EXECUTIVE SUMMARY

1. Trade in primary products from Pacific Island countries and territories faces ongoing major challenges including:
   - an uncertain investment environment and associated shortage of investment funds and working capital;
   - problems with producing on the scale needed for export markets and maintaining consistent volumes and quality;
   - low entrepreneurial base and dwindling number of farmers;
   - lack of competitiveness (high labour and transport costs);
   - unreliable, irregular and high-cost shipping; and
   - difficulties in meeting technical requirements for market access, especially for fresh agricultural produce.

2. The value of major primary commodities exported by PICTs, such as sugar products from Fiji (€83 million FOB value in 2007) and round logs from PNG and Solomon Islands (€210 million FOB in 2007), is likely to decline steeply within the next few years. The reasons for this decline vary but include lack of competitiveness when preferential trade arrangements end (sugar), exhaustion of native timber resources (Solomon Islands), and a proposed ban on log exports from PNG commencing in 2011.

3. Pacific Island nations have considerable potential to offset these losses through diversifying their agricultural and forestry exports, value-adding, and maintaining revenues earned by trade among themselves and outside of the region. It is vital that such trade is undertaken within agreed, fair trading arrangements that support and maintain local food security and nutrition and healthy environments.

4. There is considerable potential for growing trade from the Pacific Islands. Taking advantage of feasible opportunities requires:
   - a focus on research and development;
   - utilisation of the region’s plant genetic diversity;
   - development and promotion of improved agroforestry production systems;
   - greater focus on high-value, non-perishable products (kava, high-value timbers and sandalwood, virgin coconut oil, indigenous tree nuts, spices and preserved/processed foods);
   - market intelligence and improved market focus;
INTRODUCTION

5. The aim of this paper is to provide an overview of trade in agricultural and forestry products from Pacific Island nations, and identify constraints and opportunities to growing this trade so as to provide better returns to producers and exporters and increased revenue to PICT governments.

6. Trade is needed to enable procurement of goods and services that cannot be efficiently produced locally and to maintain a country’s balance of payments. For many PICTs, primary production from agriculture, forestry and fisheries offers the only, or most commercially viable and sustainable type of export industry. However, income from these sources is being increasingly supported and sometimes overtaken by income from tourism and remittances from nationals and family members living overseas.

7. Major sources of agricultural and forestry export income for some PICTs are in jeopardy. For example, Fiji’s sugar exports are threatened by removal of its preferential trade relationship with the EU and exposure to world market prices. Due to high production costs, Fiji sugar is unlikely to be competitive. Natural forest resources have been heavily and unsustainably utilised in several PICTs, for example, native timbers in Solomon Islands and Vanuatu. In the case of Vanuatu, export of the most valuable native timber tree, whitewood, has almost ceased while the native timber trade in Solomon Islands is predicted to decline steeply from about 2011.

8. Until the recent global food crisis, agricultural development was relegated to a lower priority by donors. PICT governments have generally viewed agriculture and food as high priorities, but have been either unwilling or unable to inject sufficient resources into their agricultural sector. Development of agricultural and forestry exports should not be viewed as a panacea to economic and development problems in the Pacific Islands, but rather as an important ingredient of a sustainable future that balances environmental protection, food and nutritional security, and bioenergy production.

Current trade in agriculture and forestry products from the Pacific

9. The amount and proportion of income derived from agriculture and forestry exports, and the potential for export trade, vary enormously between PICTs, as is illustrated by examples from Fiji, Vanuatu, Samoa, Solomon Islands, Kiribati and Cook Islands. Fiji derives a large amount of income from its export commodities, with almost two-thirds coming from sugar (Table 1). In 2007, considerable income was also derived from pine chips, taro and timber products (approx. €10 million each) and ginger, coconut and kava (approx. €2 million each) with agricultural and forestry exports generating around €150 per head of population.

Table 1. Summary of most valuable agricultural and forestry export commodities in 2007.

<table>
<thead>
<tr>
<th>Product</th>
<th>FOB value (million Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fiji</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) 2006 data
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar and molasses</td>
<td>83.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>83.0</td>
</tr>
<tr>
<td>Coconut products</td>
<td>2.3</td>
<td>1.3</td>
<td>6.8</td>
<td>1.9</td>
<td>2.1</td>
<td>14.4</td>
</tr>
<tr>
<td>Taro</td>
<td>10.0</td>
<td></td>
<td>0.3</td>
<td></td>
<td></td>
<td>10.3</td>
</tr>
<tr>
<td>Kava</td>
<td>1.8</td>
<td></td>
<td>3.0</td>
<td></td>
<td></td>
<td>4.8</td>
</tr>
<tr>
<td>Cocoa</td>
<td>2.9</td>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td>4.4</td>
</tr>
<tr>
<td>Palm oil and kernels</td>
<td></td>
<td></td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ginger</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>Beef products</td>
<td></td>
<td></td>
<td>1.2</td>
<td></td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td>Cassava</td>
<td>1.0</td>
<td></td>
<td>0.1</td>
<td></td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>Papaya</td>
<td>0.8</td>
<td></td>
<td></td>
<td>0.055</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Vanilla</td>
<td></td>
<td></td>
<td>0.1</td>
<td></td>
<td></td>
<td>0.1</td>
</tr>
</tbody>
</table>

**Forest & non-wood forest products**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Round logs</td>
<td>60.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60.6</td>
</tr>
<tr>
<td>Pine woodchips</td>
<td>11.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.5</td>
</tr>
<tr>
<td>Timber &amp; timber products</td>
<td>8.8</td>
<td></td>
<td>0.7</td>
<td></td>
<td></td>
<td>9.6</td>
</tr>
<tr>
<td>Noni (morinda)</td>
<td>0.3</td>
<td></td>
<td>2.6</td>
<td></td>
<td>1.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Maire leis</td>
<td>0.007</td>
<td></td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>121.8</td>
<td>67.6</td>
<td>13.4</td>
<td>4.8</td>
<td>2.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Per capita value of agricultural & forestry exports (€)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>148</td>
</tr>
<tr>
<td>2008</td>
<td>119</td>
</tr>
<tr>
<td>2009</td>
<td>63</td>
</tr>
<tr>
<td>2010</td>
<td>20</td>
</tr>
<tr>
<td>2011</td>
<td>22</td>
</tr>
<tr>
<td>2012</td>
<td>89</td>
</tr>
</tbody>
</table>

Source: Derived from official government statistics, supplemented with information from producers

**Solomon Islands**

10. Solomon Islands has considerable potential for export of agricultural and forestry products due to its abundant forest resources, established smallholder and industrial tree crop sectors, comparatively low wage rates, depreciating currency, and proximity to major markets (South East Asia and Australia). Foreign earnings are currently dominated (60–70%) by export of round logs from native forests. The FOB value of Solomon Islands log exports in 2007 was approximately €60 million. This compares with PNG’s log exports of 2.835 million cubic metres in 2007 with an FOB value of €151 million (PGK 570.6 million). Trade in native round logs from Solomon Islands is predicted to decline from about 2011 and cease soon after 2015, although harvesting will likely continue in re-growth native forests at substantially lower levels. Export of tree crop products, cocoa, oil palm and coconut, is currently substantial (around €7 million in 2007) and there is potential for expansion. Planted forests, including nut tree crops, could also partly replace the volume and revenue shortfall from native forests, e.g. over the next 20 years, plantations will provide an average of about 300,000 m³ of timber (considerably up from the current 100,000 m³). This estimate assumes that individual and community woodlot plantings will be subjected to the management practices required to achieve the needed productivity and quality.

**Vanuatu**

11. Agricultural exports from Vanuatu are dominated by coconut products, generating €6.8 million in 2007. This revenue can increase with buoyant market prices and if more copra is pressed for oil and meal rather than exported as raw product. Kava and cocoa are the next most important agricultural exports, providing €3 million and €1.5 million, respectively, in 2007. Export income from the forest sector has been declining over the past decade as accessible high-value timbers, notably whitewood and sandalwood, have been harvested to the verge of commercial extinction. New plantings of high-value, multi-purpose tree crops, including whitewood, sandalwood, *Canarium*, *Terminalia catappa* and *Calophyllum inophyllum*, have potential to provide considerable export income once these plantings come into production (in the next 10–20 years).
Samoa

12. In 2007, Samoa exported approximately €4.3 (Tala 17) million worth of agricultural and forestry products. The dominant export was noni juice with about €2.6 million exported followed by coconut products with €1.9 million exported in 2007. Samoa is actively developing taro leaf blight–resistant varieties of taro for export, especially for Pacific Island communities living in NZ, and exports are likely to considerably increase in the next few years. There is also a considerable untapped potential to export poummuli (Flueggea flexuosa) poles to Australia and NZ as naturally durable poles for the horticulture industry, and for use on organic farms. In future, mahogany, teak and sandalwood, to be developed in agroforestry systems, have vast export potential for Samoa.

Kiribati

13. Kiribati is characterised by small islands scattered over a vast sea area in the central Pacific. Limited land and human resources, remoteness from markets, high transport costs and infrequent shipping severely constrain export opportunities. The only agricultural products exported are derived from coconut, viz. copra, coconut oil and copra meal, and produced by the state-owned enterprise, Kiribati Copra Mill Co. Ltd. Coconut products provided about €2 million in export income in 2007 and comprised about two-thirds of all exports. There is also considerable potential for utilising cocowood from senile stems to produce and export high value products, especially flooring. This will also be key to the Kiribati coconut revitalisation programme.

Cook Islands

14. Export of agricultural produce from Cook Islands is minor compared with the larger Melanesian economies. In 2007, the total value of Cook Islands imports (NZ $237 million) was approximately 30 times that of exports (NZ $7 million). The Cook Islands economy has become heavily reliant on tourism, which injects about NZ $100 million per year into the local economy, supplemented by exports of fresh fish (NZ $3.1 million in 2007) and black pearls (NZ $2.1 million in 2007), and overseas remittances.

15. Cooks Islands has been historically an exporter of diverse agricultural products, including pineapple products to Australia and NZ, and high-value vegetables (e.g. snow peas) and dried fruits (bananas) to NZ. In recent times, noni juice has been the Cook Island’s most valuable agricultural export, with about NZ $2 million of noni juice exported to Japan, Germany, Chile and NZ in 2007, down from about NZ $3.5 million in 2005. Export of fresh papaya has been declining from a high of NZ $2 million to NZ $117,000 in 2007. Maire lei export to Hawai’i declined from about NZ $30,000 per year from 2003–2006 to NZ $17,000 in 2007. Major factors in the decline of Cook Islands agricultural exports include high labour costs (minimum wage of $NZ 7–8 per hour), high interisland freight costs coupled with competition from cheaper sources, e.g. noni juice from Samoa and papaya from Philippines, fewer farmers, a decline in available arable land (on Rarotonga), and a more attractive domestic market.

CONSTRAINTS

Uncertain investment environment and lack of working capital

16. Pacific Island nations could benefit greatly from investments of a longer term development nature in agricultural and forestry sectors. However, in many respects the Pacific Islands present an unattractive locale for such investment. Long-term committed investors, both local and foreign, need stable political and economic environments. Ethnic tension, riots and coups, as have occurred in recent times in Solomon Islands, Tonga and Fiji, have damaged investor confidence in these countries and

2 Due to the way in which export products are categorised this figure may be an underestimate.
the Pacific Islands generally. Unhelpful Government interventions have included monopolising export trade in a particular agricultural commodity, or steep increases in taxes and duties. An unhealthy dependence on subsidies and preferential quotas is also contributing to lack of innovation and inefficiency, which are major problems for Fiji’s sugar industry. Uncertain business and environmental factors (climate change and increased likelihood of severe cyclones) ensure that only the most optimistic and least risk-averse foreign investors will be attracted to investing in agriculture or forestry in the Pacific Islands. A quick, informal survey of regional agricultural and forestry producers and exporters has shown that most suffer from a chronic shortage of working capital, which both stifles investment and reduces profitability, e.g. through accepting capital from importers on condition of reduced prices (copra exporters in Solomon Islands).

Problems with quality control and scale/volume/regularity of supply

17. Private sector exporters face difficulties in obtaining a consistent and regular supply of high-quality produce and this is a major obstacle to expanding the export of Pacific food crops. The volume needed to meet an export order is often a major hurdle for exporters as items cannot be supplied in sufficient quantity. Furthermore, the cost and availability of shipping in the Pacific is a paramount problem and the lack of real scale renders bulk commodity exporting, such as round logs, vulnerable to macro factors.

18. Farmers and middlemen often do not fully appreciate the high demands of export markets and the need for careful handling of produce, e.g. poorly handled taro can bruise easily but the full negative impacts only become evident after a period of transit/storage or once the product has arrived in the overseas market place.

19. Low entrepreneurial skills and dwindling numbers of farmers – A potential concern for the future of agricultural and forestry exports is the lack of Pacific Islanders involved in trade. Many current export operations are run by enthusiastic individuals, often expatriates, who are now nearing retirement and have poorly developed succession plans. There is a need to encourage and develop more PICT entrepreneurs and for export businesses to move from the individual/family business model to a corporate model, in which accumulated assets, resources, knowledge and customers/goodwill can be passed on if children or other family members have limited or no long-term interest and commitment to the business. There is also a need to encourage more young Pacific Islanders into farming and agroforestry as legitimate and exciting businesses, with educational institutions nurturing and promoting innovation, entrepreneurial skills and self-employment.

20. Lack of competitiveness (high labor and transport costs and poor infrastructure) – Pacific Island nations typically have considerable disadvantages in exporting their agricultural products, including:

   - labour problems – relatively high cost but there is lower productivity and quality control compared to nearby Asian countries;

   - a highly dispersed land base, coupled with high shipping costs and infrequent schedules. Transport infrastructure, notably roads, is often in poor condition, increasing costs and transport times with the likelihood that products will be damaged on arrival at shipping points and markets. There is often a shortage of warehousing facilities near shipping points with safe storage to protect produce prior to shipping.

Land tenure and availability

21. A constraint to larger export-orientated investment in agriculture and forestry development is the customary land tenure systems that exist throughout the Pacific Islands. Investors are reluctant to invest large sums in developments where land ownership and titles are not well documented or are
disputed, such as in parts of PNG. In some cases, landowners have demanded an unrealistically large share of the returns from what were initially successful investments and schemes, e.g. the mahogany plantation programme in Fiji, which was established by the Fiji Government with support from donors.

22. An important consideration in any proposed development, especially for agriculture and forestry, is land availability. The land area per head of population for the 14 Pacific ACP countries is given in Table 2 below. For PICTs with limited land per head of population, e.g. less than 1 ha per head (viz. Kiribati, Federated States of Micronesia, Tonga, Marshall Islands, Tuvalu and Nauru), it would be advisable to focus their agricultural policy and development on food security rather than export trade.

Table 2. Population, land area, and land area per head of population for the 14 Pacific ACP countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (July, 2008 est.)</th>
<th>Land area (sq. km)</th>
<th>Land area per head (ha per person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niue</td>
<td>1,444</td>
<td>259</td>
<td>17.94</td>
</tr>
<tr>
<td>PNG</td>
<td>5,931,769</td>
<td>462243</td>
<td>7.79</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>215,446</td>
<td>12190</td>
<td>5.66</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>581,318</td>
<td>28370</td>
<td>4.88</td>
</tr>
<tr>
<td>Palau</td>
<td>21,093</td>
<td>488</td>
<td>2.31</td>
</tr>
<tr>
<td>Fiji</td>
<td>931,741</td>
<td>18333</td>
<td>1.97</td>
</tr>
<tr>
<td>Samoa</td>
<td>217,083</td>
<td>2935</td>
<td>1.35</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>21,923</td>
<td>237</td>
<td>1.08</td>
</tr>
<tr>
<td>Kiribati</td>
<td>110,356</td>
<td>811</td>
<td>0.73</td>
</tr>
<tr>
<td>FSM</td>
<td>107,665</td>
<td>701</td>
<td>0.65</td>
</tr>
<tr>
<td>Tonga</td>
<td>119,009</td>
<td>747</td>
<td>0.63</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>63,174</td>
<td>181</td>
<td>0.29</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>12,177</td>
<td>26</td>
<td>0.21</td>
</tr>
<tr>
<td>Nauru</td>
<td>13,770</td>
<td>21</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Market access (SPS standards, quarantine issues and trade barriers)

23. Since world trade is now linked to the WTO rules, Pacific Island nations (most of whom are non members) still have to comply with WTO rules and regulations as most of their important trading partners are members of the WTO. This means that the WTO Sanitary and Phytosanitary (SPS) measures are applied by most trading partners of PICTs. SPS measures are gaining significance in trade of agriculture, forestry and fisheries products as standards on product quality are raised. Accordingly, contamination from pests and diseases, pesticides residues, veterinary drugs and microbial organisms must be minimised. SPS measures are therefore increasingly becoming barriers to trade. Larger and developed trading partners want to be certain that imported products meet SPS requirements and that approved quality control procedures are being implemented by exporting countries. The capacity of biosecurity services to verify the quality of exports in exporting countries are often considered when market access requests are being assessed by importing countries through the Pest Risk Analysis process.

24. Accessing markets for Agriculture and Forestry export products remains a major obstacle for growing trade in the Pacific. One of the main reasons is the difficulty associated with gaining technical market access, i.e. when exports do not meet the biosecurity requirements of the importing country. A case in point is the long, difficult and expensive process required to get technical market access for products into Australia, New Zealand and the USA, all of which have stringent biosecurity standards. Technical market access is dependent on the sanitary or phytosanitary risk posed by the product to the
importing country. Therefore exporting countries need to, for example, establish baseline data on pest and disease occurrences, document production systems, and establish audited supply chain systems.

25. Biosecurity services in PICTs typically lack the capacity to conduct regular pest and disease surveys, update national pest and disease lists, and implement international standards set by the International Plant Protection Convention (IPPC), Codex Alimentarius Commission, and the Office International des Epizooties (OIE). PICTs often do not have appropriate treatment facilities and lack documented inspection and certification procedures. Some have limited access to technical information, including via the internet, and outdated biosecurity legislation. The limited technical capacity in some PICTs has been an obstacle to negotiating technical market access.

26. A concerted effort has to be made in facilitating trade amongst PICTs themselves. Although there is technical justification for restricting trade in some commodities such as fresh taro (spread of taro beetle and leaf blight) and pitpit (*Saccharum edule*) (risk of spreading sugar cane pests and diseases), the vast majority of other products could easily be granted market access for trade. Trade amongst PICTs needs to be more readily facilitated through reducing technical trade barriers.

**Spiraling fuel and transport costs**

27. In many Pacific Islands, fuel and transportation costs have almost doubled over the past 12 months. In some PICTs, already infrequent interisland shipping services, have become much less frequent and more expensive, and in some cases have ceased. This has impacted on the economics of exporting goods compared with selling them through local markets. The impact of markedly higher transport costs will be proportionately greater for heavier, lower-value agricultural food produce such as root crops. For example, in the Cook Islands, apart from access to larger markets, there is certainly no financial incentive to export fresh taro to NZ at $1–1.20 per kg, when the local domestic price is $NZ 2.50–3 per kg. Furthermore, coconut oil is now highly competitive with diesel as a fuel source. It is expected that as knowledge, technologies and machinery evolve, greater quantities of copra will be pressed for coconut oil and diverted into domestic markets. In summary, in a logical response to steeply rising transportation and food costs, PICT agricultural producers and traders are focusing on local markets and import substitution, rather than on international export trade.

**Opportunities to grow trade**

*Improved research and development focus*

28. Despite donor-funded capacity building efforts there has been a general erosion in the research capacity of government agricultural and forestry agencies in recent years. This makes it even more imperative that research undertaken by government and regional agencies is focused on only the highest priority constraints to agricultural and forestry production. This can be best achieved by amalgamating research and extension services and personnel, closely coordinating and integrating research efforts at the regional level and working closely with the private sector. Identified constraints to export and marketing of agricultural and forestry produce then need to be addressed through an appropriate mix of field, laboratory and market research.

*Utilisation of the region’s plant genetic diversity*

29. In addition to the indigenous tree nuts mentioned above, the Pacific Islands region contains a wealth of diversity in indigenous fruit trees whose potential is relatively untapped. Local and traditional vegetables are often forgotten in favour of the more “globally-known” crops. Many of these forgotten vegetables are rich in vitamins and minerals essential for daily nutrition and with the increasing focus on nutritionally-rich foods, these vegetables have a value in the market-place, e.g. orange and purple fleshy types of sweet potato, which are rich in antioxidants, are also in demand for
export. The nutritional value of several other common Pacific foods is highly dependent on the variety selected. Work by Dr Lois Englberger in FSM has highlighted the importance of banana diversity, with some varieties containing levels of beta-carotene 200 times that of other varieties – a very significant difference considering that foods rich in carotenoids, such as beta-carotene, have antioxidant properties, which help to protect against such chronic diseases as cancer, heart disease, and diabetes. Products with health benefits fetch a premium in the marketplace. Neglected and underutilised species could become valuable trade commodities for rural communities, which have used them to survive for centuries as subsistence crops in difficult and low-input environments.

30. Diversity can have a significant impact on ensuring continuity of supply, and also in improving quality control. Providing growers with a number of varieties gives them the opportunity to more accurately address market needs and ensure continuity of supply. For example, work on the breadfruit collection at the National Tropical Botanical Garden in Maui, Hawaii, has resulted in the selection of 20 varieties that can yield fruit all-the-year-round. Similarly, diversity can also contribute to quality control through the selection of varieties with superior post-harvest responses.

**Improved agroforestry production systems**

31. Agroforestry production systems have a tremendous but unfilled potential in the Pacific Islands. They can provide a balance between maintaining environmental sustainability and meeting local needs for food, medicines, fuel wood, building materials and a diverse array of cultural products. They also enable income generation through sale of products on local and export markets. In many places in the Pacific Islands, well-proven, traditional agroforestry systems are declining due to a focus on short-term cash crops and loss of traditional knowledge through a breakdown in intergenerational transmission of important knowledge – through shared work and stories. Modern agroforestry systems, mainly based around alley cropping with fast-growing leguminous trees, have largely failed to take hold in the Pacific Islands due partly to high labour inputs and partly to their introduction during a period in the 1980s and 1990s when fertiliser costs were low (especially urea, a fossil fuel derivative). There is now an opportunity to integrate elements of traditional and modern agroforestry, and utilizing high-quality tree germplasm, to generate highly productive and sustainable production systems.

32. In nearly all areas where shifting cultivation is still being practiced, mixtures of compatible commercial and useful tree crop species should be interplanted during the first or second year of the cropping phase. By the time the area ceases to be used for agricultural crops, after 3–4 years, the medium long-term tree crop should have begun to exert a high degree of site control (so only a couple of light follow-up weedings and trimmings are needed). Agroforestry systems have the potential to generate substantial income, while not compromising food production and security. Timber tree crops can provide a high-value sawn timber product that has great flexibility for marketing. If conditions are not right for harvest and sale, then the tree crop can be left to grow and improve in value. Nut trees can provide a valuable crop for many years; for example *Canarium indicum* can produce commercial quantities worth about €6,000 per hectare from year 8–10 for more than 50 years.

**High-value non-perishable products**

33. Higher value non-perishable products that have the potential to increase PICT trading opportunities include kava, sandalwood, desirable timbers, indigenous tree nuts (*Canarium* and *Terminalia*) and spices.

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3 Promising commercial plantation tree crops for Pacific Islands include *Santalum* (sandalwood species), *Artocarpus altilis* (breadfruit), *Terminalia catappa* (Natapoua/Tavola/Beach Almond), *Flueggea flexuosa* (poumuli, namamau), *Terminalia richii* (malili), *Calophyllum inophyllum* (Tamanu or dilo), *Canarium indicum* (Nangai/Ngarli nut), *Endospernum medulosum* (whitewood), *Tectona grandis* (teak), Swietenia macrophylla (mahogany), Acacia auriculiformis (PNG Blackwood), *Dalbergia cochincinensis* (Cochinchin Rosewood), bamboos and pandanus.
34. Kava is currently traded domestically and also exported by Fiji, FSM, PNG, Samoa, Tonga and Vanuatu. The industry is reported to be worth around US $200 million per annum to PICT economies, with Vanuatu and Fiji having the largest domestic and export markets. Kava is mainly traded as dried roots and also in powdered form, and to a limited extent as a health supplement in capsules, tablets and tea. In 2002, countries in the European Union, led by Germany, imposed bans on kava products, which crippled the Pacific Island export industry, resulting in losses of more than US $1 billion (PANG 2007). In June 2007, Australia banned commercial imports of kava, ostensibly to reduce kava abuse in indigenous communities in the Northern Territory. Both bans on kava products are unfair and discriminatory: a World Health Organization (2007) report has indicated how kava products can be safely sold into Europe, while Food Standards Australia New Zealand (2004) reported that no specific health problems have been found to be associated with moderate kava use. Kava exports can be revitalised through:

i) PICT governments working with kava producers and exporters to have the kava bans overturned by European and Australian regulatory agencies, or if necessary by lodging a formal complaint through WTO;

ii) international information campaigns to counter negative publicity on the reputed liver toxicity of kava-containing dietary supplements. Kava could be promoted for its health benefits, which should include development of better controlled and monitored methods of preparation and use of appropriate varieties (as now practised in Vanuatu with the promotion of ten ‘noble’ kava varieties for export). Hygienically produced and prepared freeze-dried green kava is under investigation in Vanuatu.

iii) Developing more sustainable kava production systems, including in agroforestry systems.

35. Sandalwood has been commercially harvested for 200 years in the Pacific and was one of the first commodities traded from the Pacific Islands. However, intermittent, but unremitting harvesting has pushed the various species to commercial extinction in all parts of their Pacific Islands range. In PNG, exports of *Santalum macgregorii* have declined from a recent spike of 101 tonnes per annum in 2002–2003 to 8.5 tonnes per annum in 2005–2006, and it would appear that nearly all mature trees in accessible stands have been harvested. In Vanuatu, although the volume of sandalwood harvested is minute compared with that of conventional timber species, the royalties earned by landowners are significantly higher because of the higher prices paid for sandalwood. There is estimated to be approximately 290 tonnes of sandalwood (*S. austrocaledonicum*) heartwood in wild stands throughout Vanuatu, but at current extraction rates (around 80 tonnes per annum) this resource will be quickly depleted (Gillieson et al. 2008). In Fiji, the last few trees are presently being felled in an unregulated manner which will see the species commercially disappear within the next 12–24 months. In the process, vital and irreplaceable *S. yasi* genetic resources are being lost forever because of failure to collect seed and/or scions of harvested trees. In Tonga, the government (MAFFF) issued permits for export of 26 tonnes, but instead 205 tonnes of sandalwood (*S. yasi*) were cut and exported, decimating almost overnight the mature stocks of the species (T. Faka’osi, pers. comm.). Domestic value-adding through oil distillation and improved marketing needs to be promoted. The high economic value of sandalwood species, coupled with their amenability to cultivation in agroforestry systems and plantations, gives them vast potential to make a contribution to rural economies. The major sandalwood markets are in the booming economies of East Asia (especially China and Taiwan), India and the Middle East. There is also a strong unmet demand from perfumers for sandalwood oil derived from sustainable and fair trade sources. Demand for sandalwood in both unprocessed form and as oil will continue to be high and prices are expected to be maintained at the present level for at least the next decade. One hectare of sandalwood plantation can conservatively yield €150,000 per ha after 20 years4. Not surprisingly, increasing replanting efforts are being undertaken by governments,

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4 Conservative estimate of 150 sandalwood trees per hectare producing 50 kg heartwood each, valued at €20 per kg (less than half current world market prices for *Santalum album* and *S. yasi*).
communities and commercial companies in Vanuatu, Fiji and Cook Islands, with smaller plantings in Tonga and Samoa. Within 20 years, sandalwood has the potential to once again become one of the Pacific Islands most commercially important exports. In the meantime, there is also the need to better conserve and manage the natural sandalwood resource to ensure that harvesting is done at a sustainable level and to avoid the possibility of further genetic erosion.

36. High-value timber – With the decline in the natural forest resource a number of countries in the Pacific have turned to planted forests, mainly of fast-growing exotic species, for their future timber supplies to service both export and domestic markets. Fiji established plantations quite early on and now has industries based on these resources, which include about 45,000 ha of mahogany. Similarly, in the Solomon Islands, plantations of Gmelina arborea, Eucalyptus deglupta and teak established by the government have been privatised for a number of years and are now supplying logs for exports. PNG and Vanuatu have also established plantations, as have Samoa and Tonga but on much smaller scales. However, with the relatively small size of Pacific plantations and the difficulty of competing in a commodity market situation, the focus for PICTs should be on high-value, well-known species that are easy to propagate and manage. These include teak (Tectona grandis), mahogany\(^5\) (Swietenia macrophylla) and whitewood (Endospermum medullosum). Solomon Islands and Vanuatu have done excellent work on improving the quality of teak and whitewood, respectively, while Fiji needs to do the same for mahogany to maximise gains from planting these high-value species. In terms of community forestry and woodlots, adequate technical support is vital to ensure that trees are effectively managed to achieve the desired productivity and quality by the target rotation.

37. Given the relatively small size of the planted resource, it would be prudent for PICTs to consider investing in small-scale domestic processing, targeting high value products for export and for the local tourism market. This strategy would enhance income-generation, create opportunities for rural employment and also contribute to the sustainable management of the resource. In countries like Solomon Islands, for example, there is real potential to move quickly towards this goal by using the traditional wood carving skills of its people.

38. Virgin coconut oil (VCO) – The results of medical research and publications on the beneficial effects of coconut oil on human health have lead to the development of a niche, high-value market for this special coconut oil, which is processed differently from refined, bleached and deodorised (RBD) coconut oil. VCO is the purest form of coconut oil. Transparent and colourless, it contains natural Vitamin E which is removed by the RBD process. VCO is obtained rapidly from the fresh, mature kernel of coconut by mechanical or natural means, with or without the application of mild heat, which does not lead to alteration of the oil and its properties. Among the plant-derived oils, VCO is the only oil with multiple uses as a food supplement or functional food – it can be used for cooking and as a food ingredient, and as a hair and skin moisturiser and conditioner.

39. In the Pacific Islands, Federated States of Micronesia, Fiji, Samoa, Solomon Islands, and Vanuatu are producing and exporting VCO. Woman in Business Development Inc. (WIB) in Samoa started producing VCO in 1996. With the introduction of organic certification in 1998, WIB started supplying to small markets in New Zealand and Australia and by 2002 annual demand was 14 tonnes. In 2007, Body Shop International started purchasing from WIB under a fair trade arrangement – 300 kg in December, 2007, 3 tonnes in February 2008 with another 8 tonnes for 2008. VCO from WIB is expected to be incorporated into Body Shop products in the 2009 European summer and thereafter exports are expected to increase. Other developing VCO markets include the USA, Australia and New Zealand. As an example of the value-adding provided by VCO, in Fiji the current price of copra delivered to the mill is €305 per metric tonne of copra, whereas the minimum price for VCO is €2 per litre (farm-gate) which equates to €1,300 per metric tonne (copra equivalent).

\(^5\) Fiji, Samoa and Tonga have a distinct comparative advantage in growing mahogany in plantations in that they are free of the pan-tropical mahogany shoot borers (Hypsipyla spp.): these caterpillars either preclude or greatly inhibit planting of mahogany in other tropical countries.
40. Indigenous tree nuts - *Canarium* nuts (*Canarium indicum*, *C. harveyi* and *C. salomonense*) are important traditional food trees in PNG, Solomon Islands and Vanuatu and have considerable potential for commercialisation (Thomson and Evans 2006). One entrepreneur in Vanuatu has shown that processed *C. indicum* nuts can be developed and promoted as high-value products for both domestic and international export markets. The main problems with production of *Canarium* kernels for export include erratic/seasonal and inadequate supply of nuts, short time between extraction of kernels from shells and drying before spoilage takes place, lack of suitable local drying facilities (as kernels spoil when sun-dried) and preference for glass jars for packaging to provide long shelf-life. Current efforts in PNG and Vanuatu are focused on trying to expand the resource by promoting farmer replanting of *C. indicum*, especially preferred varieties with a high kernel/shell ratio, single kernel per nut, and softer-shelled nuts for easy cracking. At the same time, there will be a need to introduce the required technologies in rural areas (e.g. hot air driers) to increase the level of harvest and extend kernel storability. Two other indigenous nut trees with high, but untapped export potential are *T. kaernbachii* (okari nut) and *Terminalia cattapa* (tropical almond).

41. Spices and natural food additives – Export markets for spices from the Pacific Islands are rather limited because importers generally want cheap, bulk product for final packaging and value-adding. Pacific producers cannot compete on price for large-volume orders, for example, with black pepper from Indonesia or cardamom from India. There may, however, be niche market opportunities for attractively packaged, organically certified spices through Pacific product retail outlets in major Australasian cities such as Auckland, Brisbane, Sydney and Melbourne, and/or through web-based sales. The most promising spices from the Pacific Islands are vanilla, cardamom and black pepper.

42. Massoia oil produced from the bark and heartwood of the endemic New Guinea tree *Cryptocarya massoy* is a highly valued food additive, and currently trades for €200 per kg. Trade in massoy bark was once of such importance that the East India Company organised special expeditions to New Guinea in the 17th century to procure the bark. Informed industry sources report that natural sources of this irreplaceable oil are almost exhausted, so it would appear timely to investigate the opportunity to develop commercial plantations of massoy in Papua New Guinea.

43. Processed foods – There is a vast, often untapped, resource of tropical fruits in some Pacific Islands that could be preserved in various delicious and nutritious value-added forms for export. The main forms of preservation could include jams (e.g. papaya), chutneys (e.g. tamarind and calomondin), pickles (e.g. mango and *Spondias*), jellies (e.g. guava), dried fruit and fruit leathers (e.g. banana/plantain, pineapple, mango and papaya). Traditional pandanus paste (in coconut cream) is a delicious product from Kiribati and elsewhere in Micronesia which has export market potential. There is a need to make available simple solar/hot-air drying technology (including a fuel-wood option for wetter, cloudier localities) to small-scale entrepreneurs, including women’s groups, interested in developing and preserving such foods. High-quality packaging and labelling is also essential for exported produce. A good example of what can be achieved in this regard is provided by the Friends NGO (Foundation for Rural Integrated Enterprises N Development) in Fiji (www.fijifriend.com).

**Market intelligence and market focus**

44. Market information tells you what is happening. Market intelligence tells you what is going to happen. The former requires mainly knowledge about supply and the latter, knowledge about demand. Market information is comparatively readily available in the form of import statistics and wholesale market reports. Market intelligence takes a great deal more work. To develop an understanding of market demand one needs to understand issues such as how changes in income affect changes in diet; how changes in retail structures affect where consumers buy products and at what price; and the impact of macro factors such as the role of health, eco-conservation, and social marketing. An example of market information is the price of taro from different countries supplying the Los Angeles
45. Market information rewards suppliers for having some knowledge, but market intelligence rewards them much more for having detailed knowledge. This is because market intelligence is based on what the market wants – the better this understanding, the higher the rewards. Niche marketing represents the highest form of market reward because it narrows down exactly what the consumer wants. An example of niche marketing is Samoan taro marketed to Samoans in Los Angeles. The taro is peeled, cut into 300 g portions, frozen, and sold through corner shops on Saturday to be cooked at the lual on Sunday. Niche marketing is about market focus and what specific buyers want. It is not about what a seller wants to sell. Samoans in Los Angeles will pay more for the taro they want than ‘any old taro’ on offer. So while niche markets provide the highest rewards, they also have the highest requirements for quality, service and reliability.

Developing producer and exporter networks to meet market demands

46. A common complaint from exporters and importers of Pacific Island agricultural products concerns the lack of a consistent or regular supply in the volumes needed for efficient marketing. There are two possible approaches to overcome such supply problems:

- Within-country foster collaboration, leading to formal partnerships and networks of smallholder producers to improve domestic supply chains. Within such producer networks, smallholders might be assisted with micro-credit or small-scale processing facilities. They might also be encouraged to utilise common drying, processing and storage facilities, which might be best run as independent/family enterprises or transparently well-managed co-operatives.

- Pacific Island exporters from different nations working together to fill a common market order. This would give an advantage in meeting market orders when there are supply problems with one source, e.g. due to a cyclone, drought or political problem in a producer nation, or when a product has a different season in different parts of its Pacific range. One such example would be Canarium indicum nuts. In PNG, the Canarium fruiting season is from May to July. In Solomon Islands, fruiting commences in August with a peak from September to October. In Vanuatu, the fruiting season is from October to January with a peak in November. Whilst Canarium for export would be mainly sold as dried kernels (with testa removed), local storage facilities are limited and even dried kernels degrade and lose freshness, especially when stored at high ambient temperatures. The main difficulties with such co-operative marketing by producers/exporters from different countries will be ensuring consistent quality of produce from different source countries, pricing structures and supply arrangements. There may also be other opportunities for Pacific nations to collaborate in the production and processing of agricultural and forestry products. In the case of high-quality cocowood flooring, for example, Kiribati could undertake the initial stages of processing (rough sawing and grading) with suitable materials then transported to Fiji for final working and packaging for export.

Improved relationships between all players

47. Old style marketing was about producers competing with each other for markets. Competition was all about price. And producers will always lose this battle. Modern marketing is about value chains. Competition is now between value chains and not individuals. Value chains have three parts – producers at one end, consumers at the other, and the service sector in the middle that joins the two ends. The value chain that is best at coordinating all of the bits along the chain gets the lion’s share of the consumer dollar. This requires action such as producers advising traders of the size and quality of market. Market intelligence would tell suppliers whether Pacific Islanders in Los Angeles preferred their taro whole, or pre-packed, peeled, sliced, and frozen.
the forthcoming crop so exporters can arrange local transport, storage, and shipping. Government agencies, such as quarantine services, have to be coordinated. Importers have to be organised to clear shipping and arrange transport. Even retailers have to be coordinated to get the promotion correct and arrange their own storage so there is minimal wastage. Get all of this right and you win the business. So the key to success with value chains is cooperation and coordination by all players in the chain, along with appropriate R&D at the beginning of the chain.

Value adding – certification, packaging and branding

48. Appropriate certification (organic, fair trade and eco-labeling) provides considerable opportunities for Pacific Island producer/exporters to add value to their products. More information on each of these forms of certification is provided below:

49. Organic certification – In regions with an emerging organic sector, developing organic standards can be a way to bring stakeholders together, encourage private-public partnerships and provide the basis for market development, capacity building and advocacy. The International Federation of Organic Agriculture Movements (IFOAM) promotes a certain harmonisation of organic standards at the international level, but also views the geographical region as a particularly appropriate level for adopting public standards and regulations. The Pacific Organic Standard is the third regional organic standard to emerge worldwide, after the EU regulation 2092/91 and the East African Organic Products Standard. The wording of the standard was developed with consideration of both local agricultural traditions and the two global organic standards, IFOAM IBS and Codex Alimentarius. In this way, regional stakeholders have true ownership of the regional standard. At the same time, its consistency with existing international standards will facilitate future equivalence negotiations in the context of export market development. The Pacific Organic Standard has been written for organic production and processing in the Pacific region and is appropriate for the unique and diverse social, cultural, environmental and agricultural situation of PICTs. The standard does not cover conformity assessment procedures, and hence leaves the door open for local stakeholders to develop their own. The Pacific Organic Standard will serve as a strong marketing tool to promote Pacific organic products to the world.

50. Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalised producers and workers. It considers factors that are pertinent to providing opportunities for Pacific producers, such as isolation from markets, cost of production and ability to supply. One of the key strategies of Fair Trade is shortening the value chain through building more direct relationships between producers and consumers, and adding value as close as possible to the farm gate so maximum benefit goes to the producer. This combined with pricing structures that guarantee the producer an agreed minimum price even if world market prices drop below the agreed Fair Trade minimum price (and higher price if the world price increases) and negotiated long-term trading relationships would provide a much needed safety net and incentive for Pacific producers. This is particularly important for commodities such as cocoa, sugar, spices and coffee where producers can be ‘at the mercy’ of market fluctuations. Fair Trade organisations, backed by consumers world wide, are engaged actively in supporting producers, awareness raising and campaigning for changes in the rules and practice of conventional international trade. Fair Trade products are produced and traded in accordance with these principles – wherever possible verified by credible, independent assurance systems that guarantee consumers that these standards are being adhered to. The Fair Trade Labeling Association is at the forefront of this movement but there are also numerous ‘private’ Fair Trade schemes and arrangements where companies choose to trade ethically and seek out and negotiate Fair Trade relationships with producers. The Body Shop International’s “Community Trade Programme” is an example. The market for Fair Trade products is growing internationally and provides a potential niche market for Pacific producers that will truly consider both our constraints and also the unique opportunities and marketing
possibilities we have in the Pacific. Integrating smallholder farmers into the marketplace through ensuring they receive a fair price for their goods can also encourage in situ conservation, which in turn benefits the local environment, and food and nutritional security.

51. Eco-labeling of Pacific Island forest and timber products could increase their value, providing greater returns to local communities and companies, as well helping ensure sustainability of utilisation operations, protecting biodiversity and environmental values, and respecting local traditions and community values. The Forest Stewardship Council (FSC) provides the most widely and internationally recognised and respected forest certification service, backed by a stringent chain of custody requirements. FSC-labeled sales were globally estimated to exceed €13 billion in 2007 and increasingly consumers, especially in Europe, are using their buying decisions to promote sustainable forest practices. However the Pacific Islands are lagging behind Europe and Australasia (Australia and NZ) in eco-certification. Only three forests have been FSC-certified – two in PNG and one in Solomon Islands (Kolombangara Forest Products Ltd/KFPL), with a total area of 70,000 ha of forest certified. Benefits of FSC certification are not always tangible, but have been noted to include improved market access, with some genuine loyalty/mutual dependence in the market place, and recognition by banks and donors with increased possibilities for raising capital and participating in R&D projects. Increased local processing, coupled with eco-labeling of Pacific Island forest products, has the potential to increase financial returns along the timber supply chain, especially to resource owners and local communities, and help improve the image of the region’s forest industries. A group of Australian FSC members is presently planning to work with community forest owners in PICTs to help them move toward FSC certification and take advantage of these market opportunities, while managing their forests in a sustainable way.

Unique Pacific packaging and branding

52. In marketing they say you “sell the sizzle as well as the sausage”. In the Pacific we have the chance to sell both. The sausage in this case is our wonderful array of indigenous products – natural soap, virgin coconut oils, noni juice, emerging natural scents and vanilla. The sizzle is our packaging. The people of the Pacific are gifted in traditional weaving, e.g. fine mats and tapa from Polynesia, and bilums from Melanesia. These are crafted from natural materials, using natural dyes and incorporating natural designs, and can be re-worked to produce attractive distinctive packaging for the Pacific’s niche products. Woven packaging is both functional, as it protects the containers, and attractive and distinctive. By incorporating indigenous materials and designs into the packaging industry, we can boost village-based employment as well as reduce the need for imports. The packaging becomes yet another way by which we can help build a distinctive Pacific brand. Branding of Pacific Islands products might also emphasise their origins and the risks posed by climate change to traditional ways of life, and even existence in the case of Tuvalu. It has been reported that Europeans, for example, are willing to buy products to support a cause – and consciences might be pricked by product labeling that highlights the impact of climate change on the Pacific.

Social marketing

53. Developing a brand called “The Pacific” has a sound marketing basis in social marketing. Consumers reached by social marketing tend to be better educated, well read and travel more, and are aware of other countries and cultures. These consumers want to know about the environment, the production of food and products, and the people involved. They also want to know that the products they buy are benefiting the people who grow or make them. Socially conscious consumers are the force behind the Fair Trade label and groups like the Rainforest Alliance. They buy dolphin-free tuna and products not tested on animals. They are not rich idle people with money to spare. They want good products and demand good service, but they prefer to buy from people with whom they can identify and for whom they think their purchases will have a marked benefit.
54. Most of the elements noted above – niche marketing, marketing intelligence, branding and selling the sizzle as well as the sausage – all come together under social marketing, which suggests that the Pacific’s marketing future lies with specialised products, not bulk commodities.

**Improved market access**

55. There is an urgent need to strengthen the capacities of PICTs to improve market access and trade effectively. These efforts need to focus on improving capacity in commodity production chains, biosecurity, export certification, documented inspection and certification procedures, storage and treatment facilities, maintaining pest and disease lists, and negotiating market access. There have been significant increases in both the volume and range of commodities exported from countries where such activities have been undertaken such as Fiji (Manley, 2007 unpublished report).

56. The capacity to meet the SPS requirements of importing countries is key to obtaining improved market access. Importing countries must be satisfied that appropriate measures are being rigorously implemented by exporting countries to maintain quality and prevent entry of pests and diseases. Trained human resources, collaboration with the private sector, policy changes, documented procedures and information retrieval are some keys areas for improved market access. SPC LRD has been involved in training national quarantine officers in import risk analysis, and market access formulations will increase national capacity to facilitate trade. Undertaking import risk analyses also provides an opportunity to deal with trade matters between PICTs.

57. Regional initiatives such as the regional trade facilitation programme under the Pacific Agreement on Closer Economic Relations (PACER-RTFP), Pacific Regional Economic Integration Programme (PACREIP) and other SPC and partner programmes have assisted capacity building in these areas. The appointment of dedicated officers responsible for dealing with Pacific Island market access requests in Australia and New Zealand has provided opportunities for increased market access and shorter processing times.

**RECOMMENDATION**

Honourable Ministers are requested to:

- i) acknowledge the opportunities identified in this paper for setting appropriate directions and growing trade in Pacific Island agricultural and forestry products; and
- ii) recommend that SPC expand the support it currently provides for growing trade in agricultural and forestry products in Pacific Island countries and territories.