

SUB-REGIONAL OFFICE FOR THE PACIFIC ISLANDS

**REPORT
ON A SCOPING MISSION IN SAMOA AND TONGA**

**AGRICULTURE AND TOURISM LINKAGES
IN PACIFIC ISLAND COUNTRIES**

**STUDY TO ASSESS CONSTRAINTS, POTENTIALS INCREASE
THE UNDERSTANDING OF POLICY AND INSTITUTIONAL
ARRANGEMENTS NEEDED TO ENCHANCE SYNERGIES**

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Executive Summary

The two productive sectors agriculture and tourism seem to offer the best opportunities for inclusive economic growth in several Pacific Island Countries (PICs) and therefore the promotion of linkages between tourism and agriculture should help create economic opportunities, build resilience in rural communities and enhance sustainable development in both tourism and agriculture sectors. Strengthening linkages and creating synergies between tourism and agriculture should help harness the tourist dollar to achieve the objectives of sustained and equitable growth.

Generally, in countries in the Pacific region growth and development in the agriculture and tourism industries have been pursued separately and policy and institutions have not been geared toward fostering positive linkages. Examples of positive linkages which may exist and approaches being used to promote these linkages have not been well documented in the Pacific context.

This interim scoping study report covering Tonga and Samoa aims to overcome knowledge gaps in tourism-agriculture links and help clarify the relationship between the two industries in these countries. Over the last two years FAO has initiated a process to enhance “evidence based decision making” in the Pacific region and this study will contribute to this process. After a general introduction the report details findings of the country scoping, in Tonga and in Samoa, and concludes with a general overview of the potential areas to help enhance linkages.

Both Tonga and Samoa have small open economies and run significant trade deficits. With declining agricultural exports tourism earnings are becoming increasingly important for foreign exchange and balance of payments. But to be effective in this regard requires that a significant proportion of tourism spend is on locally produced/supplied goods and services. Whilst the tourism food service sector does offer an important potential demand point for agricultural produce, the highest value produce used by this sector are generally meats, dairy, seafood and beverages. With the exception of seafood, the capacity of local producers to meet the needs of the tourism industry for meats, dairy and beverages remains quite limited. In Tonga and Samoa local seafood is a key feature on hotel/restaurant menus, but there are emerging issues of supply constraints in both countries.

For vegetables, Tonga currently has a better agronomic capacity than Samoa to produce a range of tropical and sub-tropical varieties that are demanded by the tourism sector. Both countries have the ability to cultivate a range of tropical fruits, but for vegetables and fruits seasonality continues to impact significantly on consistency of supply and price. Quality of local horticultural produce is a bigger concern to the hospitality industry in Samoa than in Tonga. As the tourism sector develops farmers and food processors wishing to supply this market will have to comply with increasingly strict hygiene, food safety and quality standards. But much still remains to be done in this area in both countries.

Several processed agricultural products including various root crop chips, sauces/chutneys, jams, soaps, massage oils, vanilla beans, coffee, cocoa, kava, nonu juice and various craft items are produced in Tonga and Samoa. Over recent years there has been an overall increase in quality, packaging and

presentation of these products, particularly in Samoa, but there still remains room for further improvement in this area. Whilst the in-country tourist market provides an important opportunity to sensitize visitors to local produce and build suit-case exports which can also help products to penetrate overseas markets, currently agriculture processed products do not seem to be extensively promoted in tourist outlets. This lack of promotion is also generally the case for local beverages such as drinking coconuts, fresh lime juice, Koko Samoa and Tongan coffee.

Visitor arrivals in both countries include a mixture of holiday/leisure tourists and Visiting Friends and Relatives (VFR) together with business travelers and 'others' including sports tourists. The VFR group is the largest representing 50% plus of the visitors in both countries. Cruise ship arrivals are another growing segment, but these tourists tend to spend relatively short time onshore in the countries.

It would be anticipated that these visitor groups will make different demands on various product markets, but data on visitor spend and appropriate analysis is not readily available to clarify the situation. Nevertheless, it can be assumed that all of these groups will make some market demand for food and beverages and a useful exercise that needs to be undertaken in both countries is a focused survey of demand from the food service sector taking into account the seasonal nature of the different visitor groups and how much of this demand is being met by local as opposed to imported produce.

The natural environment including marine life and terrestrial landscapes provide the aesthetic context for a tourist destination, whilst the people and their way of life provide the essential cultural fabric which distinguishes one place from another. In Tonga and Samoa, the agricultural systems are an integral part of these landscapes and also a centre point of the 'island' way of life and culture. Both of the countries have rich agricultural systems which do undoubtedly enhance the tourism experience, but as yet there has been only limited purposive use of these systems as tourist attractions.

The nexus between the two sectors and the environment is a crucial area for policy concern. A boom in tourism in the small island countries could result in a possible loss of natural resources including prime agricultural land. Stress on natural systems and water resources and potential pollution resulting from poorly planned development in either sector could have serious negative environmental impact. In contrast, 'environmentally friendly' agriculture can help sustain the Pacific's pristine natural environment which is ultimately, the major attraction for tourism in the region. In this regard, the current attention being focused on organic agriculture in both countries provides for potential synergies by helping to ensure a sustainable environment and also by providing a point of difference for hotel/restaurant cuisine thus encouraging demand for local agricultural produce and increasing its value.

However, presently, the relatively low number of tourist arrivals to Tonga is one key factor limiting further exploitation of positive linkages with the agriculture sector. Similarly in Samoa, the much lowered numbers of holiday visitors in the off season challenges the sustainability of enterprises exploiting linkages with the agriculture sector.

Introduction

The two productive sectors agriculture and tourism seem to offer the best opportunities for inclusive economic growth in several Pacific Island Countries (PICs) and therefore the promotion of linkages between tourism and agriculture should help create economic opportunities, build resilience in rural communities and enhance sustainable development in both tourism and agriculture sectors.

Agriculture (including forestry and fishing) remains for most countries in the region the main source of livelihood for the majority of the population, but its contribution to economic value added has generally declined over the last decade whilst over the same period, the tourism sector has seen significant growth and has become the ‘life blood’ for several of the small island fragile economies.

A challenge for policy makers is both to ensure that tourism growth is sustainable and that the benefits that accrue from increased visitor numbers are maximized in country value added and that any increased wealth is equitable shared with poorer rural communities. Strengthening linkages and creating synergies between tourism and agriculture should help harness the tourist dollar to achieve the objectives of sustained and equitable growth.

But as important as it is to enhance visitor yield by focusing both on increasing spending and ensuring that there is minimum ‘leakage’ of tourist dollars from the national economy, it is equally important to ensure that interactions between tourism and agriculture result in synergies which are mutually reinforcing and not in competition for key productive resources.

Generally, in countries in the Pacific region growth and development in the agriculture and tourism industries have been pursued separately and policy and institutions have not been geared toward fostering positive linkages. How significant the challenge is to adjust this approach and what the magnitude of the potential rewards for doing so may be is currently not well defined. Furthermore, examples of positive linkages which may exist and approaches being used to promote these linkages have not been well documented in the Pacific context.

This study aims to overcome knowledge gaps in tourism-agriculture links and help clarify the relationship between the two industries in selected countries in the region. Over the last two years FAO has initiated a process to enhance “evidence based decision making” in the Pacific region and this study will contribute to this process.

Six countries, Cook Islands, Fiji, Palau, Samoa, Tonga and Vanuatu (Table 1) have been identified as the priority candidates for inclusion in the regional study. All of these countries have seen positive growth in the tourism sector over recent years and an increasing trend in visitor arrivals. These countries also have national development policies which prioritize both the tourism and agriculture sectors as key productive sectors for economic growth. In all of the countries agriculture (inclusive of fishing and forestry) continues to be important for livelihoods and food security.

Table 1: Relative importance of agriculture and tourism in the economies of 6 PICs in 2009

Country	Agriculture Value Added US\$ million	Agriculture % Share of GDP	Tourism Value Added ¹ US\$ million	Tourism % Share of GDP	Number of Visitor Arrivals
Cook Islands	13.8 ²	5.1%	43.20	15.91	101,129
Fiji	345.1 ⁴	12.5	146.2	5.3	542,186
Palau	5.6 ³	3.4	16.0	9.7	83,795
Samoa	74.2 ³	12	22.8	3.7	129,305
Tonga	70.9 ⁴	17.8	10.7	2.7	71,795
Vanuatu	137.9 ⁴	19.7	32.8	4.6	100,675

Notes: ¹Hotels and Restaurants value added; ²Agriculture' Fishing and Pearls; ³Agriculture and Fishing; ⁴Agriculture, Fishing and Forestry.

Source of data: National Statistics Office's websites.

This interim report documents scoping studies carried out in Tonga and Samoa during December 2011 and January 2012.

Objectives of the Scoping Study

- ❖ To critically review the challenges and opportunities to enhance positive linkages between the agriculture and tourism sectors in selected Pacific Island Countries.
- ❖ To identify specific areas of linkage in the selected countries where the exploitation of synergies already exists or the potential to enhance linkages is extremely high.
- ❖ To identify specific areas where successful linkages exist which may form the subject of more in-depth case study research in a further phase of the study.

Methodology

The scoping in each country involved collection and review of secondary literature and in-depth interviews with key informants. A list of people the consultant met with is included as Annex1 and the documents and publications consulted can be found in Annex 2. A review was also made of key government and tourism industry web pages.

Potential areas of linkage between tourism and agriculture

The most obvious area for strengthening linkage is in the supply chain for tourist consumption products – foods and beverages, crafts, cosmetics, flowers and ornamentals, essential oils, massage oils and spa products etc – thus reducing dependence on imported goods to supply tourist market needs and the leakage of foreign exchange. To service the tourist market local producers need to find profitable and competitive ways to meet tourism industry demand for volume, quality, regularity and safety requirements. The ability of local agri-food systems to meet these requirements will be dependent both on agriculture supply factors (natural resource base, farming systems in place, agro-processing and marketing capacity) and the kind of tourism development (mass tourism, high end niche, health and wellness, eco-tourism etc). The exposure of tourists to specific local products could also help export market penetration when returning home such visitors help build a domestic demand. Possible

examples for market penetration might include, beef (from Vanuatu), macadamia nuts (from Hawaii), red papaya (from Fiji) and black pearls (from Cook Islands).

Table 1 depicts some of the factors influencing the strength of linkage between agriculture and tourism in supply chains for local products.

Table 2: Factors influencing the strength and type of linkage between tourism and agriculture

Demand related factors	Supply related factors	Market and intermediary factors
<ul style="list-style-type: none"> • The kind of tourism development; type of visitor, accommodation with respect to ownership, size and class • Tourism industry maturity • The degree of promotion for local cuisine and the capacity to use local produce creatively in hospitality kitchens 	<ul style="list-style-type: none"> • Natural resource base; physical limitations on production (crops, livestock and fish) • Entrenched production patterns (e.g. plantation crops for export) • The quantity and quality of local production • Price competitiveness of locally produced agriculture products • Technology and processing limitations • Health and safety standards in practice 	<ul style="list-style-type: none"> • Policy framework • Marketing and infrastructure constraints • Supply adjusted to demand • Spatial and temporal patterns of supply (including seasonality in demand and supply)

Source: adapted from brief No 3, Business Implementation of Pro-Poor Tourism Series www.propoortourism.org.uk

Another way in which visitors can potentially boost markets for local agricultural products is through event tourism such as sports events, festivals and conferences. Increased earnings for agriculture operators can also be generated through tours to municipal fresh produce markets, farms, plantations and processing plants and from accommodation on farms (farm-stays).

The examples discussed above all highlight linkages that can potentially increase opportunities for domestic agriculture earnings and sector growth, but they also offer opportunities to help develop visitor attractions and distinctive tourist destination brands by creative use and marketing of local produce and scenery. To realize these benefits the tourism industry needs to be proactive in utilizing local produce and agriculture sites as a tourist attraction. The industry therefore must build the technical capacity and skills to accomplish this.

Some other important areas of potential interaction between the two sectors include transportation, communications, utilities and other service provision. Transportation is a particularly important area for linkage in the Pacific Island context. Improving transportation infrastructure and services primarily to accommodate and boost tourism could bring positive benefits for agricultural trade on both domestic and international markets. The level of airline services in the region is largely dependent on passenger numbers; these same airline services provide potential freight capacity for fresh produce exports (e.g. fish, horticulture and floriculture). However, the type of plane the airline carrier uses can be critically important in regards to available cargo space. Another possible positive transportation interaction can be the extension of road networks to facilitate tourism, but which also serve to better link agricultural

areas to markets (e.g. the new Efate Ring Road in Vanuatu). There is also possible potential for synergies on inter-island shipping to enhance economic viability of some routes.

But interactions between the two sectors need not necessarily be positive. Indeed Tourism and Agriculture may compete for resources – land, labour, capital, water, freight capacity and even development assistance. Furthermore, the type of tourism development may significantly preclude some areas of opportunity for linkages (e.g. Cruise Ship tourism).

The nexus between the two sectors and the environment is a crucial area for policy concern. A boom in tourism in small island countries could result in a possible loss of natural resources including prime agricultural land. Stress on natural systems and water resources and potential pollution resulting from poorly planned development in either sector could have serious negative environmental impact. In contrast, 'environmentally friendly' agriculture can help sustain the Pacific's pristine natural environment which is ultimately, the major attraction for tourism in the region.

Mutual increases in the competitiveness of both the agriculture and the tourism sectors through linkages which create enhanced synergies should be the overriding policy goal. Therefore national policy frameworks for agriculture and tourism need to recognize the need for positive linkages and appropriate institutions need to be in place to foster them.

With due regard to the above discussion on potential areas for linkage between tourism and agriculture a guiding framework used for the consultation in countries is presented at Annex 3.

Findings of the Scoping in Tonga



Photo from Kingdom of Tonga website

Context

Tonga has a small, open economy with a narrow export base largely comprised of agricultural goods. Roots and tubers, kava, vanilla beans, melon and squash are the main crops. Agricultural exports, including fish, make up about two-thirds of total exports. Although the country retains a strong subsistence base it imports an increasing proportion of its food¹. The country remains dependent on external aid and remittances from Tongan communities overseas to offset its significant trade deficit².

Tourism is the second-largest source of foreign currency earnings following remittances. Official statistics indicate that Tonga had 62,662 visitors in 2010 made up of 45,400 arrivals by air and 17,262 cruise ship tourists. The government's National Strategic Planning Framework (NSPF 2010) emphasizes community development and support of the private sector, especially the encouragement of investment. Health and education, particularly increased performance of Technical Vocational Education & Training (TVET), are also highlighted.

Tonga has a reasonably sound basic infrastructure and government has prioritized maintenance and further infrastructure development as well as integrating environmental sustainability and climate change into all planning and execution of programs. However, over the past 3 years, the quality of physical infrastructure in Tonga has deteriorated in a number of areas as budget pressure and claims on revenue from public sector workers salaries have drained resources from maintenance and additional construction (ADB, 2011). Several projects supported by development partners are being implemented or planned to address infrastructure needs. Major projects that are already underway or committed include the National Roads Improvement Program (T\$80m); electricity generation and distribution upgrades (T\$60m); Nuku'alofa CBD infrastructure redevelopment and Vuna Wharf cruise ship terminal (T\$50m); delivery of the new inter-island ferry (T\$25m); and Vaipua Bridge reconstruction (T\$14m) (National Infrastructure Investment Plan, 2010).

High unemployment among the young, pressures for democratic reform, private sector disillusionment with government services and bureaucracy, and rising civil service expenditures are major issues facing the government. The Government is meeting these challenges by continuing to implement its reform program to raise economic performance which will include restructuring to streamline the Public Services by reducing the number of Ministries from 26 to 14 by July 2012. The aim is to reduce costs while improving efficiency and services to the public. In addition, the National Economic Development Committee (NEDC) has been established to support and engage with the private sectors.

¹ Total merchandise imports of animal, vegetable and processed food products amounted to about T\$86 million in 2010 (Annual Foreign Trade Report for 2010, Tonga Statistics Department).

² Imports are almost 20 times the value of exports

Over recent years the Tongan economy has been sluggish with growth averaging only 1.4% over the last decade. Key impediments to productivity and growth have been identified to include: inappropriate role of the State in economic activities; outdated and incomplete business laws; uncertainty for foreign investors in the tourism sector; a damaging and inefficient business licensing regime; and ineffective agriculture policy (ADB Update to the Private Sector Assessment, 2011).

The Asian Development Bank estimates the economy to grow by 1.2% in FY2012 mainly due to tourism and donor-financed construction. But private sector credit continues to decline, with lending to businesses falling by 11.1% (y-o-y) in September 2011. Private remittances also decreased by 7.0% in FY2011. The level of private remittances in FY2011 was also about \$31.4 million less than in FY2008. This represents a large fall in incomes for households since the onset of the global economic downturn (ADB Pacific Economic Monitor, December 2012). Aside from weakening agricultural exports the key external drivers of the Tongan economy in the most recent years have been the decline in remittances and tourism receipts. This trend is expected to slowly reverse as the international economy recovers particularly in those countries which are Tonga's major source of remittances and visitor arrivals. The agricultural, forestry and fisheries sectors remain the single most important sectors in the Tongan economy (accounting for 19.9% of GDP). The next two most important sectors are the Government sector (12.3% of GDP) and the Commerce, Restaurants and Hotels sector (13.3%).

Agriculture

The land is generally fertile, except in some of the low atolls of Ha'apai, and almost all Tongans have access to plantation areas for food crops. In general, Tonga has had one of the highest rates of subsistence production for own consumption in the Pacific region. But the agriculture, forestry and fisheries sector has shown zero growth over the past five years. With the demise of the squash industry agricultural exports have declined. Despite the poor performance, the sector is still the mainstay of the rural economy as it provides food security; employment and income for many households. For households in the rural areas of Tongatapu and the outer islands, home production accounts for approximately one third of all food consumed (NSPF, 2010). Commercial production and exports are dominated by a few primary products (squash, fish, vanilla, root crops and kava), making the economy vulnerable to changes in export markets. Increasing agricultural production for domestic consumption and for export is accorded high priority by the government.

Of an estimated 42,000 hectare of arable land, around 42 percent is currently farmed. Traditional agriculture is based on small holding of 3.3 ha and is largely rain-fed. Root and tuber crops (yam, taro, sweet potatoes, *Alocasia-kape* and cassava) dominate the cropping system and these crops occupy an estimated 28 percent of the farmed land (FAO, 2009). Root crops are principally for domestic consumption, but export is gaining importance in recent years, with an increasing volume of export. The leading exported root crop by volume is yam with an average of 1,014 tonnes each year (37% of all root crops), followed by cassava and tarua taro (31% and 15% of total root crops respectively). Irish potato which is cultivated during the cool months, has been shown to have a good potential to meet the growing local market demand and also possible export potential to Fiji and Samoa during the winter months of New Zealand (FAO,2010).

Tonga produces a wide variety of vegetables, including: lu and pele, field corn, tomato, cabbage, capsicum, carrot, cauliflower, cucumber, eggplant, lettuce, rocket, okra, onion, radish, sweet corn, various types of beans and beetroot. Other new types and varieties of fruits and vegetables have been introduced by Chinese farmers in Tonga such as asparagus, gourds, soya beans, sweet peas and broccoli. Although for the European-type of vegetables the growing conditions are not optimal, there is potential to supply reasonably well the local markets mainly to reduce the import dependency of these goods; and if properly managed, some potential as off-season crops in foreign markets

Common fruit tree crops in Tonga are: coconuts, different kinds of banana and plantains, breadfruits, mango (of which the country holds over 20 different varieties), papaya, pineapples, watermelons, Pacific litchi, Pacific plum, avocado, canarium nut-Ai, citrus (including pomelo, sweet orange and mandarins/ tangerines, limes) Malay apple, nonu, passionfruits, soursop, custard apples, guava and rambutan are also grown. Currently, there are no commercial fruit orchards and domestic production of fruits is mostly for local consumption. However, due to rising domestic demand tropical fruits do have the potential to increase household earnings through domestic market sales including to the food hospitality industry. Coffee is currently cultivated on relatively small scale in Tonga, but it is a potential cash crop for local market as well as for export however production has recently suffered due to fungal diseases.

The Australian Centre for International Research (ACIAR) has supported a project on tropical fruit production to broaden genetic diversity and increase local capacity for tropical fruit production. The project has primarily been supporting backyard/home garden planting.

The generally favorable agronomic conditions and diversity of tropical and sub-tropical horticultural (fruit and vegetable) crops being grown in Tonga provides a good basis for supplying a growing tourism industry.

Fishing

Tonga has a large exclusive economic zone for exploitation of marine resources of around 700,000 km². As in other neighboring countries, the oceanic fisheries of Tonga has for some time been facing low outturns in the industry, attributed mainly to the low catch from tuna. However this is further compounded by private sector difficulties and frustration with government processes and escalating fuel and electricity prices. Currently there are very few local fishing boats active. The Matangi Tonga, December 16, 2011 reported that “...evidence of the crisis that has overcome the industry is the number of fishing boats that are either tied up or have sunk in the Fuaa Harbour and lie abandoned in the Nuku'alofa harbor”.

In 2004, Tonga placed a moratorium on foreign fishing vessels; however, in an effort to revive its dying fishing industry in August 2011 Tonga reopened its tuna fishing to licensed foreign fishing vessels. The annual licensing fee for locally based foreign fishing vessel to fish in Tonga waters is now US\$20, 000 and Tonga currently has one licensed locally based foreign fishing vessel (Department of Fisheries Monthly Report, 2011, accessed on website <http://www.tongafish.gov.to/>).

Whilst there are substantial pelagic sea resources that have scarcely been exploited, the coastal fishery resources, which have provided the bulk of protein sources for the population, are close to being fully exploited and there is a concern about their degradation from over fishing. Sustainable management in the fisheries sector and conservation are currently priorities for the Fisheries Department.



The Fisheries Management Act 2002 allows for the provision of special management areas (SMAs) and empowers the Minister to grant a community management control of its inshore resources. The main objectives of a community management plan are to enforce the authority to exclude outsiders from entering a SMA, to establish marine parks, and implement restrictions on harvested resources, including, size limits and catch amounts. Communities (6 just increasing to 8³) provide protection for valued species such as lobsters, clams and bech-

de-mer. SMAs are generally considered to have been very successful in terms of in-shore fisheries management and several more communities have shown interest in becoming part of the SMA program. However, progress is slow due to lack of the Ministries resources and financial constraints.

The marine resource is at the heart of the tourism industry in Tonga, both as a key amenity (for whale watching, yachting, diving, snorkeling etc.) and to supply the food hospitality outlets with a wide diversity of fresh fish and seafood products.

Tourism

Tonga’s tourism sector has not developed as quickly compared to other countries in the region such as Cook Islands, Samoa and Vanuatu. According to official statistics total visitor arrivals in 2010 were 62,662, a drop from 71,795 recorded for 2009. About 70% of these arrivals were by air and the rest were cruise ship passengers (Table3). The trend in visitor arrivals since 2005 is depicted in Figure 2. This data shows that the number of visitor arrivals by air and cruise ship is cyclical with air visitors tending to peak in September/December and cruise-ship arrivals peaking in the March and June quarters. The number of air arrivals has tended to average between 10 – 15,000 per quarter with no significant trend either up or down over the period since September 2005. Cruise ship arrivals on the other hand fluctuate widely from quarter-to-quarter reflecting the number of ships that actually dock in the quarter (David Abbot, pers. comm.).



Marine-based activities currently dominate the tourism industry and include whale watching, sailing, diving, fishing plus beach resorts and swimming. Cultural tourism and trekking are also important attractions. Product supply is dominated by small, independently-run businesses. There are no large international standard resorts and the only hotel of significant size (more than 50 rooms), is the International Dateline which is currently under receivership and in poor state of repair.

³ The community-based Special Management Areas (SMAs) of ‘Atata, ‘Eueiki, Ovaka, Ha’afeva, Felemea and ‘O’ua islands, with Nomuka and Taunga having SMAs recently established.

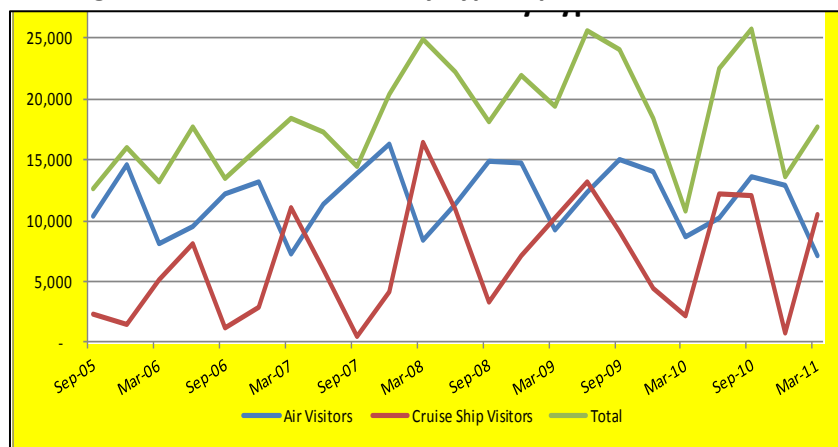
The recent IFC Tourism diagnostic noted that although Tongan tourism assets are rated relatively highly in terms of their natural and cultural value, there is a lack both of a range of suitable quality accommodation products and of tour products and quality tour operators.

The IFC ‘State of Play’ study concluded that *“Tourism has significant potential for further growth in Tonga, but its expansion is currently being constrained by a range of barriers. Therefore a more focused, strategic and cooperative planning and management approach to tourism development is required; one which demonstrates a balanced focus on the sustainability of businesses and the natural and cultural assets which underpin Tonga’s tourism sector”* (IFC SOPA, 2010).

.Table 3: TONGA TOURISM DATA 2009 & 2010

	Tourist receipts (OET) 1/ (T\$000)	Cruise ship arrivals (No.)	Air Total air arrivals (No.)	arrivals From Australia (No.)	From New Zealand (No.)	From U.S.A. (No.)	From other Pacific (No.)	From other (No.)
2009								
Q1	13,080	5,859	9,260	2,010	4,031	1,133	629	1,457
Q2	11,661	8,316	12,355	2,776	5,503	1,783	946	1,347
Q3	14,351	4,878	14,906	3,194	6,777	1,881	722	2,332
Q4	12,172	2,209	14,012	3,614	6,358	1,824	665	1,551
Totals	51,219	21,262	50,533	11,594	22,669	6,621	2,962	6,714
2010								
Q1	11,446	864	8,652	1,726	4,246	955	511	1,214
Q2	12,175	7,453	10,291	2,260	4,597	1,553	793	1,088
Q3	18,399	8,230	13,608	3,235	6,356	1,577	717	1,723
Q4	16,277	715	12,849	2,992	6,214	1,720	871	1,052
Totals	58,237	17,262	45,400	10,213	21,413	5,805	2,892	5,077

Figure 2: Tourism Numbers by Type Sept 2005 to Mar 2011



Source: Tonga Bureau of Statistics (David Abbott’s Note on Lead Indicators of Economic Activity)

Factors Affecting Linkages

Policy and Institutional Setting

The Tongan political setting is complex with the government transitioning to more open democratic processes and the public sector undergoing significant restructuring. Authorities espouse a more 'whole of government' approach to planning and program implementation, but progress in delivery of this approach is not yet well advanced. The National Strategic Planning Framework published in 2010 is the key document guiding national development policy and planning over the next five to ten years. Government Ministries have, or are in the process of, revising Corporate Plans and preparing Annual Management Plans and associate budgets that signal how they will support the achievement of the national vision and development outcomes identified in the NSPF. Enhancing the performance of the key productive sectors, tourism, agriculture and fisheries is highlighted in the Framework. The importance of economic linkages between sectors is generally recognized by government officials, but it gets only cursory mention in planning documents and no articulated specific strategies to enhance linkages and synergies between the agriculture and tourism sectors were identified in a review of current documents.

However, community development features among the important priorities of the NSPF to support all other initiatives and the Framework recognizes that *".. there have been profound changes in the rural economy, with long-term decline being experienced in many of the primary and traditional industries, somewhat balanced by the growth of the service sector, diversification into new activities and the growing importance of tourism."* A focus on community-based tourism would therefore provide a strong platform for enhancing synergies with the agriculture sector which is fundamental to livelihoods in rural areas. A further area emphasized in the NSPF is technical and vocational education which is seen as the key to developing quality products and providing quality service that meet international standards and fostering entrepreneurship. Training is also seen as the key to productively utilising skills and local and traditional knowledge and turning them into marketable products and services.

Australia has been supporting the Ministry of Finance and Planning in developing a longer-term strategic approach to planning and to better coordination of development partner support. Whilst Australia have no direct support to the tourism or agriculture sectors through their national programmes, their priority focus areas of health (including non-communicable diseases), education (including TVET), public reform/governance and infrastructure are all key areas underpinning development in the productive sectors. New Zealand is currently the principal government partner focussing on tourism development through a sector support programme. NZAID commissioned an 'economic linkages study' in 2009 which concluded that there is considerable potential to enhance the economic benefits of tourism through linkage creation with other key sectors of the national economy including agriculture, fisheries and handicrafts/ cultural experiences. The key specific areas for linkage creation identified in the report were vegetables, fruit and fish for agriculture, tapa, weaving and carving for handicrafts, and cultural events such as village –based activities and experiences - i.e. village cultural night/feast and cultural performance at a variety of tourism related-venues. But the general lack of information on linkage opportunities and a relative lack of relevant products combined to undermine realisation of potential positive linkages and synergies (Milne, 2009). The report identified a number of approaches that could

be adopted to enhance linkage creation and noted that these would often be specific to location. The report concluded that while food, agriculture and culture can be linked more closely to tourism through the strengthening of product, skills and local network formation it is also vital that external marketing of the tourism industry and experiences be developed to enhance existing and potential areas for linkage creation and that tourism linkage issues are addressed in future tourism planning and development processes.

As noted above, the government is stressing a more 'whole of government' approach to development planning which will necessarily demand greater coordination between the institutions and stakeholders in key sectors. However, the general impression gained during this consultation exercise was that there is still considerable room for improvement in coordination and cooperation among the stakeholders both within the tourism sector itself and also between institutions and relevant players in other key sectors such as agriculture. The recent IFC Tourism Diagnostic Study noted that *"...whilst the government has undertaken some positive initiatives to support private sector development in recent years, there has been a lack of coordination and leadership in the tourism sector due to limited government understanding and prioritization of the sector and limited capacity and resourcing."* In addition there has been no clear sector development plan for tourism and public private dialogue has been disjointed with a consequent lack of industry engagement in recent years in the development of policy and marketing priorities.

Under the public sector restructuring plans it is anticipated that the Ministry of Tourism (and presumably also the Tonga Visitors Bureau) will be subsumed into the Ministry of Commerce, Industry and Labour. New Zealand will also support the government in the preparation of a tourism strategic development plan which should provide good opportunity to fully consider stakeholder roles, sector linkages and coordination. Government initiatives to support greater public/private sector dialogue include a greater focus on tourism through the National Economic Development Committee (NEDC) and the New Zealand Government-supported National Tourism Forum held in June 2010.

Demand and supply of products

Overall visitor numbers include tourist/holiday makers, visiting friends and relatives (VFRs) and business travelers. There are current concerns amongst stakeholders on the quality of data on which official tourism statistics are based. However, it is generally believed that of the on average 40-50 thousand visitors arriving annually by air only about 50% represent tourist holiday visitors, the remainder being VFRs and business travelers. A further 15 to 20 thousand arrivals are on cruise ships. It would be anticipated that these visitor groups will make different demands on various product markets, but currently data on visitor spend and appropriate analysis is not readily available to clarify the situation. Nevertheless, it can be assumed that all of these groups will make some market demand for food and beverages⁴ and a useful exercise for the MAFFF would be to undertake a focused survey of demand from the food service sector taking into account the seasonal nature of the different visitor groups and how much of this demand is being met by local as opposed to imported produce.

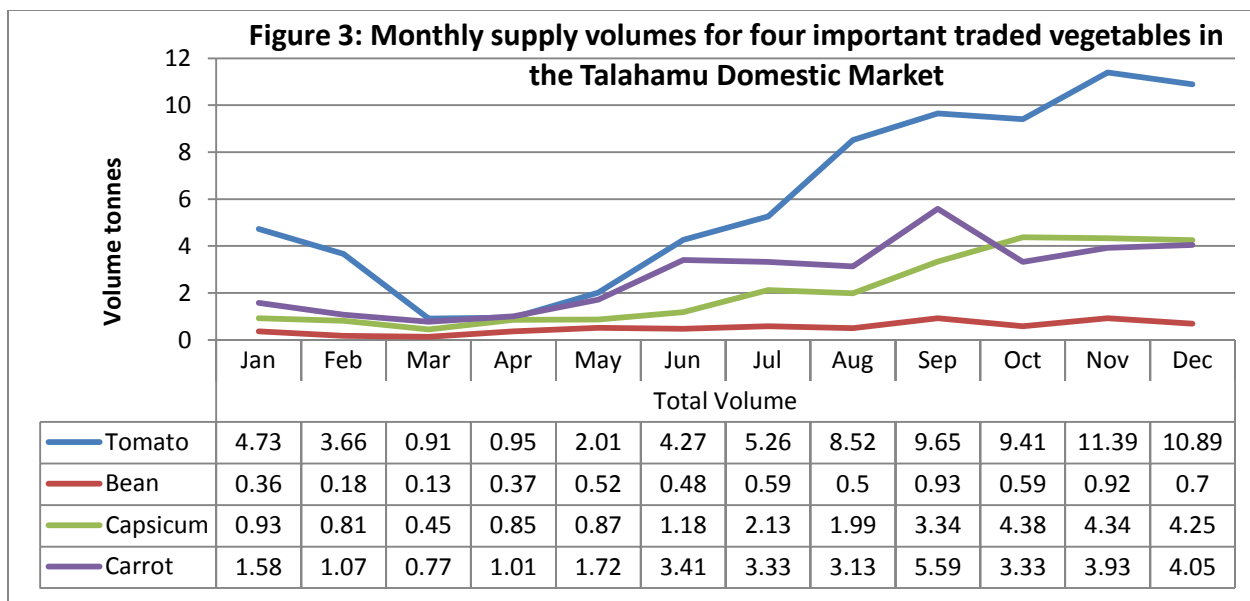
⁴ Simon Milne in his 2009 study noted that past economic impact studies in Tonga have highlighted that spend on food and beverages accounts for approximately 20-25% of visitor spend.



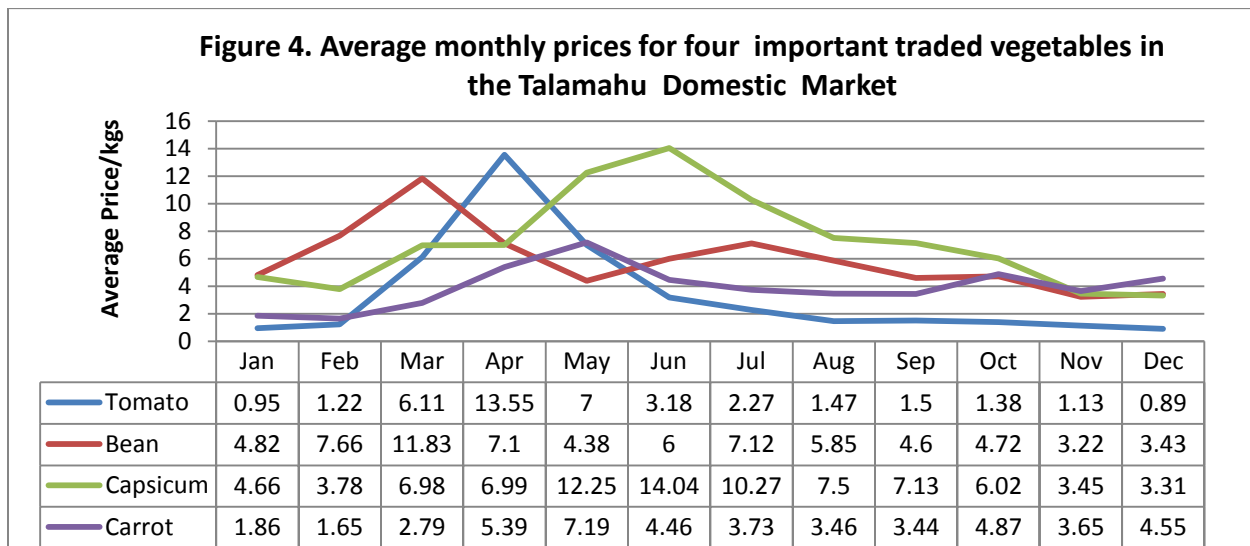
Fresh Produce

Interviews undertaken with a limited number of restaurants and hotels during this consultation indicated that local fresh produce is utilized whenever possible and that in general a good range of vegetables and some local fruits are readily available through local market outlets. However seasonality in supply of some produce can cause scarcity and significant price inflation. The issue of seasonality in supply has been well illustrated in an analysis of domestic market data in a recent

study supported by FAO (Ika, 2011). Figures 3 and 4 below illustrate the seasonality in supply and related prices of four important vegetables commonly used by the food service industry.



Source: Tonga Domestic Market Study: Using the Domestic Market Survey Report to investigate selected policy issues by 'Elisaia S. Ika (FAO, 2011)



The data indicates variability in volume and within year price volatility due to seasonal effects with considerable price inflation between the lowest and highest price levels. In the case of tomatoes, the price difference can be up to fourteen times greater in the offseason compared to the high season. Fortunately, for the latter half of the main tourist season, which runs from June to October, the supply of these vegetable crops is generally good.



Sale to sail, Neiafu Market.
Photo by Luseane Taufa

In Vava’u the current trade in fresh produce to visiting yachts and the charter yacht fleet is quite significant. Fresh produce vendors on the ‘Utukalongalu Market in Neiafu stated that yachts are by far their biggest customers and that they regularly buy big orders valued at over T\$100. From 2007 to 2011 the number of visiting yachts recorded in Vava’u has increased from 400 to 557, with some yachts staying for up to 2 to 3 months. The manager of Moorings and Sunsail Charter Yachts estimated that they alone cater each season for around

35,000 on board meals and where possible do all their fresh produce stocking from local market suppliers. The restaurants in both Nuku’alofa and Vava’u do utilize well the local fresh vegetable and fruit produce in their meals, however, menus do not tend to stress fresh Tongan cuisine, but prefer instead to highlight European or Asian dishes. There currently appears to be limited effort to try and enhance visitor awareness of local food, however, the owner of Friend’s Café in Nukua’alofa advised he is building a new hotel that has the restaurant designed by Chef Robert Oliver, author of Me’a Kai (the Food and Flavours of the South Pacific), which could become a beacon for local cuisine.



Sample menu and meals from Vava’u restaurants.
Photos by Luseane Taufa

Hospitality and tourism business operators generally purchase directly on the local markets or through direct connections with fresh produce growers and market vendors. Some tourist operators also have their own vegetable gardens and fruit trees.



‘Primrose’ at Neiafu Market.
Photo by Luseane Taufa

Because the restaurant and hotel kitchen outlets are not large there has been little need for growers to form supply networks (e.g. farmers’ groups) to service the hospitality sector demand. However, an interesting informal network to help coordinate supply and demand for yachts, tourist resorts and restaurants

is being facilitated by Pini Manoa ('Primrose') an artisan and craft vendor at 'Utukalongalu Market. She operates on VHF Channel 26 and through mobile phone to coordinate supplies of fresh produce, fish and handicrafts to visiting yachts and several Vava'u hospitality outlets. When customers require various kinds of supplies they can contact Primrose on Channel 26 and she will check availability at the market and even organize requisition of the required goods. Those without VHF radio can use her mobile phone contact for the same purpose.



Photo by Luseane Taufa

Several restaurant and café outlets offer fresh drinking coconuts and a variety of fruit smoothies and fruit drinks made with local products such as melon, papaya, pineapple and banana according to season. But there appears still to be considerable scope to extend the range, availability and access for locally produced fresh beverages. This may require specific supply chain operators using mobile phone networks to coordinate deliveries to hospitality outlets for items such as drinking coconuts.

Greater use of local Tongan fruit drinks such as *Otai* could be a way to create brand and distinction in the tourist market and could help to popularize Tongan fresh fruit produce and build market demand.

The same could also be said of Tongan coffee which has in the past had a greater market presence.

Whilst the supply and quality of local horticultural produce is generally considered good for the tourist industry needs the same cannot be said wholly for fish and meat. Fresh local seafood is very popular with tourists and a principal culinary attraction for Pacific Island destinations. In Tonga, a good variety of deep water, reef fish, shell-fish and other seafood products do feature in hotel and restaurant menus, but kitchen operators complained of lack of consistency in supply and extended periods with poor availability. Some concerns were also raised on quality particularly related to post harvest storage and consequent food safety.

The overall decline in the local tuna fishing fleet and closure of the 'Alatini fish outlet in Neiafu in December 2011 after 30 years of operation must impact negatively on fish supplies. Key informants indicated that another constraint to availability of fish was the preoccupation of fishermen on bech-de-mere (sea cucumber) during open season for this product. Some informants also indicated that whale watching offered more lucrative returns to boat operators than fishing thus competing for fishermen's time and resources. In Tongatapu and Vava'u there is also a general decline in stocks of lobster, shell fish and some in-shore fish due to over harvesting (Milne, 2009)



Government Fish Market, Neiafu
Photo by Luseane Taufa

The Fisheries Department with assistance from development partners (mainly the EU) has tried to develop the use of more hygienic fish market outlets in Nuku'alofa and Neiafu. But to date these venues have proved unpopular with fish vendors who prefer to continue their selling from open tables on the quay side, leaving the recently established markets underused

as in Nuku'alofa or to fall into disrepair in Neiafu. Clearly a more stakeholder participatory approach to market development needs to be adopted! The Fisheries Division has now made a contract with the Pacific Royale Group Limited to renovate and improve the Fish Market in Vava'u and to operate the market for selling and processing of fish products



Roast pig served at 'Oholei Beach Resort
Photo by Luseane Taufa

With the exception of roast pig, which is an essential feature dish at most Tongan feasts, local meat supplies do not generally meet the needs of the tourist food service sector either in consistency or quality of supplied products. Currently no supply chains of appropriate quality for local beef, chicken or butchered pork are operating in Tonga. There are no suitable slaughter facilities or butcheries servicing the domestic market. Indeed, there was also some concern raised about disease in regards to the conditions in which local pigs are

raised and the potential for food safety issues.

The weakness in the local meat (and to some extent seafood) supply chains constitutes a serious loss in potential domestic value added as meat/fish constitute the largest value share of most restaurant meals. It also implies an important leakage of tourist dollars as these essential products have to be imported.

Processed Products



Processed products available at 'Ene'io Beach & Botanical Garden. Photo by Luseane Taufa

Several processed agricultural products including various root crop chips, chutneys/pickles, jams, soaps, massage oils, vanilla beans, coffee, kava, nonu juice and various craft items (e.g. tapa, woven mats, fans, baskets and shell/pearl jewelry) are produced in Tonga. Over recent years there has been an overall increase in quality, packaging and presentation of these products, but there still remains a great deal of room to further improve in this area. Good examples of very high quality locally processed products in neighboring countries include [Pure Fiji](#)

brand cosmetics and the [Mailelani](#) range of virgin coconut oil based toiletries and lotions in Samoa. Both of these two mentioned outlets allow for tourist visits to their processing factories which is both entertaining for the visitors and a good way to promote sales of the products.

The in-country tourist market provides an important opportunity to sensitize visitors to local produce and build suit-case exports which can also help products to penetrate overseas markets. Currently, apart from some crafts, Tongan agriculture processed products do not seem to be extensively promoted in tourist outlets. One notable exception is the 'Ene'io Beach, Botanical Garden, Bar and Restaurant where a range of products (plantain and taro chips, nonu juice, vanilla beans and essence, kava powder, dried fruits and pickles) marketed under the 'Ene'io Naturals brand name are available.

Demand and supply of services

The natural environment including marine life and terrestrial landscapes provide the aesthetic context for a tourist destination, whilst the people and their way of life provide the essential cultural fabric which distinguishes one place from another. In the Tongan islands, the agricultural systems are an integral part of these landscapes and also a centre point of the Tongan way of life and culture. The 'Eua forest resources and national parks define this island as a prime centre for eco-tourism; whilst marine based activities, which are critically dependent on pristine resources, dominate the tourist offering in Vava'u and Ha'apai. All of the main island centers in Tonga have rich agricultural systems which do undoubtedly enhance the tourism experience, but as yet there has been only limited purposive use of these systems as tourist attractions.

In many parts of the world so-called 'Agro-tourism' has become a major part of the tourist industry and includes farm (and vineyard)tours, farm stays and visits to agricultural processing and plantation activities together with agriculture fairs and festivals. Tourism activities linked to farming systems and local food supports rural livelihoods and can help foster a more community-inclusive model of tourism development.



Photo from Tonga Tourism website

Agriculture and rural based tourism sites and attractions

Whilst there are a range of marine and land-based tours available in Tonga few focus on agriculture, local food production and processing activities.

Vava'u Tours do organize land-based tours that take in some agricultural activities and Gateway to Paradise Tours in Nuku'alofa organize on demand visits to bush block farming followed up by 'umu' preparation (cooking in a traditional ground oven) and dinner.

Unique in Vav'u is 'Ene'io Beach and Botanical Garden where private owners Lucy and Haniteli Fa'anunu organize garden tours to view a wide range of local agriculture crops and other traditional/culturally



Photo by Luseane Taufu

significant plants and trees. They also demonstrate agricultural techniques and processing (including vanilla growing and processing, kava making, and nonu juice extraction) and have a range of processed local products for sale. Haniteli, a former Director of Agriculture, has had a lifelong passion for establishing the garden which now constitutes an important collection of biodiversity.

The beach property also host s a bar and restaurant where local food is featured in a traditional Tongan show and feast. 'Ene'io organizes specially tailored trips for cruise ship passengers (100-150 at a time) which includes a garden tour, fruit lunch and coconut drink. Nine cruise ship arrivals in Vava'u are anticipated in 2012. Haniteli explained that the breakdown of

'Ene'io activity earnings was about: 32% garden attraction, 35% food, 20% beverages, 3% soft drinks, and 10% product sales.



'Oholei Beach cultural night and traditional feast is another important attraction popular with tourists, VFRs and locals alike. 'Oholei is a family run business which provides an excellent traditional show and feast of local Tongan food. The owners Simana and Akanesi Kami are cultivating the food crops and pigs used in the feast in an adjacent bush allotment and they anticipate using this area to allow tourists to view the traditional 'organic' production systems before they taste the

produce in the feast. 'Oholei is a good example of tourism-agriculture-culture linkages that enhance the tourism destination experience and competitiveness whilst provide local employment and strong backward linkages to the village economy.

Katoanga

A significant visitor event focusing on the VFR group is the '*Katoanga*' (mat exchange) which takes place each year usually during the period October to January. Local 'tour/travel' agents organize these events which involve groups of expatriate Tongan ladies travelling from Australia, New Zealand or the USA to purchase traditional Tongan mats made by local weavers. The *Katoanga* witnessed in Vava'u involved a group of 50 ladies from Australia. Each participant had agreed to purchase from specific weavers 5 mats valued at T\$1,100 each (T\$5,500 total). During the mat-exchange ceremonies participants share traditional feasts, dancing and gifts. But whilst these events are heavily rooted in Tongan culture they are nevertheless a significant economic trade event providing income to the tourist travel and hospitality sector and to the rural economy. With several hundred visitors estimated to be involved in *katoanga* each year the economic exchange for mats alone can reach into millions of Tongan dollars.



In addition to the prearranged mat purchases other gifts and significant amounts of cash can be exchanged which sometimes exceeds the value of the mats traded. However, one issue raised by organizing agents for the *katoanga* mat exchanges in Vava'u was shortages in the availability of quality pandanus for the weaving. The best pandanus and quality mat weaving is said to be in Ha'apai.

'Value chain' tours

Value chains describe the range of activities involved in creating products (and services). Exploring specific agriculture value chains from primary production through stages of processing to the final saleable consumer product could provide a rich content on which to develop tour products.

Some potential value chains that may prove interesting for tourists to explore include: vanilla, coffee, kava, coconut oil products, and crafts; particularly tapa, woven mats and shell/pearl jewelry.



A deeper immersion in the origins of local products and the people in the value chain that cultivate, prepare and market them is likely to boost sales and provide additional revenue earning opportunities for rural communities.

Areas for synergy or conflict

Environment

The pristine environment is without doubt the most precious asset for sustainable development in Tonga. The natural resource base underpins both the social and economic wellbeing of all Tongan communities. Clearly tourism is highly dependent on the quality of the environment including important vistas, landscapes and seascapes. A priority therefore needs to be to maintain the quality of the environment on which both the host community and the visitor depend.

Whilst traditional polycultural agriculture in the Pacific can be lauded for its low environmental impact and sustainability attributes there are also many examples of expansion into commercial monoculture which have had a more profound destructive impact on the natural environment. UNESCAP in 2002

cited modern commercial agriculture as the most pervasive and environmentally destructive human activity in the Pacific region, listing its primary impacts as (i) the direct removal of existing ecosystems; (ii) the reduction of biodiversity; (iii) destruction of soils; (iv) pollution of the surface and ground waters with agricultural chemicals; (v) pollution of wetlands and the marine environment with silt and agricultural chemicals; (vi) a major contributor to global warming through the loss of trees and generation of methane; and (vii) a contributor to landlessness.

The profound changes in Tonga’s agricultural system characterized by the shift from traditional agricultural practices to large scale (mainly squash production) commercial agricultural activities, resulted not only in the change in land use, but also in the extensive use of commercial fertilizers and pesticides, especially on the main island of Tongatapu and ‘Eua. Such land management practices generally prove unsustainable and also have the potential to negatively impact on other economic industries such as tourism.

Whereas traditional and largely organic production systems offer both the basis for production of value added certified organic produce, and also products and services (environmental and amenity) which can enhance Tonga’s tourism experience and the sector’s competitiveness. Tonga’s Civil Society Forum



Youth Congress vegetable production in Vava’u. Photo by Luseane Taufa

organization is promoting organic farming through the Youth Congress with good political support. At the moment they are exploring the possibility of registering all outer islands as organic and also a number of individual allotments in the main islands. The government currently subsidizes the organic certification costs. Over recent years the Youth Congress in Vava’u have been participating in organic production of vegetables and with some support from NZAID have been producing vegetables in screen houses for the local market and

hospitality outlets.

The fisheries Special Management Areas mentioned earlier are already proving successful in enhancing fish stocks and conserving over exploited species which will enrich the environment for marine-based tourism activities. There is also a further potential opportunity, if carefully and sensitively managed, for communities from the SMAs to gain further economic benefits from tours. Snorkel tours to see fish life and giant clams would be an obvious opportunity (a similar activity is available in Samoa at the Savaia village fisheries protected area.



Photos by Luseane Taufa

The Ovaka SMA community is trying to deal with the issue of free roaming pigs, but requires more support in this



Pig enclosure on Ovaka

endeavor and also to diversify their other economic and food security opportunities.

The potential negative and positive impacts of agriculture on the natural environment and thus on tourism have been discussed above, but it must also be recognized that there are potential negative impacts of inappropriate tourism development and activities on the environment which could impact on agricultural livelihoods. Pollution from hotels (and yachts) can damage reefs and diminish fish stocks; inappropriate whale watching activities could negatively impact whale breeding and ecosystem sustainability; and excessive hotel water usage could compete with other user needs.

Transport

Access to markets and improving aviation and maritime linkages to outer islands are identified as NSPF special priorities, especially in relation to their role in supporting growth in tourism and revitalizing the agriculture and fisheries sectors. The government's Agricultural Road Program will also help improve plantation and market access roads throughout the country. The benefits from upgrading ports and terminals for inter-island shipping should be complemented by the development of post harvest facilities (handling, storage, processing) so that fishing and agricultural produce can be prepared, processed and stored for export and domestic markets (including the tourist market). The European Union is assisting with implementing investments and supporting activities in this area (Tonga Infrastructure Investment Plan, 2010).

The level of visitor numbers is a major driver of international and domestic air services in the Kingdom. In 2010, after consultation with the Governments of Tonga and Samoa, Air New Zealand withdrew the weekly Boeing 767 service from Auckland to Los Angeles, which stopped in Tonga and Samoa. As well as negatively impacting on potential development in the tourism sector the loss of the wide bodied carrier constrains freight capacity for fresh produce exports. Air Pacific is currently considering extending international connections to Vava'u which could be a valuable link to important export markets in American Samoa. This connection would also open up opportunity for tourist traffic from Hawaii, Fiji and Samoa.

Findings of the Scoping in Samoa



Context

Samoa is a small open economy and total merchandise trade (largely imports with only small exports⁵) makes up about 60% of nominal GDP. The Central Bank of Samoa (CBS) therefore recognizes the critical importance of maintaining a sufficient level of international reserves to withstand unforeseeable economic shocks (CBS, November 2011). Important positive net transfers on the current account and contributors to foreign

reserves in FY 2010/11 are: remittances (SAT\$346.7 million), services (largely tourism – SAT\$226 million) and on the capital account, official development assistance grants of SAT\$145.2 million. Total merchandised exports contributed only SAT\$ 28.1 million. The main merchandised exports are fish, beer and a few agricultural commodities (principally coconut products, nonu products and taro). In Samoa, only about twelve products account for nearly the entire value of merchandise exports adding to the country's vulnerability. Tourism has been the fastest growing area of the economy over the last decade and is now the second largest contributor to foreign exchange after remittances. The tourism sector has been estimated to contribute about 20% of GDP, but as tourism contributes in many areas of the economy without a dedicated satellite account it is difficult to give a more precise tourism GDP estimate in National Accounts. The Strategy for Development of Samoa 2008 – 2012 and the Samoa National Export Strategy 2008-2012 both recognise tourism as the leading sector for future national economic growth and employment.

Approximately 75% of the Samoan population lives in rural communities with an estimated 120,000 people relying in some measure on the productivity of the agriculture sector. The 2009 Agriculture Census indicates that 68% of 23,164 households surveyed were agriculturally active with a further 15% having minor agricultural activity. Ten years earlier the 1999 Census indicated 71% of 20,521 households surveyed were agriculturally active with only 7% having minor agricultural activity. There would appear to be a very slight drop in the proportion of agriculturally active households, but at the same time a doubling in the percentage of households with minor agricultural activity. This may imply that with rising food prices people are turning to their 'backyard' for household food production. Of the agriculturally active households surveyed in 2009 only approximately 50% were deriving some income from their farming activities. Over the last decade the sector has economically performed relatively poorly and output has stagnated and exports have declined. Whilst agriculture still maintains an important role in food security, Samoa's population has become increasingly dependent on food imports with total food and fish imports topping the SAT\$165 million mark in 2009 (equivalent to 30% of total imports). Fruit and vegetable imports alone reached nearly SAT\$9 million (CBS, 2010).

Today larger-scale commercial agriculture is a small component of total agriculture whilst subsistence agriculture still accounts for an estimated half of agricultural output. Samoa's natural resource

⁵ Imports in 2010/11 were SAT\$641.3 million almost 23 times larger than exports at SAT\$28.1 million

endowment, remote location and traditional farming methods mean that it has potential advantages for organic agriculture. Currently there are around 400 farm holdings and 30,000 ha (including village communal land) organically certified. The 2009 Agriculture Census indicated that 29.1% of agricultural holdings were using organic fertilizers, but 50% of households surveyed were using herbicide, whilst only 0.9% used insecticides and only 0.3% used fungicides.

The Strategy for the Development of Samoa (SDS) 2008-2012 identifies accelerating economic growth through private sector development as a vital goal to improve living standards. Tourism, agriculture and fisheries are described as key productive sectors for achieving private sector led economic growth and employment creation. The SDS recognizes that if agriculture is to grow, there will need to be an increased emphasis on commercial production. Tourism has shown good promise as a growth industry with potential for improving foreign exchange earnings; however, the combined impacts of the Global Economic Crisis (GEC) and the tsunami in 2009 have depressed tourism earnings. But tourism is showing some signs of recovery in FY 2010/11.

After several years of relatively good economic performance the combined effects of the GEC and the tsunami were major setbacks for the Samoan economy which contracted by 5.4% in 2008/09 and grew by only 0.2% in 2009/10. However, the economy has showed signs of recovery in FY2011 and grew 2.1%, reflecting strong growth in construction and increased consumer spending based on higher remittances. Tourism related industries (e.g., hotel and restaurants and transport and communications) posted modest growth despite sluggish growth in tourist arrivals. Prospects for medium-term growth are considered generally positive, but the 2008 Household Income and Expenditure Survey shows that poverty and income disparities have been increasing (ADB, 2011). This implies a need for a greater focus on strengthening the backward linkages from economic activities to the rural communities where hardship is greatest.

Agriculture

The contribution of the agriculture sector to the economy has shrunk significantly over the decades from one half of GDP in the 1980s and one third of GDP in the 1990s to only 10% in 2010. Employment levels in the sector have also declined over the last two decades from 60% in the early 1980's to 39% in 2006 (Agriculture Sector Plan, 2011).

Farming in Samoa is generally small-scale (average farm size of 6 acres), dependent on family labour and predominantly focused on subsistence staples such as taro, banana, taamu, breadfruit and coconut with surpluses to farm household needs being sold in local markets. Farms often also include a mixed variety of vegetables, fruit trees and small livestock such as chicken and pigs. After coconut, cocoa is the most prevalent tree crop grown both for home consumption and for market sales. Nonu (*Morinda citrifolia*), which is often growing semi wild, continues to be an important crop for processing for nonu juice and fruit exports. A few of the more commercially oriented farms focus on marketable vegetables such as tomatoes, head cabbage, bok choy, lettuce, cucumber, pumpkin, long bean, eggplant and capsicum. Popular fruits that are marketed when in season are pineapple, papaya, mango, Samoan orange, lime, avocado, vi-apple, passionfruit and rambutan. A range of other tropical fruit can also be found on Samoa

including soursop, abu, and guava. Desert bananas including Cavendish variety and lady's finger variety are available pretty much year-round.

Whilst the tropical climate of Samoa offers year round growing conditions for most traditional crops, unless protected, heavy rainfall from December through March depresses the growth of vegetables such as lettuce, tomato and cabbage. Due to poor water retention in the volcanic soils drought conditions can also be experienced particularly in western regions during winter months from July to September. Despite the generally fertile nature of the soils cultivation is hampered by the prevalence of volcanic rocks and the uneven terrain. Labour productivity, lack of technical skills, poor availability of appropriate inputs, access to credit, prevalent pests and diseases and farm larceny have also been noted as other constraints to commercial farming. Developing the capacity to consistently produce commercial quantities of quality products to meet export market and tourist market needs continues to be a significant challenge. Domestic markets are small and fragmented and small holder farmers' linkages to these markets remain weak. Facilitation of supply chains through middlemen traders is limited.

The 2009 Agriculture Census records a total of 38,954 cattle, 152,145 pigs and 307,060 chickens and also a few hundred goats, sheep and ducks amongst the edible livestock. Imports of meat products have been increasing consistently over the years due to the inadequacy of quantity and quality of local



supply. Poultry is currently by far the largest meat product import valued at around US\$11,053,711 (approx SAT\$25 million) in 2009 (SPC [Pacific Trade Statistics](#)) Various attempts in the past years to establish commercial egg production have not been entirely successful due mainly to poor management, high feed price and cheap low quality imports competing with local products and reducing producer margins. However, introduction of an egg standard and regulations in 2010 have seen resurgence in local production. The recent establishment of an

integrated commercial feed mill and pig farm has also shown that there is a potential for commercial pig farming and related processing of pork if there is a reliable and cost effective source of feed and availability of markets (ASP, 2010).

There is an active Bee Keepers Association and an estimated 400 bee hives in Samoa and an estimated potential based on flora availability for 5000 hives, however bee equipment at present is imported and expensive and thus limits growth in the industry(ASP, 2010).

Fishing

Twenty five percent of households in Samoa engaged in fishing in 2009, down from 1999 when around a third of households surveyed engaged in fishing. The vast majority fish mainly or entirely for home consumption and only small percentage fish primarily for commercial reasons. In 2009 there were around 30 licensed active long-line fishing vessels compared to 60 in 2007. Fisheries production expanded at rapid rates in 1995–1998 and peaked in 2001, when fisheries accounted for 8.2% of GDP. The expansion reflected the private sector development of long-line fishing for (mostly albacore) tuna, which was blast-frozen and sent in containers to fish canneries in nearby American Samoa. Since 2002

fish production and exports declined overall as a result of the adverse impact of changing climatic conditions on tuna stocks, rising fuel costs, and a declining US dollar. Nevertheless, fish remains the largest commodity export, accounting for over half of total commodity export earnings.

The inshore coastal fishery continues to play a vital role in the livelihood of village economies; however, there has been a noticeable decline in inshore resources which has been linked to the use of destructive fishing methods, loss of habitat and increased commercial harvesting of seafood products. Land reclamation and road construction have also been known to destroy fish nursery areas and poor land management has led to erosion and consequent siltation of lagoons. The emphasis therefore for the fisheries subsector is conservation and sustainable management (ASP, 2010).

Aquaculture offers an area of potential as imports of crustaceans and mollusks has more than doubled since 2002 with a growing demand from the hospitality sector. But currently aquaculture pond production of Nile tilapia is the principal private sector activity for household consumption and food security.

Tourism

Visitor arrivals to Samoa grew at an average of 7% annually over the period 1999 to 2008, but there was little growth between 2009 and 2010 with arrivals of 129,305 and 129,487 respectively. Tourism earnings have grown along with visitor arrivals and reached an estimated SAT\$308 million in 2010 (Figure 5). The travel and tourism sector now accounts for some 20 percent of the country’s GDP and employs some 3,000 – 3,500 people directly in the industry.



Source: Research and Statistics Division, Samoa Tourism Authority

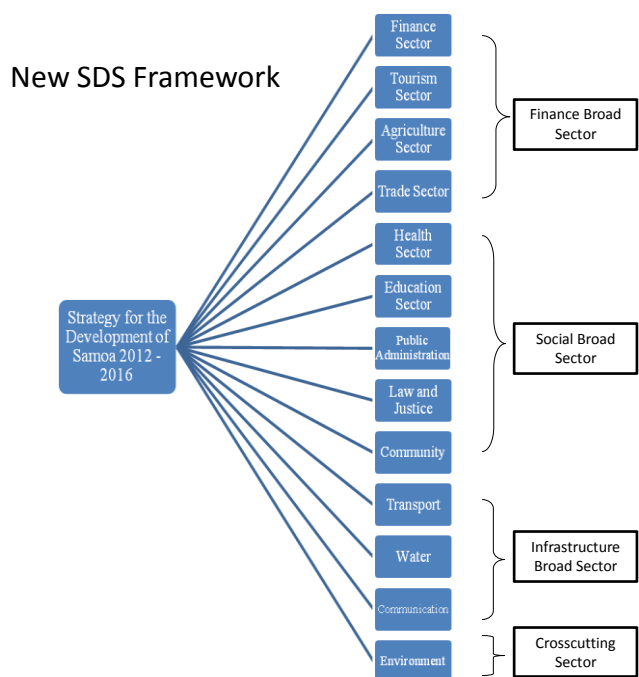
Current visitor arrivals include about 40% Visiting Friends and Relatives (50,399 in 2010) and 38% Holiday/leisure visitors (48,726 in 2010). The remaining visitors were categorized as business, sports or other. In 2010 only about 32% (41,252) of all visitors were recorded as having stayed in hotels as opposed to in private accommodation. The Samoa Tourism Development Plan 2009 – 2013 envisaged

growing visitor arrivals by 40 percent between 2009 and 2013, to 171,000, but this goal now appears over ambitious.

Factors Affecting Linkages

Policy and Institutional Setting

Driven by the Ministry of Finance, Samoa has adopted a sector-wide approach to planning and to coordination of development partner assistance. The national planning framework, the Strategy for the Development of Samoa 2008-2012, is under review and the SDS 2012-2016 is scheduled to be launched in June 2012. The government planning framework recognizes 13 sectors with the four sectors, Finance, Tourism, Agriculture, and Trade constituting the ‘Finance Broad Sector.’



Source: Ministry of Finance

An Agriculture Sector Plan was launched in 2010 and the current Tourism Development Plan 2009-2013 is scheduled for review with support from the NZ funded Samoa Tourism Support Programme (STSP)⁶ which will assist in the implementation of a sector wide approach to tourism development.

Both Agriculture and Tourism have formed Sector Committees to guide and help coordinate development in the sectors. The Prime Minister currently holds the portfolio for tourism and chairs the Tourism Sector Committee. However, at the time of the consultation it does not appear that the Agriculture Sector is represented on the Tourism Sector Committee and vice versa (Table 4). The ASP gives only a cursory mention to tourism linkages.

⁶ The STDP is planned as a five year sector-wide support with an estimated budget of NZ\$19.8 million

Table 4: Composition of Sector Steering Committees for Tourism and Agriculture

Tourism Sector Steering Committee	Agriculture Sector Steering Committee
Hon Prime Minister (Chair)	CEO Ministry of Agriculture and Fisheries (Chair)
CEO Samoa Tourism Authority	CEO Samoa Bureau of Statistics
President Samoa Hotels Association	President Farmers Association
President Samoa Savaii Tourism Association	CEO Women In Business Development Inc.
CEO Ministry of Women, Community and Social Development	CEO Samoa Research Organization
CEO Ministry of Finance	CEO Ministry of Finance
New Zealand Government	CEO Ministry of Commerce, Industry and Labour
CEO Ministry of Natural Resources and the Environment	CEO Ministry of Natural Resources and the Environment
	President of Chamber of Commerce
	Dean of School of Agriculture (USP)

A Trade, Commerce and Manufacturing Sector Plan (TCMSP) is nearing completion with the assistance of UNDP. The TCMSP is designed to achieve six key sector-wide policy objectives (SPO) within a timeframe of four years (2012-2015). This plan specifically recognizes the importance of sector linkages in SPO 6: *Enhance linkages and spillovers among productive sector*. The strategies to achieve this objective include:

- Strong and productive primary sector is a necessary condition for productive manufacturing and beneficial trade. Identifying bottlenecks and constraints at the primary sector and working with relevant stakeholders to address them will enhance primary sector productivity and ensure stable and sustainable supply that caters to the demand of the industrial and trade sectors.
- Enhance and institutionalize cross-sectoral partnerships and consultations among stakeholders in the government, non-governmental organizations, civil society, and private sector.
- Adopt cluster and value chain development approach to boost value addition and enhance sectoral linkages. This approach will ensure equitable distribution of income across sectors and between urban and rural areas, accelerating progress towards the elimination of poverty and hardship in Samoa.
- Enhance the partnership with the educational and training sector to enable it to better cater to the demand from productive sector for a Samoan workforce equipped with the needed skills and knowledge.

This will be achieved through enhanced collaboration with the relevant agencies and development partners to attain better alignment of educational and training policies and initiatives and strengthen the production and dissemination of labor market data and information augment the demand and supply mechanisms of the labor market.

The sector plan approach adopted in Samoa should provide an appropriate planning structure to facilitate cross sector linkages and synergies and there are a number of activities being discussed and muted to enhance positive linkages between agriculture and tourism. A Fruit and Vegetable Sector Strategy formulation and steering process has had strong involvement from the Samoa Hotel Association. Indeed, the Fruit and Vegetable Strategy Development Coordinating Committee was appointed by stakeholders and is composed by representatives from the value chain including farmers, processors, and tourism industry, NGO's and the Ministries of Agriculture and Finance.

Samoa Tourism Authority, Samoa Hotel Association and WIBDI are currently cooperating to try and link Samoan organic farmers to hospitality outlets and to couple this with a programme to broaden the skills of local chefs to use more creatively local produce in hotel and restaurant kitchens. The International Trade Centre (ITC) has supported an Opportunity Study for Tourism Led Poverty Reduction Programme in Samoa and developed a project proposal to both upgrade farmers supply chains to larger hotels and resorts, stimulate demand through familiarization of chefs with recipes and ways to more creatively utilize local produce, and to strengthen market information sharing and coordination between the hospitality sector and farm producers. The Samoa Farmers' Association is already working with its membership of small farmers to improve the productivity, consistency and quality of a number of fruit and vegetable products and to link the farmers to both domestic (including hospitality and retail) and overseas markets.

Considerable development partner assistance is also being channeled to support the implementation of the ASP and to tourism sector development. The Samoa- Australia Partnership for Development has a priority focus on private sector growth and employment and aims to increase the contribution of agriculture and fisheries to GDP. The World Bank supported Samoa Agriculture Competitive Enhancement Project (SACEP) will assist the revitalization of the agriculture sector by strengthening the livestock and fruit and vegetables sub-sectors through improved productivity and market development support together with institutional strengthening for the sector support organizations. New Zealand focus through the Samoa Tourism Support Programme will be on broad based sector approach and will help to update and deliver the Tourism Development Plan. The STSP has been designed to support four key areas:

1. Tourism Sector Governance
2. Marketing and Research
3. Workplace Development
4. Product, Service and Infrastructure Development

Under component two, marketing and research, a specific medium term outcome is "Tourism economic linkages strengthened" and a specific short term outcome is "Tourism and Agriculture Linkages Strengthened through marketing collateral". Activities to support increased sector linkages, will include

the development of a ‘Guide to Samoan Cuisine’ highlighting local produce and local recipes (STSP Activity Design Document, 2011).

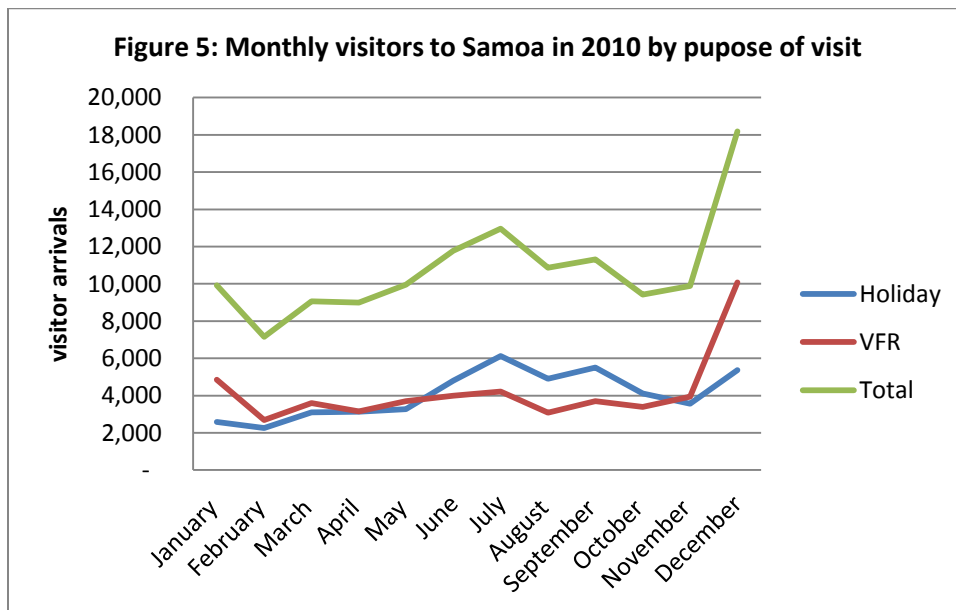


Photo by Samoa Observer

The Private sector Support Facility (supported by Australia, New Zealand and UNDP) offers direct assistance to private sector enterprise and could thus potentially help facilitate tourism and agriculture sector linkages. Mailelani who manufacture coconut-based toiletries and cosmetics have benefited from PSSF assistance as has the supply chain for ‘Hot! Samoan Boys Chili Sauce’ manufactured by Apia Bottling. The Australia Pacific Technical College (APTC) is providing tertiary level training in tourism and hospitality (Food and Beverage training for the next generation of Samoan chefs) which could be fundamental to develop capacity for strengthening linkages with the agriculture sector.

Demand and supply of products

The ITC opportunity study in 2010 for a ‘Tourism Led Poverty Reduction Programme’ (TPRP) made a analysis of demand for agriculture produce by the hotel/hospitality sector. This study noted that when considering the size of the tourist market it is important to recognize the two distinct segments of the 130,000 annual visitors arriving in Samoa each year with around 60% of all visitors staying in private accommodation (as Visiting Friends and Relatives) rather than in commercial properties. These groups will therefore have very different patterns of consumption and expenditure. However, it was concluded that with around 50,000 annual guests occupying rooms in over 90 commercial properties this constituted a significant demand market for food and beverage supplies. The ITC study observed that although Samoan beach fale properties rely heavily on local produce there is a high leakage factor in terms of food and beverages (F&B) from the higher-end hotel/resort accommodation properties which currently import almost 70% of their F&B requirements.



Source: Samoa Bureau of Statistics and Samoa Tourism Authority

A further consideration for demand for local produce is the seasonality of visitor arrivals (Figure 5) which indicates that holiday arrivals peak for only around 4 months a year (June to September), with the VFR segment peaking in December/January. This implies that demand for farm produce from the hotel sector will be depressed during the offseason from January to May. A more detailed survey over the calendar year would be required to fully assess the potential market demands from the hospitality sector for produce that could be supplied by local producers.

Fresh Produce

Consultation with a limited number of hotels and restaurants revealed a very mixed attitude to purchase and supply of local produce. Whilst most hospitality operators professed a desire to purchase and use local produce when it is available in the needed quantities and of appropriate quality and price, this was not always borne out by what was available on menus. Even when local fruits are readily available some properties present imported fruits such as apples and oranges and processed fruit drinks in preference to local choices. The largest property in Samoa, the Aggie Grey’s Group (Town Hotel and Lagoon Resort, with over 300 rooms in total) cannot rely on local suppliers to meet their needs for consistent quantity and quality of supply. This hotel does have its own farm producing a portion of its needs, but also relies heavily on imported produce and maintains a store in freezer containers to ensure its supply needs. When purchasing local produce Aggie Grey’s rely on a few dedicated suppliers and prefer contract arrangements rather than ad hoc purchases.



Photos Sinalei website

Some of the interviewed property owners clearly recognized a value in using local produce/food as a point of difference on their menus. The Sinalei Reef Resort (a boutique high end property) has a strong policy directed to utilizing local produce and the hotel management is working with local village farmers in Poutasi and Siumu to upgrade their capacity to supply them with good quality local produce on a consistent basis. As part of this process they are hoping to utilize skills of local workers who have participated in the Recognized Seasonal Employer scheme⁷ in New Zealand. The Tindall Foundation is supporting this capacity building for horticultural production. Bruce Russell, Project Manager in Samoa, said that “Tyndall have learnt from experience that there is a need to work with private sector entrepreneurs such as Sinalei to bridge the gap between aid and enterprise”.

The Women in Business Development Inc (WIBDI) and the Samoa Farmers Association (SFA) also have programmes to assist small farmers link to hospitality markets. WIBDI is focusing on organic produce and will work together in 2012 with the Samoa Tourism Authority and SHA in a project to popularize local foods in hotel menus using a ‘Samoa Guide to Local Food’ being prepared by Chef Robert Oliver.

To date the SFA have been working with small farmers to link supplies of fruit and vegetables for South coast resorts on Upolu. However the significant drop in demand by the hospitality sector during low

⁷ Under the RSE scheme, workers from Tonga, Samoa, Tuvalu, Vanuatu and Solomon Islands go to New Zealand for up to seven months out of eleven months in a year to work in the horticulture and viticulture industries in planting, maintaining, harvesting, and packing crops.

season months has proved challenging with significant produce going to waste. A demonstration farm supported by the Chinese Government is providing technical support to SFA and its members to upgrade vegetable production and introducing some new varieties.

The availability in hospitality outlets of locally produced beverages such as drinking coconut, fresh lime juice and Samoan cocoa is varied. Better promotion of these products by the hospitality sector coupled with well coordinated supply chains would undoubtedly see demand rise as tourists generally welcome opportunity to sample fresh local produce, particularly when it represents the healthy choice!



In Savaii, Lata Plantation continues a long tradition of twice weekly (Monday and Friday) deliveries to the hotels/resorts/restaurants around the 'Big Island'. Lata cultivates using hydroponics a variety of vegetables and herbs including lettuce, tomatoes, spring onion and parsley. They also grow in organic soil cultivation and the owner/manager (Bob Wetzell) stated that there is now generally a preference for the organic produce if available. Lata Plantation also delivers some

fruits including lime. Most of the hospitality outlets the consultant met with welcomed the Lata vegetable supplies, but noted that these were not sufficient to meet all their needs particularly for lettuce and tomatoes. A general practice seems for hotels/resorts to supplement supplies from local farmers and roadside stalls. Adjusting menus according to season is the norm for many smaller resorts that rely heavily on local farm supplies. For the larger and busier resorts convenience in shopping is an important consideration, but with the exception

of Lata there is dearth of dedicated farmers/traders servicing the hospitality sector.

Over recent years beef supplies and butchered meat cuts have improved in Apia super markets, but in general the higher end resorts continue to rely on imported meats for better consistency in quality. Chicken is probably the most prevalent meat used in the hospitality industry and is almost entirely sourced from imports. With the exception of local pigs which are used exclusively in traditional feasts, pork and lamb cuts have been imported. Following the introduction of the 'Egg Standard' local egg supplies have now increased and can better supply the hospitality sectors needs. Wholesalers in Apia are the principal suppliers of imported meats. However, Lata Plantation in Savaii does supply some local beef to some of the hotel and beach resorts, but the supply is not consistent. Local butchered pork cuts are becoming more available with the establishment of the FarmTech piggery and feed mill. Successful implementation of the World Bank supported SACEP with its focus on upgrading livestock, improving husbandry practices and stock management, making productivity enhancing on-farm investments, and improving the quality meat sold in the local market should see increasing opportunity to use local meat in the hospitality sector. But increasing local production capacity of quality meat will require substantial private investment, and probably some public investment, in the upgrading of processing facilities, the

introduction of hygiene standards, legislation and regulations, as well as training of the labour force. Where grain-based feeding (e.g. poultry) is expanded there is likely to continue to be a need for feed imports and a consequent foreign exchange loss to the economy.

As in Tonga, fish and seafood are very popular items on hotel/restaurant menus and in general fish supplies are being met from local fishermen or from the Apia fish market. The bigger hotels and resorts tend to have dedicated suppliers. Resorts that offer fishing charters also use the catch on their menu. Nevertheless, increasing amounts of seafood products (including mussels, prawns, squid and shrimps) are being imported frozen and used in the hospitality outlets. Also there are times when offshore fish are not available due to inclement weather.

The ITC Opportunity Study noted that as much as ST\$4 million worth of fruit and vegetable products, and most imports of chicken meat and eggs worth several million tala more, could be replaced in hotel/resort restaurants with local produce that would be consumed by tourists. The study concluded that fruit and vegetables and chicken products offer the better segments of the agricultural industry to select for intervention projects to strengthen linkages with the tourism industry (Sofield and Tamasese, 2011).

Processed Products



Photo Pacific Island Centre website

Samoan manufacturers produce a variety of products which should appeal to tourists, including: taro, breadfruit and banana chips, bottled honey, chili sauce, nonu juice, coconut toiletries and cosmetics. The quality of these products and the presentation and packaging has improved considerably in recent years. Greater exposure of Samoan products in hospitality outlets would help build market demand and if conveniently packaged for suit-case exports it could help products penetrate overseas markets.



Photo Mailelani website

Despite the appeal and quality of these Samoan processed products their exposure through the hospitality sector is still limited. Mailelani coconut- based products have now gained a much wider exposure in local retail outlets in Samoa and in some hotel gift shops, but few hotels provide these local products as complimentary toiletries. Linkage between suppliers and potential tourist markets still needs to be strengthened.

Demand and supply of services

Agriculture and rural based tourism sites and attractions

As in Tonga, Samoa has rich agricultural systems which do undoubtedly enhance the tourism experience, but as yet there has been only limited purposive use of these systems as tourist attractions. NZAID's Samoa Tourism Support Programme (STSP) Activity Design Document (page 12) notes that;

Tourism investment in Samoa over the last 10 – 15 years has concentrated more on accommodation, hire cars, cafes and restaurants and less on the development of tour activities, natural and cultural attractions. This is a key area on which Samoa will need to focus over the next decade in order to strengthen its competitiveness with other destinations such as Vanuatu, Fiji and for water-based activities, Vava’u (Tonga). Samoa has good but relatively undeveloped potential for nature and soft-adventure tourism along with more village based activities and tours linked to local and organic produce (coffee, tropical fruit, fragrances and oils), the arts and handicrafts.

The Savaii Lagoon Resort reported that they organize short tours to a local family farm operated by one of their staff which has proven extremely popular with their guests who claim it as one of their best holiday experiences. Polynesian Xplorer informed that they organise a number of tours (and also book others) which strongly feature agriculture, agriculture systems and value chains as the key attraction. They also include the fresh produce market and fish market in an Apia tour. One particular tour features plantation life on the traditional Samoan farm of Olson and Jane Vaa at Falease’ela village.

Polynesian Xplorer are now in the process of developing a ‘value chain’ tour based on Samoa Organics with WIBDI which should include production and processing of vanilla, coffee, cocoa, virgin coconut oil etc. and conclude with a visit to Mailelani where some of these products are being used in their processing operation.



Photos Talofa.net website

Other tours they organize include Savaia village marine reserve area where guest can snorkel to see giant clams. Another tour takes in an aquaculture tilapia farm. Polynesian Xplorer CEO noted that there is increasing demand for this kind of tour based in local culture and agriculture.

Areas for synergy or conflict

Environment

The Agriculture Sector Plan (Vol. 1 page 24) notes that Agricultural activity has impacted on land use, soil, water, biodiversity and the landscape and lists a number of key emerging environmental issues in agriculture with significant implications on the future productivity and sustainability of both the agriculture and tourism sectors. These include:

- Land degradation including erosion, compaction and overuse;
- Agro-chemical pollution of ground and surface water;
- Loss of strategic forests and wetlands leading to loss of biodiversity;
- Increasing livestock numbers imposing pressure on ecosystems and watershed systems;
- Loss of biodiversity in agricultural landscapes through the introduction of non-native varieties;



Photo STA website

Under a heading “Waterfalls Aplenty” the STA website states that “Samoa is blessed with an abundance of gorgeous waterfalls, each with their own distinctive charm”. Togitogina waterfall and pools are very popular for recreational purposes and for eco-tourism and the Forestry Department has provided recreational facilities such as picnic fales, barbeque area, and toilets and changing rooms at this site. But such national assets are increasingly under threat from

continued land clearance for cattle farming, cropping and land development for residential and business purposes. Now for several months of the year Togitogina is completely dry. This has led local tour operators such as Polynesian Xplorer to be cautious about stressing such areas in their advertising. During the wet season poor agriculture practices in the catchment area have also led to fresh and coastal water pollution and soil erosion.

The continual degradation of the Togitogiga catchment is a major concern to the government and a few years ago the Ministry of Natural Resources and Environment (MNRE) with assistance of the IUCN commenced pilot activities to implementing watershed conservation and protection activities. But in 2011 the Togitogiga waterfall was still exhibiting considerable environmental concerns (Box 1).

Box 1: Fish Massacre Fear

The sight of hundreds of fish carcasses floating in the Togitogiga waterfall has shocked locals and tourists hiking to the Scenic Reserve during the last few days.

Suluimalo Amataga Penaia, Assistant CEO of the MNRE Water Resources Division says the incident could be explained by a lack of oxygen in the water that causes the fish to suffocate and eventually die. "We are in the middle of the dry season," she says. "And it is likely that the short supply of the mainstream and the absence of flow in the waterfalls caused the fish to suffocate in these stagnant waters.

"If there is no continuous flow in the water, a lack of oxygen is created and can cause the death of the surrounding ecosystem." An investigation to determine what killed the fish will take into account scenarios of algae contamination or contamination of the water due to farming pollution. Upstream deforestation will also be taken into consideration.

The state of the waterfalls was reported to the Samoa Observer by a local and two tourists who visited the site last Sunday. Asked how long the waterfalls have been in this state, the Water Resources Division could not provide any answer.

On a bigger scale, the implications of this incident are also of great concern. Climate change, cattle farming, agriculture and land development for residential and businesses are all impacting on the Togitogiga ecosystem, the water quality and quantity of the catchment, including the Tagitogiga watershed, which is the main source of supply of water for nearby villages.

The Water Resources Division says they are working with the wider community and stakeholders to implement solutions for a sustainable use of the water and to protect the ecosystem, biodiversity and environment in this area. However, this will take time.

"It is like planting a tree, it can't be done overnight," says Suluimalo. "As trees need years to grow this project will take years to be completed."

Source: Samoa Observer 23 June 2011

The NZAID Activity Design Document for the STSP noted under the problem analysis that: *Assessment of both cultural and environmental development impacts have not been applied rigorously for new developments in Samoa. Development is impacting on the core product of Samoa in a number of ways which detract from the visitor experience; more adequate planning is required to support long term industry sustainability; this should include protecting key assets, including beaches and environmentally important areas and heritage buildings. Planning processes relating to development standards need to be strengthening to ensure that future development enhance the visitor experience.*

Back in 2003 Samoa developed a set of sustainable tourism indicators; it would be worthwhile to now check progress in this area (Twining-Ward, 2003).

On a more synergistic note, the Fishery Division-led establishment of marine reserve and protected areas has had both positive environmental impact and improved amenity benefits for the tourism industry. Established reserve areas range in size from 15,000 to 175,000 square metres and many include ecologically important mangrove and sea grass environments, and hence important breeding grounds for fish stocks. Although individual reserves are relatively small it is believed that together they constitute a vital network of safe havens around the Samoan islands. The reserves are also helping replenish adjacent fishing areas through reproduction and migration. Increase in fish and other marine resources benefit both subsistence fishers and beach resort operators whose guests can enjoy an enhanced snorkeling experience. Indeed, the resort operators interviewed during this study actively encouraged the formation of reserve areas (marked by white buoys) in their vicinity and once established helped to police them.



Conclusions

Potential areas to help enhance linkages

Demand for agriculture products

The first step in creating stronger demand from the tourist sector for local produce is to promote and popularize local food and beverages in hotel and restaurant menus. Robert Oliver and Tracey Berno, authors of the Me'a Kai Cookbook (The Food and Flavours of the South Pacific) state that to make it work it is necessary to write the farm products right on to menus. There is also a need for concerted effort to change perceptions and attitudes of managers and chefs about the quality and worthiness of local dishes for the hospitality sector.

Supply of Agriculture Produce

Regarding the supply of agriculture produce (including processed goods) to the tourist sector areas that need to be addressed are:

- improved data on tourist sector needs and detailed survey of purchasing patterns covering the full calendar year.

- the seasonality in supply of horticultural produce and off season production⁸
- Improved supply and access of appropriate seed varieties
- broadening the scope of fruit tree projects to improve impact in the hospitality industry
- improved consistency of supply and post harvest quality (hygiene and sanitary control) of seafood
- upgrading all aspects of local meat supply chains (but this poses the most difficult challenge, particularly related to feed costs)
- ensuring pandanus and other craft raw material production meets demands.
- For processed goods, priority is to generally upgrade the quality, packaging and presentation and promotion of local products.

Some specific products that have a comparative advantage for the tourism sector

Vegetables including , lettuce, tomato, salad leaf, carrot, cucumber, sweet peppers, hot peppers, spring onion, eggplant, beans, cabbage, pumpkin and various culinary herbs. Roots and tubers including, sweet potato, Xanthosoma taro and to a lesser extent cassava and Colocasia taro. All tropical fruits particularly coconut, papaya, pineapple, watermelon, banana, mango, passion fruit, avocado, limes, vi-apple and soursop. Improving supply chains, convenience and ‘just in time’ delivery of salad items, tropical fruits and drinking coconuts should enhance use by the tourist sector.

All seafood products and there are possible opportunities for some aquaculture products.

For processed items opportunities should be explored in products that require less processing facilities and plant and equipment, such as: chips (banana, plantain, taro, breadfruit and cassava), dried fruit, chili sauces, jams and pickles, virgin coconut oil soaps, lotions and massage oils, coffee(in Tonga), cocoa (in Samoa), and vanilla. Particularly in Tonga, craft items such as mats, tapa and shell and pearl jewelry are also clearly important. All these items can be used in the tourist hospitality sector and sold as souvenirs for tourists or exported to niche markets including the Diaspora of Tongan and Samoa nationals living in NZ, Australia and the USA.

Cuisine plays a major role in promoting a country’s national identity and culture therefore further initiatives in areas such as culinary events and creative use of local products in recipes and menus would also be worthwhile. Developing story lines and promotional material for all local produce would enhance opportunities in both tourist and export markets. Both Tonga and Samoa are planning programmes to develop rating standards for accommodation, it could be useful alongside this activity to consider rating the use of local produce perhaps with ‘diamond’ ratings being accorded to those establishments where there is a strong emphasis on use of local produce. The Samoa Hotel Association and the Tonga Tourism Association clearly could play critical roles in encouraging greater use of local produce in the hospitality industry.

⁸ Improved systems of vegetable production such as greenhouses, plastic-tunnels and more efficient irrigation systems could help address seasonality issues.

In both Tonga and Samoa family run small hotels and beach resorts (less than 20 rooms) dominate the accommodation offering and these establishments should be more flexible in their procurement patterns than larger hotels/resorts (such as the Aggie Grey's group in Samoa) where economies of scale are all important. For the smaller properties the manager/owners perspective, perceptions, available time and involvement/relationship with the local community will be the most important factors determining the decision to purchase and use local products. However, the very nature of an industry based on many small properties implies a much disaggregated market with consequent issues regarding coordination of supply and demand. Facilitated local supply networks will undoubtedly be required.

Furthermore, as the tourism sector develops in Tonga and Samoa farmers and food processors wishing to supply this market will have to comply with increasingly strict hygiene, food safety and quality standards. But much still remains to be done in this area.

Supply of amenity services

Enhancing tourism attractions and entertainment based on agricultural systems and value chains would be a good way to strengthen positive linkages. Promoting such forms of tourism offering should foster stronger linkages with local communities thus broadening the benefits from tourism spending and better ensuring sustainability in the industry. But to realize such opportunities efforts must focus on building a stronger culture of entrepreneurship and capacity in associate technical and business management skills. However, it must be recognized that entrepreneurship is a topic very hard to teach and which is more suitable to providing the right incentives than to setting up training sessions (World Bank, 2008). Particular in Tonga, stronger focus is also needed on building appropriate 'Tongan-concept' business models adopting a strategy of "small is beautiful", as opposed to more universal tourism offerings, as these will better reflect local culture and community needs. That means that strategies must be both place specific and driven by local stakeholders. In Tonga, amongst the most successful and sustainable enterprises witnessed during this study were family run businesses deeply rooted in Tongan hospitality traditions and local culture (e.g. 'Ene'io Botanical Garden, 'Oholei Beach, Cottage Breeze Restaurant and Port Wine Guest House).

The World Bank's 2008 study on increasing linkages in the Caribbean noted that "*when done and managed successfully, tourism can create significant multiplier effects on the local economy in numerous ways: directly, through the creation of jobs and business opportunities in tourism establishments, and indirectly, through increased opportunities of the local population that offer complementary services and experiences to this market. In order to gauge the realization of this potential, the three main levers are number of arrivals, length of stay; and expenditures per day*". Currently the relatively low number of tourist arrivals to Tonga is one key factor limiting further exploitation of positive linkages with the agriculture sector. Similarly in Samoa, the much lowered numbers of holiday visitors in the off season challenges the sustainability of enterprises exploiting linkages with the agriculture sector.

Annex 1: List of People Met

Tonga

Tongatapu

Ken Lyell, General Manager International Dateline Hotel
Ata'ata Finau, Government Statistician
Peter Shackleton, New Zealand Deputy High Commissioner & NZAID Manager
Leilani Tamu, Second Secretary New Zealand High Commission, Nuku'alofa
Kilisitina Tuamei'api, Aid project Officer, Ministry of Finance and Planning (Aid Project Management)
Lupe Matoto, Acting CEO Ministry of Environment
Paul Davis, Tourism Advisor, Ministry of Tourism (Tonga Visitors Bureau)
George Nakao, Executive Chairman, Tonga Finest Fresh; Ha'amo Growers Co. Ltd.
Adrian Ali, Executive Manager Commercial Chatham Airline
Taniela Hoponoa, Head of Biosecurity, Ministry of Agriculture, Food, Forestry and Fisheries (MAFFF)
Liz Sullivan, Owner/Manager, Davina Motel and Bill Fish Bar
Sinama Fa'anunu, Ministry of Training, Employment, Youth & Sports
Geoffrey Penhall, Project Manager AUSAID/NZ support for TVET
Edgar Cocker, President of Tonga Manufacturers Association (private sector processor and businessman)
'Alifeleti 'Atiola, Former Director, Tupou Tertiary Institute, Wesley Free Church
Mo'ale Finau, Acting Head; Fisheries Division
Simana Kami, Owner Manager, 'Oholei Beach Resort
Paul Aitu-Johansson, Managing Director, Friends Café & Tourist Centre
Lilieta Takau, Senior Programme Manager (Development Cooperation), Australian Agency for International Development (AusAID), Australian High Commission, Nuku'alofa
Drew Havea, Chairperson of the Civil Society Forum of Tonga
Viliani Tiseli, Farmers Association
Steve Finau, Tonga Tourism Association

Vava'u

Tai Tuiniua, Owner, Port Wine Guest House
Manusiu 'Atuekaho, Craft Vendor, Utukalongalu Market, Neiafu, Vava'u
Palu Sinipata, key grower and vanilla farmer
Tevita Sinipata, Officer in Charge 'Utukalongalu Market, Neiafu
Salesi Paea, Vavau Tours, President of Business Association, Business Council
Masina Talakai, Secretary, Governors Office
Samuela Fakatou,, Acting Head, Finance and Planning, Vava'u
Silika Ngahe, Officer in Charge, Fisheries Division, Vava'u
Puluno Toke, Head Tourism Ministry, Vavau Visitors Bureau
Derek, Owner Adventure Backpackers Hotel and Sunset Grill Bar and Restaurant
Lawrence Hall, President Vavau Tourism Association, Owner 'Ovava Restaurant
Hanitele Fa'anunu, Owner Eneio Beach and Botanical Garden
Pini Manoa, artisan and craft vendor 'Utukalongalu Market, Neiafu

Lisa Mahe, fresh produce vendor, 'Utukalongalu Market, Neiafu
Paula Tatafu Government Representative, Vava'u
Shane Walker, Moorings and Sunsail Yacht Charters, owner Mango Café and Tonga Beach Resort
Mana'ia Halafihi, OIC, MAFFF, Vava'u
Representative, Tonga Development Bank, Vava'u
Emi Paea, Owner/Manager Puataukanave Hotel
Sapate Toke, Ministry Commerce, Labour & Industry (and craft coordinator), Vava'u
Nufe Kuila, Vegetable Farmer

Samoa

Peter Zwart, First Secretary, NZAID Manager, New Zealand High Commission
Francois Martel, CEO, PolynesianXplorer
Mohammed Umar, Director IRETA, USP
Peseta Frank Fong ACEO, Policy and Planning, MAF
Kitiona & Sylvie Salanoa, Mailelani
Beverly Barlow, and the Head Chef Aggie Grey's Hotel Group
Joe Annandale, Owner, Sinalei Resort
Karen Maposua, Associate Director, WIBDI
Bruce Russel, Tindall Foundation Project Manager, Samoa
David Abbott, Team Leader AusAID/NZ Statistics Institutional Strengthening Programme
Litia Brighthouse, CEO, Samoa Hotel Association
Bob Wetzell, Owner/Manager Lata Plantation
Maanaima Matau, Head of Extension, Savaii, MAF
Tuvae F. Sua, Senior Fisheries Officer, Savaii, MAF
Kieth & Lanu, Owners, Aganoa Beach Surf Resort
Kuki Retzlaff, Owner Le Lagoto Resort,
Tony and Melissa, Managers Savaii Lagoon Resort
Saleimoa Vaai, Owner/Manager Va-I Moana Beach Resort
Afamasaga Toleafoa, Samoa Farmers' Association

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Annex 3: Guiding Framework for Consultation in Countries

Area	Comments
<p>General potential</p> <ul style="list-style-type: none"> • What is the importance of agriculture and tourism in the country? <ul style="list-style-type: none"> ○ GDP contribution ○ Earnings ○ Jobs ○ Livelihood <p>What are the challenges and potentials for building tourism and agriculture linkages?</p> <ol style="list-style-type: none"> 1. Can tourism become an important driver of agricultural output? 2. Can agriculture enhance tourism competitiveness? 3. Can tourism provide additional revenue for farm families? 4. Can tourism exposure to an area's agricultural products and improvements in transportation system affect agriculture exports? 5. Are there any other potential areas of benefit or competition <ul style="list-style-type: none"> • Resources – water, land, labour, capital • Transport – road, sea, air • Services – utilities, banking & business, communications, credit 	
<p>Policy & Institutional framework</p> <ul style="list-style-type: none"> • Does National Development Policy mention sectoral linkages? • Does Sector Policy (agriculture, tourism, trade, infrastructure, environment etc) promote linkages? • Do Industry Associations have policy/strategy to promote linkages? • Do hotels/restaurants have a local purchasing policy in place? • Is data collected sufficient for policy formulation to increase linkages <ul style="list-style-type: none"> ○ Data on tourist arrivals – numbers and seasonal. ○ Data on types of tourists – holiday visitors, business, VFR ○ Tourist spending data – food and beverage, accommodation, activities etc. ○ Contribution to GDP ○ Agriculture production and marketing data for key products ○ Hotels/restaurants purchasing patterns and spending on local verses imported • Have Institutions got capacity and structures to 	

Area	Comments
<p>support linkages?</p> <ul style="list-style-type: none"> • Are there any formal structures or institutions in place to foster agriculture/tourism linkages? • What coordination mechanisms exist between the sector stakeholders? • What are examples of strategies being used to enhance linkages? 	
<p>Supply and demand for products and services</p> <ul style="list-style-type: none"> • What kinds of linkage are operating (product supply & market penetration, services, infrastructure, transport, environment etc)? • What are the main outlets for agriculture goods- hotels, restaurants, specialty shops and centers, airport etc. • What factors influence supply chain performance to hotel/restaurant sector (quality, standards, price, availability, seasonality, transport, information etc.)? • Do chefs & purchasing staff visit farms and producers? • What are potential agriculture products with tourism potential – goods? <ul style="list-style-type: none"> ○ Foods - Fruit & veg (which), staples etc. (Vi apple, melon, pineapple...) ○ Floriculture and ornamentals ○ Processed foods (jams, purees, chips etc.) ○ Aquaculture products (fish, seafood, jewelry) ○ Beverages (e.g. coffee, coconut, lime juice, kava, lemongrass tea, others) ○ Wood products and building materials ○ Craft products ○ Toiletries and cosmetics, massage oils etc. • What is the capacity to produce these goods competitively and consistently to appropriate standards? <ul style="list-style-type: none"> ○ Seasonality and tourism peaks do they coincide ○ Opportunities for processing surpluses • What are the potentials for import substitution? • What are potential agriculture products with tourism potential – services <ul style="list-style-type: none"> ○ Amenity/Tours (farms, plantations, processing facilities, fishing, forests etc) ○ Farm stays ○ Aesthetic value, forests and marine also farming systems ○ Teaching and learning opportunities 	

Area	Comments
<ul style="list-style-type: none"> ○ Brand, distinction, differentiating the holiday experience – Organic, fair trade, health • What are factors helping drive demand for local products? <ul style="list-style-type: none"> ○ Advertising, website etc. ○ Cook books, recipes, training for local chefs ○ Price competitiveness and availability ○ What is the sector demanding ○ Information sharing ○ Food miles and social responsibility • Which kind of establishment uses most local products? <ul style="list-style-type: none"> ○ High end, mass tourist, economy, community/backpack ○ What is the availability of local products in different outlets? ○ What are the spending patterns of tourists? ○ How can you get more spend per visitor head? 	
<ul style="list-style-type: none"> • Are there areas of competition/conflict? <ul style="list-style-type: none"> ○ Labour –wages ○ Land availability and prices ○ water ○ Credit and investment ○ Transport ○ Environment • Barriers to linkages and actions to overcome them? <ul style="list-style-type: none"> ○ Place specific or generic 	
<ul style="list-style-type: none"> • Transportation <ul style="list-style-type: none"> ○ Air <ul style="list-style-type: none"> ▪ Domestic, international ▪ Freight and passenger capacity – trade offs and synergies ○ Sea <ul style="list-style-type: none"> ▪ Domestic – freight and passenger synergies ○ Road • Training <ul style="list-style-type: none"> ○ Chefs, tour operators ○ Farm production and marketing 	