment of Agricultural information needs in African, Caribbean & Pacific (ACP) States, Phase 1: Pacific
- Technical Centre for Agricultural and Rural Cooperation 2000. *Annual report 2000*. Wageningen, The Netherlands.
- Technical Centre for Agricultural and Rural Cooperation 2001. *Annual report 2001*. Wageningen, The Netherlands.
- Tohi, K. 2004. Customer Satisfaction Survey in both Radio and Television in Tonga. M.Sc Thesis. Unpublished.
- Tonga Government, Agriculture Census: 2001
- Tonga Government, Ministry of Agriculture and Forestry 2002. *Annual Report 2000*.
- Tonga Government, Ministry of Agriculture and Forestry 2002. *Annual Report 2002*.
- Tonga Government, Ministry of Finance. *Budget Statement for year ending 30/06/2004*
- Tonga Government, Ministry of Fisheries 2003. *Annual Report 2003*.
- Tonga Government, Population Census 1996
- Tonga Government, Statistic Department. 2002. *Annual Trade Report 2002*.
- Walton, P. 2000. Rural development stakeholders in Pacific ACP countries: their roles, information needs and response capacities. Proceedings of a CTA seminar on Information for agricultural and rural development in ACP countries: emerging stakeholders, new media, and priority themes. Paris, France 29 – 2 June 2000.

ANNEXES

ANNEX 1. TERMS OF REFERENCE

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 agriculture¹.

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. 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

¹ 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.

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, traditionally, the Pacific and Caribbean regions have not received sufficient attention in CTA's programme and activities. This is, for example, highlighted in the statistics on the number of individuals and organisations which receiving CTA publications or participating in workshops and training courses. Furthermore, the admission of 6 new Pacific member states under the Cotonou Agreement means not much known about them, hence the need to develop CTA intervention strategy and provide more targeted assistance.

Finally, various national and regional partners with whom CTA has had a long-standing relationship have requested the current study in order 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 country² basis and may give rise to more in-depth studies as and when needed in the future.

² Out of 30 countries comprising the Caribbean and Pacific regions, 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.

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 the 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
- 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 Pacific 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 two months after contract signature by CTA
- Final report due two weeks after receipt of comments from CTA.

8. Expertise needed

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.

Mr. Peter Walton will ensure the regional coordination and lead a team of local consultants to be identified per country³:

Local Consultant	Country
Mr. Nga Mataio	Cook Islands
Ms. Makelesi Tavaiqia	Fiji
Mr. James T. Movick	Federated States of Micronesia
Dr. Mareko Tofinga	Samoa
Mr. Pita Taufatofua	Tonga
To be identified	Vanuatu
To be identified	Papua New Guinea

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.

9. Implementation schedule (CTA)

- Preparation/Finalisation of ToR; Identification/ short-listing of (potential) consultants; Call for offers (15 September – 10 November)
- Selection of consultants: (11 – 15 November)
- Contractual arrangements/ briefing (16 November – 10 December)
- Start date of contract: 11 December 2003
- Implementation period 11 December 2003 – 9 April 2004
- End date of contract: 10 April 2004

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 & Pacific region
- Documents on products & services provided by CTA

³ Final list of countries to be confirmed by 31/01/04.

11. Role of Regional Coordinator

- Attend briefing meeting at CTA
- Review the terms of reference
- Finalise questionnaires and methodological approach after due consultation with CTA Team
- Draw up briefing notes and guidelines for local consultants to ensure accurate and consistent application of the agreed methodology in data collection
- Responsibility for the implementation of the study and interpretation of technical queries to local consultants
- During the study, monitor and provide technical assistance to the local consultants
- Review preliminary country reports and findings and send comments back to local consultants
- Coordinate and ensure consistency of country reports
- In conjunction with the CTA Team, prepare the overall report taking into account the findings and recommendations of all the Pacific country reports (table of contents to be agreed by 31/01/04).

12. Role of Local Consultants

- Familiarise themselves with background documents received from CTA; including the Terms of Reference
- Conduct interviews and gather in countries specified in the contract
- Undertake field visits in countries specified in the contract
- Draft initial country reports and send to Regional Coordinator for initial comments
- Based on comments received from Coordinator, revise country reports and send draft report to CTA
- Finalise country reports based on comments and observations received from CTA and send back to CTA

13. Role of CTA (Overall coordination CWE, assisted by TVI)

- Establish contacts with the Regional Coordinator and the ACP Local Consultants
 - Draw up Terms of Reference and other relevant documents
 - Invite the Regional Coordinator for Briefing Meeting
 - In consultation with the Regional Coordinator, draft questionnaires
 - Provide relevant background documents to the Team
 - Draft budget and discuss contractual obligations with the Team
 - Overall responsibility for the supervision and implementation of the studies
 - Appoint the Regional Coordinator and the ACP Local Consultants
 - Bear the agreed costs of expenditure in respect of the evaluation (economy class tickets for approved visits to CTA's Headquarters, hotel accommodation and subsistence allowances during briefing meeting, or during agreed and specified field visits)
 - In conjunction with the Regional Coordinator, prepare the overall report taking into account the findings and recommendations of all the Pacific country reports (table of contents to be agreed by 31/01/04).
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ANNEX 2. COUNTRY PROFILE – [TONGA]

2.1 General Agricultural Profile

2.1.1 Size of agricultural population (male, female, youth)

Table A2.1 Agricultural active household population by sex and age group: 2001

Division District	All Household Members			Under 15 Years Old			15 to 59 Old			60 Years Old and Over		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Tonga	61,186	31,774	29,412	22,430	11,927	10,503	33,401	16,881	16,520	5,355	2,966	2,389

Source: Agriculture Census: 2001

2.1.2 Farmed Land, forests, fishing areas

Farmed Land

Table A2.2 Number and area of holdings (acres) of agriculturally active households, by location of holdings: 2001

Location of Holdings (Division/District)	Total Holdings		Agriculturally Active Households					
	Number	Area	Subsistence Only		Subsistence with Cash Cropping		Commercial Crop Producer	
			Number	Area	Number	Area	Number	Area
Tonga	10,328	66,956	6,013	28,813	4,061	31,768	254	6,375

Source: Agriculture Census: 2001

Forests

3,000 - 8,000 hectares of natural forests
750 + hectares of forest plantations.

Fishing areas

700,000 sq. km.

2.1.3 Agricultural Systems (Refer to Table A2. 2, above)

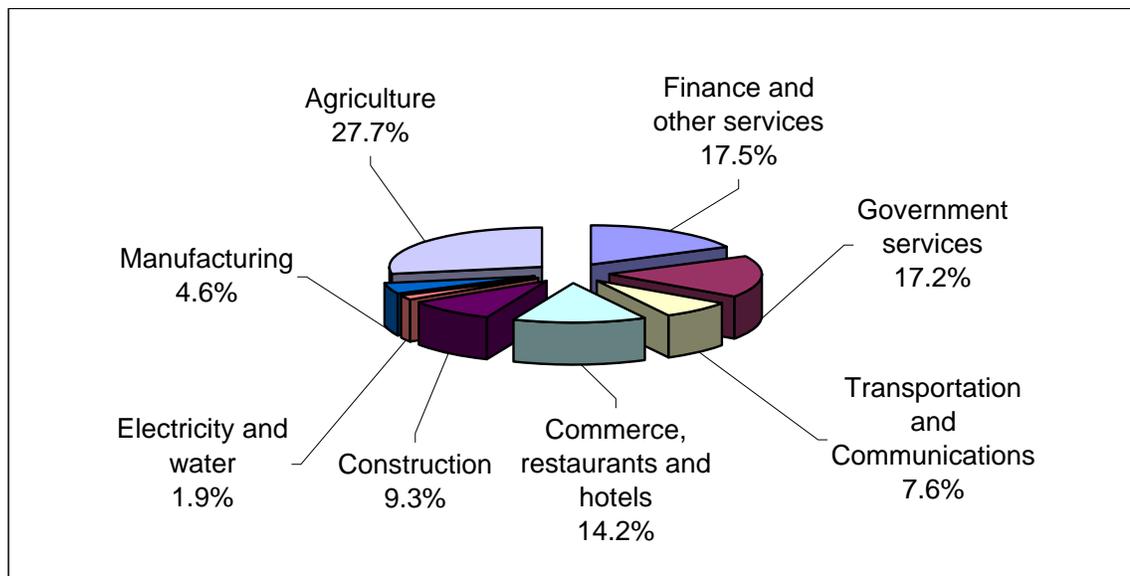
Subsistence only - 43.03%
Subsistence with Cash Crops - 47.45%
Commercial Cropping - 9.52%
Total - 100.00 %

2.1.4 Agriculture in the Economy

Agriculture contributed to 27.7% of GDP for the year 2001/2002. This shows a slight improvement from the average of 26% over the previous 10 years, a period of fairly stagnant economic growth. However, the slight increase in 2001/2002 is just a reflection of increased squash exports in that particular year. The general trend has been declining since the 1970s mainly due to the increased contribution from tourism, services and other industries.

Fig. A2: Sectoral Contribution to Real GDP at factor Cost for the year 2001/2002.

GDP at factor cost = T\$245.6 million



Source: Budget Statement for year ending 30.06.2004

2.1.5 Main agricultural produce and secondary products:

Squash and vanilla account for about 80% of agricultural exports. The balance is made up of kava, root crops, coconuts, nonu, sandalwood, aloe vera, vegetables and watermelon.

2.1.6 Main export markets

The main export markets are Japan, USA, France, Europe, Australia, New Zealand and American Samoa. A detail on percentage of exports going to each market is not available.

2.1.7 Trade agreements that include agriculture

The trade agreements that include agriculture are as follows:

- Codex, Food standards are being developed as required by Codex.
- W.T.O, Tonga is yet to become a member.
- Bilateral Trade agreements with New Zealand, regarding specific Agricultural Commodities e.g. Vegetables, watermelons, etc. The Agreements specify quarantine requirements regarding import of these commodities into New Zealand.

2.1.8 Sectoral policy related to agriculture, fisheries and forests – main points

- There is a sectoral policy on quarantine exports and imports to prevent the entry of new pests and diseases that may be hazardous to Tongan agriculture and to maintain trading with overseas partners.
- A harvest policy has to be maintained to preserve local marine creatures and forest species that are almost endangered. Fishing for turtles is only at specific season during the year. Catching of lobster fish less than 20cm long is illegal. Sandalwood

harvest is controlled to discourage complete harvesting since the rate of harvesting is quite high in comparison with the rate of replanting due to economic pressure

- Importing of agricultural chemicals is well controlled as to maintain low level of toxicity and damages to the environment due to an increase agricultural activities

2.2 Socio-economic profile

2.2.1 Demographics: Population

by gender

age group

Province/district

Table A2.3: Total population (by Province) by sex, by age group, and number of households, 1996.

Div. / Dist./ Village	Total	Male	Female	0-4	5-9	10-14	15-19	20-24	25-34	35-49	50+	20+	No. of house- holds
Kingdom of Tonga	97,784	49,615	48,169	13,479	12,258	12,521	10,895	8,722	13,675	12,306	13,928	48,631	16,194
Tongatapu	66,979	33,753	33,226	9,235	8,126	8,488	7,746	6,423	9,603	8,317	9,041	33,483	10,796
Vavau	15,715	8,055	7,660	2,179	2,045	2,131	1,643	1,149	2,089	2,018	2,461	7,717	2,728
Haapai	8,138	4,109	4,029	1,143	1,136	1,108	742	607	1,014	1,068	1,420	4,109	1,469
Eua	4,934	2,624	2,310	645	642	626	566	417	725	628	685	2,455	820
Niua Toputapu	1,283	673	610	176	198	179	135	78	127	178	212	595	242
Niuafoou	735	401	334	101	111	89	63	48	117	97	109	371	139

Source: Tonga Population Census 1996. (Tonga has a ten yearly population census and the latest population census was in 1996)

Table A2.4: Total population by sex and five year age groups.

SEX/AGE GROUP	TOTAL	TOTAL	TOTAL
	Male and Female	Male	Female
All Ages	97,784	49,615	48,169
Less than 5	13,479	6,987	6,492
5 to 9 years	12,258	6,539	5,719
10 to 14 years	12,521	6,482	6,039
15 to 19 years	10,895	5,609	5,286
20 to 24 years	8,722	4,445	4,277
25 to 29 years	7,757	3,972	3,785
30 to 34 years	5,918	3,009	2,909
35 to 39 years	4,686	2,244	2,442
40 to 44 years	4,122	1,933	2,189
45 to 49 years	3,498	1,606	1,892
50 to 54 years	3,310	1,548	1,762
55 to 59 years	3,008	1,500	1,508
60 to 64 years	2,562	1,289	1,273
65 to 69 years	1,971	995	976
70 to 74 years	1,370	691	679
75 years and over	1,707	766	941

Source: Tonga Population Census 1996

2.2.2 Literacy Level and Languages

The 1996 census showed that 98.5% of Tongan and part-Tongans aged 6 years and above as literate, either in Tongan or English or both languages and only 1.5% were illiterate. The majority of Tongan and part-Tongans (72.8%) could read and write both in English and Tongan, 25.2% could read and write in the Tongan language only, and 0.6% was literate in English only. The remaining 1.4% is illiterate.

Table A2.5: Literacy of Tongans and Part-Tongans aged 6 years and above by language and by sex, 1996

	Male No.	%	Female No.	%	Total no. of persons	%
Literate:	39,794	98.4	39,224	98.7	89,018	98.5
English and Tongan	29,335	72.5	29,076	73.1	58,411	72.8
English only	225	0.6	249	0.6	474	0.6
Tongan only	10,234	25.3	9,899	24.9	20,133	25.1
Illiterate	650	1.6	523	1.3	1,173	1.5
Not reported	5	0.0	2	0.0	7	0.0
TOTAL	40,449	100.0	39,749	100.0	80,198	100.0

Source: Tonga Population Census, 1996

Table A2.6: Literacy of Tongans and Part-Tongans aged 6 years and above by language and broad age group, 1996

Age group	Total	English and Tongan	English only	Tongan only	Illiterate	Not Stated
6-9	9,680	3,574	174	5,466	464	2
10-14	12,412	11,062	78	1,202	69	1
15-19	10,793	9,969	43	721	58	2
20-24	8,595	7,740	16	759	79	1
25-34	13,327	11,400	28	1,791	107	1
35-49	11,829	8,519	41	3,139	130	0
50	13,562	6,147	94	7,055	266	0
<i>Total</i>	<i>80,198</i>	<i>58,411</i>	<i>474</i>	<i>20,133</i>	<i>1,173</i>	<i>7</i>

Source: Tonga Population Census, 1996

2.2.3 Access to Services

Health

There is a general hospital on each of the major island groups of Tongatapu, Vavau, Haapai, 'Eua, Niuatoputapu and Niuafouu. There are 6 health centres in Tongatapu and in rural areas, to deal with minor health problems, while several private health clinics in Tongatapu also serve the public.

There are also health centres situated at different locations, throughout the islands of Vava'u and Haapai.

Education

The high level of literacy – 98.5% – indicates that the population has good access to educational services. Education is compulsory until the age of 14.

Primary education is free, and primary schools are located in almost every village, throughout the Kingdom. This means that all children have easy access to primary education, until the age of 12.

Government high schools are located throughout the main island centres of the kingdom providing secondary education for the growing population. Mission high schools are also available in the main centres to provide secondary education for those not catered for by Government High Schools. The government pays a subsidy of T\$100 to the Mission High Schools, for every student enrolled, with the exception of the Mormon High Schools, which do not accept subsidies.

Electricity

The entire main island of Tongatapu has access to electricity 24 hours a day. The main islands of Vavau, Haapai, and 'Eua all have access to electricity. A few islands in the Vava'u group and Haapai islands also have access to electricity, either from generators, or from solar energy. Continuing efforts are being made through several projects to get electricity to the more isolated islands.

2.2.4 Rural Urban Drift

The incidence of rural-urban migration is significant in Tonga. As shown by the 1996 census, 12% of the population born in Tonga and who usually resided in Greater Nuku'alofa, at the time of the census were born in rural areas.

Table A2.7: Migration to Greater Nuku'alofa, place of birth and place of usual residence, 1996

	In-Migrants	% distribution	Out Migrants	Net-migrants
Rest of Tongatapu	2,462	21.09	1,437	1,025
Vavau	3,001	25.71	647	2,354
Haapai	3,654	31.31	353	3,301
Eua	739	6.33	381	358
Niuas	789	6.76	129	660
Abroad	1,026	8.79	118	908
Not stated	1	0.001	1	-
Total	11,672	100.00	3,066	8,606

Source: Tonga Population Census 1996

2.3 Media and Telecommunication

2.3.1 Newspapers, periodicals and broadcast media

There is presently no daily publication of newspapers or journals etc, in the country. All newspapers are published either weekly or monthly. Figures on the distribution of the various newspapers are not available.

1. **Tonga Chronicle**- Where Time Begins - Bilingual
 - Government owned
 A weekly paper. A column available for rural issues including agriculture, varying from half a page to two pages. Distributed locally and overseas.
 Email – chroni@kalianet.to

2. **Tonga Star** - The News You Can Trust. – Tongan
 - Privately owned.
 Published weekly. No fixed column for agriculture, but space is available if required.
 Email – tongastar@yahoo.com

3. **Talaki**
 - Private ownership. Tongan paper.
 A weekly paper. No column for agriculture. This newspaper is quite new (2004).
 Email – filo@kalianet.to

4. **‘Ofa-ki-Tonga**
 - A monthly newspaper owned by the Tokaikolo Church.
 Space is available for agricultural issues; however, this is not used up in every issue.
 Distribution is throughout Tonga and overseas countries where the church has spread.

5. **Taumu’a Lelei**
 - The Catholic Newspaper
 A monthly newspaper, owned by the Roman Catholic Church. There is no space for agricultural issues. It is distributed in Tonga and overseas to all Roman Catholic Tongan communities.

6. **Ko e Tohi Fanongonongo**
 - Owned by the Free Wesleyan Church of Tonga and published monthly. No space for agricultural issues. It is distributed both locally and overseas to all Free Wesleyan Church congregations.
 E-mail – fwctf@kalianet.to

7. **Matangitonga**
 - A monthly news magazine – private ownership. There is no set column for agricultural issues, although space is available for any agricultural issues. It is distributed in all local bookshops in Tongatapu, Vavau & Haapai.

8. **M.A.F.F. Technical Bulletin:**

 Published by the Ministry of Agriculture, Forest and Food, not on a regular basis but only when an issue is ready for publication. e.g. Technical Bulletin No. 10. is “Root Crop Production in Tonga”. It was first printed in 1989. There are also “leaflets” produced by the Information Section of M.A.F.F. on specific agricultural aspects. These leaflets are produced regularly, when problems and needs arise.

2.3.2 Radio-Stations

- (1) **Radio Tonga – A3Z – A.M. Station:** Semi – Government owned.

Broadcast for 18 hrs everyday except Sunday, when it broadcasts only for 6 hrs. This radio station is the only one received throughout the whole country.

There is a 15 minute programme everyday except on Sundays and Wednesdays by the Ministry of Agriculture, Forestry and Food. These programmes are titled “Man of the Land” and deal with different agricultural

aspects, ranging from agricultural news, advice, marketing news and information, interviews, etc.

(2) **Radio FM 88.6 Station:**

Owned privately. Broadcasts 24 hours a day and received only on Tongatapu; Favoured by the youths for the popular programmes of hit music. No agricultural programmes.

(3) **Radio FM 93:**

A Christian radio, broadcasting 24 hours only on Tongatapu; concentrating on religious programmes and music. There are no programmes focusing on agriculture.

2.3.3 Television Channels

(1) **Television Tonga**

Semi-government owned. Broadcasts six hours everyday: 5:00 p.m. -11:00 p.m. There is a regular agricultural programme every fortnight, for half an hour sponsored and conducted by the Ministry of Agriculture Forestry and Food. The programme focuses on different issues of agriculture, including the provision of agricultural advice.

Television reaches all areas of the main island of Tongatapu and 'Eua Island.

(2) **TonFon Television**

Privately owned. Broadcasting 24 hours a day, through a number of channels. It is a commercial television station, with limited subscribers, not freely available for public viewing. It is viewed throughout the main island of Tongatapu.

(3) **Television OBN: (Oceania Broadcasting Network)**

Private ownership. Broadcasts six hours a day: 6:00 p.m. - 12:00 midnight. It broadcasts throughout the main island of Tongatapu. There are no fixed, regular programmes on agricultural issues although they do broadcast different issues on agriculture on request. Hosts regular panel discussions on different issues including agricultural.

(4) **Television TBN (Trinity Broadcasting Network)**

Privately owned, as a Christian Television channel. It broadcasts 24 hours a day, concentrating only on religious programmes. No agricultural programmes are broadcast.

2.3.4 Telecommunication Services

(1) **Tonga Communications Corporation (TCC)**

TCC commenced operations on February 2001, as a result of the merger of two companies.

Tonga Communications Corporation provides local, national and international communication services for the Kingdom. It is fully owned by

the Government of Tonga. There are fixed telephones on islands of Tongatapu, Vavau, Haapai, Eua and Niuas.

TCC has a total of 12,966 fixed telephone subscribers, and 4,000 mobile telephone subscribers.

Tonga Communications Corporation ensures that all major island groups have good phone network coverage. The main island of Tongatapu has access to fixed telephones from towns to all rural areas as well as main islands of Vavau, Haapai, Eua and Niuas.

In the outer islands, smaller isolated islands have access to telecommunication services by cell telephones, community radio telephones and telegram.

(2) TonFon Cellular Network

TonFon is a private company providing mobile telecommunication for about 1,500 subscribers in Tongatapu, Eua, Haapai and Vavau. The cost of a 3 minute local call is shown below. TonFon phone cards are available at competitive prices for calling Tonga from Australia, USA and New Zealand.

Comparative cost table TCC and TonFon

	Cost per 3 mins	Peak time (T\$)	Off-Peak (T\$)
TCC fixed line	Local Calls	0.18	0.12
TCC fixed line	National Calls	0.78	0.72
Mobile U-Call	Local Calls	0.54	0.45
Mobile U-Call	National Calls	1.14	1.05
TonFon-Cellular Network	Local Calls	0.18	0.15
TonFon-Cellular Network	National Calls	0.38	0.35

2.3.5 Computers and the Internet

1. Number of Computers per 1,000 people
It is estimated that there are 30-40 computers per 1,000 people
2. Internet service providers:
 - (i) Kalianet (TCC)
 - (ii) TonFon
3. Internet subscribers – 2,500-3,000
4. Cost of dial-up Internet:
 - (i) Kalianet T\$40/month (fixed) plus 4cents/minute for phone time
 - (ii) TonFon T\$300/ T\$600 per month for 30/60 kbps (unlimited). This service can link up to 20 terminals of a network (LAN).

ANNEX 3. PROFILE OF INSTITUTIONS

3.1 List of Main Institutions in the Agricultural Sector

Name and contacts	Type	Role
<p>Name Ministry of Agriculture, Forestry and Food (MAFF, RED)</p> <p>Contact Person: Dr. Pita Taufatofua Position: Head of Research and Extension Division</p> <p>Postal address: PO Box 14, Nuku'alofa, Tonga</p> <p>Tel (676) 32 125, Fax 32 253 Email mafreshh@kalianet.to</p>	GOV	RD, EX
<p>Name: Ministry of Agriculture, Forestry and Food, (MAFF, Info)</p> <p>Contact Person: Mr. Mana'ia Halafihī Position: Head of Information Section</p> <p>Postal address: PO Box 14, Nuku'alofa, Tonga</p> <p>Tel 32 910 or 32 125 Fax 32 253 Email mhalafihī@hotmail.com</p>	GOV	IN
<p>Name: Ministry of Agriculture, Forestry and Food, (MAFF, Forestry)</p> <p>Contact Person: Mr. Taniela Hoponoa Position: Head of Forestry Division</p> <p>Postal address: PO Box 14, Nuku'alofa, Tonga</p> <p>Tel 29 500 Fax 29 500 Email forestry@kalianet.to</p>	GOV	RD, EX
<p>Name Ministry of Education, Community Development and Training Centre (MOE, CDTC)</p> <p>Contact Person: Mr. Siosi Tu'avao Position: Course Coordinator</p> <p>Postal address: PO Box 161, Nuku'alofa, Tonga</p> <p>Tel 24 122 Fax 24 105 Email moe@kalianet.to</p>	GOV	TR
<p>Name: Ministry of Labour, Commerce and Industries, Tonga Trade (MLCI, Tonga Trade)</p> <p>Contact Person: Mr. Paulo Kautoke Position: Secretary</p> <p>Postal address: PO Box 110, Nuku'alofa, Tonga</p> <p>Tel 25 483 Fax 25 410 Email secretary@fmhci.gov.to</p>	GOV	TM
<p>Name: University of the South Pacific, Tonga (USP)</p> <p>Contact Person: Mrs. Salote Fukofuka Position: Director</p> <p>Postal address: PO Box 278, Nuku'alofa, Tonga</p> <p>Tel 29 055 Fax 29 249 Email fukofuka_s@usp.ac.fj</p>	EDU	TR
<p>Name: Tonga Development Bank (TDB)</p> <p>Contact Person: Mr. Afu'alo Matoto Position: Managing Director</p> <p>Postal address: PO Box 126, Nuku'alofa, Tonga</p> <p>Tel 23 333 Fax 23 775 Email tdevbank@tdb.to</p>	BNK	FS
<p>Name: Tonga Trust</p> <p>Contact Person: Mr. Lopeti Senituli Position: Director</p> <p>Postal address: PO Box 519, Nuku'alofa, Tonga</p> <p>Tel 23 478 Fax 24 898 Email tcdt@kalianet.to</p>	NGO	EX

Name and contacts	Type	Role
Name: Fua Fonua Store Contact Person: Mr. Paul Karalus Position: General Manager Postal address: PO Box 1039, Nuku'alofa, Tonga Tel 25884 Fax 29885 Email karalus@kalianet.to	PRV	PS-S
Name: FIMCO Store Contact Person: Mr. Ma'u Havea Position: General Manager Postal address: PO Box 523, Nuku'alofa, Tonga Tel 21 988 Fax 23 928 Email fimco@kalianet.to	PRV	PS-S
Name: Ha'amo Growers Contact Person: Mr. Tsutomu Nakao Position: General Manager Postal address: PO Box 12, Nuku'alofa, Tonga Tel 23 232 Fax 23 236 Email t2nakao@kalianet.to	PRV	PS-E
Name: Squash Export Contact Person: Dr. Feleti Sevele Position: General Manager Postal address: Po Box 255, Nuku'alofa, Tonga Tel 23 711 Fax 23 665 Email none	PRV	PS-E
Name: Tinopai Farm Contact Person: Mr. Pousima Afeaki Position: Manager Postal address: Po Box 170, Nuku'alofa, Tonga Tel 28 048 Fax 21 353 Email tinopai@kalianet.to	PRV	PS-E
Name: Ministry of Fisheries Contact Person: Dr. Vailala Matoto Position: Secretary of Fisheries Postal address: PO Box 871, Nuku'alofa, Tonga Tel 21 399 Fax 23 891 Email mofish@kalianet.to	GOV	RG
Name: Alatini Fisheries Contact Person: Mrs. Tricia Emberson Position: General Manager Postal address: Private Bag 49, Nuku'alofa, Tonga Tel 22 768 Fax 23 759 Email tricia@alatini.to	PRV	PS-E
Name: South Pacific Resources Contact Person: Mr. Chin Choe Position: Managing Director Postal address: P.O. Box 1036, Nuku'alofa, Tonga Tel 26 289 Fax 26 290 Email spr_tonga@kalianet.to	PRV	PS-E
Name: Tonga Timber and Hardware Contact Person: Mr. Kaveinga Fa'anunu Position: General Manager Postal address: PO Box 21, Nuku'alofa, Tonga Tel 29 944 Fax 29 778 Email t-timber@kalianet.to	PRV	PS-S

Name and contacts	Type	Role
Name: Tonga National Youth Congress Contact Person: Elaine Howard Position: Director Postal address: PO Box 2670, Nuku'alofa, Tonga Tel 25 474 Fax 25 277 Email elaine@tnyc.to	NGO	EX
Name: Future Farmers of Tonga Contact Person: Mr. Martin Nelson Position: Coordinator Postal address: c/o PO Box 2670, Nuku'alofa, Tonga Tel 25 474 Fax 25 277 Email info@tnyc.to	NGO	EX
Name: Vava'u Agricultural Farmer's Council Contact Person: Mr. Sione Vuki Position: Treasurer Postal address: Private Bag 46, Neiafu, Vava'u, Tonga Tel: 70 280 Fax: Email: vukico@kalianet.to	NGO	PS-P

Key

<u>Type</u>	<u>Role</u>
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 Private sector – exporter (fresh, frozen and dried produce)
CHU Church-based group	PS-M Private sector – manufacturer (e.g. tannery, bottler, refiner, roaster)
EDU Educational institution	PS-P Private sector – producer (e.g. commercial farm, fishing company)
GOV Government department / ministry	PS-S Private sector – supplier (e.g. chemicals, seeds) (what about public / state-owned enterprises in this area?)
NGO Non-government organisation	RD Research and development
PRV Private enterprise, company	RG Regulation (compliance, standards)
REG Regional organisation or network	TR Training (tertiary and vocational level)
STA Statutory body	TM Trade and marketing (includes development)

3.2 Key Institutions Involved in Agriculture and Rural Development (Tonga)

3.2.1 Ministry of Agriculture, Forestry and Food (MAFF)

Objective/mission statement	The Mission Statement for the MAFF is to provide clients with high quality services to increase agricultural productivity, food security and profitability while sustaining the environment
Fields of specialization	Formulation and implementation of laws related to the development and sustainability of the agricultural and forestry sector Formulation and implementation of policies, development planning, and financial budgets Implementation of programmes and projects in respect to the agricultural sector development Dissemination of technical and market information to facilitate yield improvement, quality aspects and market accessibility Development of import and export protocols for both private and commercial produce
Number of staff	As at the end of December 2003, there were a total of 326 employees. 57 were graduates, 88 were at technical level (diplomas) while 181 staffs were at junior level (certificates). Staff distribution in island groups are as follows: 37 staff members are working in Vavau, 13 in Haapai, 12 in Eua, 10 in Niuatoputapu and 8 in Niuafouu. The rest are working in the main island of Tongatapu where most of the MAFF branches are located.
Branches, other sites	Tongatapu: the main MAFF head office is in Nuku'alofa, the capital town. Research and Extension Division main office stationed at Vaini, with 3 other extension offices located at the Eastern, Central and Western district to serve farmers in each districts. Quarantine Services' main office is at the harbour area while another branch operated at the Fuaamotu International Airport. Forestry and Livestock Division are located at Tokomololo in the Central district. Outer Islands: each island group of Vavau, Haapai, Eua, Niuatoputapu, and Niuafouu have an office that serves all MAFF activities in outer islands.
Annual budget	Total Budget for 2003/04 = T\$3,523,230; 69.2% for salaries and wages while 30.8% for operational costs. Total Budget for 2002/03 was T\$3,299,082 where 73.9% was for salaries and wages while 26.1% was for operational costs.
Source of funding, including main donors/sponsors	<ul style="list-style-type: none"> ▪ Government – staff salaries and operating budget ▪ SPC – technical and financial assistance to approved projects ▪ FAO – technical and financial assistance to approved projects ▪ EU- financial assistance with the development of agriculture and agricultural roads, particularly in Vava'u ▪ Republic of China Government- technical and financial assistance in the development of vegetable productions ▪ ADB – financial assistance ▪

Programme / projects undertaken	<p>There are on-going programmes and projects in the areas of:</p> <ul style="list-style-type: none"> ▪ crop research and development ▪ fruit-fly management ▪ women development programmes ▪ development of sustainable agriculture technologies ▪ extension agricultural demonstration plots ▪ forestry nurseries development including plant propagations and seed nuts propagations ▪ quarantine services ▪ animal clinical services and extension ▪ collection and dissemination of agricultural information
Target audience	<p>A total of 15,738 households were recorded in Tonga in the last agricultural census in 2001. About 67.2% in the main island of Tongatapu, 16.7% in Vava'u, 8.2% in Haapai, 5.5% in 'Eua and 2.3% in the two Niuas (i.e. Niuatoputapu and Niuafuou). The concept of households may include a one-person household or a multi-person household who are living together and make common provision for food or other essentials for living. Source: <i>Agricultural Census 2001</i>.</p>
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	<ul style="list-style-type: none"> ▪ National training on organic agriculture (August 2002) – funding assistance ▪ Mass media promotion of agricultural activities (Nov. 03 – October 04) – funding assistance ▪ Stakeholders consultation on operations of CTA (Sept. 02), Netherlands – funding assistance towards participation of one rep (airfares, DSA, accommodation) ▪ Several regional workshops organised by IRETA (with CTA funding) for both staff and farmers in specific areas related to agriculture sector development ▪ Books/publications received from CTA under the DORA programme
Extent of collaboration/interaction with other institutions	<p>National</p> <ul style="list-style-type: none"> ▪ With other Government institutions – providing information and services in regards to agricultural sector developments e.g. Ministries of Education, Fisheries, Health, Lands, Survey and Natural Resources, Finance, etc. ▪ With several development NGOs – providing information for the strengthening of NGO's developments ▪ Friendly Island Marketing Cooperatives – provide technical information on crop management and budgeting ▪ Tonga Development Bank – agricultural information for loan processing and development projects ▪ Tonga National Youth Congress and Future Farmer of Tonga Project– provide information and extension services to encourage youth participation in agriculture ▪ Vavau Grower Association – provide technical and marketing information ▪ Development Investment Board – information supply ▪ Organic Growers Association – technical advice and export certification ▪ Environment Service – information supply <p>Regional and International</p> <ul style="list-style-type: none"> ▪ SPC – information supply, donor support, training, and several research project ▪ FAO – information supply, donor support, training, and

	<p>funds for projects</p> <ul style="list-style-type: none"> ▪ IRETA – information supply and training ▪ CTA - information supply, donor support, and training ▪ EU – information supply, donor support, and training
How information needs are currently met, and from where or by whom	<ul style="list-style-type: none"> ▪ SPC – technical information including pest control, plant genetic resources and conservation, agroforestry, biosecurity/quarantine ▪ FAO – crop & livestock production, fisheries, forestry, value-adding ▪ Environment Service – information on SPREP/UNEP-funded projects relating to biodiversity and biosafety ▪ Pacific Islands Trade Commission (based in Auckland) – information on markets and market suppliers, prices ranges
Main information needs not satisfied	<ul style="list-style-type: none"> ▪ Horticulture – information on seed varieties, suitable for the tropics (seeds now being used are temperate types mainly from Yates and Takii which are more suited to the cooler months of the year (May – November) ▪ Information on agricultural chemicals ▪ Technical information on sustainable agriculture management and technologies ▪ Technical information on soil management ▪ Information on plant propagation and plant breeding ▪ Livestock – alternative sources of stock feed (the high cost of imported feed is by far the main obstacle to expanding commercial piggery and poultry) ▪ Livestock management (particularly on poultry and piggery) for low income farmers
Main problems faced in terms of information and communication management	<ul style="list-style-type: none"> ▪ Lack of skilled and motivated staffs to collect, process and disseminate information ▪ Lack of funds for bulk publishing of information to farmers and clients. ▪ Lack of appropriate technical equipment used for information processing and dissemination e.g. TV camera for TV productions, appropriate printers, radio equipments, appropriate scanners for digital library, field digital cameras ▪ Lack of communication skills and habits (e.g. noting down of messages) ▪ Telephone infrastructure and internet service provider - very slow to put on new telephone lines and expensive of internet services ▪ Expensive to pay for TV productions and hiring of TV photographers. Need technical photographers that are familiar with agriculture to make the right information
Why institution selected as key	<p>The main facilitator in promoting and facilitating the development of agriculture in the country as evidenced from its objective/mission statements, and its fields of specializations. The first point of contact for farmers, agricultural marketing agents, general public, travellers, other Government agencies, and sponsors, on any aspect related to agriculture and livestock development, including agriculture legislation.</p> <p>The main source for technical, marketing, and management information for the public in the development of the agricultural sector</p>

3.2.2 Ministry of Fisheries (MOF)

Objective/mission statement	The mission of the Ministry of Fisheries is to increase the effectiveness of the living aquatic resource sector's contribution to the sustainable development of Tonga by providing management, administration, training and research
Fields of specialization	Development and management of Tonga's living Marine Resources
Number of Staff	A total of 91 permanent staff
Branches, other sites	Nuku'alofa – the headquarter and main centre. Branches in outer islands such as Vavau, Haapai, Nomuka, Haafeva and Niuatoputapu
Annual budget	The total expenditure for the Financial Year 2003/04 increased by 39.17 % compared with the previous year. The staff salary allocation was therefore increased by 40.91%, from T\$760,464 in 2002/03 to T\$1,286,892 in 2003/04 contrary to a declined un-established staff allocation, by 58.14 %. Travel and Communication rose by 20.82 % and similarly 21.06% for Maintenance and operation, 0.65% for Purchase of Goods and Services, and 90.04% for Capital expenditure
Source of funding, including main donors/sponsors	The Ministry receive funding from regional and international organisations and donor countries, like the Forum Fisheries Agency, the Secretariat of the Pacific Community, the Food and Agricultural Organization of the United Nations, Japan International Cooperation Agency and the Australian Government.
Programme / projects undertaken	The Tonga Fisheries Project provide assistance to the Ministry in terms of technical assistance for HRD; deployment of 11 FADS (fisheries aggregated devices) in the outer islands, particularly the Niuas and Vavau; formulation of the Ministry's Strategic Plan; formulation of workplans for section and divisional heads; drafting of proposals for the recruitment of Australian Youth Ambassadors and AESOP; adoption of a domestic VMS systems; procurement of ice makers for the Haapai region; and refurbishing the office building at Sopa.
Target audience	Fishermen
Extent of interaction with CTA-SDI, QAS, DORA, Seminars, consultants, publications	Received publications from CTA
Extent of collaboration / interaction with other institutions	SAPA newsletter, SOPAC newsletter, SPC newsletter, JICA newsletter, ICLARM etc. PIMRIS always held a seminar once a year and we participated on it.
How information needs are currently met, and from where or by whom	Secretariat of the Pacific Community from Noumea
Main information needs not satisfied	Lack of direct access to databases on all areas of fisheries.
Main problems faced in terms of information and communication management	It is very hard to obtain latest research in the area of fish biology, ecology, aquaculture and fisheries management.
Why institution selected as key	The only facilitator for the development of fishing development in Tonga in terms of technical assistance and supplier of fishing information and data

3.2.3 Friendly Island Marketing Cooperatives (FIMCO)

FIMCO is an NGO and the main exporter and marketer of agricultural products also the main supplier of agricultural supplies.

Objective/mission statement	Promote the economic and social interests of its members through the use of sound business management and financial strategies in accordance with cooperatives principles
Fields of specializations	<ul style="list-style-type: none"> ➤ Export and marketing of squash, kava, root crops and vanilla. Also involved in the marketing of handicrafts. ➤ Importer and seller of agricultural chemicals and other supplies ➤ Importer and seller of fishing supplies
Number of staff	A total of 24 staff
Branches, other sites	Main headquarter in Tongatapu and two branches at Vava'u and 'Eua
Annual budget	Annual budget is around T\$6,000,000
Source of funding, including main donors/sponsors	Loan from Tonga Development Bank Self finance from profits from various business enterprises
Programme/projects undertaken	Squash export Vanilla processing (curing) and export Handicraft store Agricultural chemicals and supply store Fishing supplies store
Target audience	Farmers, Fishermen and handicrafts producers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	Very minimal – subscriber to Spore Publications
Extent of collaboration/interaction with other institutions	Tonga Development Bank and other Commercial banks Ministry of Agriculture, Forestry and Food (MAFF) for information on agricultural production management MAFF Quarantine for quarantine and quality control services Ministry of Labour, Commerce and Industries in marketing issues Other local marketing agents
How information needs are currently met, and from where or by whom	Marketing information are received from agents in New Zealand and Japan for squash and from the United States for vanilla
Main information needs not satisfied	Marketing information for squash, vanilla, kava, and handicraft products from other countries. Market information is limit to mainly developed countries but needs to explore other marketing opportunities in neighbouring countries
Main problems faced in terms of information and communication management	Information source are sometimes hard to access and communication channels are unreliable.
Why institution selected as key	An active exporter of the main economic crops in Tonga, like squash, vanilla and kava and also agricultural products (handicrafts) A cooperative firm which is mostly run by farmers and financiers The main importer and seller of agricultural chemicals and supplies

3.2.4 Secretariat of the Pacific Community – Land Resources Division (SPC-LRD)

Objective/mission statement	To help Pacific Island people make and implement informed decisions about their future
Field of specialisation	<ul style="list-style-type: none"> ▪ Plant protection and quarantine ▪ Environment and biosecurity ▪ Animal health and production ▪ Forestry – management ▪ Plant Genetic Resources ▪ Policy analysis and advice ▪ Marketing ▪ Diversification and emerging high-value crops ▪ Development of Sustainable Agricultural Systems
Number of staff	65 staff
Branches, other sites	SPC - Land Resources Division is based in Suva Fiji
Annual budget	USD 7.5 million
Source of funding, including main donors/sponsors	All SPC-member countries have fixed rates to contribute to the main budget. The EU is a major donor as well as Australia and New Zealand
Programme /projects undertaken	<p>Several programmes have been implemented in the country over the last 25 years, mainly on crop production but also include livestock and forestry. Examples include;</p> <ul style="list-style-type: none"> ▪ Management of the coconut flat moth, orchid weevil and Queensland fruitfly ▪ Materials and supplies for the research station laboratory ▪ International consultancies in selected areas of horticulture, livestock and forestry ▪ Several international/regional manpower training programmes for staff in all disciplines
Target audience	Regional Ministries of Agriculture and Farmers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	not available.
Extent of collaboration/interaction with other institutions	not available.
How information needs are currently met, and from where or by whom	not available.
Main information needs not satisfied	not available.
Main problems faced in terms of information and communication management	not available.
Why institution selected as key	SPC has been a driving force for agriculture sector development in the Region. Assistance in all forms has been kindly provided to enhance efforts by both farmers and MAFF in agriculture sector development. SPC will certainly continue to be the key development partners in the future.

3.2.5 Food & Agriculture Organisation of the United Nations (FAO)

Objective/mission statement	Not available
Field of specialisation	Policy/Planning, Horticulture, livestock, fisheries, forestry
Number of staff	Not available
Branches, other sites	Sub-regional branch in Apia, Samoa whom MAFF communicates on all FAO programmes and projects
Annual budget	Not available
Source of funding, including main donors/sponsors	All FAO-member countries have fixed rates to contribute to the main budget, e.g. Tonga is US\$15,000 annually. Other countries such as EU, Japan, Italy contributed directly to the SAPA office in Apia, Samoa
Programme /projects undertaken	Several programmes have been implemented in the country over the last 25 years, mainly on crop production but also include: <ul style="list-style-type: none"> ▪ livestock and forestry. ▪ agriculture censuses (2001) ▪ milk processing ▪ telefood projects (up to US\$10,000) for the NGOs and communities of which about 10 has been approved and implemented ▪ several international/regional manpower training programmes for staff in all disciplines
Target audience	MAFF staff farmers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	not available.
Extent of collaboration/interaction with other institutions	not available.
How information needs are currently met, and from where or by whom	not available.
Main information needs not satisfied	not available.
Main problems faced in terms of information and communication management	not available.
Why institution selected as key	FAO has been a driving force for agriculture sector development in the country since it became a member. Assistance in all forms has been provided to enhance efforts by both farmers and MAFF in agriculture sector development.

3.2.6 The Institute for Research, Extension and Training in Agriculture (IRETA)

Objective/mission statement	IRETA contributes to sustainable growth and development of South Pacific countries by responding to their needs for research, information and training in the broad fields of agriculture and rural development.
Field of specialisation	Training (meetings, seminars, workshops, field study visits) and information dissemination.
Number of staff	12, including the Director
Branches, other sites	IRETA is a branch of USP. It maintains a network of staff employed by the national Ministries of Agriculture (ALO) who meets annually concerning its work programme.
Annual budget	Not available
Source of funding, including main donors/sponsors	USP core budget Other donors of which CTA is the main contributor
Programme /projects undertaken	IRETA implements its activities under 4 key areas; Printing Activities, Information and Networking, Capacity Development, and Video Production. All USP member countries benefit from programmes under these 4 groupings.
Target audience	MAFF staff Farmers and rural workers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	A lot CTA is the main funding agency apart from its core USP budget.
Extent of collaboration/interaction with other institutions	A lot (CTA, FAO, SPC, NZAID, AusAid, etc.).
How information needs are currently met, and from where or by whom	Subscription to publications of development partners, e.g. SPC, FAO, CTA, NZAID, AusAid Personal communications with contacts in the above and other organisations
Main information needs not satisfied	With IRETA's well-established networks with its development partners, information can be promptly obtained if it is not already within IRETA.
Main problems faced in terms of information and communication management	A crucial problem is getting and retaining the right calibre of staff.
Why institution selected as key	IRETA has been involved in agriculture sector development in the country since the early 1980s. Assistance in all forms, mainly capacity development, has been provided to enhance efforts by both farmers and MAFF in agricultural development.