

DRAFT PROJECT

**REGIONAL PROGRAMME FOR FOOD SECURITY (RPFS)
IN MEMBER COUNTRIES OF THE
PACIFIC ISLANDS FORUM
(PIF)**

**Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue,
Palau, Papua New Guinea, the Republic of Marshall Islands, Samoa,
Solomon Islands, Tonga, Tuvalu and Vanuatu**

**Prepared with the collaboration of the Food and Agriculture
Organization of the United Nations (FAO)**

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PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

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Abbreviations

<i>CBO</i>	<i>Community-Based Organization</i>
<i>CROP</i>	<i>Council of Regional Organizations in the Pacific</i>
<i>DES</i>	<i>Dietary Energy Supply</i>
<i>DSAP</i>	<i>Development of Sustainable Agriculture in the Pacific</i>
<i>EEZ</i>	<i>Exclusive Economic Zone</i>
<i>EU</i>	<i>European Union</i>
<i>FAO</i>	<i>Food and Agriculture Organization of the United Nations</i>
<i>FFA</i>	<i>South Pacific Forum Fisheries Agency</i>
<i>FICs</i>	<i>Forum Island Countries</i>
<i>GSP</i>	<i>Generalised Systems of Preference</i>
<i>HACCP</i>	<i>Hazard Analysis and Critical Control Points</i>
<i>IPPM</i>	<i>Integrated Production and Pest Management</i>
<i>M&E</i>	<i>Monitoring and Evaluation</i>
<i>NGO</i>	<i>Non-Governmental Organization</i>
<i>OIE</i>	<i>International Office for Epizootics</i>
<i>PICs</i>	<i>Pacific Island Countries</i>
<i>PIDP</i>	<i>Pacific Islands Development Programme</i>
<i>PIFs</i>	<i>Pacific Islands Forum Secretariat</i>
<i>PRAP</i>	<i>Pacific Regional Agriculture Programme</i>
<i>REG</i>	<i>Regional Economic Grouping</i>
<i>RPFS</i>	<i>Regional Programme for Food Security</i>
<i>SOPAC</i>	<i>South Pacific Geo-science Commission</i>
<i>SPARTECA</i>	<i>South Pacific Regional Trade and Economic Co-operation Agreement</i>
<i>SPC</i>	<i>Secretariat of the Pacific Commission</i>
<i>SPREP</i>	<i>South Pacific Regional Environment Programme</i>
<i>SPS</i>	<i>Agreement of the Application of Sanitary and Phytosanitary Measures</i>
<i>SPTO</i>	<i>South Pacific Tourism Organisation</i>
<i>URA</i>	<i>Uruguay Round Agreement on Agriculture</i>
<i>URMTN</i>	<i>Uruguay Round of Multilateral Trade Negotiations</i>
<i>USP</i>	<i>University of the South Pacific</i>
<i>WFS</i>	<i>World Food Summit</i>
<i>WTO</i>	<i>World Trade Organisation</i>

SUMMARY

(i) *As part of its follow-up support to the World Food Summit, FAO has expanded its co-operation with a number of Regional Economic Groupings of developing countries. In this context, an FAO mission worked in the South Pacific region to prepare proposals for a Regional Programme for Food Security (RPFS) that would complement national policies and programmes, address emerging issues related to trade and regional integration, and take advantage of synergies and complementarities at regional level .*

(ii) *The Pacific Island Countries, in spite of their diversity, share common constraints that impede their efforts to achieve a balanced economic growth and sustainable food security at both national and household levels. Major constraints include small size, remoteness, geographic dispersion and vulnerability to natural hazards, as well as a heavy dependence on external economic conditions. Most people, more than 80% in some countries, live in rural areas and rely heavily on agriculture, forestry and fisheries . The export sector which occupies a central place in most Pacific Island Countries, comprises a narrow range of primarily agricultural commodities. With the conclusion of the Uruguay Round, agriculture has been integrated into the multilateral trading system and subjected to disciplines under the WTO Agreement. The need to diversify exports away from the narrow base of traditional commodities has been acknowledged by all governments, as is the need to promote intra-regional trade.*

(iii) *With the ultimate objective of contributing to the stabilization of food security, at both national and household levels in the developing member countries of the Pacific Islands Forum, the Regional Programme for Food Security (RPFS) would follow a three-pronged approach which would help Forum Island Countries (FICs) to adjust to changes in the international trade environment brought about largely by the Uruguay Round Agreement on Agriculture (URA). The three areas where actions would be supported relate to (a) trade facilitation which would improve the environment for and remove impediments to trade; (b) policy harmonization which would help create a conducive domestic policy framework for promoting efficient production system sin line with comparative advantage, and (c) community level investments which would allow farmers to adjust to, and take advantage of, new opportunities resulting from trade facilitation and policy harmonization.*

(iv) *Conceived as the first four years of a phased programme, the programme components represent*

(v) *clusters of demand-driven interventions, would be implemented under three major inter-related pillars, namely Trade Facilitation, Agricultural Policy Assistance and Income Generation at Community Level.*

Pillar I Trade Facilitation:

- Food quality and safety standards;*
- Promoting intra-regional trade;*
- Commodity development programmes; and*
- Marrakesh Agreement follow-up.*

Pillar II Agricultural Policy Assistance:

- *Harmonization of agricultural and trade policies;*
- *Analysis of socio-economic constraints;*

Pillar III Income Generation at Community Level:

- *Community level interventions;*
- *Technical support for sustainable agriculture*

(vi) *The programme costs are provisionally estimated at the equivalent of US\$11.5 million. Demand-driven interventions in support of income generation at community level would generate some 40% of total costs, followed by trade facilitation and agricultural policy assistance (close to 30%), with the balance made up by programme management, monitoring and evaluation. Programme implementation would be the responsibility of relevant organizations of the Council of Regional Organizations in the Pacific (CROP), under the overall guidance of the Pacific Island Forum*

(vii) *By helping the participating countries to adjust to the new international trading environment, RPFs would generate major benefits for the economies concerned in that it would: (a) Support the improvement of food quality and standards; (b) reinforce the process of intra-regional trade expansion; (c) facilitate export diversification; (d) assist in the follow-up to the Marrakesh agreements; (e) provide assistance to adapting domestic agricultural policies and practices to the new rules; and (f) foster regional co-operation. Through its support to demand-driven initiatives at community level, the Programme would stimulate a supply response at producer level that would lead to higher incomes, and thus to an enhancement of sustainable food security at household levels.*

(viii) *The success of the Programme is highly dependent on the commitment of national and local authorities of the participating countries, and their capacity to make efficient use of the financial resources and technical assistance that would be provided on request. It is therefore essential, that after the initial campaign to raise awareness of the key role of domestic agriculture and foreign trade in food security, and of the main objectives and features of RPFs, the proposed Steering Committees at country level, with support of the national World Food Day Committees, play an active role in soliciting support for the Programme.*

1. INTRODUCTION

1.1 At the World Food Summit (WFS), Rome, November 1996, the nations of the world committed themselves to making substantial progress in eliminating the scourge of hunger and undernourishment. They recognized the importance for food security of sustainable agriculture, forestry and fisheries, trade and rural development. They also recognized that poverty is a major cause for food insecurity and that sustainable progress in poverty eradication is critical to improve access to food. The Rome Declaration on World Food Security and the Action Plan of the World Food Summit opened the way to a common aim: food security at household, national, regional and world levels. Particular consideration was given to small island developing states which include most of the Pacific Island Countries (PICs).

1.2 “Small Island Developing States”, as pointed out in the World Food Summit Action Plan “face the threat of land loss and erosion due to climatic change and sea level rise, and have particular needs for their overall sustainable development. Improvements in trade, transportation, communication, human resources, stabilization of income and higher export earnings will increase food security in those countries”. In the “Ministerial Declaration” the Ministers participating in the “Special Ministerial Conference on Agriculture in Small Island Developing States”

- recognized the specific constraints of small island developing states and reaffirmed their commitment to address their particular needs and their determination to support the sustainable development in small island developing states as a follow-up to the WFS;
- they acknowledged that small island developing states vary widely with respect to distinct characteristics such as natural resource endowments for agriculture, forestry and fisheries, levels of economic development, role of the agricultural sector in the economy, competitiveness in agricultural markets, and socio-cultural situations;
- they also noted that small island developing states face common constraints arising from the interplay of factors such as smallness, remoteness, geographic dispersion, vulnerability to natural hazards, and peculiar population structure and mobility; and
- reaffirming their common determination and strong commitment, expressed during the WFS, they pledged to pursue their efforts towards the achievement of food security and to implement policies and programmes which secure the sustainability of agriculture, forestry and fisheries in small island developing states.

The Special Ministerial Conference which was focused on the specific problems of agriculture, including fisheries and forestry, had been organized by FAO in March 1999 as part of its support to WFS follow-up.

1.3 Though most of the critical issues related to poverty and food security have national characteristics, to reinforce national policies and programmes and take advantage of synergies and

complementarities at regional and sub-regional levels, FAO has undertaken to expand its cooperation with Regional and Sub-regional Economic Groupings (REGs) of developing countries and countries in transition.

1.4 In this context, an FAO Investment Centre mission¹ visited the Pacific Region between 28 February and 10 March 2002 to discuss proposals for a regional programme for food security. Following briefing by the FAO Sub-Regional Office for the Pacific Islands in Apia/Samoa, the mission travelled to Tongatapu/Tonga, Suva/Fiji, Honiara/Solomon Islands, Port Moresby/Papua New Guinea and Port Vila/Vanuatu. Meetings were held with concerned government officials as well as with the main development partners. In Suva the mission met with the Pacific Islands Forum Secretariat and with the Secretariat of the South Pacific Commission.

¹ D. Müller-Praefcke, Mission Leader, Consultant; S. Gavotti, Agriculturist; and F. Mangila, from the FAO Subregional Office for the Pacific Island in Apia, Samoa, who accompanied the mission throughout its country visits.

2. REGIONAL SETTING

A. NATURAL RESOURCE BASE AND POPULATION (Annex 1)

2.1 The Pacific Island Countries (PICs)¹ are characterized by an extraordinary variety of land and marine ecosystems. The land area, dispersed over several thousand of mostly small islands and atolls, is only about 500,000 km². By contrast, the sea area, controlled through exclusive economic zones (EEZ) is estimated at 17 million km². There is substantial diversity amongst them in terms of physical size and endowment with natural resources for agriculture, forestry and fisheries. Papua New Guinea, representing close to 90% of the land area, the Solomon Islands, Vanuatu and Fiji are large, rugged, mainly volcanic land masses which are generally rich in biological and physical natural resources. Mineral wealth is substantial in some, especially in Papua New Guinea, Vanuatu and Fiji. At the opposite end of the spectrum are the atoll nations whose resource endowments are very limited. They include Federated States of Micronesia, Kiribati, Nauru, Niue, the Republic of the Marshall Islands, Tuvalu and Palau. These nations are small and isolated and have very poor soils, some have minerals. Between these two extremes are the Cook Islands, Tonga and Samoa which are intermediate size volcanic islands with rich soil but little or no mineral wealth.

2.2 For centuries the peoples of the Pacific have relied on the resource endowment of their islands and the sea to meet all their needs. Today, the fragile ecosystems of the Pacific islands are being threatened by various trends such as urbanisation, over-exploitation of common land and lagoon resources, agricultural cultivation of marginal lands, deforestation and so forth. The widespread destruction of protective forests in critical watershed areas has resulted in environmental degradation, critical impairment of water supply and damage to coastal/marine habitats and natural resources. At the same time, the sectors holding perhaps the greatest promise for future economic and employment growth – tourism and agriculture, including fisheries and forestry – are heavily dependent on the sustainable management of the natural resource base.

2.3 There is an increasing awareness that environmental precautions are essential to continued economic development. Fragile ecosystems in particular are on the front line of danger. The challenge is to strike an appropriate balance between conservation and sustainable use of natural resources. Effective erosion control, conservation of water, careful management of forests and protection of fisheries are required. Production systems need to be diversified for maximum efficiency in the utilization of land resources while minimizing environmental and economic risks. The ocean and coastal environment is of strategic importance and constitutes a vulnerable resource for food security.

2.4 The PICs, in spite of their diversity, share common constraints that impede their efforts to achieve a balanced economic growth and sustainable food security. Among the constraints they share with other small island developing states are in particular smallness, remoteness, geographic dispersion and vulnerability to natural hazards, as well as a heavy dependence on external economic factors such as changes in the global trading environment.

¹ Pacific Island Countries, which are members of the Pacific Islands Forum and classified as developing countries, include Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, the Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

2.5 The total population of the 14 PICs is currently estimated at close to 7 million (2000), with Papua New Guinea alone accounting for about 70 % and Nauru, Niue, Palau and Tuvalu together for less than 1% . Demographic growth has been stable during the last two decades at an average annual rate of 2.2%. Outward migration is an important phenomenon in PICs contributing to a high reliance on remittances as well as to changes in food consumption patterns, most notably in the Cook Islands, Samoa and Tonga.

2.6 Indigenous cultures and traditions have remained strong in the PICs and continue to play a role in political, economic and cultural life. The existence of these strong cultural and social systems continues to ameliorate the incidence of absolute and abject poverty.

B. AGRICULTURE AND FOOD SECURITY (Annex 2)

2.7 Most people, in some cases more than 80% of a country's population, live in rural areas and rely heavily on agriculture, forestry and fisheries as a source for their food security. The contribution of the agricultural sector to the GDP of individual countries ranges from 3% (Federated States of Micronesia) to 40% (Solomon Islands).

2.8 Average data on per caput income seem to indicate that people of the region do not face particularly serious problems of poverty and access to food. However, the average national indicators - in terms of GDP per caput (2000), PICs range from low-income (Solomon Islands, US\$880) to upper middle-income (Palau, over US\$8,000) with most of the countries classified as lower middle-income with GDPs per caput ranging from US\$1,070 (Samoa) to US\$2,300 (Fiji) - mask strong territorial and social disparities within countries. Economic development seems to have taken place in the capital island to the detriment of small and remote islands. Moreover, some PICs have a highly skewed distribution of income. In Papua New Guinea, for example, while the average GDP per caput is estimated at about US\$1,100, some 80% of the population are believed to have an annual income of less than US\$350.

2.9 The regional average dietary energy supply (DES), with 2,380 Kcal only slightly lower than the total developing country average (1994-96), obscures the existence of pockets of chronic undernourishment in most countries. Anaemia, iron and vitamin A deficiency are frequent. The national figures for energy supply range between 2,050 Kcal/day in the Solomon Islands to more than 3,000 Kcal/day in Fiji, indicating important disparities among countries.

2.10 Traditional farming is practiced by small farmers who often cultivate less than 2 ha of land using mostly family labour with very few external inputs. Women are responsible for most of the food production in Melanesian countries, while men play a much larger role in traditional Polynesian farming systems. The major proportion of the produce is consumed by the family but some may be sold. Root crops which are the main food crops in the region are generally grown in agro-forestry systems with other food crops such as coconut, breadfruit, bananas and plantains, various other fruits and nuts, spice plants, medicinal plants, and other plants that provide raw material for housing, handicraft, wood fuel etc.. In Fiji, agriculture is organized more along commercial lines, although the subsistence sector remains important. Large-scale agriculture comprises oil palm, coconut, cocoa and coffee plantations, and beef cattle in Vanuatu. Typical constraints faced by producers include a shortage of labour, poor quality and availability of planting material, a lack of efficient pest control and monitoring programmes, post-harvest losses,

poor animal health and high cost of purchased feed, and weaknesses in both domestic and export marketing.

2.11 Towards the coastline, the root-tuber farming system often merges into coastal artisanal fishery. Subsistence fisheries provide an important source of protein in the PICs. Subsistence fishing results in a total catch that is often several times larger than from commercial fishing although available statistics are limited. In Fiji, for example, which has extensive commercial “tuna fisheries”, the subsistence fishery is the largest sector of the fishing industry. Most of the inshore (coastal) resources in the PICs are small and therefore highly vulnerable. The start of commercial fishing, or the switch from subsistence fishing to commercial fishing, will often result in over-exploitation in the coastal areas. Despite the comparatively minor impact of aquaculture on Pacific Island economies, the PICs now recognize that aquaculture including restocking and stock enhancement programmes provides one of many long-term sustainable methods of deriving benefit from inshore fisheries resources.

C. AGRICULTURAL MARKETING AND TRADE (Annex 3)

2.12 While there may be significant differences in the pattern of agricultural production in the PICs, from a marketing standpoint the similarities are perhaps more important than the differences. Firstly, and obviously, the countries are made up of islands. Most of those which are inhabited have relatively small populations, which means that the difficulties associated with sea transport are compounded by the small quantities of produce which the islands have to sell and the small quantities of goods they can afford to buy. Some islands in the Solomon Islands and Cook Islands, for example, are serviced by boat monthly, or even less frequently. This obviously has implications for the types of crops which can be grown for sale. Even the larger and more populated islands experience communication difficulties. For example, most fresh produce grown in the Highlands of Papua New Guinea has to be shipped from Lae to Port Moresby. There is no road from the Highlands to the nations capital and airfreight is very expensive.

2.13 Since a large proportion of agricultural produce such as root crops, fruits, vegetables and also fish is locally marketed fresh, development of proper post-harvest processing and storage technologies are extremely important. Farmers, extension staff, middlemen and retailers in the local markets generally lack information on post-harvest handling of fresh produce, proper packing transportation and storage of the produce before sale. There is therefore need to promote, also among traders, simple low-cost technologies, preferably using local resources, for handling and packing fresh produce, to reduce damage during transportation and storage. For export produce, post-harvest handling in general is better organized as exporters tend to pack the produce themselves or provide packing material and supervise packing. The major problem for export of fresh produce appears to be in meeting the quality and quarantine standards.

2.14 The export sector, which occupies a central place in income generation of most PICs, comprises a narrow range of primarily agricultural commodities. Tree crops, sugar and fruits and vegetables as well as timber and marine products, are the major exports from the region. Major trading partners include Australia, New Zealand, Japan, United States and Europe. Intra-island trade is small, doubtless mainly due to similarity of commodities on offer and diseconomies of scale for strengthening trade links between small countries. Exports are therefore vulnerable to external disturbances, including recession in trading partner countries, the effect of weather on

export supplies, and strong competition from larger low-cost countries of the region having greater comparative advantage.

2.15 With the conclusion of the Uruguay Round of Multilateral Trade Negotiations (URMTN), agriculture has been integrated into the multilateral trading system and subjected to disciplines under the World Trade Organization Agreement. Several PICs have joined the WTO, including Fiji, Papua New Guinea and the Solomon Islands and others have applied for accession. Rules already established under the WTO have an impact on agricultural trade and national policies. Further commitments for achieving progressive reductions in levels of support and protection provided to agriculture and improved mechanisms for achieving these goals will form part of the next round of negotiations. Furthermore, there are clear indications that several WTO member countries wish to include fisheries in the reform process.

2.16 In most PICs agricultural exports account for over 50 % of total exports and at the same time significant quantities of major food items, machinery, capital goods and petroleum products are imported, and with the exception of three countries (Nauru, Papua New Guinea and Solomon Islands) trade balances are highly negative. Agricultural trade occurs under a number of agreements in addition to the Uruguay Round Agreement on Agriculture (URA). At the regional level, countries have preferential access to Australian and New Zealand markets under the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA). Access to European markets occurs both under the Lomé Convention / Cotonou Agreement and the Generalised Systems of Preference GSP). Agricultural commodities enter Japan and the United States under the GSP programmes of those countries. In all these markets, Pacific island products enter duty-free or under preferential tariffs and as importers lower their most favoured nation (MFN) tariffs, the margins of preference erode. At the same time, domestic economies have been protected through tariff and other measures.

2.17 Countries of the region recognise the new international trading environment will lead to increased liberalisation of agricultural trade and a more market oriented trading environment. They also recognise that this will require changes in national agricultural policy related to domestic subsidies, market access and export subsidies. Thus, the trade rules determined at the WTO will affect the development efforts of the PICs. However, policy options are available under the existing URA and can be negotiated under the continuing reform process.

2.18 The need to diversify the export base away from traditional commodities has been acknowledged by all Governments who are now committed to facilitate the upgrading of the production and the exploitation of niche markets. Potential export commodities might include horticultural crops, fresh and processed fruit, root crops, spices and herbs, indigenous nuts, floriculture, non-copra coconut products, certified organic products, fresh fish exports among others.

2.19 Food quality and safety remain crucial issues in the PICs. Although national food laws are at various levels of development, food standards and regulations are generally inadequate.

D. REGIONAL COOPERATION (Annex 4)

Regional Organizations

2.20 Initiatives in support of economic development and, more specifically, in support of the agricultural sector in Pacific Island Countries (PICs), are available at the national, regional and international levels. In terms of regional organizations, the main ones include the Pacific Islands Forum, the Pacific Islands Forum Secretariat, the Pacific Community, the Secretariat of the Pacific Community, the South Pacific Forum Fisheries Agency, the University of the South Pacific School of Agriculture and Institute for Research, Extension and Training in Agriculture, the South Pacific Regional Environment Programme, the International Board for Soil Research and Management, the South Pacific Geo-Science Commission. The Food and Agriculture Organization's Sub-Regional Office for the Pacific Islands is the main international organization in the sector.

2.21 The Pacific Islands Forum, formerly South Pacific Forum, represents Heads of Government of all the independent and self-governing Pacific Island Countries including Australia and New Zealand¹. The Forum is the region's premier political and economic policy organization. Forum leaders meet annually to develop collective responses to regional issues.

2.22 The Forum's administrative arm, known as the Pacific Islands Forum Secretariat, acts as the secretariat for Forum-related events, implements decisions by the Leaders, facilitates the delivery of development assistance to member states, and undertakes the political and legal mandates of Forum meetings. The Secretary General is also permanent Chair of the Council of Regional Organizations in the Pacific (CROP) which brings together eight main regional organizations in the Pacific region: (i) The South Pacific Forum Fisheries Agency (FFA); (ii) Pacific Islands Development Programme (PIDP); (iii) Secretariat of the Pacific Community (SPC); (iv) South Pacific Applied Geo-Science Commission (SOPAC); (v) Pacific Islands Forum Secretariat (PIFS); (vi) South Pacific Regional Environment Programme (SPREP); (vii) South Pacific Tourism Organization (SPTO); and (viii) The University of the South Pacific (USP).

2.23 The Pacific Islands Forum Secretariat (PIFS) comprises four Divisions: Development and Economic Policy, Political and International Affairs, Trade and Investment, Corporate Services.

2.24 The Trade and Investment Division helps members to improve their trade and investment performance through sound policy advice and technical assistance. The Division is also directly engaged in post-harvest handling activities such as cleaning, grading and sorting, storage, drying, inspection of export quality, clipping, bagging, packaging and then marketing, including market negotiation. The post-harvest handling training programme is an on-going programme, which is held on an annual basis. Its Marketing and Product Development Section is directly responsible for the identification of market opportunities for products produced by the Forum Island Countries (FICs), assist the countries to ensure their products meet the exact specifications of the market, assist them to better understand the marketing system in each targeted market, and to ensure that their products are priced reasonably.

¹ Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

2.25 The Secretariat of the Pacific Community (SPC) services the Pacific Community with its 27 members¹, and provides technical advice, training and assistance in economic, social and cultural development to 22 countries and territories of the Pacific Region. The mandate or core function of SPC's Agriculture Programme is to provide technical support, training and information for national and regional agriculture programmes in sustainable agriculture production, resource economics, plant protection, and animal health. The Agriculture Programme has four key objectives which address the current as well as the major emerging issues in the agricultural sector of Pacific Island countries and territories:

- Increase efficiency and sustainability of agriculture;
- Improve food security and public health;
- Facilitate trade in agricultural products; and
- Decrease impact of natural disasters.

2.26 The Agriculture Programme is divided into four sections, comprising animal production and health services, crop improvement services, plant protection services, and resource economics and agriculture information services. In January 1998, Phase II of the EU-funded Pacific Regional Agriculture Programme (PRAP) (October 1994 to December 1999) became part of the SPC Agriculture Programme with projects and activities that included farming systems, atoll agriculture, seeds and planting materials, tissue culture services, agriculture information services and others. A draft financing proposal for a follow-up project "Development of Sustainable Agriculture in the Pacific (DSAP)" was discussed at a SPC/EU workshop held at Nadi, Fiji 31 October to 2 November 2001. The project - purpose is "to increase sustainable agricultural production of farm families in participating countries" will be an integral part of the SPC Agriculture Programme. The previous accomplishments of Phase I and II of PRAP in training, technical assistance and the development of technologies provide a foundation for this project.

Initiatives and Priorities in the Agriculture Sector

2.27 The variation of membership amongst regional organizations – some comprising independent island states only and others including the non-independent territories and administrations – has created a potential for duplication and overlap of activities within the mandates of these organizations. Emanating from a decision taken by the then South Pacific Organizations Coordinating Committee (renamed to "Council of Regional Organizations in the Pacific – CROP") in late 1997, the Forum Secretariat was requested to develop, in consultation with other regional organizations, a Working Paper on agriculture. The aim of this paper was to assess complementarity, duplication and overlap between existing and proposed regional initiatives in the agricultural sector, and also to identify regional priorities in the agricultural sector.

¹ American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United Kingdom, USA, Vanuatu, Wallis and Futura Islands.

2.28 For the purpose of the Working Paper “Initiatives and Priorities in the Agriculture Sector”, the current project activities of the Regional Organizations had been grouped into seven relevant disciplines, namely: (i) Plant protection; (ii) Crop production and diversification; (iii) Animal health and production; (iv) Soils and farming system; (v) Agriculture value-adding and marketing; (vi) Agricultural policy and statistics; and (vii) Capacity building and training.

2.29 Based on project titles and taking into account the gaps identified by the Working Group, the Review has determined areas of top priority in each of the agricultural disciplines. Classified as “very high” or “high regional importance” were: plant protection including national quarantine, genetic improvement of planting material and tropical fruit production, animal production including quarantine and OIE standards, atoll cultivation, export marketing and WTO issues, agricultural development policy, capacity building and training as well as multidiscipline areas, including household food security and food safety – Codex Alimentarius (see Appendix of Annex 4).

3. PROGRAMME RATIONALE AND DESIGN CONSIDERATIONS

3.1 The proposal to contribute to the stabilization of food security in the Forum Island Countries (FICs), at both national and household levels, through a Regional Programme for Food Security (RPFS), recognizes: (i) the importance for food security of sustainable agriculture, forestry and fisheries, trade and rural development; (ii) that FICs are heavily dependent on agricultural production and trade for income generation; (iii) that with few exceptions, national trade balances are highly negative, and (iv) that, although most of the critical issues related to poverty and food security have national characteristics, to reinforce national policies and programmes, advantage should be taken of synergies and complementarities at regional level and of changes in the trade environment resulting from the Uruguay Round and WTO.

3.2 Specific factors that need to be kept in mind when designing an RPFS include:

- Agricultural production and exports are based on a relatively narrow base of mostly traditional commodities;
- Typical constraints faced by producers include a shortage of labour, poor quality and availability of planting material, weaknesses in agricultural extension, a lack of efficient pest control and monitoring programmes, post-harvest losses, poor animal health and high cost of animal feed and weaknesses in both domestic and export marketing;
- With the conclusion of the URMTN, agriculture has been integrated into the multilateral trading system and subjected to disciplines under the WTO Agreement on Agriculture;
- The most frequent problems confronted by FICs in their efforts to keep pace with their MTNs and commitments include: (i) inadequacy of administrative/legal capacity to meet the requirements of WTO membership; (ii) insufficient national policy formulation capacity in agriculture, including fisheries and forestry, and the inadequate analytical capacity to assess the impact of policy changes being proposed by WTO; (iii) limited scientific, administrative and infrastructure capability and capacity to deal with food standards, plant and animal inspection services and quality assurance requirements of the exports and imports; and (iv) lack of capacity to prepare for, and negotiate in, MTN rounds.
- At their bi-annual meeting held in July 2001, in Port Vila, Vanuatu, the South West Pacific Ministers of Agriculture reconfirmed the importance of a well-defined, coherent and achievable agricultural policy. Ministers recognized that food security issues need a holistic approach across sectors such as agriculture, land, health, education, fisheries and forestry, and cooperation with the private sector, NGOs and other partners.

3.3 Considering the importance of export trade for the Pacific Island economies, the changes in the global trading regime and the national weaknesses in capacity to respond to the new challenges, it would appear justified for a RPFS to concentrate in a first phase on: (i) Assisting countries to meet obligations under WTO agreements; on helping them, whether they are WTO members or not, to adjust to the changes in the international and trading environment; (ii) Capacity building in related agricultural and trade policy; and (iii) Initiatives directly at community level to enable producers to exploit new opportunities offered under the new trade environment. Enhancing food security directly at community level.

3.4 Based on the foregoing, proposals for programme implementation arrangements should reflect the following:

- The implementation capacity of individual governments is largely overstretched.
- A number of coordinating/steering committees exist that were set up in connection with other, on-going projects/programmes of national or regional character; the National World Food Day Committees typically under the Director of Agriculture concerned, could probably become involved.
- Experience/lessons from past development projects in support of agriculture would suggest that NGOs and CBOs could play a useful role in overcoming weaknesses in government services and play a role in implementation.
- Close collaboration should be sought with on-going related projects/programmes, to minimize duplication of efforts and generate synergies.
- Regional organizations, in particular those under CROP, must play a key role in RPFS implementation and monitoring.
- FAO, with its large track record of technical cooperation in the Pacific Region at both country and regional levels, might be requested to provide technical support.

3.5 The heterogenic nature of the FICs as a group, the differences in requirements of the individual countries would suggest a holistic view of food security and a highly flexible programme design, with the main thrust on demand-driven interventions. Given the complexity and specific nature of food security issues in the Pacific Region and considering the tasks involved in adjusting the national agriculture to the changes in the global trade environment, the proposed four year RPFS, might be considered as a first phase of a longer term programme. Such a programme could play an important role in generating synergies between the various sectors and sub-sectors involved in pursuing the common aim of stabilizing food security in FICs.

4. REGIONAL PROGRAMME FOR FOOD SECURITY

A. GENERAL DESCRIPTION

4.1 With the ultimate objective of contributing to the stabilization of food security, at both national and household levels, in the developing member countries of the Pacific Islands Forum, the Regional Programme for Food Security (RPFS) would follow a three-pronged approach which would help Forum Island Countries (FICs) to adjust to changes in the international trade environment brought about largely by the Uruguay Round Agreement on Agriculture (URA). Conceived as the first four years of a phased programme, its components, to a large extent representing clusters of demand-driven interventions, would be implemented under three major inter-related pillars, namely “Trade Facilitation”, “Agricultural Policy Assistance” and “Income Generation at Community Level”.

Pillar I Trade Facilitation:

- Food quality and safety standards;
- Promoting intra-regional trade;
- Commodity development programmes;
- Marrakesh Agreement follow-up;

Pillar II Agricultural Policy Assistance:

- Harmonization of agricultural and trade policies;
- Analysis of socio-economic constraints;

Pillar III Income Generation at Community Level:

- Community level interventions;
- Technical support for sustainable agriculture.

B. DETAILED FEATURES

Pillar I – Trade Facilitation

Component - Improving Food Quality and Safety Standards – US\$1,748,000

4.2 The activities proposed aim at upgrading and modernising food control in FICs, thus promoting food trade within the region and also further afield. Strengthening capacity of national food control agencies will ensure that the safety and quality of locally produced food meet internationally accepted levels. Harmonising national food regulations and standards in line with those of Codex Alimentarius and others in force in major export markets, will also be an important requirement in the facilitation of international food trade. Improved national food control programmes, covering food imports as well as locally produced food, will also provide increased protection against food-borne hazards and fraudulent practices in food trade.

- (i) **Elaboration of Food Standards and Guidelines – US\$1,140,000.** The activities proposed comprise:

- Improvement of the organization of food control activities in the region as well as the administration and management of food control services and programmes, including contaminant monitoring and import/export inspection and certification programmes (International technical assistance in food standards, 14 person/months);
 - Provision of equipment for the inspection and analysis of food products that complement existing equipment and to strengthen plant quarantine laboratories and reinforce border posts for adequate phytosanitary control. The assumption is made that each country already has a nucleus physical infrastructure (Equipment/materials would include microscopes, inspection kits, surveillance equipment, seed testing equipment, disease diagnostic equipment; lumpsum);
 - Training of personnel within the private sector as well as for officials of national agencies and institutes involved in food quality and safety control, covering quality assurance, application of general principles of good hygienic practice and good manufacturing practice, HACCP (two 3-day workshops per country for 50 persons each);
 - Training of food control officials in (i) food inspection, (ii) methods of sampling and analysis for pesticide residues, heavy metals, mycotoxins, and other chemical food contaminants, (iii) food micro-biology, sampling and analysis, covering fish products as well, (iv) analytical quality assurance and accreditation of laboratories (two 2-week courses per country for 12 persons each. Overseas short training – two week visits for three people per country – crops, livestock, fisheries; lump sum);
 - Strengthening of information systems dealing with food regulations, food quality standards, and other food quality and safety issues to ensure that industry, national authorities and consumer groups are adequately informed to participate effectively in the national food control system (Food standards and guideline preparation, one each for crops, animal and marine products; lump sum contract. Food regulations information study; lump sum).
- (ii) **Legal Framework Review and Updating – US\$304,000.** The activities proposed include a review of existing legislation and regulations dealing with food quality and safety control (including marine products) and the organization of workshops on harmonization of food quality and safety regulations with those of major trade partners and Codex Alimentarius. Drafting of new legislation or modernising existing legislation for harmonised phytosanitary/regulatory action and consistency with the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the International Plant Protection Convention (two regional workshops of 5 days for 30 persons for consensus building and harmonisation of plant protection legislation; two visits of two weeks per country by legal drafting expert);

- (iii) **Pest Surveillance Activities – US\$304,000.** Under the Programme pest surveillance activities would be undertaken to develop a quarantine pest list for each country, to guide regulatory actions to achieve an appropriate level of protection for each country (National consultants/institutions contracted for two years to conduct surveillance activities and compile preliminary and/or update existing list of pests of potential phytosanitary significance - Year 1, 2 and 3; Pest Risk Analyst contracted for 2 weeks per country to assist in the determination of the quarantine pest list – Year 4).

Component – Promoting Intra-Regional Trade in Agriculture – US\$90,000

4.3 Opportunities for promoting intra-regional trade in agriculture are limited due to the narrow range of commodities produced in the region and the high production and transportation costs arising from the geographic location of the islands. Nevertheless, governments in the region are seeking opportunities to promote intra-regional trade as one avenue toward diversifying production and enhancing sustainability. This proposal seeks to reinforce this process through studies and workshops aimed at identifying opportunities for intra-trade in agriculture and obstacles to its growth and possible solutions. Some background studies would also be needed to analyse how various existing and prospective trade policy measures impact upon intra-regional trade. In order to enhance the effectiveness of this activity, it is proposed that regional consultations and seminars would go hand-in-hand with the analytical work (Preparation of eight analytic background studies; lump sum contract. Organization of two regional workshops for 25 participants; lump sum).

Component – Commodity Development Programmes – US\$380,000

4.4 The Uruguay Round has offered new export opportunities for all countries even as it presents challenges for the Forum Island Countries in the form of the erosion of preference schemes in their traditional markets. Further, many FICs are attempting to more fully develop their tourist sectors which could present market opportunities for local suppliers of high quality food commodities. This proposal seeks to identify problems faced at the supply level that constrain export growth and import substitution on the basis of in-depth analysis of constraints at each level of the product cycle, from production through export. This supply-side study would be complemented by the analysis of the opportunities in import markets, at both regional and global level where different market access conditions exist, e.g. the non-reciprocal preferential access (e.g. Lome Convention, Cotonou Agreement, SPARTECA and GSP) as well as access on a most-favoured-nation basis. The overall result would be a development strategy for products including technical and investment needs (The proposal consists of undertaking studies for about six major export commodities of the region to be identified and the organization of two regional workshops per country to discuss study findings at country level; funding would be provided for 8 person/months of international technical assistance and for 8 person/months of regional technical assistance as well as a lump sum for the holding of the workshops – 30 persons for three days).

Component – Marrakesh Agreement Follow-Up – US\$192,000

- (i) **Transitory measures in response to the on-going trade liberalization – US\$10,000.** Implementation of the Uruguay Round commitments also implies adapting domestic economic policies and practices to the new rules. This could adversely affect the food security situation of the rural and urban vulnerable groups. To avoid these possible costs, certain transitory measures would be required. This component would review various WTO-compatible domestic policy instruments and analyze their feasibility, leading ultimately to a package of *transitory measures for safeguarding food security* for the FICs (The component would fund a feasibility study on transitory measures; lump sum).
- (ii) **Compensatory measures in response to emerging trends in global commodity markets and trading environment – US\$42,000.** In a period of considerable change in the international trading environment, countries of the region may well find that their food import bills or earnings from the exports of agricultural commodities undergo large variations from year to year. At the same time, existing financing arrangements, stabilization schemes and assistance under the *Marrakesh Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries* are coming under review. In order to assist countries in the region, it is proposed that a review would be undertaken of the needs for and adequacy of, financial and other compensating schemes in the light of the changing world trading environment. The proposals following from the study would be discussed at a regional workshop (Lump sum payment would be provided).
- (iii) **Assisting countries to enhance their capacity to participate effectively in multilateral trade negotiations on agriculture – US\$140,000.** This is an immediate need of the countries in the region as the next round of negotiations at the WTO has already started in late 2001. Only three of the FICs are WTO members (Fiji, Papua New Guinea and Solomon Islands) although three more (Samoa, Tonga and Vanuatu) have Observer Status and have applied for membership. While some FICs have assessed the consequences of the Uruguay Round Agreements for their economies and domestic policy making, a majority of them have not undertaken such an analysis. Most of them face an additional challenge arising from the existence of a number of preferential and regional trade agreements. Following on the initial round of training under FAO's Umbrella Training Programme on Uruguay Round in 1999, it is proposed that follow-up workshops are organized during each of the subsequent years as agricultural trade negotiations continue and new issues/problems come up. A series of country studies would also be conducted in order to assess the consequences in some detail (Lump sum payment would provided for the preparation of one study per country and the holding of one workshop per country).

Pillar II – Agricultural Policy Assistance

Component – Harmonization of Agricultural and Trade Policies – US\$310,000

4.5 Faced with the challenge of global competitiveness, FICs are looking for opportunities to diversify their economies, especially the agricultural sector, in order to maintain and/or increase their degree of food security and self-reliance by exploiting their resource base more rationally and sustainably. In the new trade environment created by the URA and by changing conditions in food markets in importing countries, FICs face the challenge of having to broaden their agricultural export base. Increased attention will have to be paid to the diversification of agricultural commodities into new products (both primary and processed), to the quality of their export products such as fruit and vegetables, fish and to regularity of supplies.

4.6 The activities proposed would assist FICs in the creation of a policy framework that (i) facilitates the adoption of new technologies and supports efforts to improve agricultural production, diversify into new products, as well as developing new end uses; (ii) promotes trade and marketing policies that positively affect individual farmers' decisions about diversification.

4.7 The activities proposed would be focused on:

- Assistance in the review of on-going strategies and programmes with a view to their compatibility with policies at national and regional levels.
- Assistance in the formulation of new programmes and policies.
- Training in agricultural policy analysis.
- Consistency of agricultural and trade policy at national level (Funding would be provided for the organization of 3-day workshops at country level for 30 participants – two per FIC; provision of 8 person/months international and 8 person/months regional technical assistance).

Component – Analysis of Socio-Economic Constraints – US\$450,000

4.8 Under this component funding would be provided for the identification and analysis of major constraints faced by FICs in adjusting to changes in the international trade environment and in enhancing food security at household levels. The analysis would focus on the various levels of the agricultural sector, including forestry and particularly coastal fisheries, with emphasis on the producer and village/community levels.

4.9 At regional level, the proposed activities would concentrate on the results obtained at national levels, the identification of common problems faced by the countries concerned, the comparison and harmonization of these elements with regional policies, as well as on the identification and proposals of elements to be integrated into the regional policies of agriculture development and food security (two 3-day capacity building workshops at each of the FICs; two 5-day-regional thematic workshops that would permit the exchange of information and experiences among FICs; provision of the services of international and regional technical assistance/experts in constraints analysis – a total of 16 person/months).

Pillar III – Income Generation at Community Level

Component – Community Level Interventions – US\$4,558,000

4.10 The economic and social development of the rural sector is a key requisite for the achievement of food security for all. Rural poverty is a complex phenomenon that varies considerably between and within countries. The rural areas in FICs, outer islands in particular, are generally less well equipped in terms of technical and financial resources and educational infrastructure. In those areas lack of income opportunities, failure to crop and to maintain production systems, limited access to public services and the poor quality of these services are all fundamental aspects that need to be considered with regard to rural food security. The main consequences of this are reflected in out-migration, both internally and to other countries.

4.11 This component would support demand-driven activities at community level. Based on the organization of awareness workshops at national and provincial levels on the role of domestic agriculture in income generation and food security, RPFS interventions would be addressing farmer training needs, as well as income-generating activities based community initiatives.

- (i) **Information and Support to Farmer Communities – US\$418,000.** The activities proposed comprise the holding of awareness workshops at country level on the important role of domestic agriculture and foreign trade in food security. Similar types of workshops would be held at provincial level. Activities proposed would also include the provision of national technical assistance to assist with the formulation of interventions that aim at income generation (The Programme would support the holding of two awareness workshops in each of the FICs as well as an estimated total of 26 district level workshops. A total of 200 person/months of national technical assistance in project formulation would be provided).
- (ii) **Community Initiatives for Income Generation – US\$4,140,000.** The activities proposed comprise farmer group/community-based interventions of a training nature, and support to investment. A typical learning initiative (25 farmers, 2 facilitators, 3 meetings/month during 4 months, repeated twice) would promote the establishment of farmer field schools which would focus, for example, on integrated production and pest management (IPPM) for horticultural crops, on seed production and rapid multiplication of vegetative material, on compost making, on rearing of short-cycled animals, on beekeeping, on rural aquaculture, on artisanal fishing techniques. For investment activities, matching grants would be made available, for example, for small-scale investments in water-harvesting, orchard establishment, peri-urban agriculture and home vegetable gardens, commercial pig and poultry production, honey making, cassava/starch processing, taro cleaning centres, improved fish drying facilities. Matching grants for interventions of a training nature would cover inputs and equipment for demonstrations, local trainers/facilitators' allowances as well as transport allowances and food for the participants. Community participation, estimated at 30% of total cost, would cover labour and local material used during the training/demonstration period.

For investment activities the community participation to the matching grant is estimated at 10% and 15% respectively of the corresponding total costs. For the purpose of estimating total funding requirements, the number of interventions in the 14 countries, phased over four years, is assumed to comprise 460 interventions of a training nature and 230 interventions each for small-scale infrastructure, marketing and processing (see Annex 5 for details).

Component – Technical Support for Sustainable Agriculture– US\$528,000

4.12 Under this component funding would be made available to individual communities and/or national governments, to assist in the solving of specific constraints of a technical nature, including, for example, IPM, seeds and planting material matters, organic farming, rural aquaculture. Particular priority would be given to addressing problems related to natural resource management, such as over-exploitation of common land, erosion control, water control, environmental degradation – including marine and coastal environment. (Phased over four years, provision would be made for the services of 44 person/months of regional technical expertise and of 22 person/months of national technical expertise).

RPFS Implementation

4.13 Component – Programme Management, Monitoring and Evaluation – US\$3,219,400

(i) **Programme management – US\$3,029,400.** Funding would be provided for the services of a Chief Technical Adviser at regional level (48 person/months plus travel and field allowances) and a RPFS Facilitator at country level (56 person/months plus operating expenses – lump sum). Funding would also be provided for preparatory activities at regional level (3.5 person/months of regional technical assistance for the preparation of materials and facilitation of workshops and courses; holding of launching workshops – lump sum, and for documentation and media – lump sum) and for similar activities at national level (12 person/months of national technical assistance, holding of a two- day launching workshop per country – lumpsum; documentation and media – lump sum).

(ii) **Monitoring and evaluation – US\$190,000.** The activities proposed comprise the development of an impact assessment methodology, its testing in two countries and implementation (2 person/months of regional technical assistance plus field testing – lumpsum per country).

5. PROGRAMME COSTS AND FINANCING

A. COST ESTIMATES

5.1 The programme costs are estimated at a total of US\$11.5 million. The estimates, at this stage very provisional, do not include contingencies. Given the demand-driven nature of most of the proposed programme activities, frequent use was made of lump sum forfeits. The cost estimates for training and workshops are based on recent relevant technical cooperation activities in the region.

5.2 The cost estimates distinguish between regional and country level interventions, with the latter representing about three quarters of total programme costs. Demand-driven interventions in support of income generation at community level would generate some 40% of the total cost, followed by trade facilitation (some 20%) and agricultural policy assistance (about 7%) with the balance made up by programme management, monitoring and evaluation. Detailed cost estimates of the individual programme component are presented in Tables 1 to 9 of Annex 5. They are summarized in the table below.

Expenditure Accounts by Components – (US\$)

	Trade Facilitation	Agric. Policy Assistance	Income Generation at Community Level	Programme Mgmt. Monitoring and Evaluation	Total
I. Investment Costs					
A. TA and studies	1,792,000	480,000	728,000	823,000	3,823,000
B. Training & workshops	344,000	280,000	218,000	130,000	972,000
C. Equipment	140,000	-	-	-	140,000
D. Service provider contract	134,000	-	4,140,000	168,000	4,442,000
E. Transport allowances	-	-	-	1,146,400	1,146,400
Total Investment Costs	2,410,000	760,000	5,086,000	2,267,400	10,523,400
II. Recurrent Costs					
A. Salaries	-	-	-	672,000	672,000
B. Field allowances	-	-	-	280,000	280,000
Total Recurrent Costs	-	-	-	952,000	952,000
TOTAL PROJECT COSTS:	2,410,000	760,000	5,086,000	3,219,400	11,475,400

B. FINANCING

5.3 The financing plan below is indicative only. It assumes that the donor(s) would provide some 80% or the equivalent of about US\$10 million for the funding of the programme, with the participating governments providing 8% or about US\$1.0 million. Donor funding could, for example, be provided through the establishment of one single trust fund with sub-funds for (i) Trade Facilitation/Agricultural Policy Assistance, (ii) community initiatives for income generation, and (iii) for technical support at country level. The contribution from governments would cover a share of the salaries and of transport allowance of staff involved in implementation, seconded from government offices as well as any eventual taxes and duties. The contributions from the beneficiaries at community level (US\$690,000) would be mainly through labour inputs and other payments in kind for micro-project investments.

Programme Financing Plan – (US\$'000)

Category	Donor(s)		Beneficiaries		Governments		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
Technical assistance and studies	3,823	100	-	-	-	-	3,823	33
Training & workshops	972	100	-	-	-	-	972	8
Equipment	140	100	-	-	-	-	140	1
Service Provider Contract ^{1/}	3,752	84.4	690	13.6	-	-	4,442	39
Transport allowances	1,146	100	-	-	-	-	1,146	10
Recurrent costs	-	-	-	-	952	100	952	8
TOTAL:	9,833	86	690	6	952	8	11,475	100

^{1/} Mostly NGOs, CBOs and extension staff.

5.4 **Recurrent Cost Implications.** The national local authorities would cover incremental operation and maintenance cost of equipment provided under the programme. In most cases these are expected to be small. Recurrent costs under community level micro-projects would be self-financed as such investments are expected to become financially sustainable.

6. PROGRAMME IMPLEMENTATION

A. GUIDING PRINCIPLES

6.1 The approach proposed to programme implementation would be based on the following guiding principles:

- rely on relevant national and regional institutions;
- collaborate, exchange experiences, develop synergies with other relevant development projects/programmes under implementation in the region;
- recognise that the programme as identified is composed of three inter-related pillars of intervention which require different management solutions;
- create a management structure that would serve RPFS beyond its first phase; and
- consider lessons learned from past experience in the implementation of regional projects/programmes.

B. OVERALL MANAGEMENT STRUCTURE AND RESPONSIBILITIES

6.2 The Regional Programme for Food Security would be implemented under the umbrella of the Pacific Islands Forum Secretariat (PIFS) with technical and operational support from a competent international technical organisation with a track record of technical cooperation in the Pacific at both country and regional levels. The Office of the Secretary General, PIFS would have overall responsibility for the Programme. The Secretary General may wish to delegate this responsibility to the Head of the Trade and Investment Division, PIFS who in turn would collaborate closely with relevant CROP agencies. Arrangements similar to those made for the purpose of EU-PRAP may serve as example, thus:

- A Regional Project Steering Committee, consisting of representatives of the participating countries, SPC and the Regional Authorizing Officer, would meet annually to assess progress, review work plans and emerging issues;
- At country level, national steering committees would oversee and guide national RPFS operations. The committees would be composed of representatives of the ministries concerned, the national coordinator and NGOs involved in field operations.

C. IMPLEMENTATION OF THE PROGRAMME COMPONENTS

6.3 The three pillars of the Programme, while all contributing to the ultimate objectives of contributing to the common aim of stabilizing food security, will have different requirements and thus place different demands on programme management. The inclusion of the position of a

Chief Technical Adviser is therefore proposed. The focus of the components under the pillar “Trade Facilitation” is very much a technical initiative that would require extensive technical, economic, administrative, legal and policy expertise and would involve public and private sector institutions at both national and regional levels. The components of the pillar “Agricultural Policy Assistance” would concern mostly government staff at central level of national governments, and management responsibilities would be fairly straight forward. The main thrust under the pillar “Income Generation at Community Level” would be at producer level and hence the importance of well-defined responsibilities at decentralized level. After the initial sensitisation campaign and awareness raising workshops to be conducted in the participating countries, the initiative would be at country level to propose implementation arrangements, including the elaboration of a specific set of eligibility criteria as detailed in Annex 2.

D. MONITORING AND EVALUATION

6.4 Specific budgetary resources have been earmarked for the development of a system for monitoring and evaluating, the implementation of the demand-driven activities at community level (See Annex 2). A similar system would be developed for activities under the components related to Trade Facilitation and Agricultural Policy Assistance. The system to be developed by an M&E specialist would be used to assess the impact of specific activities, and allow for their refinement, in the light of experience with their implementation. Its key components to monitor and evaluate community-level interventions would include:

- Environmental impact assessment, to be developed primarily for provincial and country-level service providers and used to, *inter alia*, identify and monitor changes in natural resource use, land management practices, and safe use of agro-chemicals, identify and characterize provincial and country specific “high quality production” indicators to be used in connection with organic farming.
- Beneficiary impact assessment, to be developed for provincial and country level service providers and used to, *inter alia*, identify economic, social and cultural changes brought about by the Programme and their impact on food security at household levels.
- Simple indicators for participatory M&E, to be used for use by participating communities with the aim of stimulating critical self-awareness as to the impact of the demand-driven activities on natural resources and chemical inputs use, production and incremental income generated.

6.5 At country level, the M&E institution/NGO selected would be responsible to liaise with the different programme implementing agencies (NGOs, Community-Based Organisations-CBOs). Semi-annual reports would be submitted to the national coordinators for validating forwarding to the regional level for consolidation.

7. BENEFITS AND RISKS

A. BENEFITS

7.1 By helping the participating countries to adjust to the new international trading environment created by the Uruguay Round on Agriculture, RPFS would generate major benefits for the economies concerned in that it would:

- (i) support the improvement of food quality and standards;
- (ii) reinforce the process of intra-regional trade expansion;
- (iii) facilitate export diversification;
- (iv) assist in the follow-up to the Marrakesh agreements;
- (v) provide assistance to adapting domestic agricultural policies and practices to the new rules; and
- (vi) foster regional cooperation.

7.2 Through its support to demand-driven initiatives at community level, the Programme would allow farmers to adjust to, and take advantage of, new opportunities resulting from trade facilitation and policy harmonization. It would stimulate a supply response at producer level that would lead to higher incomes and thus to an enhancement of sustainable food security at household levels. Major benefits would be expected to result, *inter alia*, from:

- (i) promoting farmer field schools methodology as an alternative to conventional extension;
- (ii) providing technical support to peri-urban agriculture and home gardening;
- (iii) propagating organic farming and the production of non-traditional crops for export;;
- (iv) support to small-scale animal production;
- (v) support to rural aquaculture and coastal fishing; and
- (vi) providing financial support to small-scale, agriculture-related, processing and rural infrastructure.

B. RISKS

7.3 The success of the Programme is highly dependent on the commitment of national and local authorities of the participating countries and their capacity to mobilize the necessary interest to make efficient use of the financial resources and technical assistance that would be provided on request. It is therefore essential that after the initial campaign to raise awareness of the key role of domestic agriculture for food security and of the main objectives and features of RPFS, the proposed steering committees at country level with support of the national World Food Day Committee play an active role in soliciting support for the Programme.

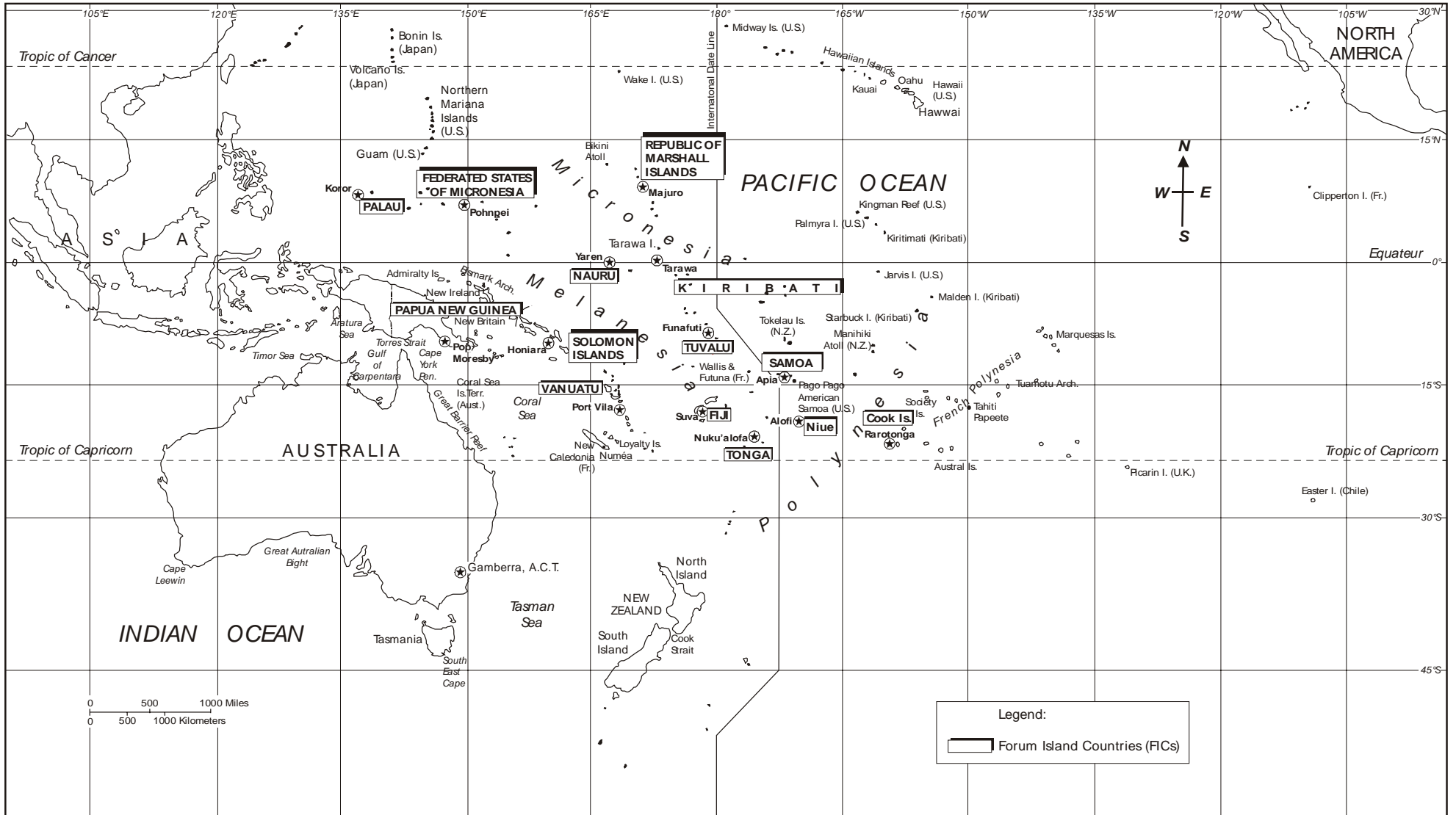
8. FOLLOW-UP

8.1 The mission report provides proposals for review by FIC Governments, in particular those not visited by the mission, by the regional organizations concerned, i.e. Forum Secretariat and SPC, and other relevant members of CROP, as well as potential donors.

8.2 The entire report, including a Power Point presentation which facilitates access to relevant technical documentation, is available on CD. Included is also a form for providing feedback.

PACIFIC ISLANDS FORUM: Regional Programme for Food Security

Location Map



PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 1
COUNTRY BACKGROUND NOTES

ANNEX 1
COUNTRY BACKGROUND NOTES
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ANNEX 1

COUNTRY BACKGROUND NOTES

INTRODUCTION

This annex presents background information and basic data on each of 14 Forum Island Countries (FICs)¹. It is based on information provided by national governments and on data published by the Pacific Islands Forum, by the Statistics Programme of the Secretariat of the Pacific Community, FAO and other official sources. The individual country data deal with land and sea area, with population and income. Two summary tables are attached to this annex, providing data also on land use, forest cover and fisheries production.

The main purpose of the annex is to give an indication of the substantial diversity that exists among FICs in terms of physical size and endowment with natural resources for agriculture, forestry and fisheries. The intention is also to draw attention to the differences in population size and to the considerable differences that exist with regard to the size of national economies, as expressed by the GDP, the share of the agricultural sector and to the average annual income per caput.

The data on land use show clearly the dominating role of permanent crops in most of the countries. The data also reflect the importance of forestry cover in the majority of them. The data on fisheries production provide a clear indication of the importance of subsistence fisheries. With few exceptions – Nauru, the Solomon Islands and Tonga – coastal subsistence fisheries production typically generates well over half of total fish landings.

¹ Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Samoa, the Republic of Marshall Islands, Solomon Islands, Tonga, Tuvalu and Vanuatu.

COOK ISLANDS

Capital:	Rarotonga
Land Area (km²)	240
Sea Area/EEZ (million km²)	1.8
Islands (No.)	15 (13 are inhabited)
Population (No.)	18,700 (2000)
Annual Growth (%)	0.5
Density (inhabitants/km²)	79
Rural Population (% of total population)	31
GDP (US\$ million)	95.8 (1997)
Agricultural GDP (% of total GDP)	22
GDP per caput (US\$)	5,044 (1997)
Currency:	New Zealand Dollar Cook Island coins

A. GENERAL

The Cook Islands consists of a group of 15 islands with a total land area of 240 km², scattered over some 2 million km² of the Pacific Ocean. The country has no immediate exploitable mineral or energy resources. Its natural resource base is primarily the fertile soil and the marine resources.

Like many other Pacific Island Countries, the Cook Island's economic development is constrained by the isolation of the country from foreign markets, the limited size of the domestic market, lack of natural resources, periodic devastation from natural disasters and inadequate infrastructure. Agriculture provides a base for food security. Manufacturing activities are largely limited to fruit processing, clothing and handicrafts. Marine products generate most export revenues. Tourism generates the largest share of the GDP.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

The agricultural sector remains a fundamental sector of the economy and is crucially important for providing labour and food security through subsistence and semi-subsistence food production, as well as for maintaining sustainable livelihood of much of the population. Pig is the main livestock of the country and is an important component of social exchange. The traditional diet is based on root crops and fish.

Agriculture contributes some 20% to the GDP. Close to 70% of all households are active in agriculture, but almost all of them are part-time farmers and get the major share of their

household cash income from off-farm activities. Principal agricultural products are copra, citrus, pineapples, tomatoes, beans, paw paw, banana, yams, taro, coffee, pigs and poultry. All of the fully commercial farms are located in Rarotonga.

Forestry is in its infancy. Forest resources cover 15,900 ha representing approximately 67% of the total land area. In the forestry sector, around 1,100 ha of plantations have been established at the end of November 1997, and the growth of *Pinus caribea* shows potential for production of basic timber products. Some small sawmills operate on different islands, milling local timbers such as old coconut palms. Tree species natural to the atoll environment are few but they have a broad spectrum of qualities in environmental tolerance, protection and product capability.

The Cook Islands marine sector is heavily concentrated on black pearl production. The industry is expanding rapidly and is a significant foreign exchange earner. The Cook Islands has started to license distant-water fishing nations to fish in its 200-mile exclusive economic zone.

In order to reduce food imports, retain increasing share of tourist expenditure in the country and promote export earning, the Government's agricultural policy is geared towards increasing production of fresh fruits, vegetables and taro, the commodities in which the country has relative comparative advantage. The policy has proved successful because production and export of fresh fruits, taro and vegetables has gone up significantly in recent years. A need has been expressed for the development of proper post-harvest processing and storage technologies and facilities for post-harvest handling and inspection to ensure the quality and quarantine standards of products.

FEDERATED STATES OF MICRONESIA

Capital:	Pohnpei
Land Area (km²)	700
Sea Area/EEZ (million km²)	2.9
Islands (No.)	607
Population (No.)	118,100 (2000)
Annual Growth (%)	1.9
Density (inhabitants/km²)	168
Rural Population (% of total population)	73
GDP (US\$ million)	210.6 (1996)
Agricultural GDP (% of total GDP)	3 (1996)
GDP per caput (US\$)	1,928 (1996)
Currency:	United States Dollar

A. GENERAL

Federated States of Micronesia (FSM) occupies a major part of the group of Micronesian Islands called the Carolines, a chain stretching over 2,500 km. in an east-west direction roughly parallel to the equator. There are four states, which from east to west are Pohnpei, Kosrae, Chuuk and Yap. The total land surface of FSM's dozens of islands is only about 700 km² but the EEZ covers a vast area of almost 3 million km² and includes some of the richest tuna fishing grounds in the Pacific.

FSM has a federal government as well as four state governments which have a high degree of autonomy. Each state has its own administrative organisation and its own plans and strategies for economic development and management, in particular for fisheries development.

The islands have few mineral deposits worth exploiting, except for high-grade phosphate and economic activity consists primarily of subsistence farming and fishery. A potential for tourism exists, but the remoteness of the geographic location and a lack of adequate facilities hamper its development.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Farming is mainly on a subsistence level, although its importance is diminishing. The principal agricultural crops are coconuts, bananas, betel nuts, cassava and sweet potatoes. White pepper corns are produced on Pohnpei. The sector (including forestry and fishing) engaged 30% of the employed labour force in 1997. Exports of agricultural products (excluding fish) accounted for some 6% of export earnings in 1996, while exports of marine products accounted for 85% of

total export revenue in that year. In 1997 fees from foreign fisheries licensing agreements, mainly with Japan, contributed some 30% of budgetary revenue.

Each state in the FSM has extensive forest cover, with tropical rainforest being the predominant forest type. Significant areas of mangroves are also present. On the low atoll islands, and the literal slopes of the high islands, the forest cover is better described as an agro-forestry complex with a scattered secondary forest on long-fallow within the traditional gardening system. Timber is cut for subsistence farmsteads for construction and firewood. Mangrove timber is used for handicrafts.

Marine resource use consists of inshore fisheries (those taking place in mangroves, reef areas, and lagoons), nearshore and bottom fisheries, and offshore fisheries (mainly for tuna). Subsistence fishers make the greatest use of inshore resources, artisanal fishers concentrate on nearshore and bottom resources, and offshore resources are exploited by commercial and industrial fisheries which often take place far away from land.

FIJI

Capital:	Suva
Land Area (km²)	18,272
Sea Area/EEZ (million km²)	1.26
Islands (No.)	322 (110 are inhabited)
Population (No.)	824,700 (2000)
Annual Growth (%)	1.6
Density (inhabitants/km²)	45
Rural Population (% of total population)	54
GDP (US\$ million)	1,902.4 (1997)
Agricultural GDP (% of total GDP)	16
GDP per caput (US\$)	2,320 (1997)
Currency:	Fiji Dollar

A. GENERAL

Fiji is an archipelagic nation comprising about 320 islands with a total land area of 18,300 km² and a surrounding EEZ of about 1.3 million km². The group includes two large high islands, several medium-sized high islands, and numerous small islands and atolls. Most of the islands are surrounded by fringing and barrier coral reefs: some are of coralline origin. There are three substantial rivers, a few lakes and some man-made impoundments where fishing and aquaculture take place, but marine fisheries are predominant.

The largest sector of the economy continues to be agriculture. Sugar exports, a growing tourist industry, as well as garment exports are the major sources of foreign exchange, Sugar processing alone makes up about one third of industrial activity.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

The agricultural sector's contribution (excluding fisheries and forestry) to total GDP is about 16%. Sugar and subsistence are still the dominant activities of the sector. Other important export crops are coconuts and ginger, although production levels of both crops declined in the early 1990s. Vegetables and fruits are grown for domestic consumption and rice-growing has been particularly encouraged for import substitution. Foreign exchange earnings of the sector (including fisheries and forests) have remained fairly constant in real terms to stand at about 55% of gross exports. The sector remains the main source of employment throughout the country.

About half of Fiji is forested. The country has extensive timber reserves and forestry has become important as an export trade. Fiji's most important forestry export is plantation-grown woodchips.

Fiji's marine fisheries are estimated to generate annual landings of about 35,000 tonnes. Fishing is divided into three sub-sectors: subsistence, artisanal/commercial, and industrial. The distinction between subsistence and artisanal fishing in the larger, less isolated islands is often blurred as small-scale fishing activity is becoming increasingly monetised in these areas.

The subsistence fishery makes a large contribution to domestic food supplies. It has recently been estimated that 50% of all rural households are involved in some form of subsistence fishing and that between 15,000 to 20,000 t of fish are landed each year, or slightly more than half of all domestic production.

KIRIBATI

Capital:	Tarawa
Land Area (km²)	726
Sea Area/EEZ (million km²)	3.6
Islands (No.)	33 (20 are inhabited)
Population (No.)	90,700
Annual Growth (%)	2.5
Density (inhabitants/km²)	112
Rural Population (% of total population)	63
GDP (US\$ million)	46.3 (1996)
Agricultural GDP (% of total GDP)	9
GDP per caput (US\$)	592 (1996)
Currency:	Australian Dollar

A. GENERAL

Kiribati is an archipelagic nation comprising 33 islands with a total land area of only 810 km² but with a surrounding EEZ of about 3.5 million km² which includes some of the richest fishing grounds in the Pacific. All the islands are of coralline origin and are surrounded by fringing or barrier coral reefs. The country is divided into three widely separated island groups - the Gilberts in the west, the Phoenix Group in the centre, and the Line Islands in the east - each surrounded by their own discrete portion of the EEZ. Several islands in the Line and Phoenix groups are uninhabited. The distance between the eastern and western extremes of the EEZ is over 4,500 km. There are no rivers, lakes or other freshwater impoundment in Kiribati, and therefore no freshwater fisheries.

Kiribati has few natural resources. Commercially viable phosphate deposits were exhausted some 20 years ago. Economic development is constrained by a shortage of skilled workers, weak infrastructure and remoteness from international markets. Tourism generates about 20% of GDP. The financial sector is at an early stage of development, as is the expansion of private sector initiatives.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Apart from Banaba, Kiribati is composed of coral atolls with poor quality soil. Most of them are covered with coconut palms, which provide the only agricultural export in the form of copra which generates 60% of total domestic export revenue (1998). Earnings from seaweed production, which began in the mid-1980s, accounted for some 8% of total export earnings in that year. Most islanders participate in subsistence activities, although agriculture and fishing engaged

only 13% of those in paid employment in 1990. Banana, screw-pine (Pandanus), breadfruit and papaya (paw paw) are grown as food crops.

The very infertile atoll soils, restrict forest development. Despite these limitations, Kiribati has developed an intensive agro-forestry system based on coconut, breadfruit, bananas, pandanus and native figs. The system tends to represent a natural forest rather than plantation since the trees occur spontaneously, in a variety of different patterns and ages. There is virtually no formal forestry activity although a number of species have been tested for windbreaks, coastal protection and fuelwood or timber production.

Subsistence and small-scale artisanal fishing is conducted throughout the islands, from traditional canoes driven by sail or paddle, from plywood canoes powered by outboard motor and from larger outboard-powered skiffs. Fishing is by bottom hand-lining, trolling, pole-and-line fishing, mid-water hand-lining, spearing, trapping, netting and reef gleaning.

The majority of small-scale fishing activity in Kiribati is for subsistence purposes. In outer island areas especially, customary obligations relating to the sharing of catch among family and kinship groups prevail. Artisanal commercial fishing is concentrated around Tarawa where a sizable population, some ice and cold store facilities, and a cash-oriented economy create better market conditions. The commercial fish catch from the coastal zone is principally made up of reef and deep slope fish (54%), molluscs (25%), and pelagic species (21%).

As a result of various development projects, the contribution of fisheries to the country's GDP trebled between 1979 and 1984. In 1998 fish exports earned US\$0.6 million and contributed about 12% of total export income. The sale of fishing licences to foreign fleets is an important source of revenue.

NAURU

Capital:	Yaren
Land Area (km²)	21
Sea Area/EEZ (km²)	320,000
Islands (No.)	1
Population (No.)	11,500 (2000)
Annual Growth (%)	1.8
Density (inhabitants/km²)	548
Rural Population (% of total population)	
GDP (US\$ million)	377 (1996)
Agricultural GDP (% of total GDP)	-
GDP per caput (US\$)	27,514 (1996)
Currency:	Australian Dollar

A. GENERAL

Nauru is a single, raised coralline island with a land area of only 21 km² but with an EEZ which extends over more than 430,000 km². The island is rich in phosphate, which has been the country's principal source of income for many years. Until the early 1990s, the island's economy was based on the extraction of phosphate rock. Phosphate resources are now almost depleted and the country is looking for alternative sources of income to replace mining revenues. With porous soils and uncertain rainfall, Nauru offers limited opportunity for agricultural production, and fisheries development is considered to be the principal economic prospect for the future.

Although possessed of only a very shallow lagoon, much of which dries at low tide, and a narrow fringing reef, Nauru's near-shore open ocean areas are frequented by an abundance of tuna and other pelagic species.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agricultural activity is limited to the small-scale production of tropical fruit, vegetables and livestock. Coconuts are the principal crops. Banana, pineapples and screw-pine (Pandanus) are also cultivated as food crops, while the islanders keep pigs and chicken. The principal imports are food and live animals (which comprised 84% of total imports in 1994, while beverages accounted for a further 4%).

The flora of Nauru consist of almost 200 species, of which 30 are indigenous, and covering almost 20% of the land area. The majority tree species are coconut, Tomanu and Banyan. There appears to be little scope for the development of any sort of commercial forestry (beyond coconut groves). The major roles for trees are as shelter belts, for amenity purposes and to assist in soil improvement programmes.

Nauru's national revenues are expected to decline substantially in the near future due to the depletion of the island's reserves of phosphate. In recognition of the economic potential of the nation's tuna resources, the government is exploring the feasibility of establishing a domestic, commercial tuna fishery. Although Nauru's tuna resources are considered to be abundant, increased domestic production is constrained by the restriction in the size of fishing craft that can be used due to the lack of a harbour. To address this problem the Government of Nauru is presently planning to widen and deepen the small boat channel on the east side of the island.

NIUE

Capital:	Alofi
Land Area (km²)	259
Sea Area/EEZ (km²)	390,000
Islands (No.)	1
Population (No.)	1,900
Annual Growth (%)	-3.1
Density (inhabitants/km²)	7
Rural Population (% of total population)	68
GDP (US\$ million)	6.9 (1991)-
Agricultural GDP (% of total GDP)	34
GDP per caput (US\$)	3,295 (1991)
Currency:	New Zealand Dollar

A. GENERAL

Niue is an uplifted coralline island with the greater part of its coast comprised of an ancient, raised reef platform, forming cliffs which rise to around 60 m above sea level. The island is mainly covered with bush and forest, and, because of the rocky and dense nature of the terrain, fertile soil is not plentiful. Niue has no lagoon and the outer reef slope descends precipitously to 1,000 m within 5 km of the shore. Although the island's land area is only 259 km², Niue's EEZ extends over an area of 390,000 km².

Manufacturing consists primarily of small factories to process passion fruit, lime oil, honey and coconut cream. The sale of postage stamps to foreign collectors is an important source of revenue. Tourism and financial services are being promoted.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agricultural activity is mostly of a subsistence nature (according to the census of 1989, some 96% of agricultural holdings are for subsistence; only some 10% of production is exported). The main subsistence crops are coconuts, taro, yams, cassava (tapioca) and sweet potato. Honey is also produced for export, and, until the closure of a processing factory in 1989, coconut cream was the country's leading export. A taro export scheme was introduced in the early 1990s, and production of the crop increased by more than 500% in 1993. Pigs, poultry and beef cattle are reared mainly for local consumption. Roughly 50% of Niue is under forest or wooded land, though only a small portion is considered merchantable, the remainder being scattered or

coastal forest. Fishing is primarily for local consumption, although some fish and coconut crab are exported for Niueans living in New Zealand.

PALAU

Capital:	Koror
Land Area (km²)	487
Sea Area/EEZ (km²)	600,900
Islands (No.)	343
Population (No.)	19,100
Annual Growth (%)	2.2
Density (inhabitants/km²)	39
Rural Population (% of total population)	29
GDP (US\$ million)	143.8 (1996)
Agricultural GDP (% of total GDP)	5
GDP per caput (US\$)	8,124 (1996)
Currency:	United States Dollar

A. GENERAL

The 343 islands of the Republic of Palau are diverse in geological origin and include volcanic, low platform, high platform, and atoll types. The Republic includes the islands of Koror (the administrative center and capital), Babelthup (the largest island in terms of land mass, making up 78% of Palau's land area), Angaur, Peleliu and several coral outer islands including Sonsorol, Tobi, Pulu Anna, Helen's Reef and Merir to the southwest, and Kayangel to the north. The westernmost islands of Palau are closer to Indonesia than they are to Koror, which comprises only 4% of the land area but is home to more than 70% of the population. Politically, the country consists of 16 states vested, *inter alia*, with inshore fishery management responsibilities and a national government with offshore responsibilities.

The economy consists primarily of subsistence agriculture and fishing. The Government is the major employer of the work force. Long-term prospects for the tourist industry have been greatly improved by the expansion of air travel in the Pacific.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agriculture (including fishing) is mainly on a subsistence level, the principal crops being coconuts, root crops and banana. Pigs and chicken are kept for domestic consumption. Eggs are produced commercially.

Palau is generally well-forested. The forest and woodland cover is estimated at around 70%. The forests are predominantly upland rainforest. The country has small areas of mangroves and savannah woodland on Babeldaob. There are no large-scale forest industries.

Exploitation of Palau's living marine resources is diverse. Most fishing is done within the lagoons and on the outer reef slopes, and is commonly conducted on a subsistence or semi-subsistence level, with a portion of catches finding their way to markets in the capital, Koror. Techniques used for subsistence and small-scale commercial fishing range from simple hand-collection of beche-de-mer, sea urchins, clams and other species at low tide, often by women and children, to hook-and-line fishing, underwater spear-fishing, net fishing and trolling, all of which are conducted almost exclusively by men. Fishing licences are sold to foreign fleets.

PAPUA NEW GUINEA

Capital:	Port Moresby
Land Area (km²)	462,000
Sea Area/EEZ (million km²)	3.1
Islands (No.)	Several large and some 600 small islands
Population (No.)	4,790,800 (2000)
Annual Growth (%)	2.3
Density (inhabitants/km²)	10
Rural Population (% of total population)	85
GDP (US\$ million)	4,740.7 (1997)
Agricultural GDP (% of total GDP)	26 (2000)
GDP per caput (US\$)	1,100 (1997)
Currency	Kina

A. GENERAL

Papua New Guinea (PNG) comprises the eastern half of the island of New Guinea in the western Pacific Ocean, several large volcanic islands and some 600 small and scattered islands to the east and north in the Bismarck and Solomon Sea. The country is richly endowed with natural resources, but exploitation is constrained by the rugged terrain and the high cost of developing infrastructure. The topography of Papua New Guinea is among the most rugged in the world, with altitudes of over 4,000 metres. Large geographical diversity exists with offshore islands, lowland forests and extensive marches, dry savannah and temperate highlands. Some 90% of the country's area is classified as forests and woodland.

In addition to its National Government, PNG has a decentralised system of semi-autonomous Governments in each of its 19 Provinces. Besides the importance of agriculture, mining represents a substantial part of the country's economy, generating about a quarter of the GDP. Major exports include oil, gold, copper ore, logs, palm oil, coffee, cocoa, crayfish, prawns.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agriculture provides a subsistence livelihood for 85% of the population. Two distinct sub-sectors can be distinguished in agriculture: estates, which hire labour and which produce mainly tree crops for export; and smallholders, who grow cash crops, mainly for export, and staple root crops, fruits and vegetables for their own consumption or for sale on a small scale in their immediate vicinity. There are four main smallholder farming systems: (i) sago and taro-based systems in the wet lowlands; (ii) yams, banana, and cassava-based systems in the dry lowlands; (iii) taro and sweet potato-based systems in the highlands and its fringes; (iv) sweet and

Irish potato systems in the high altitude valleys. Smallholders have traditionally accounted for most of the output of the main export and staple agricultural commodities, namely coconut, cocoa, coffee, rubber, oil palm, cardamom, chillies and pyrethrum. Tea is the only export which is almost entirely grown on estates. The principal crops for domestic consumption include sweet potatoes, banana, taro, yam, cassava, sugarcane, maize and groundnut. Virtually all smallholder crops are rainfed, intercropped, have low input levels and low productivity. Food crops account for more than 50% of total agricultural output, of which about 25% of production is marketed.

The livestock sub-sector accounts for about 13% of agricultural production, of which subsistence pig and poultry production accounts for about two-thirds. Broiler production dominates the commercial sphere, followed by beef, eggs, crocodile skins and pork. Pigs play an important economic and cultural role in the village, particularly in the highlands, providing wealth, status and protein.

Papua New Guinea has extensive forest cover. Almost 70% of the country is under forest. The vast majority of the forests are of closed broadleaved type. In volume terms, fuel is the most important use of wood. Log exporting constitutes, however, an important component of the economy. PNG is the world's second largest exporter of tropical logs. The sawn timber industry produces mainly for local consumption.

PNG's small-scale fisheries reflect the diversity of the country's coastal environments. Along the mainland and high island coasts and in the smaller island communities fishing activities include the harvesting of the reef flats, spear fishing, shallow-water hand-lining from dugout canoes, netting, and trapping in the freshwater reaches of the larger rivers. In the swampy lowland areas net fisheries for barramundi, catfish, and sharks occur, while in the Gulf of Papua there is also a village-based lobster fishery. The sale of fishing licences to foreign fleets provides a significant source of income.

REPUBLIC OF MARSHALL ISLANDS

Capital:	Majuro
Land Area (km²)	181
Sea Area/EEZ (million km²)	2.1
Islands (No.)	1,152 and 30 atolls
Population (No.)	51,700
Annual Growth (%)	2.0
Density (inhabitants/km²)	286
Rural Population (% of total population)	35
GDP (US\$ million)	90.3 (1997)
Agricultural GDP (% of total GDP)	14 (1996/97)
GDP per caput (US\$)	1,774 (1997)
Currency:	United States Dollar

A. GENERAL

The Republic of the Marshall Islands (RMI) consists of two archipelagos of 29 atolls and five low coral islands. The two island chains, the eastern *Ratak* (Sunrise) and western *Ralik* (Sunset) lie 200 Kms apart in a northwest to southeast orientation. Nineteen atolls and four islands are inhabited. The total land area of the Marshall Islands is only 181 km², but the country has an EEZ which extends over more than 2.1 million km². The Republic is governed by a unicameral legislature and President elected from its members. Respect for traditional chiefs and traditional authority remains strong in the RMI.

Agricultural production is concentrated on small farms, and the most important commercial crops are coconuts, tomatoes, melons, and breadfruit. Small-scale industry is limited to handicrafts, fish processing, and copra. The tourist industry, at present a small source of foreign exchange, employing less than 10% of the labour force, offers scope for future income. The islands have new natural resources and imports far exceed exports.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agriculture, which contributed an estimated 14% of GDP in 1996/97, is mainly on a subsistence level, the principal crops being coconuts, cassava and sweet potatoes. Coconuts are processed into copra (dried coconut meat), some of which is then pressed for coconut oil. In 1997, about 6,400 metric tons of copra were produced. In that year coconut oil and copra cake accounted for 11% of exports. Low prices, transport problems and an aging palm stock adversely affected copra production in the late 1990s.

Forests as such, are non-existent although a wide variety of trees and plants are present. Around 60% of the Marshall Island's area is covered by coconut palms and breadfruit. Other dominant species include screw-pine.

Subsistence and artisanal fishing for inshore and offshore species is of prime importance in the outer atolls of RMI, providing the primary source of animal protein. Capture methods are diverse, including spearing, hand-lining, trolling, gill-netting, and cast netting. Paddling canoes are widely used for subsistence fishing in the outer atolls while most artisanal fishing is conducted from wooden or GRP craft of 4.5-6 m in length, powered by outboard motors in the 15-30 hp range.

There is a commercial tuna-fishing industry, including a tuna-canning factory and transshipment base on Majuro. The cultivation of seaweed was developed extensively in 1992, and in 1994 a project to cultivate blacklip pearl oysters on Arno Atoll was undertaken with US funding. The sale of fishing licences is an important source of revenue.

SAMOA

Capital:	Apia
Land Area (km²)	2,934
Sea Area/EEZ (km²)	120,000
Islands (No.)	9 (4 are inhabited)
Population (No.)	169,200
Annual Growth (%)	0.6
Density (inhabitants/km²)	58
Rural Population (% of total population)	79
GDP (US\$ million)	175.9 (1996)
Agricultural GDP (% of total GDP)	19
GDP per caput (US\$)	1,066 (1996)
Currency:	Tala

A. GENERAL

Samoa consists of two dormant volcanic islands together with a few smaller adjacent islands, whose total land area is just below 3,000 km². Barrier reefs enclosing narrow lagoons encircle much of the coastline except for the north coast of Upolu, the main island, where there is an extensive shelf area which extends up to about 20 kms offshore. The country is vulnerable to devastating storms.

Agriculture employs two-thirds of the labour force, and furnishes 90% of exports, featuring coconut cream, coconut oil, and copra, lately also fish. The manufacturing sector mainly processes agricultural products. Tourism is an expanding sector, accounting for 15% of GDP; about 85,000 tourists visited the islands in 2000.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Agriculture, forestry and fishing generated about 19% of GDP in 1998. The principal cash crops are coconut (which, in its various form, accounted for 54% of domestic export earnings in 1997) and taro (also the country's primary staple food). Sales of taro provided 58% of all domestic earnings in 1993, but an outbreak of taro leaf blight devastated the crop in 1994 and reduced exports to almost nil in that year and subsequently. A campaign to revive the taro industry was launched in mid-2000. Breadfruit, yams, maize, passion fruit and mangoes are cultivated as food crops. Pigs, cattle, poultry and goats are raised, mainly for local consumption.

Samoa's forest area comprises almost 40% of the total land area. Substantial areas are under coconut, and smaller areas of mangroves are also present. The export of unprocessed

logs has been banned. The country produces sawnwood for its domestic market. Small quantities of timber are also exported.

There are no freshwater bodies of any significance and thus no important inland fisheries, although a number of aquaculture projects are under way. Marine fisheries are predominant, but due to the proximity of neighbouring countries Samoa's EEZ does not extend to 200 nautical miles offshore in any direction, and at 120,000 km² the EEZ area is the smallest in the Pacific Islands region.

SOLOMON ISLANDS

Capital:	Honiara
Land Area (km²)	28,000
Sea Area/EEZ (million km²)	1.6
Islands (No.)	6 large and many small islands
Population (No.)	447,900 (2000)
Annual Growth (%)	3.4
Density (inhabitants/km²)	16
Rural Population (% of total population)	87
GDP (US\$ million)	286.4 (1993)
Agricultural GDP (% of total GDP)	40
GDP per caput (US\$)	882 (1993)
Currency:	Solomon Islands Dollar

A. GENERAL

The Solomon Islands is situated in the Western Pacific and comprises a double chain of six large islands and many smaller ones. The major island is Guadalcanal, location of the capital, Honiara. The islands are divided administratively into eight provinces, which have considerable autonomy in matters of self-government, including in relation to fisheries. The bulk of the population depends on agriculture, fishing, and forestry for at least part of their livelihood. Most manufactured goods and petroleum products must be imported.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Close to 90% of the population depend on semi-subsistence agriculture as a base for their livelihood, the main crops being coconuts, sweet potatoes, taro, yams, cassava, rice, garden vegetables and fruit. The principal commercial agricultural product is copra, which for many years was the country's main export item.

The Solomon Islands produces a significant quantity of tropical hardwood logs, most of which are exported without processing. The country produces also a modest quantity of sawn timber, mainly for domestic consumption.

The Solomon Islands is one of the world's most extensively forested countries. Much of the country is under high rainforest with a small proportion of mainly swamp forest, including mangroves, and upland forests. A very large proportion of the forests are, however, presently non-commercial given their steepness and inaccessibility.

Subsistence and artisanal fishing activities are widespread and of great importance. These fisheries are concentrated on coastal and nearshore reefs and lagoons and target finfish and sedentary organisms for home consumption, domestic sale, and export. In 1998 earnings from fish exports exceeded the equivalent of US\$10 million which permitted the sector to regain its position as the country's biggest source of export revenues. Common fishing techniques include hand-lining, trolling, spearing, netting and the collection, sometimes by diving, of bêche-de-mer, trochus, green snail, mud crab and pearl oyster.

TONGA

Capital:	Nuku'alofa
Land Area (km²)	688
Sea Area/EEZ (km²)	700,000
Islands (No.)	Some 150, about 35 are inhabited
Population (No.)	100,200
Annual Growth (%)	0.6
Density (inhabitants/km²)	154
Rural Population (% of total population)	64
GDP (US\$ million)	173.5 (1997)
Agricultural GDP (% of total GDP)	24
GDP per caput (US\$)	1,774 (1997)
Currency:	Pa'anga

A. GENERAL

Tonga is an archipelagic nation comprising some 150 islands, of which about 35 are inhabited, as well as many smaller islets and reefs. The islands, whose collective land area is close to 700 km², are distributed in three main groups - Tongatapu (location of the capital and administrative centre, Nuku'alofa) and neighbouring islands in the south, the Ha'apai group located centrally, and the Vava'u group to the north. Other islands extend the archipelago further north and south beyond the main groups.

Tonga has a small, open economy with a narrow export base in agricultural goods, which contributes 30% to GDP. Squash, coconuts, banana, and vanilla beans are the main crops, and agricultural exports make up two-thirds of total exports. The country imports a high proportion of its food. The industrial sector accounts for about 10% of GDP. Tourism is the primary source of foreign currency earnings.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

The agricultural sector is characterized by smallholder semi-subsistence production. Root crops are the staple food, which occupy more than half of the land in agricultural production. They are important for traditional and cultural ceremonies. Agricultural export is dominated by a narrow range of fresh or semi-processed commodities, notably squash, vanilla, kava and a few traditional root crops (mainly yams, taro and cassava).

Tropical cyclones and droughts are major threats to agriculture and food production. On average, Tonga has had one tropical cyclone in every four years over the last three decades. Droughts have a more long-term impact on agriculture and food production than cyclones due to

the damage caused to both production and the supply of planting materials. Following a cyclone, food production is able to return to pre-cyclone level within six months whereas the impact of a drought could last for more than 12 months.

Tonga has limited forestry resources and has always been a net importer of wood products. There are only about 4,000 ha of natural forests, which are found mainly on uninhabited islands and on slopes too steep for cultivation. There is, however, considerable potential for agro-forestry development in Tonga with 48,000 ha of potential agro-forestry land, which at present is mainly planted with coconuts. Traditionally, the farming systems are fundamentally agro-forestry systems with a sequence of food crops being intercropped with coconuts and other trees before the land is left to fallow. The system has proved to be robust, productive and sustainable and has readily allowed for the incorporation of new commercial crops such as vanilla, kava and coffee. The only established forestry plantation of significant value is that on the Island of Eua.

Fish and marine animals (including whales, whose capture is now prohibited) have traditionally been an important source of food in Tonga. Up to the early 1960s domestic demand was almost wholly met through catches from the country's reefs and lagoons. Subsequently, however, increases in population and fishing effort and the growth of the cash economy have led to overfishing in many inshore areas. Some traditionally important fish, especially mullet, have been reduced to a small fraction of their earlier abundance, and inshore invertebrates such as *bêche-de-mer*, lobsters and giant clams have undergone severe declines, some quite recently. These problems are found throughout Tonga, but are most acute close to population centres or in easily accessible fishing areas.

TUVALU

Capital:	Funafuti
Land Area (km²)	26
Sea Area/EEZ (km²)	757,000
Islands (No.)	9
Population (No.)	9,900 (2000)
Annual Growth (%)	0.9
Density (inhabitants/km²)	381
Rural Population (% of total population)	58
GDP (US\$ million)	11.9 (1995)
Agricultural GDP (% of total GDP)	24 (1995)
GDP per caput (US\$)	1,259 (1995)
Currency:	Australian Dollar

A. GENERAL

Tuvalu is a group of nine coral atolls with poor soil, lying in the south-central Pacific north of Fiji. Tuvalu's small land area of only 26 km² limits the prospects for agriculture or other forms of terrestrially-based development. The country places much hope for future economic growth on the fishery resources contained within its large EEZ area, which covers close to 800,000 km².

The country has no known mineral resources and few exports. Subsistence farming and fishing are the primary economic activities. Government revenues largely come from the sale of stamps and coins and worker remittances.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

Tuvalu is composed of coral atolls with poor-quality soil. Most of the land is covered with coconut palms, which provide the only export in the form of copra. Agriculture (including fishing), which is, with the exception of copra production, of a basic subsistence nature, contributed some 20% of GDP in 1995 and engages some 75% of labour force. Pulaka, taro, papayas, the screw-pine (*Pandanus*) and bananas are cultivated as food crops, and honey is produced. There is also subsistence farming of pigs, goats and poultry.

Fishing is carried out on a small scale, and subsistence activities dominate Tuvalu's fisheries sector. A wide variety of techniques are used throughout the group to collect fish, crabs and shellfish which are consumed, shared or informally bartered. Fisheries centres have been established on several outer islands with the intention of providing fishers there with income earning opportunities.

The sale of fishing licences to foreign fleets is an important source of revenue. Income from the sale of fishing licences was equivalent to an estimated 40% of total government revenue in 1998.

VANUATU

Capital:	Port Vila
Land Area (km²)	12,190
Sea Area/EEZ (km²)	680,000
Islands (No.)	80 (67 are inhabited)
Population (No.)	199,800 (2000)
Annual Growth (%)	0.9
Density (inhabitants/km²)	16
Rural Population (% of total population)	82
GDP (US\$ million)	257.9 (1997)
Agricultural GDP (% of total GDP)	16 (1996)
GDP per caput (US\$)	1,009 (1997)
Currency:	Vatu

A. GENERAL

The archipelago of Vanuatu is situated in the south-west Pacific Ocean approximately 2,300 km off the east coast of Australia, between New Caledonia, the Solomon Islands and Fiji. It is comprised of some 80 islands and islets extending over 800 km north to south. The total land mass area measures 12,190 km², with an exclusive marine economic zone of 680,000 km². The largest two islands are Espiritu Santo (4,248 km²) and Malekula (2,053 km²). The administrative capital and commercial centre is Port Vila, located on Efate. The majority of the islands of Vanuatu are mountainous due to their volcanic origin, and there are three active volcanoes. Based on geographical locality, the country is divided into six provinces, which are administered by local governments.

The economy is based primarily on subsistence or small-scale agriculture which provides a living for 65% of the population. Fishing, offshore financial services, and tourism, are other mainstays of the economy. Economic development is hindered by dependence on relatively few commodity exports, vulnerability to natural disasters, and long distances from main markets and between constituent islands. The most recent natural disaster, a severe earthquake in November 1999 followed by a tsunami, caused extensive damage to the northern island of Pentecote and left thousands homeless.

B. ROLE OF AGRICULTURE, FORESTRY AND FISHERIES

The agriculture sector generates around 16% of GDP and more than 75% of the exports. Vanuatu's development strategy remains largely focused on agriculture. The main agricultural activities are production of copra, beef and cocoa for export, and traditional food

production for subsistence and local markets. Timber is also an important export commodity, accounting for 3% of total exports in 1997. Coconut is produced in large volumes. However, production and earnings are heavily influenced by copra prices. In recent years, the output of copra has tended to decline, due to cyclone damage, aging of trees and switch by farmers to other crops. Around 75% of copra output comes from smallholders which cultivate also groundnuts, potatoes, vanilla and peppers.

The production of food crops is based on a slash and burn/fallow system that has remained virtually unchanged over centuries. Due to rapid population growth on some islands, however, the fallow periods have become shorter. This situation is presenting a challenge to Government with a realization that more intensive agricultural production systems will have to be developed. The subsistence smallholder farming generally includes growing root crops, indigenous vegetables and tropical fruits, raising livestock and inshore fishing.

The livestock sub-sector contribution to GDP is significant. The country has approximately 150,000 head of cattle. The infrastructure (export trade abattoir, quality control and veterinary inspection system) for beef production is well established. There are five export grade meat processing facilities, 2 abattoirs and 2 canneries, with slaughter output of more than 4,000 tons in 1994, however, rural farmers still face the difficulties due to high transportation costs. Most traded beef is frozen and exported to Japan and other Pacific countries (Papua New Guinea, Solomon Islands, Fiji and New Caledonia) while about 30% of slaughtered carcass are canned.

Forest lands cover almost 40% of the total land area, and consist of dense tropical rainforest and exotic plantation forests. Much of the natural forest is on steep inaccessible sites. In the island interiors much of the natural forest has primarily a protective role. The potential for agro-forestry development and sustainable exploitation of forest resources in Vanuatu are considerable. Forestry contributes about 4% to the GDP.

Vanuatu's fisheries resources are exploited at the subsistence, artisanal and industrial levels. Subsistence activities include coastal line and net fishing targeting demersal and small pelagic reef and lagoon fish, as well as reef gleaning and collection of shellfish and other invertebrates. Most of the catch is for home consumption or family distribution, but where markets or handling and distribution facilities exist some part may be sold. The subsistence fishery is becoming increasingly cash-oriented around urban areas, with varying portions of the catch being sold.

PACIFIC ISLANDS FORUM: Regional Programme for Food Security
Annex 1: Country Background Notes

Table 1. Summary Table

	Land Area (km ²)	Sea Area (million km ²)	Population Estimates - 2000				GDP (US\$ million)	Agric. GDP (% of Total)	GDP p.c. (US\$)	Remarks
			Total (No.)	Growth (% p.a.)	Density (Inh/km ²)	Rural Pop. (% of total)				
Cook Islands	240	1.8	18,700	-0.5	79	31	95.8 ^{1/}	22	5,043.5	15 islands (13 are inhabited)
Fed. States of Micronesia	700	2.9	118,100	1.9	168	73	210.6 ^{2/}	3	1,928.3	some 607 islands and atolls
Fiji	18,272	1.3	824,700	1.6	45	54	1,902.4 ^{1/}	16	2,320.1	322 islands (110 are inhabited)
Kiribati	726	3.6	90,700	2.5	112	63	46.3 ^{2/}	9	591.9	33 islands (20 are inhabited)
Nauru	21	0.3	11,500	1.8	548	-	377.0 ^{3/}	-	27,514	1 island
Niue	259	0.4	1,900	-3.1	7	68	6.9 ^{5/}	34	3,295	1 island
Palau	487	0.6	19,100	2.2	39	29	143.8 ^{2/}	5	8,124.2	343 islands
Papua New Guinea	462,000	3.1	4,790,800	2.3	10	85	4,740.7 ^{1/}	26	1,099.8	Several large, some 600 small islands
Rep. of Marshall Islands	181	2.1	51,700	2.0	286	35	90.3 ^{1/}	14	1,773.9	1,152 islands and 30 atolls
Samoa	2,934	0.1	169,200	0.6	58	79	175.9 ^{2/}	19	1,065.5	9 islands (4 are inhabited)
Solomon Islands	28,000	1.6	447,900	3.4	16	87	286.4 ^{3/}	40	882.3	6 large, many small islands
Tonga	688	0.7	100,200	0.6	154	64	173.5 ^{1/}	24	1,773.9	Some 150 islands, about 35 inhabited
Tuvalu	26	0.8	9,900	0.9	381	58	11.9 ^{4/}	24	1,259.1	A scattered group of small atolls
Vanuatu	12,190	0.7	199,800	0.9	16	82	257.9 ^{1/}	16	1,009.0	80 islands, 67 are inhabited

Source: Pacific Islands Forum 2002 Diary; South Pacific Commission Statistical Summary 2000; FAOSTAT.

^{1/} 1997.

^{2/} 1996.

^{3/} 1993.

^{4/} 1995.

^{5/} 1991.

Rates of exchange US\$ per A\$, (IMF market rates, period average): 1997 - 7441; 1996 - 7829; 1995 - 7415; 1993 - 6801.

Table 2. Land Use and Fisheries Production

	Agricultural Area (1999)					Fisheries Production ^{1/} (1995)				
	Land Area	Arable Land	Perm. Crops	Perm Pastures	Total	Forest Cover	Offshore	Coastal		Total
	('000 ha)	('000 ha)				('000 ha)	(tonnes)	Commercial (tonnes)	Subsistence ^{2/} (tonnes)	(tonnes)
Cook Islands	24	4	3		7	16	127	124	858	1,109
Fed. States of Micronesia	70									
Fiji	1,827	200	85	175	460	815	4,000	6,653	16,600	27,253
Kiribati	73		37		37	28	2,898	3,240	9,084	15,222
Nauru	2					-		279	98	377
Niue	26	5	2	1	8	6		12	103	115
Palau	46	10		4	14	35		736	750	1,486
Papua New Guinea	45,286	60	610	90	760	30,601	190	4,966	20,588	25,744
Rep. of Marshall Islands	18					-	616	369	2,000	2,985
Samoa	283	55	67	1	123	105	1,838	208	3,281	5,327
Solomon Islands	2,799	42	18	40	100	2,536	53,621	1,150	10,000	64,771
Tonga	72	17	31	4	52	4	1,062	1,429	933	3,424
Tuvalu	3									
Vanuatu	1,219	30	90	25	145	447		467	2,045	2,512

Source: FAOSTAT unless otherwise indicated

Notes: ^{1/} Excluding inland fisheries and aquaculture: see also Annex 2 Table 1.

^{2/} SPC

PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 2
AGRICULTURE DEVELOPMENT AND FOOD SECURITY

ANNEX 2
AGRICULTURE DEVELOPMENT AND FOOD SECURITY

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ANNEX 2

AGRICULTURE DEVELOPMENT AND FOOD SECURITY

A. INTRODUCTION

1. For a regional programme for food security to be successful a high degree of co-ordination is required to avoid duplication, identify complementarity and seek synergies among the various regional initiatives. The overall importance of agriculture in terms of its contribution to gross domestic product (GDP), employment, foreign exchange and food security for the Pacific Islands countries is widely acknowledged; its importance however is not always reflected by substantial investment and donors assistance which in fact has declined sharply in recent years. This annex, based on a three weeks visit to six different countries (Samoa, Tonga, Fiji, Solomon Islands, Papua New Guinea and Vanuatu) attempts to provide an overview of promising ongoing initiatives by different parties and to identify existing gaps that could be usefully filled by a regional programme of food security. Three major pillars are proposed for such a programme: (i) assistance to member countries on trade and WTO related issues, (ii) assistance on agriculture policy matters and (iii) promotion of food security through community and country based interventions. This annex will focus particularly the third pillar to illustrate types of interventions at grassroot level including organisation and management details.

Organisation of the Annex

2. The annex starts (Section B) with a synthetic review of the natural resource base and the socioeconomic features of the region. In spite of the huge diversity in the land resource base and the relative importance of agriculture and fishery sector in the economy of the different countries of the region, a number of common production and marketing constraints were observed that justify the adoption of a regional strategy and the identification of a number of proposed initiatives that could respond to local priorities. In section C experience and lessons drawn by past and on-going food security initiatives by the main regional and international development agencies including NGO and private sector are presented. In section D agriculture related constraints and factors of vulnerability are reviewed in order to provide the rational and justification for the design, strategy and priority technical options (section E) proposed under the Regional programme for food security. The final sections provide elements for costing the proposed interventions as well as for the organisation and management of the proposed programme.

3. The entire report is also available in CD. This includes a [power point](#) presentation which provides access to relevant available documentation (e.g. the papers prepared by FAO-SAPA technical officers for the Ministers Meeting which was held in of Vanuatu in July 2001, training and operational manuals on relevant aspects of the proposed interventions) and direct links to the web pages of important partners that provide additional technical information on the on-going agriculture development initiatives as well as on a number of the proposed technical options.

B. THE SOUTH PACIFIC REGION

The Natural Resource Base

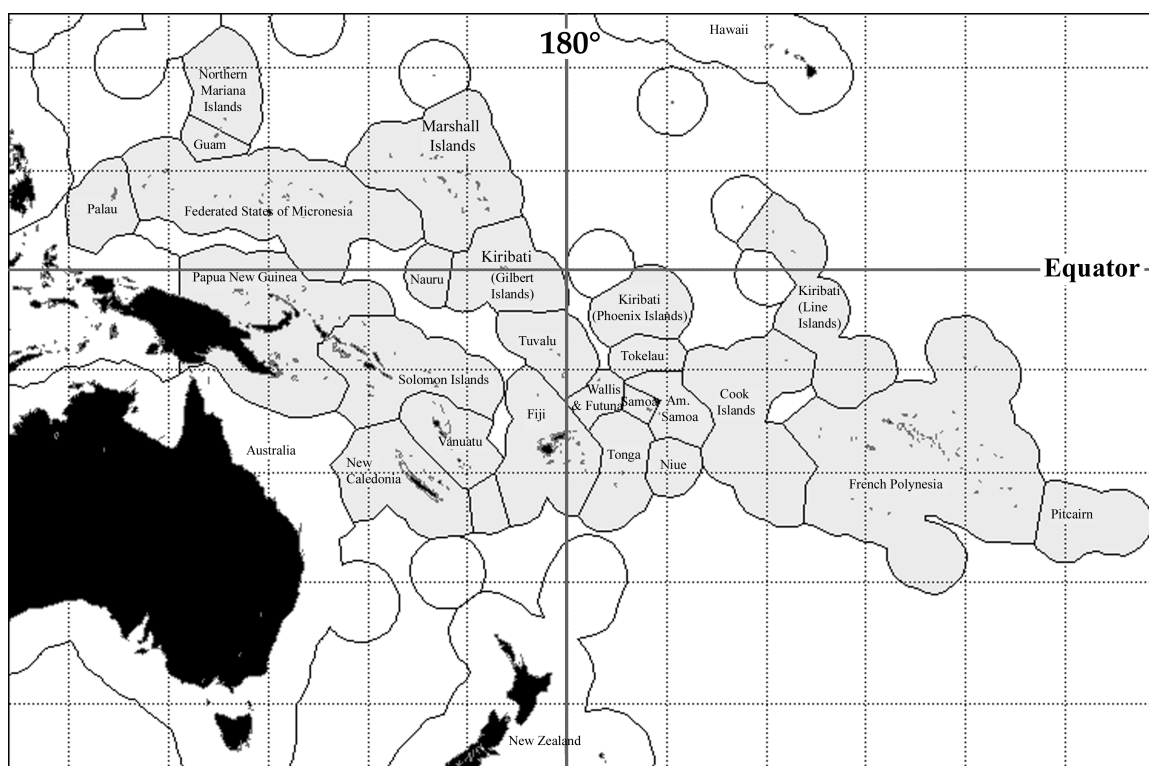
4. Great disparities exist among the 14 Pacific Islands Countries, members of FAO, in terms of availability of fertile land: broadly they can be classified in three categories:

- I: Countries with important land resources and fertile soils (4); these are Papua New Guinea, Fiji, Solomon Islands and Vanuatu;
- II: Medium size countries (3): Cook Islands, Tonga, Samoa;
- III: Small “atoll islands” countries (7): Kiribati, Marshall Islands, Nauru, Niue, Palau, Tuvalu and the Federated States of Micronesia.

Cat.	Country	Land Area (km ²)	Population	Agric. Land + Forest (ha)	ha/Hab	Agric. Exports; Trad. crops
I	PNG	462,243	4,790,800	509,000 (1%+93% forest)	0.1	palm oil, coffee, cocoa, prawns; beans, rice, roots, pigs;
	FIJI	18,333	824,700	256,000 (14%+10% past. + 65% forest)	0.3	sugar, timber, fish; coconuts, cassava, rice, sw.pot. banan,
	SOLOMON	28,370	447,900	56,900 (2% + 89% forest/pasture)	0.12	pig, copra
	VANUATU	12,190 (521,136)	199,800 6,263,200	146,400 9 +77% for (968,300)	0.76	copra, yam, , beef, cocoa, timber, coffee; taro, fruits, veget, fish, beef
II	COOK	237	18,700	5,200	0.32	copra, pawp, citrus, coffee, fish;
	TONGA	649	100,200	50,100	0.48	squash, vanilla, fish; coco,
	SAMOA	2,935 (3,821)	169,200 (288,100)	123,000 + 134,000 f (178,300)	0.68	banana, cocoa, coffeee, ginger copra, fish; coconut, banana, taro, yams
III	FSM	701	118,100			
	KIRIBATI	811	90,700	36,500 perm.crops	0.4	copra, fish; coco
	MARSHALL	181	51,800	10,860	0.2	coco, tomat, cacao, taro, breadf,
	NAURU	21	11,500	-	0	pigs
	NIUE	259	1,900	1,300	0.6	coconut
	PALAU	488	19,100	-	0	coco, honey, passion fruit,
	TUVALU	26 (1,455)	9,900 (302,900)	(48,660)		pawap. fish, copra,
Tot	14 countries	526,412	6,854,200	(1,195,260)		

Source: SPC, Statistics Programme.

5. Figure 1 below shows the PICs and their Exclusive Economic Zones (EEZs). Pacific Islanders are more dependent on the sea than most other regions of the world.



Main Agricultural Features

Farming Systems

6. Two main farming systems are prevailing in Papua New Guinea and the Pacific islands:

- The root-tuber based which is found in humid and moist sub-humid agro-ecological zones in both plain and hill landscapes; as compared to other farming systems in Asia it is characterised by the absence of irrigated land. It is based in the use of root food crops (lesser yams, taro, sweet potato), vegetables and fruits trees (mainly banana and bread fruit), coconut and livestock (pigs and poultry), supplemented by hunting and gathering in forest areas;
- The coastal artisanal fishing along coastal strips and in small “atoll” islands; here people supplement artisanal inshore fishing with food production, mostly root and tubers and breadfruit, and cash oriented enterprises such as coconuts and livestock.

7. The bulk of the farmers are small scale and operate mixed farming systems; they make little use of external inputs. Productivity is low, only a limited share of the products is marketed, and farmers thrive in a sort of semi-subsistence economy. Nevertheless, agriculture contribute for an average 30% of the GDP, over 50% of the export revenues and over 60% of

employment. However in both systems remittances from foreign migrants and off-farm income contribute substantially to reduce poverty incidence in the rural areas.

8. The **fisheries sector** in the Pacific Island countries (PICs)¹ assumes a role of critical importance for social and economic reasons. The sector provides a basic and vital source of food; employment when commercial production is possible and where population concentrations and markets exist; and important additions to government revenue from the sale of fishing rights (access fee payments). Exports of fish and fishery products generate needed foreign exchange.

9. Table 1 below shows the 1995 fishery production (volume and value) in the FAO member countries of the region². The total production (volume) is highest in the Solomon Islands, followed by Fiji and Papua New Guinea.

Table 1. Fishery Production (1995)

Country	Production		Offshore	Coastal		Inland Fish. & Aquac.	
	(tonnes)	(US\$'000)	Commercial (tonnes)	Commercial (tonnes)	Subsistence ³ (tonnes)	(tonnes)	(US\$'000)
Cook Islands	1,109	90,154	127	124	858		4,347
Fiji	45,200	108,074	4,000	6,653	16,600	1,144	327
Kiribati	15,222	20,400	2,898	3,240	9,084		650
Marshall Islands	2,985	19,200	616	369	2,000		
Nauru	376	850		279	98		
Niue	115	526		12	103		
Palau	1,486	4,215		736	750	428	
Papua New Guinea	44,334	55,900	190	4,966	20,588	13,500	13,500
Samoa	('96) 6,446	10,695	1,838	207.5	3,281		
Solomon Islands	64,771	62,743	53,621	1,150	10,000		
Tonga	3,424	6,832	1,062	1,429	933		
Vanuatu	2,512	4,554		467	2,045		

Source: FAO (1998) Fishery Country Profiles.

10. Tuna species are extremely important for the PICs. Not only as a source of foreign exchange earnings through the export of tuna, but also for the revenues generated by the licensing of foreign vessels to fish tuna in their respective EEZs. The annual tuna catch in the Western and Central Pacific Ocean is about 1 million tonnes, which equals about 30 percent of the world tuna catch, with an annual value of about 2.0 billion US dollars. Sixty percent of the tuna processed in the canning industry worldwide originates from the South Pacific.

11. It is reported that a preliminary estimate of the purse seine catch in the region was 876,300 tonnes in 2000. The continuing high catches in 2000 sustained throughout the period of low prices for canning grade skipjack and yellowfin that began in 1998. Catches of bigeye tuna by purse seiners were a record at almost 35,000 tonnes in 1999. A recent report by the Secretariat of Pacific Community (formerly the South Pacific Commission: SPC)'s Oceanic Fisheries Programme noted that recruitment is estimated to have fallen in the 1990s and is still at a low

¹ This section is based on the information paper presented at the Fourth Meeting of SWP Ministers of Agriculture, Vanuatu, July 2001. The full [fishery](#) report is accessible through the PPT presentation.

² Breaking it down into offshore commercial (industrial) fisheries, coastal commercial fisheries, coastal subsistence fisheries and inland fisheries and aquaculture.

³ Data based on a study done by the South Pacific Commission (now, the Secretariat of the Pacific Community).

level. Catches and fishing mortality of juvenile bigeye in particular have increased. The total catch in the longline fishery in 1999 was approximately 185,100 tonnes. Bigeye and yellowfin tuna comprised about two-thirds of the catch while albacore tuna comprised around 18%. The small-scale longline fishery in Samoa continued to develop with fish exports. The catch from this fishery is mainly exported to the canneries in nearby American Samoa. US import data shows that imports of tuna from Samoa more than doubled in 1998 with 775 tonnes in volume compared to 316 tonnes in 1997. Approximately 70 percent of this was albacore tuna.

12. Subsistence fisheries provide an important source of protein in the PICs. Subsistence fishing results in a total catch that is often several times larger than that from commercial fishing although available statistics are limited. In Fiji, which has extensive commercial 'tuna fisheries', the subsistence fishery is the largest sector of the fishing industry. Most of the inshore (coastal) resources in the PICs are small and therefore highly vulnerable. The start of commercial fishing, or the switch from subsistence fishing to commercial fishing, will often result in over-exploitation in the coastal areas.

13. **Forestry Sector¹**. Forests and trees play an important role in the lives of the peoples of the region and have provided products such as timber, posts, thatch, food, fuel-wood, traditional and cultural medicines and other useful services such as erosion control and regulation of ground water. All these are crucial to the sustainable livelihoods of Pacific Island Communities.

14. With increasing population, the pressure for forest products and other forest and tree uses have also increased. These increases in demand often coupled with unsustainable forest and tree use and harvesting practices, have led to serious depletion and degradation of forests and tree resources in the region. Forestry development in the region can be looked at in three categories: in large island countries such as PNG, Fiji, Solomon Islands and Vanuatu, the forestry sector contributes significantly to the national economy; in the high island countries such as Cook Islands, Tonga, FSM, Niue, Nauru and Palau, role of forests in terms of employment opportunities and export earnings is not significant; and in atoll islands, the terrestrial ecosystems are relatively simple and fragile – there is limited forest resources.

15. Forests are especially important in protecting the natural resource base upon which sustainable agriculture depends. The role of forests in protecting watersheds is perhaps more crucial than any other of its functions. In island countries water resources and their management is important for food and food production. Clearly forests and trees cannot replace agriculture as a food production system to any significant extent. However, the part played by forestry in food security must be kept in perspective, properly acknowledged and practiced. The fact is forest and trees have an important role in supporting food security.

¹ This section is based on the information paper presented at the Fourth Meeting of SWP Ministers of Agriculture, Vanuatu, July 2001. The full [forestry](#) report is accessible through the PPT presentation.

Rural Population, Food Security and Poverty

Population and Food Security

16. The total population of the 12 countries amounts to about 7 million people of which 5 million (>70%) are in PNG. The total land area is 517,000 km² of which only some 2.3% (1,195,260 ha) is classified as arable land or under permanent crops; the average availability of agricultural land is 0.17 ha/caput across the Pacific region; the range goes from a maximum of 0.76 ha/caput in Vanuatu to a minimum of 0.1 ha/caput in PNG. No agricultural land is reported for the two small atoll islands of Palau and Nauru.

17. Throughout the region however an important contribution to the diet comes from the fish; sea food consumption in Samoa is around 56 kg/caput/annum which corresponds to the median for the Pacific region. The population projections for the PICs for year 2010 indicate that the population will reach 8.9 million, it is expected that approximately 170,000 tonnes of fish will be required in 2010 to meet the PICs' nutritional needs.

Food Security and Poverty

18. In the Pacific countries with sufficient agriculture land food shortage may be experienced under unexpected seasonal circumstances (cyclones, disease outbreak), but there is no chronic food insecurity; the recovery from food crisis is generally very rapid as it will be described below. However throughout the region two features appear closely linked to vulnerability and food insecurity:

- the special status of youth as vulnerable group in the population; they have been consistently identified as a vulnerable group throughout various studies¹ due to a number of reasons including the well known pressure from the traditional society and consequent rigid land tenure customary law that impede access to cultivable land; and
- the densely populated urban areas where rural out migrants tend to experience serious food shortages and from those precarious subsistence situations may easily originate creeping violence and urban delinquency.

C. PAST AND ON-GOING EXPERIENCES AND LESSONS

Secretariat of the Pacific Community – SPC

19. SPC is a regional technical development agency that delivers to its member countries services aiming to develop the technical, professional, scientific, research, planning and management capabilities. Priority work programmes cover Land resources (agriculture and forestry), Marine resources (Coastal and Oceanic Fisheries and Maritime), and Social Resources.

¹ In Samoa the National Human Development Report gives a historical background to key poverty issues, though UNDP human development indicators are not yet incorporated with the Government Economic Statements to highlight link between economic and social development.

The programmes are based partly in Suva (Fiji) and partly in Noumea (New Caledonia). The land resources programme comprises the following services: Crop Improvement, Plant Protection, Animal Health and Production ; a number of significant regional initiatives/projects are carried out within each service through various financing (EU, New Zeland, Australia, Taiwan,..):

– **Animal Production:**

phase 1 of a PARAVET training project, technical assistance for honey production and apiculture products, food safety and quarantine aspects of animal products;

PARAVETERINARY PROJECT: A course has been developed by the SPC's regional animal health service as a means to provide distance learning materials and training to animal health specialists who are not qualified veterinarians. The training material is tested in workshops. Extensive use of video productions is used to cut down on the volume of text needed in the instructions. Three priority areas have been identified by a project steering committee: a) pig health and production; b) poultry health and production; and c) livestock and the environment.

– **Crop Improvement** (<http://www.spc.int/cis/>): besides supporting through various international crops networks (coconut-COGENT, bananas-INIBAP, taro-TaroGen, kawa and vegetables), other specific initiatives focus : a training needs assessment for value adding opportunities that was carried out with Taiwanese funding¹; the promotion of local planting material network for the conservation of biodiversity of the local root and tuber crops; the development of sustainable agriculture project that provides a follow-up to previous PRAP (see EU);

– **Pacific Plant Protection Service** (PPS-EU financing) whose information is available on a well structured web site (<http://www.spc.int/pps/>) , a joint Australia and New Zeland Pest Management in the Pacific (PMP), and a GTZ biocontrol project.

20. SPC has developed a Strategic Plan 2001-2005 to implement its Agriculture Programme with four main objectives: Increase efficiency and sustainability of agriculture; Improve food security and public health; Facilitate trade in agricultural products; Decrease impact of natural disasters. Within such a comprehensive working framework it has to be noted that SPC is largely understaffed : for instance only one agronomist is responsible for the various crop development initiatives.

21. The regional forestry programme comprises two main projects: Forest and trees project and GTZ Pacific-German regional forestry project focusing both capacity building at country level to manage forest, tree and plant resource and to enhance sustainable income generating opportunities and livelihoods. A recent promising initiative is the processing of wild fruits of noni (*Morinda citrifolia*) to produce a fruit juice, health drink which is sold at high price AUS\$6.6/litre) on the local Nauru market.

22. The marine resources programme comprises Coastal and Oceanic fisheries programmes based in Noumea - New Caledonia, and the Maritime programme (training on maritime law/policy, seafarers, safer ships and cleaner seas) based in Suva. The coastal fisheries

¹ Detailed report can be accessed from power point presentation.

(<http://www.spc.int/coastfish/>) provides training on assessment, development and management advice for reef and lagoon ecosystems; it also help member countries achieving a greater share of the regional tuna fishery. In comprises programme of community fishery development, fishery information and training on commercial fishery.

23. To deal specifically with deep sea fishing and tuna is the **Forum Fisheries Agency – FFA** – which was established in 1979 to enable Member Countries to manage, conserve and use the tuna resources in their Exclusive Economic Zones and beyond, through enhancing national capacity and strengthening regional solidarity"

24. The **South Pacific Regional Environment Programme – SPREP** - based in Apia-Samoa fulfill the mission to promote the cooperation in the South Pacific region and to provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations.

EU

25. After having supported heavily the agriculture sector in the past decades EU assistance to the Pacific countries has shifted lately towards other priority sectors namely: I. Human resources, II. Rural water supply and sanitation, and III. Governance. EU interventions in the agriculture and fishery sectors are mostly at regional level; with US\$2.3 million per year EU is the single largest non-member contributor to SPC. Eu also finance two main projects in agriculture and one in fishery:

- Development of Sustainable Agriculture in the Pacific ([DSAP](#)) that is going to build upon the research findings and experiences of the former Pacific Regional Agriculture Programme (PRAP) in the field of agroforestry and soil fertility management for small atoll countries; estimated cost to be funded by EDF during a four years period is 6,226,000 Euro;
- Plant Protection in the Pacific (PPP) designed as Phase II of the Pacific Plant Protection Services Project (PPPS) implemented by SPC. The purpose of the new phase is to facilitate sustainable production and trade of agricultural produce by minimising pests in a new age of free trade, global quarantine standards and increased tourism; overall commitments for a four year period amount to 5,181,000 Euro of which 4,300,000 from 8th EDF , 763,500 Euro from SPC and 117,500 from PICTs (Pacific Island countries and territories); and
- Oceanic and reef fisheries monitoring and assessment project (implemented by SPC) to conduct a comprehensive scientific survey of all coastal and oceanic fish stock in the Pacific ACP and OCT countries.

26. DSAP is particularly relevant in the context of regional food security; technical findings tested under PRAP are ready for wider adoption:

- sustainable land management: agroforestry for soil improvement, shade, support for crops, live fencing, windbreaks, fuel and timber wood; also fruit trees, livestock integration in coconut based farming systems and fodder crops;
- improved varieties of main staple crops: taro, yams, bananas, sweet potato and selected vegetables;
- pest management technologies: bio-control, integrated pest management and other strategies to control pest and diseases and improve the quality of agricultural products; and
- livestock production and management, use of animal waste for soils fertility enhancement.

27. However a participatory approach will be used with farmers and rural communities for the identification, demonstration and promotion of technical innovations¹. Substantial training and technical assistance will be devoted to developing the capacity in participatory methodologies. A regional project steering committee consisting of representatives of participating countries, SPC and project staff and the Regional Authorising Officer, will meet annually to assess project, review workplans and emerging issues. At country level national steering committees will oversee and guide national DSAP operations. The committees will consist of staff from NARES (national agricultural research and extension services, and NGOs involved in training and field project operations.

28. In addition EU funds are mobilised for the stabilisation of export commodities prices (STABEX); these funds have been used by the countries for different interventions (copra crushers in Solomon Islands, kawa and Tahitian vanilla in Tonga, copra, coconut oil and cocoa beans in Samoa). EU matching grants (30% minimum contribution is requested from participants) are also available for the implementation of microprojects in the agriculture and fishery sectors.

FAO

TCP

29. Between 1990 and 2000 FAO has provided assistance to 6 member countries through its Technical Cooperation Programme for a total funding of US\$ 5.86 million of which more than 50% for the most active countries Tonga (2 million) and Samoa (1.3 million). Appendix 4. provides a list of recently

TCP/KIR/0165(A) “Strengthening Ecologically-based management of Rat (*Rattus rattus*, *Rattus exulans*) in Coconut”. Coconut plantation are experiencing important damage (>60%, up to 80% to green coconuts in some hot spots) due to rat attacks. The immediate objective include: a) assess the status and impact of the infestation; b) strengthen the knowledge of local staff in ecologically-based rodent management; c) develop an integrated control package, d) carry out a rat control campaign, using locally made ingredient (crated coconuts mixed with correct volume of crushed *Gliricidia* leaves; e) increase the knowledge of farmers in the appropriate agronomy for coconut production. Total budget is US\$279,000.

¹ Major emphasis would remain on TA, training and information, with only 6.5% of the total budget earmarked for field work.

TCP/SAM0165(A) “Re-establishing Samoa’s Traditional Staple Food – TARO-through Rapid propagation of Tolerant Leaf Blight Varieties”. The main objective is to assist government by enhancing local capabilities to establish viable and efficient Taro propagation systems. Three experts under FAO’s Partnership programmes will provide specialised expertise on a) mass propagation of taro, b) tissue culture, and c) sub-soil irrigation. Approved budget is US\$182,000.

approved TCP and Telefood projects; TCP projects cover a wide range of topics from pest and disease control (African tulip, rats in coconut, inventory of bee diseases) to fishery, from farming systems and marketing/processing to animal production and water resource development. TCP projects are designed to provide rapid and qualified technical services in response to specific problems faced by member countries; they are demand driven, focused

on technical problems whose solution can generate substantial development opportunities: in Tonga a fisheries sector review jointly conducted with Australian AID has been followed by a multimillion aquaculture development project; in Solomon islands beekeeping promotion and extensive training has been followed by a sustained growth of honey production for local consumption and export.

Special Programme for Food Security - SPFS

30. A pilot phase of the Special Programme for Food Security (<http://www.fao.org/spfs/>) was implemented in the Markham valley (Morobe Province) in Papua New Guinea since 1996. Markham valley was selected because of its relatively good infrastructure, road network, access to market in Lae and Port Moresby, availability of agro-industries, good moisture conditions and diversity of farming systems¹. The programme started with an action towards intensification of the cropping systems and identification of constraints. Encouraging results were obtained with improved technologies for rice (3-5 t/ha), peanut, vegetables (water melon, Chinese cabbage, cabbage, tomato, capsicum) and yams (40-80t/ha). Even more successful was the diversification component with the introduction of small animal in the farming systems (ducks, rabbit, chicken, aquaculture) as well as fruit trees (mangoes, cashew, guava) for added food and income². More problematic has proved the introduction of small scale irrigation due to a number of problems related to the soil and water quality.

31. SPFS has been instrumental for the creation of the Food Security Branch within the Department of Agriculture and Livestock (DAL) with the task to provide an interdepartmental forum for the coordination of all food security initiatives at national level. After completion of the pilot phase the sustainability of the initiatives at farmers level is below expectations; it appears that in spite of the initial farming system analysis conducted in two pilot districts (Huon and Kaipit) in the Markham valley a number of serious socio-organisational and cultural issues were not properly addressed; today the team responsible for the evaluation of the program has identified the following lessons :

- cultural differences (750 different ethnic groups in the PNG) force to adjust success indicators to the different pace of the various ethnic groups: adoption of improved techniques can take much longer time than the extremely short pilot phase of SPFS;

¹ Appendix 5.

² Results/constraint analysis of the livestock industry in the Markham valley of Papua New Guinea, 1998.

- effective extension service is required to reach a larger number of farmers, particularly in sparsely populated area as the one targeted by SPFS in PNG; in the absence it would be more effective to target other organised and dense groups like schools/colleges, hospital, prison camps that are high consumers of the targeted commodity (rice); these are stronger institutions that can be used as better effective vehicles for technology transfer;
- the targeted communities were not sufficiently involved by effective participatory planning due to shortage of time; the low potential of the light soils of Markham valley for irrigated rice and the absence of serious motivation for intensive farming systems by the sparse farming community should have been identified; rice cultivation appears to have better potential in the highlands where rural communities are more vulnerable to food insecurity due to recurrent drought and frosts.

Telefood

32. During the last four years some 59 Telefood projects have been implemented in 9 countries of the region; the total budget contribution to farmers based interventions has been at some US\$378,000 for an average project cost of US\$6,400. The range of interventions that are supported under the Telefood scheme (<http://www.fao.org/food/tf2001/proj-e.htm>) is quite broad ranging from home gardening to staple food production, animal production, fish production, marketing and processing, bee keeping and water storage. However the bulk of the implemented projects is for home gardening (41% of total), small livestock (poultry and piggery 34%), fishery, marketing and processing (20%).

TFD-00/KIR/003- Establishment of Vegetable Garden to Provide Supplements to Student Diet in Private Boarding Schools on Outer Islands.

The aim is to provide vegetable to diet of students thereby improving the nutritive value of the food consumed and reducing the incidence of blindness and hepatitis which are becoming serious in all boarding schools. The schools will establish nurseries for vegetable crops and babais. The project (total budget US\$5,164) will provide for tools, materials, equipment and planting materials

33. The demand for Telefood projects is high and can not be met by the present ceiling of US\$ 30,000/country. All requests from member countries are screened in the FAO-SAPA office. Monitoring of results and impact after project completion is responsibility of national coordinator; reports from Samoa, where a FAO national programme officer is responsible for monitoring implementation of the Telefood programme in the country indicates encouraging results: a high degree of success, cohesion of the groups and sustainability of the initiatives after completion; unfortunately a similar follow-up is not available for other countries and only scanty information exist about results and sustainability.

34. The following weaknesses of the program were identified:

- an excessively long gestation and approval period¹;
- insufficient ownership by the local group due to lack of responsibility in funds management;
- non availability of resources to provide necessary technical training and expertise;
- insufficient monitoring and follow-up.

35. A national world food day committee is established in all FAO member countries to supervise the implementation of the Telefood projects; usually under the chairmanship of the head of Agriculture these committees are actively involved in the identification and initial screening of Telefood proposals; national WFD committees could therefore play a similar role with respect to the proposed RPFS.

Other Donors Initiatives

Australia and New Zealand

36. Australia² and New Zealand³ aid provide over 2/3 of the member contributions to SPC budget. Both countries are involved in pest management, in the conservation of plant genetic resources (through the Australian centre for agricultural research-ACIAR⁴ and New Zealand Official Development Assistance-NZODA), and training at regional and country level on food quality standards and quarantine regulations (through the joint agency ANZFA-Australia New Zealand Food Authority). New Zealand is also supporting animal production and apiculture while Australia bilateral cooperation is supporting the restructuring of the Ministry of Fishery in Tonga including an aquaculture development project. Australia is also involved in promoting a local capacity to best use information technology.

37. The trend for both countries is to reduce direct country assistance to the agriculture sector and favour on one side the most vulnerable targets (NZ has a community development fund to promote initiatives addressing youth, gender, environment, poverty) , and on the other side to foster a reform process of the relevant sector ministries.

JICA

38. Japan's ODA to the Pacific countries is highly significant in budgetary terms⁵. However involvement in agriculture has been reduced sharply compared to the past. At present there are direct intervention in community based fishery management in Samoa, Vanuatu, Fiji and

¹ The time required for approval tends to be long often exceeding 6 months from initial request to funds release.

² <http://www.usaid.gov/au/keyaid/rural.cfm>

³ <http://www.mft.govt.nz/nzoda/programmes/pacific/pacificregional.html>

⁴ <http://www.aciar.gov.au/>

⁵ Over US\$80 million in fiscal year 2000 for the 9 countries (Fiji, Tonga, Vanuatu, Tuvalu, Kiribati, Nauru, Marshall, FSM, Palau) covered by the Fiji JICA's office.

Tonga, in animal husbandry and vegetable production in Fiji. JICA assistance to the agriculture sectors suffered a number of set backs, namely in Fiji where local rice production, due to high input costs, could not compete with imported rice from Australia; and in Samoa where the taro multiplication project was seriously constrained in 1995 by the outbreak of the taro blight and production fell to levels below that possible for export.

39. The Government of Japan is actively involved in the promotion of “Information Technology” projects that can assist in the reduction of the widening digital divide between developed and developing countries. A regional Trust Fund project has been signed with FAO (GCP/RAS/184/JPN) that will pursue the pilot implementation of an electronic based data exchange system on food and agriculture statistics in 16 countries of the Asia-Pacific area.

Taiwan

40. Taiwan assistance to the agriculture sector focus mainly the promotion of rice production and horticultural crops. In Solomon Islands after a failed attempt to introduce paddy rice the Taiwan project is now successful in promoting upland rice; since 1997 the cultivated area has passed from 30 to over 500 ha in 3 different provinces. Short maturing varieties (105 days) are used and yields range between 2 and 3 t/ha. Rice is grown in small household plots of 0.2 ha in rotation with vegetable. The Government is showing great interest given the import substitution potential; a similar programme is undertaken with the assistance of Taiwan Cooperation in PNG where upland rice is currently promoted in the highlands, although the adoption by farmers appears to be much slower than in Solomon Islands.

Important NGO and Private Sector Initiatives

The Planting Material Network in Solomon Islands

41. PMN is a network of farmers, NGOs, governments extension workers, schools and community groups; today it has over 500 members actively engaged in promoting focused food security initiatives:

- share planting material among village farmers;
- conserve local planting materials for the future generations;
- encourage biodiversity as an essential mean to achieve and maintain food security
- promote farmer to farmer extension/training programmes.

42. Established in 1995 with the support of an Australian NGO to make available supplies of non-hybrid seeds, the long term aim of the network is to increase the self-reliance of village farmers; PMN actually act as a clearing house for agricultural useful seeds and promote exchange of agriculture advice. Members send their excess seeds to the network’s centre in Honiara or Munda where they are grown out, multiplied in quantity, dried, tested and packaged into small paper envelopes, that are kept in climate-proof containers with appropriate technology. The seed are then distributed to members that can try these new species in their subsistence

gardens as a way to increase diversity and improve nutrition. Only non-hybrid, locally adapted seed are exchanged in view to ensure that successive harvests are reproductive. At the same time the network encourages on farm conservation of all crop genetic resources. This is achieved through awareness raising and practical training programs carried out with and sometimes by the farmers themselves.

43. The network works mainly on traditional staple crops including root and tubers and local green vegetables; improvement of traditional farming systems is sought through small adjustment of prevailing local practices; the medical/health services are often preferred as a more effective vehicle than extension staff to promote PMN initiatives; nurse aids training for instance has proved to be very effective for dissemination of kitchen garden for daily leaf vegetable production. The target group for grass root intervention is the extended family and/or parental line rather than the whole community; this restriction provides lesser risk in terms of organisation and management of the micro projects. Since two years a new association has been formed (Kastom Garden Association) with the precise mandate to encourage conservation and consumption of local vegetables.

44. Since November 2000 the PMN has been producing seed for 5000 families affected by the ethnic unrest in Solomon Islands. Families that were given the opportunity to access the network have also received information and training. Building links and cooperation between farmers on a vital issue like seed and planting material, has proved to be a successful and sustainable approach, more reliable than conventional relief supplies of seed in difficult situations as ethnic unrest. The PMN has received funding from AusAID and the European Union through the STABEX program.

Hope World Wide - HWW

45. HWW is an NGO active in PNG with education, health and agriculture programme. Since 5 years they are assisting a group of over 40 rural families from 5 different ethnic groups who recently moved to Port Moresby in establishing commercial vegetable production on a 2 ha land made available by the city council. With assistance of the DAL the NGO intends to provide training on sustainable agriculture, processing and marketing for direct sale on the nearby city market. Chinese cabbage, tomato, sweet potato, lettuce, carrots, English cabbage are amongst the products most in demand on the local market which is presently supplied mostly by imports from Australia. A number of other NGO are active in the same field of peri-urban agriculture which is particularly needed both to provide substantial income to newly arrived families and to promote consumption of fresh vegetable among the urban population of Port Moresby which is presently limited by the high price of the imported vegetables.

D. AGRICULTURE RELATED CONSTRAINTS AND FACTORS OF VULNERABILITY

Climatic Hazards, Crop Pests and Diseases

46. The rather regular occurrence of extreme climatic conditions in terms of violent cyclones and prolonged dry spells resulted in the rise of imports of food stuff ; the ensuing problems is the quality of the imported produce in the absence of clear regulation. ; another associated problem is the risk of introducing pests and disease since quarantine legislation is also

deficient. In spite of the prolonged efforts to control major crop pests and diseases by a number of regional projects, these continue to represent a major constraint to local agriculture development; the introduction of the giant African snail (*Achantina fulica*- GAS)¹, the taro leaf blight (*Phytophthora colocasiae*), the fruit piercing moth and fruit fly are the typical examples of recently introduced pests that stimulated the promotion of IPM control strategies. Fruit flies and piercing moths still represent a main limiting factor for fresh fruits and vegetable exports, taro blight and virus, taro and coconut beetle, rats, giant African snails are only few of the major pests that can severely damage agriculture production; on the other side the islands are free from a number of animal disease (newcastle-poultry, F&M-cattle, bees are also disease free).

Land Tenure

47. The traditional land tenure system is a possible restraining factor in production in Samoa: the "matai"² control what is grown and receive the profits from any sales. The younger men in the village (the youth) who are non-matai work in the plantations but don't have any control over what is grown, nor have they rights to profit beyond what the "matai" decide to give them. The gap between the youth and the traditional system is reportedly widening and there are calls for land from young men; there is a high migration rate of untitled youth to urban areas, which might have a serious effect on food security. A recent study (Boydell, 2000) provide an exhaustive review of land tenure arrangements in the Pacific countries (Summary in Appendix 3).

Communication

48. The low level of education amongst farmers and the tendency for extension agents to use technical terms can easily result in a communication gap/breakdown; farmers friendly materials translated in local languages is not available. A number of initiative like the People first network in Solomon Islands attempts to provide connectivity to a large range of development stakeholders: rural communities, government officials, Provincial Governments, Development Organisations, Aid Donors, NGOs, people researching Solomon Islands. The web site³ is part of a wider grassroots communications project, known as the People First Network; financed by UNDP, this project will provide connectivity to the provinces and so facilitate information sharing and improved communications. Solar-powered email stations, run in the fashion of telegraph offices by trained community volunteers, will be set up in all the major islands and provinces. These will connect to the Internet using existing HF and VHF radio technology via a central "hub" Internet Cafe in Honiara.

¹ Originally a native of Eastern Africa, giant African snail owes most of its current wide distribution to man. It is now present everywhere in the Indo-Pacific except the Solomons, Fiji, Banaba Island, Cook Islands, Kiribati, Lord Howe Island, Nauru, Niue, Norfolk Island, Pitcairn Island, Tokelau, Tonga, Tuvalu, Australia and New Zealand. In the 1930s the giant African snail was brought to Hawaii for "decorations" in backyard gardens. This backyard alien multiplied quickly and became a nuisance. In the 1950s the Department of Agriculture introduced the cannibal snail in an effort to control the African snail population. The population of the African snail did decline, but the cannibal snail cannot be credited for this. Alien invasions often follow a pattern of population explosion, then eventual decline. While the African snail is no longer a problem, the cannibal snail is now a serious threat to native species.

² Or head of the extended family in Samoa.

³ <http://www.peoplefirst.net.sb/>

Food Habits and Nutrition

49. The combined effects of increasing rates of urbanization, emigration of skilled people, population pressures on scarce land resources and the receipt of remittances from abroad have led to a trend towards increased food imports in almost all of the Pacific Island countries. As a consequence the current trends in national food security are for the consumption of low quality food which is often associated to the raise of a number of health problems: obesity, diabetes, and circulatory problems that have thus attracted the attention of policy makers to food security and food safety issues.

The Place of Agriculture in the Economy of the Pacific Countries: Some Consolidated Trends¹

50. In the last two decades agriculture production has been facing a number of **recurrent difficulties** related to adverse climatic conditions (cyclones, prolonged dry spells), outbreak of pests and diseases (Taro blight in Samoa) and growing difficulties in accessing the export markets due to lack of competitiveness and strict quarantine regulations (decreasing price of copra, lack of competitiveness for pineapple export from Cook Islands, quarantine difficulties with tomato, water melon, banana, and squash export from Tonga, kava recent export difficulties,...).

51. As a consequence a **significant decline in the export of agriculture commodities**² has been observed while a growing share of export and currency earnings have been originated respectively by the fishery sector and the tourism industry (Tonga, Samoa). Export earning in fishery is mainly due to off-shore tuna fishing, while for inshore artisanal fishing a more or less rapid depletion of the catch is recorded in some countries (Tonga).

52. However small islands economies have also shown **high level of resilience to external economic shocks and natural disasters**: it is the case for Samoa that in five years experienced two 100 years cyclones and the outbreak of taro blight which resulted in the loss of the most important staple food of the country. Yet in Samoa there was no famine and overall exports have been restored to the previous level within only six-eight years. This is mostly attributed to the overall solidity of the traditional farming system based on a mixture of deep rooted skills, traditional food habits and land tenure arrangements. Unfortunately the economic value of traditional food production tends not to be recognised by agricultural and national planners and is usually much under-estimated in national accounts³.

53. Similarly, **traditional farming systems were able to absorb the shock** due to recent political unrest (Fiji, Solomon Islands) and the food situation has remained satisfactory in spite of a large number of displaced persons (some 50,000 people, over 10% of the total population in Solomon Islands). In the case of Fiji producers were able to quickly respond to new market opportunities and have quickly taken over taro export to Australia after Samoa production has been wiped out by taro blight. In the Pacific countries with sufficient agriculture land food

¹ For a more exhaustive analysis see Appendix 2. : Critical issues for farmer-Centred Development in the Pacific (by Thaman and Randy).

² This is also due to increased difficulties with export markets, one example being the present crisis with exports of Kava (*Piper methysticum*), see [Kava update from SPC](#).

³ Linking market development to farming systems in the Pacific Islands, by A. MacGregor, [SAPA publication](#) 1999/2

shortage may be experienced under unexpected seasonal circumstances (**there is no chronic food insecurity**) and recovery is generally very rapid.

54. On the contrary a number of **negative experiences with the introduction of exotic crops** mostly for the export market (ginger, litchi and mung bean in Samoa) but also with food crops (rice in Fiji and paddy rice in Solomon Islands) demonstrate the difficulty to find suitable diversification options outside of the traditional crops and working habits; this is due not only to the food habits but also to the prevailing culture and land tenure systems that tend to preserve the traditional cultural heritage.

55. From the socio-economic point of view agriculture development is presently constrained by the generally high price of the labour (up to US\$3-4/hour in Tonga; US\$5/day in Solomon Islands) and by the consequent urban drift of the youth towards urban centres with related problems of high unemployment rate.

56. It is also observed that government spending in agriculture tend to decrease, extension services are highly ineffective; investments in agriculture is a much lower priority for the majority of pacific governments and this has a repercussion on bilateral donors assistance that also tend to support other sectors (education, health, governance, reform). Meanwhile services provided by ministries of agriculture are highly inefficient and restructuring is on-going (with donors assistance). By converse a number of regional institutions (PIF, SPC, FFA, SPREP,..) have a strong reputation and therefore receive substantial funding from bilateral and international partners and donors.

E. PROGRAMME DESIGN AND TECHNICAL STRATEGY

57. The observed trends lead to the definition of a strategy for RPFS type of activities and implementation arrangements:

- the high labour costs dictate a focus on value adding initiatives that can result in increased benefits retained at producer/community/country level;
- the difficulties experienced with accessing export markets leads to a preference for dual purpose crops, food and cash, that can rely on both domestic and export markets; semi-processed products (dried vegetables, fruit juices and conserve) can also provide alternative options to fresh/raw material agriculture products;
- the small scale production potential of most of the islands makes it possible to seek niche markets for high quality products and explore linkages with the growing tourism industry (fresh vegetable supply and semi-processed local cash crops: coffee, cocoa, coconut oil, soap, etc);
- poverty, food insecurity and malnutrition is often prevailing in and around urban centres and highly populated areas where peri-urban agriculture and horticulture can provide significant incomes; obesity is a common problem often related to the transition from purely subsistence to semi-commercial

economy and the evolution of dietary and working habits (<http://www.fao.org/Focus/E/obesity/obes1.htm>) ;

- pest problems and export markets restrictions can be eased by convincing policies towards integrated production and pest management; progressive reduction of imported chemical inputs should be pursued not only to ensure high quality and food standards but as a major initiative to minimise the present high risk of environmental damage by agriculture;
- environmental impact assessment should be introduced as a standard feature of future studies of crop diversification;
- increased collaboration between public and private sector should be pursued as an alternative to reduce high extension costs and solve recurrent problems at the implementation stage; a number of long established NGO, community based and individual pilot farmers experiences that should be capitalized in the process to scale-up successful experiences (promotion of private public partnerships).

Need for Country-Based Interventions and a Highly Flexible Approach

58. The regional food security programme (RPFS) would fill an important gap if it could be instrumental in promoting a new wave of food security initiatives at community and provincial level and provide new mechanisms of public/private partnership to initiate, implement monitor and evaluate such field activities.

59. The differences observed in the scale, problems and opportunities of the various countries impose a highly flexible design for country based activities; RPFS will support a wide range of community/farmer-based initiatives that can boost food security provided they respond to pre-defined criteria and fit within the overall strategy at country and regional levels.

Food Security and Poverty: Need for a Clear Targeting of the Most Vulnerable

60. There is no chronic food shortage in the pacific region; however food security tends to represent a major concern for the poorest sector of the population: the youth, the women and people who have recently moved to cities and are found in the most densely populated areas. Therefore the community/country based initiatives of RPFS must necessarily target those sectors of the population that are chronically vulnerable to food insecurity situations and not only as a consequence of unexpected crisis (of climatic nature, political disturbances, plant pest and disease outbreak).

The Sustainable Livelihood Approach at Community Level

61. Experiences made in agriculture development projects in the Pacific over the last decades (e.g. EU-PRAP 1, FAO Regional Farming Systems Development Project, AusAID Farming Systems Project) have indicated that farmers' knowledge and skills can be critically important in identifying, developing, evaluating and disseminating relevant technologies for improving productivity and sustainability. The sustainable livelihood approach (SLA) broadens

the range of initiatives that are addressed in improving the welfare of farmers and communities: a wide range of productive sectors like crops, forestry, fishery, livestock, and farmer rendered services like food storage and processing, eco-tourism and conservation of biodiversity are equally important as potential sources of sustainable incomes to the rural families. The SLA also pays more explicit attention to building up the ability of farmers and communities to help themselves (i.e., solve their own problems). It facilitates this through focussing on ways in which farmers can improve their own analytical skills (i.e., improve their human capital) and works on ways in which they can cooperate with each other in a manner that is mutually or collectively advantageous (i.e., enhance their social capital). The SLA thus empowers farmers and communities by improving their ability to participate in, address the challenges of, and gain from the opportunities, of participating in the market. Furthermore, the sustainable livelihood approach is compatible and congruent with the trend in most countries to the geographic decentralization of decision-making with respect to developmental initiatives, the downsizing of the public sector, and increasing significance of the private sector.

62. An important component of this programme will be to facilitate farmers and their communities in identifying, implementing and sustaining action plans for improving their income generating activities from within the farm (i.e., via diversification and intensification type initiatives) and possibly through off-farm activities. The activities will be iteratively determined over time and will be adjusted in light of earlier experiences.

Review of Technical Options – Pro-Poor Technologies

63. In a strategy to address food security and poverty related issues the improved technology to be designed and promoted have to be tailored to the needs and constraints of the poorest sectors of the rural communities. A “pro-poor technology” should be in the reach of the producer, should minimise the risk of production and marketing failure as well as the dependency from external inputs and maximise the value added which is kept within the rural community.

64. Food security is made up of year-round access to a supply of high quality nutritious food sufficient to support an active life; a lesson that can be derived from the resilience of Samoan smallholder agriculture and a number of failures with the introduction (and maintenance) of export crops markets is that food crops should be preferred having a dual – food and cash – purpose. Moreover it is often observed that domestic markets offer to producers prices that are more attractive than export markets.

65. A strategy to help the smallholder in the Pacific should build upon the existing skills with traditional food and cash crops; due to the dispersed environment, a great range of biodiversity as well as local technologies exist that merit to be known, preserved and improved; this might require just small adjustments of the present farming system, which can only be identified with the active involvement of the farmer himself.

Promising Initiatives

66. In the region already exist a range of promising experiences that justify a documentation and replication efforts. In some cases the experiences are already conducted and managed at community level with the assistance of local or international NGOs; in other cases the

experience relies on the initiative of some pilot farmer¹; all initiatives that will be promoted under the RPFS would have a clear focus in the promotion of income generating activities that can have a quick impact on improved food security at farm household level.

Seed and Planting Material Conservation and Multiplication

67. The Planting Material Network is a seed multiplication and exchange initiative in the Solomon Islands; started in 1996 with the support of APACE (Australian Aid agency for community development and environment) PMN encourages farmers to save and share their seeds, provide practical training on quality seed and planting material conservation and distribute freely the seed among his members. The network is particularly active in documenting traditional farming systems, food and cooking habits; through a parallel association (Kastom Gaden Association) it organises field days and biodiversity fairs, training on IPM, and improved practices such as mulching, development of food/kitchen gardens. It uses participatory tools (PRA) participatory technology development and community food security assessment.

Youth development project aiming to increase the planting the taro crop and to integrate other crops with banana and to generate income for the village. The group is already engaged in growing root crops and tubers and the approved funds will help to adopt improved land management practices, the introduction of selected varieties resistant to TLB, the use and production of mini-sets for easier multiplication, the storage and marketing of the produce.

68. New taro varieties resistant to taro leaf blight are available as well as biological agents to control GAS; IPPM program have been developed and efforts are made to reintroduce traditional breadfruit processing, drying and home bottling of fruits and fruit products.

69. Stock enhancement programmes are carried out in Samoa by the fisheries division in association with participating villages. This involves restocking of the reef with fingerlings, release of juvenile giant clams into managed areas for restocking, and consumption and the promotion of new species of Tilapia into suitable environments. These three elements make a major contribution to the diet of coastal villages.

The Farmers Field Schools Methodology as an Alternative to Conventional Extension

70. Ineffective and costly agriculture extension is a problem which is common to most countries in the Pacific; as a matter of fact the restructuring and rethinking of the extension methodology is a priority for DAL in Papua New Guinea as well as in other countries. In contrast to the limited success achieved in past years by conventional extension methods, Farmer Field Schools (FFS), based on an innovative, participatory, learning by discovery approach, have been the success story of the 1990's in a number of Asian and African countries. The FFS approach, developed by an FAO Project in South East Asia as a way for small-scale rice farmers to investigate, and learn, for themselves the skills required for, and benefits to be obtained from, adopting integrated pest management (IPM) practices in their paddy fields., was subsequently extended to several countries in Africa and Latin America. At the same time there has been a shift from IPM for rice based systems towards other annual crops, vegetables, cotton and the curriculum has been enriched with other crop management aspects. More recently farmer field

¹ Text boxes present recent on-going experiences financed under Telefood in various countries of the region.

schools on the principles and practice of integrated soil management have been piloted in Asia¹, while in Africa FFS has been successfully implemented for soil fertility and animal production initiatives. It has been found that the FFS approach, although originally developed for IPM purposes, provides a proven people centred learning methodology whereby farmers can learn about, and investigate for themselves, the costs and benefits of alternative technological practices for sustaining and enhancing farm productivity.

71. The FFS approach offers an alternative to the conventional extension approach in which farmers are passive recipients of externally formulated extension messages, that are demonstrated to farmers by the field assistant. The approach is aimed at exposing farmers to a learning process in which they are gradually presented with new technologies, new ideas, new situations and new ways of responding to problems. The knowledge acquired during the learning process can be used to build on existing knowledge enabling farmers to adapt their existing technologies so that they become more productive, more profitable, and more responsive to changing conditions, or to adopt new technologies. There is now a rapidly growing awareness that a much more participatory approach is required if extension recommendations are to be fully acceptable - technically, socially, environmentally and economically. Appendix 6 provides additional reading on FFS with reference to relevant web sites.

Peri-Urban Agriculture and Home Gardening

72. Most vulnerable groups are found in high density population areas as a consequence of continuous outmigration from rural areas towards the cities. Here one option is offered by the production of fresh horticultural products that can find easy access and good prices on the urban markets. However producers need technical support to improve their production and marketing skills to transform such opportunity into a sustainable and profitable venture. In PNG a number of local NGOs provide initial assistance to vulnerable communities; they have recently sought partnership to upgrade the training they provide to include the basic principles of Sustainable Agriculture, and advise on effective marketing strategies.

¹ Through the regional Farm-Centred Agricultural Resource Management Programme (FARM) of eight Asian countries co-ordinated by the FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.

Sustainable Agriculture – What is it?

A more sustainable agriculture seeks to make the best use of nature's goods and services as functional inputs. It does this by integrating natural and regenerative processes, such as nutrient cycling, nitrogen fixation, soil regeneration and natural enemies of pests into food production processes. It minimises the use of non-renewable inputs (pesticides and fertilizers) that damage the environment or harm the health of farmers and consumers. It makes better use of the knowledge and skills of farmers, so improving their self-reliance. And it seeks to make productive use of social capital - people's capacities to work together to solve common management problems, such as pest, watershed, irrigation, forest and credit management.

Sustainable agriculture technologies and practices must be locally-adapted. They emerge from new configurations of social capital (relations of trust embodied in new social organisations, and new horizontal and vertical partnerships between institutions) and human capital (leadership, ingenuity, management skills and knowledge, capacity to experiment and innovate). Agricultural systems with high social and human capital are able to innovate in the face of uncertainty.

Sustainable agriculture jointly produces food and other goods for farm families and markets, but it also contributes to a range of public goods, such as clean water, wildlife, carbon sequestration in soils, flood protection, landscape quality. It delivers many unique non-food functions that cannot be produced by other sectors (eg on-farm biodiversity, groundwater recharge, urban to rural migration, social cohesion).

73. Additional relevant training package has been developed by an FAO project: “*Improving nutrition through home gardening*”; it focus the instruction of agricultural extension agents and other field workers in Southeast Asia. It aims to strengthen their ability to promote home gardening for better family and community nutrition. The package was prepared by the Food and Nutrition Division of FAO on the basis of training materials developed for the FAO/UNDP Technical Support to the WFP Transmigration Development Project (INS/89/004) in Indonesia¹.

74. The training package has three components:

- course materials and technical notes for trainers (marked in green) and course materials for participants (marked in yellow) - these are divided into ten sessions;
- information and participation
- home garden technology leaflets (marked in grey).

75. The course materials for trainers and participants provide an introduction to each topic and should be given to trainees as hand-outs after each session. The technical notes for trainers set out a programme of activities in which the trainer may lead the class. The information

Sustainable Home Garden and Backyard Food-Production.

Assisting a community to establish backyard and homeyard gardens to provide fresh nutritious vegetables fruits and staples, together with training on dietary habits to address food related health problems. An important component would aim to provide technical training to the young generations on sustainable methods in home-based production to ensure food security in the community, including food safety, and the production of high quality inputs (bio-compost) for organic certification.

¹ [Improving nutrition through home gardening-Training Package](#)

sheets for trainers and participants contain technical information on each topic and should be distributed to and used by trainees as indicated in the technical notes for trainers. The home garden technology leaflets are for use by extension workers and families whose members are able to read. There are 15 leaflets, each of which provides information on a different technology option or type of improvement a family may want to make to its home garden in order to increase food production, provide a greater diversity of fruit, vegetables and other plant crops and add nutritional value to its diet.

The Diversification Component of SPFS

76. The lessons learned during implementation of the SPSF and particularly under the diversification component (promotion of short cycle animals (ducks, poultry, rabbit) can provide significant additional incomes and nutritious food to targeted communities in peri-urban and rural areas. Small animal rearing modules (including pigs, poultry, rabbit and bee keeping) were successful promoted under a number of SPFS, TCP and Telefood projects targeting both women and the youth groups: skilled producers are therefore available in many islands that could be effectively mobilised for disseminating practical training modules on small animal rearing techniques through farmers centred learning methods.

Development of **Dry Sow Pens – Piggery** - to increase the number of piglets of selected improved breeds available for distribution and sale to the general public within the same island and in outer islands. This type of project is usually addressing a youth group who shall receive practical training in improved animal rearing techniques, production of live animals and fresh meat. It includes the construction of additional dry sow pen to allow more space for a larger breeding parent stock to be used in selective breeding program. Proper dietary, breeding, and maintenance practices are also trained that should result in increased village piggery stocks and provide for food security for all the members of the community.

Organic Production and Certification

77. Given the geographical environment which at the same time provide a positive isolation barrier against the contamination of crop and animal pests and diseases, but results in difficult and costly supply of agricultural inputs, Pacific island countries have a comparative advantage in seeking niche markets for high quality organic certified agriculture products. The world market for organic agriculture products is growing steadily and increasing attention is given by world trade organization as it is shown by the number of ITC papers presented at international conferences (<http://www.intracen.org/mds/>).

78. Production under organic parameters, which generally bans the use of chemical fertilizer and demands very different biologically accepted measures of pest and disease control, is a highly sophisticated and technically as well as managerially demanding production method. A high level of knowledge, new and often very different technologies, and good information about different quality standard requirements in different importing countries are needed to successfully produce for this market. In addition, while production can be changed from one production period to the next, international standards usually require a period of several years of organic production before products can be accepted as ecologically produced (transition period for ‘cleaning’).

79. In the Pacific countries a number of pilot producers are already exploring such opportunity with moderate success. In Samoa organic banana are produced for export to New

Zealand; recently a new mealy-bug was founded by NZ quarantine inspection on fresh organic banana which had to be fumigated before entering NZ market (therefore loosing the organic certification/premium); the producer then opted for a two pronged strategy:

- production of for sun-dried banana targeting the internal snack's market, and
- adoption of more strict washing measures of the fresh organic banana production to qualify for organic export certification to NZ.

80. Two organisations in Samoa¹ have already acquired some skills on organic production certification under a AUSAID project and have expressed a concrete interest to see more farms starting the certification process in order to be soon in a position to offer bigger volumes of high quality products for direct export to Australia and New Zealand. Local expertise is available which could be mobilised for mapping and monitoring farms, record keeping, and assisting all potential organic farmers during the transition process, the main problem being the time required for farms that have been heavily dependent from the use of total herbicide. With the development of organic farming and more farmers wishing to start the transition process there will be an increased demand for inputs that are accepted for organic production; particularly good quality compost, farm yard manure, poultry dung, etc. . Consequently there will be opportunities for trainers and advisors on improved preparation techniques as well as for pilot producers of the required organic farming inputs.

Small-scale commercial beekeeping with women groups. The project finance all material, from frames and foundations to hive tools, smokers and protective overalls, as well as 20 broods of bees. The project should address the main risks associated with projects of this nature, mainly the availability of regular markets for the honey and the demands of the traditional culture on the profits earned from small business; in Samoa the honey produced will also be used in yoghurt production, which is being generated from the milk produced from a dairy farming project, also initiated by FAO.

Simple Food Processing Conservation Methods

81. The increasing number of imported snacks could be easily replaced by locally produced food; dry fruits, taro and cassava chips, fruit and tomato preserve, dry sweet pepper, semi refined chocolate, roasted coffee are just a few of a wide range of semi-processed products that could be sold on the local market as well as to the tourists; a number of opportunities exist that need to be fully exploited by promoting links between local agriculture initiatives and the steady development of local tourism industry.

82. Other opportunities that deserves being explored is the possibility to mix increasing proportion of local starchy food (taro, breadfruit,..) in the preparation of mixed wheat/tropical flours.

Water Harvesting and Storage Facilities

¹ Women in Business Foundation (WiBF) producing pure virgin coconut oil (direct micro expelled) and honey, and Samoa's Organic Farmer's Association (SOFA) specialised on organic farming with members already engaged in compost production.

83. In spite of the prevailing tropical humid climate, long dry spell periods are experienced in a number of countries (Tonga, PNG, Port-Moresby area); here the dry season with monthly precipitation below 100 mm can last for over seven months; surface water become scarce, while most of the rainfall falling is lost to the sea. Simple water harvesting through ground or roof catchment could be stored in vertical or underground tanks for future consumption; these water reserves would be used for a range of activities: animal rearing, plant nursery, small garden irrigation, food cleaning and processing, etc.¹

Fishery and Aquaculture

84. Fishing has always been an integral part of village life in the South Pacific island countries. However, increased population, overfishing, use of destructive fishing methods and natural disasters have contributed to declining stocks of fish and marine invertebrates. Recent efforts are geared to rejuvenate the fisheries through better management, both at the national and village levels; increasing attention is placed to support women and the youth for an increased participation in the fishery sector.

Establishment of giant clam nurseries to enhance natural stocks in adjacent reefs.

Financial support is needed for the supply of giant clam seeds, material for protective cages for the juvenile clams and packaging, and equipment for the maintenance and protection of the nursery. Villagers will contribute labour and time to the project and provide 24-hour-a-day security. Such a program can be accompanied by some small-scale tourism development project.

Natural resources management

85. NRM and environmental related considerations will represent an integral dimension of all initiatives at country/community level. The regional technical agency – SPREP – will provide the technical focal point (expertise) and operational framework for environmental related initiatives. In the context of the RPFS it is foreseen that technical support funds will be provided in the form of international/regional technical assistance to satisfy specific country demands to assist with the formulation of NRM initiatives and perform environmental impact assessments whenever necessary. The typical case that is presently faced in PNG and Solomon Islands is the expansion of upland rice cultivation and its potential impact on deforestation and erosion of fragile ecosystem; in particular the option to introduce mechanisation to speed-up land preparation operations, justifies a thorough EIA : this could be eligible for RPFS technical support funding at country level. Other typical fields that were highlighted refer to IPM and a more cautious use of inputs and pesticides ; other topics will emerge from specific country priorities.

Cost Elements

86. The approach and assumptions used to estimate the cost of **community/country-based interventions** in a demand driven environment are presented in the Annex 5: Cost Estimates.

¹ The delegation of SP agriculture ministries who visited SPFS initiatives in China have expressed specific interest for this types of infrastructure.

F. IMPLEMENTATION ARRANGEMENTS

87. The Community Initiative Fund (CIF) would promote the adoption of community based initiatives to address food security and poverty issues country level. The programme is designed to build capacity at country and provincial levels and provide seed capital to allow a diverse typology of services providers to assist communities in the implementation of their own initiatives. According to these principles RPFs should reflect some degree **of flexibility** with respect to the selection of participants, activities that will be financed and the service providers that will be involved.

Principles

88. Though the programme will be regional in coverage, participation will not be mandatory for country/community based interventions. Rather the opportunity will be offered to all 14 countries to draw from the CIF. In order to participate the countries will have to meet participation requirements. The resources available being inadequate to satisfy at the same time all requirement from the 14 states, a selection process should be in place to establish participation priority and eligibility criteria. At different levels this process should: **a) reflect a high degree of flexibility by operating a demand-driven approach** for the planning and implementation of activities, and **b) adopt a competitive mode for selecting participants based on the quality of their own proposals**; this should ensure “quality at entry”, the initial screening being based on the quality of preliminary self-assessment of needs and existing capacity (comparative advantage) to address those needs as it will be presented by each potential partner.

89. After the initial sensitisation campaign and awareness raising workshops to be conducted in each participating country, the initiative will be at country level to propose implementation arrangements, including a list of eligibility criteria. The quality and depth of the activities to be supported being an essential feature of RPFs, country proposals will be assessed based on the amount and quality of work that will be produced in a limited time as an indication of the commitment to participate in the programme, to tailor the existing realities and build ownership at different levels.

90. Within the general approach, different criteria may become more relevant at different levels:

(a) for allocating priorities to the participation of the countries:

- the time required to propose **an institutional framework and a responsible team/steering committee** for the initiation of RPFs activities in the country; the team should be multidisciplinary, women should also be members, and should represent diverse typology of service providers; the team/committee should propose a methodology for the implementation of the programme, consistent with decentralized governance, including the harmonization of political, administrative and fiscal process; to demonstrate political support the steering committee should be headed by the Head of Agriculture to orient on food security policy and poverty targeting issues; in order to avoid unnecessary

duplication and overlapping it is recommended that the team/committee be proposed within the existing institutional framework¹;

- **the preparation of an inventory of the resources** available for participation in the RPSF both as recipients or service providers; the list should include NGO, CBO, village and farmers associations, technical staff at country and provincial levels, private sector, groups that have been formed as a result of the information campaign, requesting training or offering their services; the list should be completed by a simple annotation of known weaknesses and/or strengths of each party and should include a typology of partnership contracts between RPSF and different recipients/services providers including reference to the proposed cost-sharing arrangements;
 - the existence, within the country, of a **successful experience of community based development** from where it might be possible to draw skilled human resources; this may also allow to identify communities that can be easily mobilised for future initiatives;
 - the **methodology that will be proposed to select the first initiative** to be financed through the CIF; this will provide an opportunity to assess how the team have internalized CIF principles and methodology in terms of poverty targeting, sustainability, etc.
- (b) **for provincial and communities** the selection criteria should be proposed/defined by each local team/steering committee at the time of submitting their initial request to participate in RPSF; at this stage it should be stressed that:
- each proposal for participation should in any case make specific reference to their understanding of the **sustainability and cost sharing arrangements** for the initiatives to be implemented with the support of CIF: the commitment and actual interest to engage in a partnership with CIF are of outmost importance in order to build a solid working relationship with a community from where continuity and development impact can be expected; hence the existence of a dynamic traditional association might be an indicator of a favourable human environment as well as the capacity of the community to propose a peer group of dynamic young men and women that would be selected as the community/program interface;
 - additionally the reference to **targeting most compelling situations**; in this case poverty and gender considerations, the presence of a conflict situation on the use of natural resources, a particularly serious land degradation problem or the over-reliance on an non-sustainable farming system (excessive monocropping, or reliance on chemical herbicide or

¹ Specific reference has been made to the FAO/WFD committees or the EU/DSAP/microprojects committees whenever they are already in place.

other chemical pesticide) are examples of site specific situations that might receive priority in a strategy to address common difficult situations that are directly related to poverty;

- (c) **for selecting service providers** (for capacity building, community facilitation, monitoring, etc):
- selection would be made on the basis of a proposal submitted by each candidate with special reference to the strategy proposed for targeting poverty and their proven experience/commitment to participatory methods;
 - in case of technical expertise, the capacity to present **an integrated/sustainable approach** to problem solving.

Eligible Activities

91. The CIF will provide matching grants for the implementation of community based initiatives; however not all activities proposed by communities will be eligible and in order to avoid raising false expectations, it is important that eligibility criteria are clearly defined including an explanatory list of eligible and non-eligible activities.

92. Eligible activities will be investments providing either public or private benefits, with the beneficiaries being the community and private entrepreneurs or groups respectively. Public investments are usually associated with larger numbers of beneficiaries and the realisation of a profit in the medium or long term, while private investments benefit less people and provide short term profits. Each sub-project proposal in order to be eligible for CIF financing should have the following characteristics:

- should be demanded by the community and stem from a participatory exercise of needs assessment conducted with the participation of all the targeted members of the community including a fair representation of women (not less than 30%) and young people; the impact on the community as a whole should be demonstrated;
- 30% of the direct beneficiaries/participants should be ranked by the community amongst the poorest, and women should be adequately represented;
- financial viability and long term sustainability, once programme support withdrawals, should have been discussed; it should contribute to the improvement of the economic-wellbeing of the beneficiaries and specifically of the vulnerable groups;
- should conform with project overall objectives in promoting improvements on food security and sustainable agriculture practices;
- the implementing agent(cy)/services providers and the implementation procedures should be defined;

- should include an indication of proposed budget; the contribution from community participation should be clearly spell out, as well as other possible sources of financing (NGO, local government, private sector) besides CIF.

93. The table below provide few examples of eligible and non-eligible activities according to above criteria; in addition relevant technical and financial considerations are summarised.

ELIGIBLE	NON ELIGIBLE	
- Rehabilitation and construction of improved animal housing (piggery, poultry houses..)	-The same activities in the absence of a clear community commitment with respect to sustainability in managerial and financial terms, including provision for the establishment of a community bank account for maintenance works.	
- Construction of water harvesting and storage facilities including. wells, handpumps)		
- Multipurpose stores run by the community		
- Rehabilitation or construction of collection and market places		
- Simple food and feed processing equipment		
- Training courses on food quality, quarantine and certification		
-		
- Farmer based learning programmes including production of planting material,		- The procurement of free goods, inputs or equipment for individuals. - The same activities in the absence of a clear reference to the participation of identified members of the target group (women, landless, young people,..)
- Paravet clinics run by coop.groups or individuals		
- Training in book-keeping and basic accountancy		
- Training in small business management		
- Communal shops run by coop-groups, or individuals		
- Training in group and co-operative formation		
Technical and financial considerations		
- Agriculture and livestock: Replicability of the supported initiatives. The selected communities/sites should be representatives of the different agro-ecological zones and the prevailing farming systems.		
- Rural Infrastructure: Technical feasibility and average unit cost should be verified to fall within accepted standards; proposed design and implementation according to established guidelines.		
- Cost-sharing : Communities should contribute 10-30% of activities financed by CIF (in labour, local materials or cash)		
- Total cost per community and household should not exceed the established ceiling (of...).		

Implementation Responsibilities

94. National steering committees will be responsible for screening initial proposals, advising on allocations of TA to enhance capacity of local services providers and assist rural communities to transform their own initiatives into an eligible project proposal; they should also take the responsibility to endorse the proposed service providers and to verify the proposed arrangements for the flow of funds to the implementing agency.

95. The service providers (NGOs, extensionists) will be responsible for developing a partnership agreement with the participating group/community; a letter of agreement should be signed specifying: i) the respective contribution of each part to the project, ii) the arrangements for a participatory monitoring and evaluation system, and iii) future commitment in view to provide assurance of long term sustainability.

Development of a Monitoring and Evaluation (M&E) System

96. Specific budgetary resources have been allocated for the development of a system for monitoring and evaluating the implementation of the community-based rural development activities at the farm, community, provincial and country levels. The system would be used to assess the impact of specific activities, and allow for their refinement, in the light of experience with their implementation. It would comprise the following key component elements:

- *Environmental Impact assessment M&E*:- to be developed primarily for provincial and country level service providers, and used to:
 - identify and monitor changes in natural resource use, land management practices, and safe use of agrochemicals;
 - identify and characterise provincial and country specific “high-quality production” indicators; and
 - assess changes in the environmental status of those areas where specific measures were promoted to correct identified critical features.
- *Beneficiary impact M&E*:- to be developed primarily for provincial and country level service providers, and used to:
 - identify economic, social and cultural changes at the farm household and community level;
 - determine the extent to which the costs and benefits of the programme are shared equitably between the different socio-economic target groups at the community level and within the household between the individual members (male, female, old and young);
 - assess the economic, social and cultural impact on the beneficiaries as a result of their involvement in the sustainable agricultural development component; and
 - determine the reasons for adoption/non-adoption of the promoted improved practices.
- *Simple indicators for participatory M&E*:- to be developed for use by participating communities with the aim of stimulating critical self-awareness as to the impact, at the farm and fishing areas, at the production, storage and processing stages, including the overall management skills. The focus would be on the identification, development and testing of simple bio-physical and socio-economic indicators that can be used by farmers for the participatory monitoring and evaluation of changes over time at:
 - the field, farm, forest and fishing areas (environmental geographic area impact); and
 - the household and community level (socio-economic/cultural impact).

97. Along these lines it is proposed that one TA specialist from the region will develop in PY1 a framework for the implementation of M&E initiatives through an institution/NGO as an independent service provider. Recommendations from the regional specialist will be further discussed and reviewed in two different countries and their suggestions will be incorporated in the contract proposal that country-level candidates will propose to national coordinators for the implementation of M&E activities in each country. The selected M&E institution/NGO in each country will be then responsible to liaise with the different project implementing agencies (NGOs, CBOs) and agrees on the responsibilities of each party in the documentation of progress achieved and results of the community based initiatives. At country level the M&E service provider will be responsible to compile semi-annual reports to be submitted to the national coordinators; the latter will be responsible for validating the country reports and transmitting to the regional level.

G. EXPECTED BENEFITS

98. RPFS is expected to generate benefits at different levels.

- Rural communities at country level would feel better ownership and support for developing a wide range of agriculture, fishery and food security interventions; this should have a direct impact on the farm family incomes at producers level.
- NGOs and private sector would benefit from a new range of opportunities to provide their qualified services to rural communities as well as from the participation to the capacity building programmes that will be promoted at country level. They will also be in a position to establish better linkages with the public sector by being members of the required food security committees at country level.
- For the public sector RPFS would provide a working framework that would allow for advisory services to be given on demand, in amore effective a more popular way than in the past; moreover funding will be available for strengthening public and private sector capacity on technical aspects related to food security as well as in planning and participatory processes.
- For regional institutions RPFS would create an opportunity to establish closer links, and mutual understanding of comparative advantages. Finally consumers in the pacific region should benefit from a larger supply of good quality agriculture commodities.

99. Provided the proposed targeting mechanisms are retained and internalised by country and local teams that will decide on the utilisation of the funds for community based interventions a large proportion of the benefits should go to the poorest and more vulnerable sectors of the population; RPFS should therefore have an impact by reducing the share of people that are chronically confronted to problems of food insecurity. All together allocations of the food security funds have been tailored to support some 920 different interventions in the 14 countries which corresponds to a potential direct impact over some 25 000 families.

H. RISKS AND FOLLOW-UP

100. Almost 80% of the total budget refer to activities that will be managed at country level. It is essential that after the initial information campaign to raise awareness about this new program in each country, the proposed food security committees play an active role in requesting support to involve local communities and a different stakeholders to plan and execute the proposed interventions. The final success of the program is highly dependent on the commitment of country and local level authorities and their capacity to mobilise private sector resources for a correct utilisation of the funds and technical assistance that will be available from RPFS.

101. It is expected that the relevant technical agencies at regional and country level will actively participate in the review of the present programme proposal; their suggestions should be discussed during a workshop with the objective to finalise the programme formulation stage.

ANNEX 2

APPENDICES

LIST

- 1. SUMMARY FEATURES OF PACIFIC ISLAND COUNTRIES AND TERRITORIES (FROM A. MCGREGOR, 1999)**
- 2. CRITICAL ISSUES FOR FARMER-CENTRED DEVELOPMENT IN THE PACIFIC**
- 3. SUMMARY OF LAND TENURE IN PACIFIC ISLAND COUNTRIES IN FAO**
- 4. RECENTLY APPROVED AND ON-GOING TCP AND TELEFOOD PROJECTS**
- 5. THE SPECIAL PROGRAMME FOR FOOD SECURITY IN PAPUA NEW GUINEA**
- 6. THE FARMER FIELD SCHOOL APPROACH**
- 7. LIST OF ALL DOCUMENTS AVAILABLE ON THE CD**

1. SUMMARY FEATURES OF PACIFIC ISLAND COUNTRIES AND TERRITORIES (FROM A. MCGREGOR, 1999)

	Land Area (km ²)	Population	Geographic Type	Importance of Agricultural Sector
American Samoa	240	61,100	High islands, with a few atolls.	minor - some subsistence and limited market gardening
Cook Islands	180	19,000	High islands and atolls	considerable – main export earner – subsistence a significant component of GDP
Federated States of Micronesia	702	111,800	High islands and atolls	some - small export earnings, some domestic cash income, and some subsistence
Fiji	18,376	779,200	High islands a few minor atolls	fundamental – main employer and net foreign exchange earner, subsistence a significant proportion of GDP
French Polynesia	3,521	222,300	High islands and atolls	some - small export earnings, domestic cash income, and subsistence
Guam	549	145,400	High island	limited- dome market gardening and a little subsistence
Kiribati	726	83,400	Predominately Atolls	considerable – important for subsistence – copra important for out-island cash income and some foreign exchange
Marshall Islands	720	60,000	Atolls	limited - some subsistence and income earned from copra
Nauru	21	11,200	Raised coral Island	insignificant
New Caledonia	19,103	201,300	High island	important, particularly in the south
Niue	258	2,100	Raised coral island	significant – subsistence and some root crop exports
Palau	475	18,100	High islands and atolls	some - market gardening
Papua New Guinea	461,690	4,311,500	High islands – a few small atolls	fundamental – overwhelming source of employment – provides a substantial proportion of net export earnings - subsistence a significant component of GDP
Samoa	2,934	170,700	High islands	fundamental – subsistence found to be strength of economy
Solomon Islands	29,785	401, 100	High islands – A few atolls	fundamental – overwhelming source of employment – provides a substantial proportion of net export earnings - subsistence a significant component of GDP
Tokelau	12	1,500	Atolls	Some subsistence
Tonga	696	97,800	High islands – a few small atolls	Fundamental – agricultural led economic growth
Tuvalu	26	10,900	Atolls	some - subsistence and some cash income from copra
Wallis and Futuna	255	14,200	High islands and Atolls	Some subsistence
Vanuatu	12,189	177,200	High islands – a few small atolls	Fundamental – overwhelming source of employment – provides a substantial proportion of net export earnings - subsistence a significant component of GDP

2. CRITICAL ISSUES FOR FARMER-CENTRED DEVELOPMENT IN THE PACIFIC¹

- ***Ignorance of existing/traditional root crops based farming systems*** with modern agricultural development is often advocated without the "developer" understanding the ecological, economic and social importance, and rationale for the existing system. There is a need for developers to become familiar with existing systems before they try to "develop" them, or as is sometimes the case, in their ignorance, actually promote the deterioration or "underdevelopment" of existing systems.
- ***Simplification/monoculturation of household*** involving undue emphasis on monocultural production and a loss of polycultural diversity characteristic of all traditional PIC household farming systems. A return to polyculture and the protection of appropriate wild land areas must be seen as a priority while developing existing root crop farming systems.
- ***Overemphasis on cash incomes as a measure of farming system development.*** The overemphasis on increasing cash incomes seems to have led to declining total "real incomes" (i.e., cash plus non cash incomes) and the loss of subsistence affluence at the household level. The answer is to promote appropriate local and export cash cropping, while at the same time, as an integral component of a strategy to improve existing root crop based farming systems, protecting and enhancing non cash incomes in the form of subsistence production of a wide range of food plants and animals, medicines, fuels, construction materials, perfumes, and a countless array of other products that were, and still are, produced within traditional integrated farming or farm household systems.
- ***Poor/disintegrated agricultural extension services*** that are commonly narrowly focused, misinformed and lack an integrated or interdisciplinary approach. Most extension agents do not have the knowledge or training required to promote improved and sustainable farming technologies at the family farm or community level. Generally, too much time is spent on research stations. Rapid rural appraisal and participatory approaches offer great promise in rectifying the situation.
- ***Disease infestation epidemics*** affecting the PICs' most important cash and staple food crops (e.g., taro, coconuts, bananas, rice, cocoa, sweet potato, rice, watermelons, coffee, and ginger). Most of these have occurred when these crops have been grown as commercial monocultures. This can be addressed best through the adoption of appropriate systems of integrated pest management and the protection of the polycultural diversity within the farming system.
- ***Ecological deterioration*** in terms of accelerated erosion, coastal and inland deforestation, leaching, laterisation, overuse or shortage of surface and groundwater resources, saltwater incursion, salt-spray damage, soil and water pollution, genetic erosion, and loss of biodiversity. These are all problems that must be addressed using appropriate conservation and environmental management strategies.
- ***Agro-deforestation and deforestation*** involving the loss of trees, tree groves, and forests, in or bordering agricultural areas, and the failure to protect or replant trees in the context of modern agricultural development. The easiest way to address this problem is to have tree

¹ Based on Thaman, Randy R. (1996): *Critical Issues for Sustainable Farming Systems Development in the Pacific Islands*. In. Norman et al. (1996): *The Farming Systems Approach to Sustainable Agriculture Development in the South Pacific*. Proceedings of an FAO/IRETA Workshop. The University of the South Pacific, Suva, Fiji, 5-8, 1996.

protection and the deliberate planting of a wide range of traditionally important, and appropriate new, tree species as part of the process of farming systems development. The main point here is that it is far easier, and far less expensive, to protect trees or to protect and promote the existing diverse agro-forestry systems and associated agro-forestry knowledge than it is to replant trees or to introduce new trees that are not familiar to the farmers.

- **Natural disasters** involving tropical cyclones, floods, drought, saltwater incursion, and salt spray damage. The maintenance of crop diversity, the protection of surrounding coastal and inland forest stands, the planting of appropriate windbreaks, and the implementation of a range of traditional and modern strategies for preparing for, and rehabilitating after, natural disasters can help to minimise damage to farming systems.
- **Limited local markets** for agricultural produce. Because all farmers can produce the same crops for very limited markets, the best strategy to address this is to maintain a highly diversified system with a wide range of short- and long-term, seasonal and non-seasonal crops for both export and local sale.
- **Limited and unreliable export market** for primary products, for example, for copra, sugar, bananas, cocoa, and ginger. This, again, underlines the need for diversification and the maintenance of a stable subsistence base and diversified cropping for limited local sale, which can give farmers insurance against external economic factors beyond their control.
- **Deficiencies in infrastructural development** such as roads, wharves, airstrips, storage/freezing centres, market places, and processing plants. This impairs the marketing and distribution of agricultural products and access to agricultural inputs. The only solution to this is for governments to systematically address these deficiencies with appropriate rural infrastructural development initiatives.
- **Declining terms of trade** for the PICs. This occurs because where prices of exports (i.e., mainly primary agricultural products) have progressively deteriorated relative to the costs of imported consumer and capital goods, including the agricultural inputs needed for the production of the export crops. Once again, the only on-the-farm solution to this is to maintain a diversified base and to maximise self-sufficiency and minimise dependence on imported items.
- **Increasing economic dependency** as farm households and PICs become increasingly dependent on aid, loans, remittances, and trade. This is a trend that makes both farmers and countries increasingly vulnerable to indebtedness and dependence on unsustainable export agricultural systems that have negative effects on the agricultural environment and the biodiversity within the agricultural system.
- **Increasing food dependency** on imported human and livestock foods in both urban and rural areas. Increasing emphasis on food self-sufficiency and multi-species cropping systems could address this problem.

3. SUMMARY OF LAND TENURE IN PACIFIC ISLAND COUNTRIES

Cook Islands	More contemporary (western) approach to land ownership with associated culture clash, particularly with high numbers of absentee landlords (more than half Cook Islanders live overseas). This results in non-cultivation of potential agricultural land. Some individuals obtain additional occupation right over idle land. Some create leases by surrendering their occupational rights in order to create a securable legal entity for loan security purposes. Generally women now have equal rights of access to land as men.
Fiji Islands	Land vested in the indigenous people comprises 90% (by area) and is administered by Native Land Trust Board. Freehold land comprises 6% and Government (Crown) 4%, although the 415,000 acres of Freehold land is subject to legal contest. Land issues were significant in the attempted coups of 2000, despite the paramountcy of indigenous rights over customary land being explicit in the 1997 Constitution. Confusion prevails over the expiry of 13,140 agricultural leases, largely relating to cane production. The imminent expiry of residential leases on native land is yet to be addressed.
Kiribati	The 1971 Constitution addressed property acquisition, with land only to be taken for public purposes. Land has social, political and legal significance in traditional society with real estate title being distinguished as 'full' and 'divided'. One group cultivating and harvesting whilst the other group receives goods and services explains the division concept. Traditional ownership has diminished with land being marketable and traded. However land is traditionally held in multiple ownership that causes inheritance difficulties. Native leases are restricted to 21 years and 5 acres.
Marshall Islands	The 1978 Constitution ensures paramountcy of traditional and customary land tenure. Most land is transferred through matrilineage. The average land parcel is 1-2 hectares. Given the variations that occurred under German and then US administration, there is a restlessness to move to individual ownership by the younger generation. The legislature has the power to override customary principles.
Micronesia, Federated States of	Whilst tradition is supported by the Constitution, it does not address land issues. Matrilineal descent prevails, albeit administered by males, with most land held in group-ownership. There is a traditional expectation that if a husband dies before a wife, leviratic principles apply and the wife should remarry the husband's brother to protect the land rights of the children. The concept of 'sale' has been introduced to Truk.
Nauru	Economy totally reliant on status of depletion of the phosphate reserves. Land is not addressed in the constitution. Variable ownership patterns emerged, evolved from Anglo-German adaptations to customary ownership. Sales are rare, with exchange most common. Group ownership still exists and is administered under the 1976 Lands Act.
Niue	The Constitution allows for a Lands Court. A customary system of land ownership and transfer applies, whereby group title and adoption are important. Matrilineal and patrilineal transfer applies. Now absenteeism is an issue, but the family are allowed to take over the absentee's land.
Palau	Customary ownership prevails. Land cannot be alienated to non-Palauans, although aliens can be granted leases of up to 50 years. Only 8-10% of land has been registered. Previously the land was divided into, and administered by, village units with a concept of public community land. This public community land was transferred to 'district authorities' in 1974, akin to municipalities with land title boundaries being defined. Primarily patrilineal.

Papua New Guinea	The Constitution does not specifically address land rights, instead deferring to the adoption of custom as 'underlying law'. 97% of land is held under customary tenure, facilitating a subsistence agriculture base. Colonisation resulted in the establishment of Crown land upon which 99-year leases were created. Since the 1973 land commission, a 'lease and lease-back' system has been established to generate some security through 25-year leases. Traditional ownership complicated by polygamy.
Samoa	Land is divided into customary (81%), freehold (4%), Samoa Land Corporation (4%) and public (Government, 11%). The Constitution recognizes that customary <i>matai</i> land should be held and administered under customary law. Customary land cannot be alienated. The traditional cultural social system remains intact despite foreign influences. There is a right for Samoans to use, live and build dwellings on family provided they serve the <i>matai</i> . Land inheritance is bilineal with women also acquiring land rights through their lineage.
Solomon Islands	Land ownership is not specifically addressed in the 1975 Constitution. Land is communally owned under a 'kinship' arrangement, although some individual ownership does exist (88% customary whilst 12% is registered). Current major tension prevails in respect of 'taken' land and desire for compensation in Guadalcanal. Lands and Titles Act under review as part of Honiara Peace Accord.
Tonga	Under the 1976 Constitution, all land is vested in the Crown. Women are neglected in land matters. All males over 16 years are entitled to an 8-acre allotment for cultivation and a town allotment for a dwelling.
Tuvalu	The constitution does not address land issues. Traditional land rights were vested under chiefly stewardship, which has declined through Christianity and democracy. A <i>matai</i> system applies. Customary rights can permit the extended family to use a members land parcel. Whilst preference is given to the male line, female inheritance does occur. Absenteeism is addressed under recent legislation, which permits the land to be utilized productively through leases to government, churches and companies.
Vanuatu	All land belongs to the indigenous customary owners, and land tenure is based on customary rules. All alienated land was abolished at independence, a solution that could potentially be followed elsewhere in the Pacific. Both patrilineal and matrilineal land rights apply in differing parts of the countries.

Source: Boydell, 2000.

4. RECENTLY APPROVED AND ON-GOING TCP & TELEFOOD PROJECTS

The Sub-Regional Office for the Pacific is responsible for co-ordinating many activities to be implemented for its member countries. To assist the member countries with the daily processing of such activities, two key personnel are responsible for the daily liaison, review, appraisal and processing of all proposals, through to the implementation stage.

Together with the responsible technical officer they would monitor and report on the overall implementation and effectiveness of the operation of the programmes and projects, including inter-regional or regional projects.

SAPA has processed a number of proposals for Telefood and TCP Projects for member countries in the period 2000-2001, and a total of 28 Telefood projects and 3 TCP projects were approved within the same period, and some are awaiting approval from FAO headquarters. Some projects have been put on hold due to member country personnel being absent or political unrest.

TCP projects initiated/ongoing for 2000-2001 by sector

Fisheries

- TCP/TON/8923 (USD 135,000): Assistance in Fisheries Legislation
- GCP/INT/575/DEN (USD 4.9 million) : Training in Fish Stock Assessment and Fishery Research Planning

Forestry

- TCP/VAN/8921 (USD 179,000): Assistance in Forestry Legislation
- GCP/RAS/134/AsDB (USD 4 million): Forestry Research Support Programme for Asia and the Pacific (Phase II)

Plant Protection and Quarantine

- TCP/FIJ/0065 (USD 45,000) - Survey of Honeybee Pests and Diseases
- TCP/FIJ/8921 (USD 120,000) - Integrated Control of the African Tulip Tree
- RAS/97/331 (USD 1.7 million) - FAO/SPC/AusAID/UNDP Regional Management of Fruit Flies in the Pacific
- TCP/KIR/0165 (A-USD 279,000) Strengthening Ecologically-based management of rat (*Rattus rattus*, *Rattus exulans*) in Coconut

Agriculture

- TCP/CKI/0066 (USD 151,000) - Agriculture Census and Statistics
- TCP/CKI/8921 (USD 76,000) - Assistance in the Agriculture Strategic Plan Formulation in Support of Food Security
- TCP/SAM/8921 (USD 244,000) - Agricultural Census and Statistics
- SAM/98/002 (USD 703,000) - Fruit Tree Development
- SPFP/PNG/4501 (USD 744,730) - Special Programme on Food Production in Support of Food Security in Papua New Guinea
- TCP/PNG/8821 (USD 279,000) - Small Scale Irrigation Development

Emergency

- TCP/FIJ/8922 (USD 267,000) - Urgent Provision Agricultural Basic Inputs to Drought Affected Farmers
- OSRO/FIJ/901/FIN (USD45,000) - Strengthening of National Capacity for Emergency Disaster Preparedness and Mitigation in Agriculture
- TCP/TON/8922 (USD 89,000) - Urgent Provision of Agricultural Inputs to Small Scale Farmers Affected by Tropical Cyclone Cora

Farming System and Marketing

- TCP/SOI/8921 (USD 270,000) - Capacity Building for Farming Systems Development in Support of the Special Programme for Food Security
- TCP/VAN/6711 (USD 224,000) - Agricultural Marketing Improvement
- TCP/SOI/6711 (USD 167,000) - Assistance to prepare a food production and nutrition policy
- TCP/RAS/4452 (USD 288,000) - Farming Systems training for Sustainable Development in the South Pacific

Livestock

- TCP/CKI/9065 (USD 93,000) - Goat Industry Development Programme
- TCP/TON/8821 (USD 228,00) - Small Holder Forage based Dairy Production
- TCP/TON/6714 (USD 96,000) - Assistance in Dairy Processing (Phase II)
- GCP/SAM/007/FRA (USD 270,000) - Establishment of a Regional Reference Centre for Milk Processing and Marketing (Tonga/Samoa)

TELEFOOD PROJECTS by country

Cook Islands

- TFD-97/CKI/001 (USD 7,250) Establishment of Community Banana Block for Supply of Planting Materials for Women's Groups
- TFD-97/CKI/002 (USD 9,950) Establishment of a Meat and Daily Goat Parent Stock.
- TFD-97/CKI/005 (USD 6,400) Establishment of Rootcrop Nursery on an Atoll to Generate Propagation Planting Materials
- TFD-97/CKI/004 (USD 6,640) Beekeeping Demonstration and Food Substitution
- TFD-98/CKI/004 (1,666) - Fish Aggravate Device
- TFD-98/CKI/003(6,560) - Establishment of a Cassava processing Plant for the Vainetini of Puaikura to enhance Food Security and Household Income
- TFD-99/CKI/001 (USD 8,741) - Strengthening Manihiki's Food Security through the Establishment of a Community Nursery and Enhancement of the Atoll's Home Gardening Programme.
- TFD-99/CKI/002 (USD 6,370) - Establishment of a Food Crop Community Market for the Au Vaine (Women's Group) of Nikao Panama Village
- TFD-99/CKI/003 (USD 5,095) - Establishment of a Small Cassava/Starch Processing Plant for the Te Ivi o Kau Women's Group, Aitutaki
- TFD-99/CKI/004 (USD 5,095) - Establishment of Home Vegetable Gardens for the Vainetini Women Groups of the Island of Mangaia to Improve Nutrition, Pursuit of Food Security

Fiji

- TFD-97/FIJ/003 (USD 9,900) Vuo Village Women's Project Small Scale Commercial Piggery Farm
- TFD-99/FIJ/001 (USD10,000) Koroivonu Rural Water Utilisation Project
- TFD-99/FIJ/002 (USD 7,166) Mataqali Veiniumiu sheep project
- TFD-99/FIJ/003 (USD 7,224) Diriniu Horticultural project

Kiribati

- TFD-99/KIR/001 (USD 9,800): Establishment of root crop nurseries to generate planting materials to assist household food production on selected atoll islands.

Niue

- TFD-99/NIU/002 (USD 9,750) - Icing of Fishing products
- TFD-99/NIU/003 (USD 9,370) - The establishment of Taro Cleaning Centres

Papua New Guinea

- TFD-00/PNG/003 (USD 1820) - Commercial Poultry farming at Nainumu, Central Province
- TFD-99/PNG/002 (USD 1925) - Pilot Commercial farming
- TFD-99/PNG/003 (USD 1910) - Pilot Commercial Poultry farming
- TFD-99/PNG/004 (USD 3,765) - Women involvement in Nurseries and village livestock
- TFD-99/PNG/005 (USD 8,610) - Fruit tree seedling production and distribution at Eight-mile Port Moresby

Samoa

- TFD-97/SAM/001 (USD 8,900) - Small Scale Commercial Beekeeping
- TFD-97/SAM/004 (USD 9,105) - Lagoon Giant Clam Nursery Development in Fusi Safata Village
- TFD-97/SAM/003 (USD 6,250) - Fruit and Vegetable Gardening Aualuma a Sagone
- TFD-97/SAM/005 (USD 5,925) - Lagoon Giant Clam Nursery Development in Satoalepai Village
- TFD-98/SAM/001 (USD 8,900) - Small Scale Commercial Piggery for Faleasiu-uta Village.
- TFD-98/SAM/004 (USD 3,526) - Taro Fili Plantation Project for Tapueleele Village on Savaii
- TFD-99/SAM/001 (USD 10,000) - Pig Livestock Project for YMCA in Samoa
- TFD-99/SAM/002 (USD 7,015) - Chicken Livestock Project for YMCA in Samoa
- TFD-99/SAM/004 (USD 5,170) - Banana Development for Savaia Village
- TFD-99/SAM/005 (USD 9,300) - Small scale commercial piggery project for Vaitoomuli village.
- TFD-00/SAM/001 (USD 4,355) - Chicken Livestock project for Neiafu society
- TFD-00/SAM/002 (USD 4,802) - Mixed cropping development project for Fagalii-uta farmers
- TFD-00/SAM/003 (USD 3,800) - Multiplication of Taro project for Magiagi farmers group
- TFD-00/SAM/004 (USD 6,474) - Small scale commercial piggery for Saanapu village
- TFD-00/SAM/005 (USD 5,900) - Small scale commercial piggery for Samatau farmers group
- TFD-00/SAM/006 (USD 3,943) - Taro Fili project for Aleisa womens group

Solomon Islands

- TFD-97/SOI/005 (USD 5,300) - Kia Village Fishing Project-Santa Isabel

Tonga

- TFD-97/TON/015 (USD 7,500) - Improved Drying of Fish Facility
- TFD-97/TON/004 (USD 8,000) - Vegetable fruit for Holongo Village Women's Group
- TFD-97/TON/012 (USD 8,000) - Fruit and Vegetables Seedling Nursery Establishment - Pangau Communities
- TFD-97TON/013 (USD 7,490) - Fruit and Vegetable Gardening Tongatapu and Eua.

- TFD-99/TON/001 (USD 8,900) - Vai Ko Mokasia Ho'hata village small scale piggery
- TFD-99/TON/002 (USD 7,600) - Alonga group poultry project
- TFD-00/TON/001 (USD 9,500) - Small scale commercial piggery

Vanuatu

- TFD-97/VAN/001 (USD 9,500) - Yam and Banana Production for the Port Vila Markets
- TFD-99/VAN/001 (USD 9,500) - Onesua horticultural project

5. THE SPECIAL PROGRAMME FOR FOOD SECURITY IN PAPUA NEW GUINEA

A. BACKGROUND

FAO and the Department of Agriculture and Livestock (DAL), in collaboration with the Department of Primary Industries in Huon and Kaiapit districts of Morobe Province and other collaborating partners (particularly the Taiwanese Rice Improvement Programme), began a pilot phase of the SPFS in the Markham Valley at the end of 1996. The purpose was to see the pilot phase to improve food security, reduce year to year variability in food production and improve people's access to food in the target areas. The major activities of the pilot phase have included constraint analysis of the farming systems; introduction of improved technologies for rice and vegetable production, construction and development of small irrigation schemes and integration of small livestock/inland fisheries into the local farming systems. A strong training programme has supported these activities.

More specifically, the present SPFS in PNG aims to “address the assessment of natural and socio-economic resources in the Markham Valley, to be used as the basis for participatory planning of the expansion phase; analyse resource use and management by existing farming systems; analyse constraints to increased production and productivity at both the policy/institutional and the household level; search for improvements, demonstrate promising technologies and adjustments on-farm; monitor and evaluate tested and demonstrated improvements; extend improvements on a pilot scale to farm families; explore means to activate necessary support systems and sensitise the policy level; monitor and evaluate experience; and prepare the ground for wider application of improvements in the expansion phase”¹.

The Government of PNG identified areas in two districts of the Markham Valley of the Morobe Province as the initial pilot sites for the SPFS in PNG, with the ultimate aim of achieving “greater self-sufficiency in food and food security at both national household levels through increased agricultural production and productivity and a rise in rural incomes and standards of living”. The development of SPFS activities in the pilot sites has been closely associated with the DAL – Grain and Rice Project centred at ERAP Research Station at Wawin. The DAL-ERAP programme is conducted with the support from the Taiwanese Rice Mission in Lae, PNG. The approach has been participatory and holistic and based on human resources development, in order to ensure continuity and sustainability of the process of agricultural development in the future.

The Markham Valley was selected as the initial site for the SPFS in PNG because of its large open land areas and abundance of surface water, holding considerable potential for the development of mixed farming systems in support of national food security. Practically, all open agricultural lands are sparsely populated. Each cluster of cleared land represents a hamlet composed of a small number of farm families. The low availability of skilled farm labour in these areas will create a major limitation to the development of partial or fully commercial farming systems.

¹ Papua New Guinea: Special Programme on Food Production in Support of Food Security. Pilot Phase Plan of Operation, FAO, 1996

In general, all the pilot sites are small traditional food gardens with mixed farming systems. A wide variety of high-value, nutritious vegetable food crops are grown. Peanut is a major food crop that is grown, with maize, rice and cattle rearing providing a commercial option. However, the intervention of the ERAP Grain and rice programme, which provides irrigation facilities for the use of water from shallow well and rivers, encourage the farmer to have greater interest in the semi-commercial production of rice and some vegetable crops.

B. NATIONAL INSTITUTIONAL STRUCTURE

The Government of Papua New Guinea has set up the following national institutional structure in order to ensure **oversight and efficient guidance** of the Special Programme for Food Security:

- A **Programme Steering Committee** including representatives at national, provincial, and district levels. The Steering Committee, in coordination with FAO, shall provide oversight guidance and supervision in all stages of the programme, from formulation, to implementation, monitoring and evaluation.
- A **Technical and Management Committee** at provincial level to provide technical guidance and management assistance for the implementation and follow-up of the Programme in close collaboration with the Steering Committee.
- Two **Programme Implementation Groups**, one in **Kaiapit** and the other in **Huon** District, directly involved in the Programme implementation activities in both districts under the guidance and support of both the Steering and the Technical and Management Committees.
- A **National Programme Coordinator** to oversee programme implementation on a full-time basis, and to coordinate between the FAO and the above supervisory committees.

The Government has accepted a participatory approach in the implementation of the SPFS in Papua New Guinea, and **NGOs and farmers' representatives** are therefore included as members of these bodies as appropriate. The same arrangements would obtain for the implementation of the SSC.

In the absence of an FAO representation in Papua New Guinea, in addition to the above national institutional structure, the coordination and support of the **UNDP** Office in Port Moresby is essential for the success of the SPFS and SSC programme. In particular, the UNDP Office is expected to be working closely with the national authorities in providing coordination of national and FAO inputs to the SPFS and SSC, and to actively participate in the monitoring and evaluation of programme implementation.

C. PROGRAMME COMPONENTS

Water Control

The ERAP research station and the Taiwan-sponsored farm production improvement project are the major institutions that actively promote and support the development of shallow ground water irrigation system. The research and extension staff at the ERAP research station provides farmer training and assistance in the implementation of small-scale water harvesting and control technologies.

Pump-driven small-scale irrigation schemes have been developed in each of the six SPFS pilot sites. Water is withdrawn from groundwater or from rivers by 5-6 horsepower engine pumps. In at least two villages (Jumni and minimiam Villages) irrigation water is drawn from a 20-25 meters deep well with a submersible pump. The details of the irrigation schemes in the six SPFS pilot sites are given below:

Small-Scale Irrigation Schemes and Crops Planted

Location	Water Sources and Power	Method of Application	Crops Planted	Remarks
1. Naratoma Village	Groundwater (5 Horsepower stationary engine and pump)	Direct, by hose	Rice, vegetables and legumes (mainly peanut)	About 55 tons Rice seeds stored and for use by some 150 farmers (0.2 ha/farmer)
2. Ragiampur Village	River (5 Horsepower stationary engine and pump)	Direct, by hose	Rice, vegetables	About 2-3 tons of paddy (expected yield per hectare)
3. Jumni Village	Groundwater (Deep well 20-25 meters) with submersible pump	Water is stored in two elevated water tanks (about 2000-3000 gallons capacity)	Vegetables (tomato, green pepper, onion)	Possible zinc and magnesium deficiency is observed
4. Minimiam Village	Groundwater (Deep well 20-25 meters deep), with submersible pump	Irrigation pipe laid out in farm and water is applied by hose	Vegetables (tomato, green pepper, onion)	
5. Mutzing Village	Groundwater, shallow well (5 meters deep) with home-made cement casing; water drawn by 5 HP pump engine	Irrigation pipe lay out in farm and water is applied by hose	Rice, Vegetables (tomato, green pepper, onion)	Possible zinc, boron and magnesium deficiency is observed
6. Ragiampur Village	River (5 Horsepower stationary engine and pump)	Irrigation pipe laid out in farm and water is applied by hose	Rice (estimated yield, 3529 kg per hectare) vegetables	Possible zinc, boron and magnesium deficiency is observed

Crop Intensification

Agricultural crops are grown in small garden plots where the production efforts are mainly focused on providing food for the farm family. The garden plots are either located separately from or as part of the homelots. The sizes of individual farm lots generally do not exceed 0.2 hectares and are planted with variety of food crops. Traditional food crops grown in home gardens include banana, sweet potato, cassava, taro, yams, tomato, onion and other vegetables, grown either in sequence or in separate garden plots. Rice and some other vegetables have been more recently introduced as part of the small-scale irrigation package and have become an acceptable part of the cropping system. Some associated tree crops are also found, such as neem trees, jackfruit, guava and other naturally growing food tree crops. Betel nut is grown widely as an important cash crop.

Farms are mainly subsistence and cultivation is undertaken in small, often isolated, areas. Farmers have inadequate farm tools and are practically without draft animals for land preparation and transport of their fresh farm produce. Many farmers have already taken the initial steps to move from a mere subsistence home food garden farming system to semi-commercial farming where crop production is aimed at providing sufficient food and nutrition for the family as well as producing marketable surpluses for added household income. The move to semi-commercial farming is based on both intensification and expansion of cultivated area. However, lack of capital for investment in farm machinery (tractors, etc.) and lack of available farm labour create significant constraints to larger scale farm development. The introduction of animal draft power would be desirable intermediate step that farmers could afford in graduating to commercial farming.

It appears that the initial effort of the farmers to switch from small subsistence home food-gardens to semi-commercialised farming may have to contend not only with technology and land tenure issues, but also the low purchasing capacity of rural communities and the need to identify urban markets that can absorb the potentially large variety of farm products. There are clear indications that land tenure, which is controlled by rules of land ownership by the Tribal Clan, is the most outstanding issue that may limit the full and accelerated transformation of the traditional subsistence, food-oriented production system to semi-commercial, food-cum-income production oriented farming. It is also quite evident that while the farmers have started diversifying food production in home gardens, farm technologies and water management and quality control, are still inadequate to sustain long-term, high-farm productivity.

The inclusion of rice in the traditional food systems of small farmers in PNG has created a need to consider the extent to which rice cultivation should be promoted under the National Policy on Food Security. Multiple cropping/mixed cropping systems have been aptly demonstrated and adopted by farmers under the SPFS initiative. These include the following component crops: cereals (rice, corn, sorghum), legumes (peanuts, beans), vegetables (bell pepper, onion, tomato, eggplant, cabbage, spinach, cauliflower), root and tuber crops (taro, sweet potato, yam, cassava), cucurbits (watermelon, squash) and fruit crops (banana, papaya) at the SPFS sites.

The provision of shallow tubewell pumps and engines under the SPFS has created awareness by farmers of the need for irrigation to sustain farm intensification and diversification and for protecting their crops from the extreme climate events, such as prolonged drought and El Nino. There are known major pests and diseases (except possibly for rats) that will hamper the

productivity of agriculture and fishery industry in PNG that need to be controlled under an appropriate IPM strategy.

Agricultural Diversification

Commercial livestock production (cattle, pigs and poultry) occupies large portions of the Markham Valley. Land devoted to the poultry and pig industries are quite developed and are employing relatively modern technologies. However, the cattle industry use extensive grazing systems and there has been little investment in improved pastures. The cattle are grown under open range conditions where they are dependent on poor quality native grasses.

Pig raising is the traditional livestock enterprise in villages. Pigs are culturally a very important part of the tribal household. Native breeds of pigs and poultry are raised under extensive systems of management in villages. Private companies in the Markham Valley have developed large commercial poultry production facilities. At the village level, demonstrations of improved livestock (poultry, pigs and rabbits) and aquaculture systems have been more recently introduced into the SPFS. The focus to date has been on multiplying and distributing small livestock and fingerlings to farmers. Integration of improved livestock and aquaculture production into the farming systems to attain diversification has therefore not yet developed to any great extent.

The major areas of technical assistance required to enhance the present animal diversification activities of the present SPFS are for:

Improving animal nutrition and feeding practices

- Developing systems to improve feed formulation from local feed resources, and
- Improving animal husbandry techniques and practices for intensification of animal production systems, at village level. Training of government extension staff and farmers in technical aspects associated with these improvements is also required. Technical assistance is also required to improve the technologies of raising freshwater fish in ponds in selected villages.

An initial farming systems analysis was conducted in two Pilot Districts of the SPFS in the Markham Valley in August/September 1996. The detailed results of this study have been documented¹. The general outcome of the farming systems and participatory constraints analysis identified low productivity and production (closely related to poor farmer motivation) as key problems affecting food security and hampering increased farm income. The situation is caused by biophysical, socio-economic, political and cultural factors. The main constraints identified by the farm household members were interpreted as follows:

- Unstable yields as a consequence of increasing soil erosion, declining soil fertility, increasing disease and pest pressure as a result of extreme weather conditions and landscape, the lack of agricultural inputs and appropriate

¹ Initial Farming Systems Analysis in two Pilot Districts in the Markham Valley, Special Programme on Food Production in Support of Food Security Papua New Guinea, SPFP/PNG/4501, FAO/DAL Food Security Program, Erap Station, Markham Valley, August/September, 1996.

machinery (for land preparation and irrigation), partly related to unavailability of credit for the majority of farmers and the low farm management skills (in economic and technological terms).

- Low farm management skills among the bulk of Markham Valley farmers are a result of ineffective extension and research support. Farmers lack knowledge and training in improved and sustainable agricultural cultivation practices (e.g. timely planting, drainage, contour ploughing, integrated pest management as well as basic production economics).
- In addition, weak linkages between farmers, extension and research result in inadequate research results and extension messages and methods. Declining insecure and/or untimely budgetary allocation are causes for under-staffing, lack of mobility by extension staff, lack of training, and little motivation among research and extension staff.
- Poor infrastructure, high production and transport costs, lack of downstream processing and market related insufficiencies are major causes for insecure farm incomes.
- Cultural related constraints prevent the formation of farmer cooperatives, lead to fire hazards and are the major source of land disputes.

For the demonstration phase of the SPFS, the stabilisation and improvement of yields and upgrading of farmer as well as research and extension staff skills were considered the major entry point and first step for overcoming existing weaknesses. As a second step, it was concluded that the more socio-economic and politically related constraints have to be overcome. Market and marketing related constraints were considered the most crucial, as they form the major bottleneck for improved and secure farm household incomes from agricultural and horticultural production.

Based on this situation, the Programme Implementation Groups and farmers identified options for improvements and ways and means of how the SPFS could assist in increased production and productivity. Major components identified for the first year of the SPFS were:

- Establishment of a “model farm” on station and on farmers’ fields for demonstration and extension purposes.
- Demonstrations for three different types of farm household groups on improved technologies for cereals and root and tuber crops.
- Field days and study tours for farmer couples.
- Training for extension staff and selected farmers in production economics and marketing.
- Immediate realisation of two pending studies: social assessment and soils and water management.

6. THE FARMER FIELD SCHOOL APPROACH

In contrast to the limited success achieved in past years by conventional extension methods, Farmer Field Schools (FFS), based on an innovative, participatory, learning by discovery approach, have been the success story of the 1990's. The FFS approach was developed by an FAO Project in South East Asia as a way for small-scale rice farmers to investigate, and learn, for themselves the skills required for, and benefits to be obtained from, adopting integrated pest management (IPM) practices in their paddy fields. Subsequently the FFS approach was extended to several countries in Africa and Latin America. At the same time there has been a shift from IPM for rice based systems towards other annual crops, vegetables and cotton and the curriculum has been enriched with other crop management aspects. More recently farmer field schools on the principles and practice of integrated soil management have been piloted in Asia¹. Where it has been found that the FFS approach, although originally developed for IPM purposes, provides a proven people centred learning methodology whereby farmers can learn about, and investigate for themselves, the costs and benefits of alternative land husbandry practices for sustaining and enhancing farm productivity.

The FFS approach offers an alternative to the conventional extension approach in which farmers are passive recipients of externally formulated extension messages, that are demonstrated to farmers by the field assistant. The approach is aimed at exposing farmers to a learning process in which they are gradually presented with new technologies, new ideas, new situations and new ways of responding to problems. The knowledge acquired during the learning process can be used to build on existing knowledge enabling farmers to adapt their existing technologies so that they become more productive, more profitable, and more responsive to changing conditions, or to adopt new technologies. There is now a rapidly growing awareness that a much more participatory approach is required if extension recommendations are to be fully acceptable - technically, socially, environmentally and economically.

CHARACTERISTICS OF THE FARMER FIELD SCHOOL APPROACH

The characteristics of the approach are as follows²:

- Farmers as Experts. Farmers 'learn-by-doing' ie. they carry out for themselves the various activities related to the particular farming/forestry practice they want to study and learn about. This could be related to annual crops, livestock/fodder production, orchards or forest management. The key thing is that farmers conduct their own field studies. Their training is based on comparison studies (of different treatments) and field studies that they, not the extension/research staff conduct. In so doing they become experts on the particular practice they are investigating.

¹ Through the regional Farm-Centred Agricultural Resource Management Programme (FARM) of eight Asian countries co-ordinated by the FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.

² The notes in this, and the following, section are largely derived from material to be found in: Indonesian National Integrated Pest Management Program. 1993. *IPM Farmer Training: The Indonesian Case*. FAO-IPM Secretariate Yogyakarta Indonesia.

- The Field is the Primary Learning Material. All learning is based in the field. The rice paddy, yam plot, maize field, banana plantation, coffee/fruit orchard, vegetable garden, woodlot or grazing area is where farmers learn. Working in small sub-groups they collect data in the field, analyse the data, make action decisions based on their analyses of the data, and present their decisions to the other farmers in the field school for discussion, questioning and refinement.
- Extension Workers as Facilitators Not Teachers. The role of the extension worker is very much that of a facilitator rather than a conventional teacher. Once the farmers know what it is they have to do, and what it is that they can observe in the field, the extension worker takes a back seat role, only offering help and guidance when asked to do so. Presentations during group meetings are the work of the farmers not the extension worker, with the members of each working group assuming responsibility for presenting their findings in turn to their fellow farmers. The extension worker may take part in the subsequent discussion sessions but as a contributor, rather than leader, in arriving at an agreed consensus on what action needs to be taken at that time.
- Scientists/Subject Matter Specialists Work With Rather Than Lecture Farmers. The role of scientists and subject matter specialists is to provide backstopping support to the members of the FFS and in so doing to learn to work in a consultative capacity with farmers. Instead of lecturing farmers their role is that of colleagues and advisers who can be consulted for advice on solving specific problems, and who can serve as a source of new ideas and/or information on locally unknown technologies.
- The Curriculum is Integrated. The curriculum is integrated. Crop husbandry, animal husbandry, horticulture, silviculture, land husbandry are considered together with ecology, economics, sociology and education to form a holistic approach. Problems confronted in the field are the integrating principle.
- Training Follows the Seasonal Cycle. Training is related to the seasonal cycle of the practice being investigated. For annual crops this would extend from land preparation to harvesting. For fodder production would include the dry season to evaluate the quantity and quality at a time of year when livestock feeds are commonly in short supply. For tree production, and conservation measures such as hedgerows and grass strips, training would need to continue over several years for farmers to see for themselves the full range of costs and benefits.
- Regular Group Meetings. Farmers meet at agreed regular intervals. For annual crops such meetings may be every 1 or 2 weeks during the cropping season. For other farm/forestry management practices the time between each meeting would depend on what specific activities need to be done. In the case of identifying and learning about specific forms of soil degradation, such meetings would be related to critical periods of the year when the symptoms and effects can be observed and discussed in the field.

- Learning Materials are Learner Generated. Farmers generate their own learning materials, from drawings of what they observe, to the field trials themselves. These materials are always consistent with local conditions, are less expensive to develop, are controlled by the learners and can thus be discussed by the learners with others. Learners know the meaning of the materials because they have created the materials. Even illiterate farmers can prepare and use simple diagrams to illustrate the points they want to make.
- Group Dynamics/Team Building. Training includes communication skills building, problem solving, leadership and discussion methods. Farmers require these skills. Successful activities at the community level require that farmers can apply effective leadership skills and have the ability to communicate their findings to others.

Farmer Field Schools are conducted for the purpose of creating a learning environment in which farmers can master and apply specific farm and land management skills. The emphasis is on empowering farmers to implement their own decisions in their own fields.

Some Key Concepts and Principles of the Farmer Field School Approach

The following are some of the key concepts and principles underlying the FFS approach:

- Communication. Communications in extension have come to mean the marketing of informational packages. Messages are crafted to focus on a particular aspect, put on flip charts, the mass media, or on posters that are developed in central offices. In addition they may be disseminated to farmers via 'model' demonstration farms where the farmer is effectively serving as a labourer, merely following the instructions of the research or extension worker. This is not education and use of these communication approaches does not educate a farmer, they treat him or her as a target. The farmer is used by others to implement their decisions in his or her field.
- Education is the most important thing that an 'extension' programme can do and the farmer is the most important person being educated. Within the educational approach, communication must take place at the field level, dealing with field issues in a dialogue with learners. The communications model cannot do this. However it can be done within the context of the Farmer Field School. The field school deals not only with the practice that farmers want to learn about but with farmers as farmers. Such farmer field schools are conducted for the purpose of helping farmers to master and apply field management skills. The farmer implements his or her own decisions in his or her own field.
- Problem-Posing/Problem-Solving. Within this form of training problems are seen as challenges, not constraints. Farmers groups are taught numerous analytical methods. Problems are posed to groups in a graduated manner such that trainees can build confidence in their ability to identify and tackle any problem they might encounter in the field.

- Field Based Education. Put farmers in a classroom and if they have been to school, what they remember is the bad times they probably had in the classroom. Education in the classroom can only mimic the natural world. Putting the classroom in the field allows the field to be the learning material and the farmer to be able to learn from real live examples. Putting the classroom in the field means that the educator (extension worker) must come to terms with the farmer in the farmer's domain.
- Principles not Packages. Educational programmes should not promote packages in which are presented weekly atomised messages. Educational programmes should take a broad integrated approach to working with farmers, based on the belief that farmers want to learn to be better farmers and wish to optimise their incomes. The FFS approach teaches principles, any activity encompasses several principles, principles bring out cause and effect relationships, principles help farmers discover and learn, principles help farmers to learn so that they can continue to learn. Packages have nothing to do with learning and do not encourage learning, in the long run they are neither cost effective nor effective at improving the quality of farmers management skills. Skilled farmers can optimise yields independently of others. Packaged approaches increase the dependence of farmers on central planners.
- Training Driven Research. Research must be responsive to field needs. By and large researchers have got it backwards. Research programmes in agriculture drive the extension or education programme that the research should actually be serving. What farmers need to know to be able to operate sustainably, both environmentally and economically, should drive the research programme. In the FFS approach research is based on training needs or is a part of the training itself. Through their participation in the field schools farmers can become a part of a wider programme of local, district and national research networks investigating agricultural production problems and developing local solutions for improving the sustainability and productivity of the country's farming systems.

Changing Extension Role From Instructing to Facilitating

The attitudes and skills of most extension workers will need to be radically modified, if they are to successfully change from being “instructors” to becoming FFS “facilitators”. The role of the facilitator and his/her relationship to farmers contrasts significantly from that of the conventional extension instructor or trainer. The instructor imparts knowledge to farmers who adopt a passive role of merely receiving information. In contrast, a facilitator creates conditions for farmers to learn, by arranging opportunities for farmers to observe and interpret differences in soil conditions and crop performance, by carrying out simple tests and exercises, and through subsequent discussions. The facilitator encourages farmers to adopt an active role in the learning process.

The main features of the attitude and role of a facilitator are:

- to accept that there is no monopoly of wisdom or knowledge on the part of the facilitator;
- to listen to farmers and respect their knowledge, experiences and perceptions;
- to give farmers the confidence to share their knowledge and experiences;
- to create suitable conditions and activities from which farmers can learn;
- to be responsive to farmers’ needs and flexible in organising the FFS; and
- to increase farmers’ knowledge, problem-solving ability, capacity for innovation and skills so that the facilitator becomes redundant.

Structuring and Running Farmer Field School Sessions

Each session commences with one participant summarising the findings of the previous session. The facilitator then introduces the activity for the present session, and explains what the participants will be doing and what they can expect to achieve. This effectively creates a “contract” between facilitator and participants.

For discussions, and if possible for field activities, it is beneficial to divide the participants into groups of 3-5 persons so that all participants are obliged to actively participate. One person is nominated to present the group’s findings to the whole assembly, and the nominated person rotates within the group. It is often beneficial for women to be in separate groups to the men, as their perceptions of problems are frequently different, and they often feel more able to express their opinions in the absence of men.

To help participants feel less inhibited and more confident at expressing their opinions and relating their experiences within a group, various activities such as games, singing, plays and miming may be introduced, where the activities focus on soil fertility management problems and their solutions. In this way participants also become accustomed to working together as a group.

Opening and Closing Ceremonies

The presence of dignitaries from the municipality and local communities at the opening and closing ceremonies of the FFS is important as it lends credibility to the FFS and attaches importance to improving soil fertility management. All participants who satisfactorily complete the course should receive a "Diploma in Improved Soil Management" at the closing graduation ceremony. This will provide recognition to the participants of the importance attached by the community to their achievements, and will probably be the first time their skill as a farmer has been recognised.

7. LIST OF ALL DOCUMENTS AVAILABLE ON THE CD

(Including Additional Bibliographic References)

REGIONAL PROGRAMME FOOD SECURITY- RPFS

Main Report
Executive Summary

Annex 1 : Country Notes

Annex 2 : Agricultural Development and Food Security
Annex 2 : Appendices 1-6
Annex 2: Appendix 7 (list of documents available on CD)

Annex 3 : Trade Issues facing Pacific Islands Countries

Annex 4 : Regional Cooperation

Annex 5 : Cost Estimates
Cost Tables

Annex 7 : Logframe

CD Home Page (PPT)

Power Point Presentation (PPT)

FAO

WORLD FOOD SUMMIT FOLLOW-UP [World Food Summit.htm](#)

Strategy papers for National Agricultural Development Horizon 2010 :
Cook Islands, Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu,

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[UN System Network on Rural Development and Food Security](#)

Food Insecurity Vulnerability Mapping System ([FIVIMS](#))

International Plant Protection Convention ([IPPC](#))

Special Programme for Food Security

[TELEFOOD](#) - Samoa

[Farmers Field Schools](#) Guideline

[Organic Agriculture](#)

SAPA – Sub regional Office – Apia SAMOA

Papers presented to the Ministries of Agriculture meeting in Vanuatu, July 2001

[Forestry](#)

[Fishery](#)

[Farming Systems](#)

[Plant Protection](#)

[Final Report of the Ministers Meeting](#)

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TCP projects

[National fisheries – PNG](#)

[Farming system – Vanuatu](#)

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RAPA

Improving nutrition through home gardening: [A training package](#)

[Food Security Situation And Issues In Asia And The Pacific](#)

REGIONAL INSTITUTIONS AND DONORS

Pacific Islands Forum Secretariat

Secretariat of the Pacific Community

- Coastal Programme

- [Plant Protection](#)

- [Training needs assesment for value adding](#)

- [Kawa, an update](#)

European Union

- [Development of Sustainable Agriculture Programme](#)

- [Plant Multiplication Network](#)

Australia - [AusAid](#)

New Zealand - [NZODA](#)

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PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 3
TRADE ISSUES FACING PACIFIC ISLAND COUNTRIES

ANNEX 3

TRADE ISSUES FACING PACIFIC ISLAND COUNTRIES

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APPENDIX: Uruguay Round Agreements

ANNEX 3

TRADE ISSUES FACING PACIFIC ISLAND COUNTRIES

A. AGRICULTURAL EXPORTS

1. In most Pacific Island Countries (PICs) agricultural exports account for over 50% of total exports. Principal agricultural export commodities include fish, timber, copra, coffee, cocoa, sugar, coconut oil, fresh and canned fruit. Minor commodities, albeit of importance for the exporting country concerned, include beef, black pearls, sea weed, prawns, coconut cream, palm oil, squash and vanilla. Largest exporters are Papua New Guinea, Fiji and Solomon Islands, which together account for over 90% of total annual exports from the region. The balance is made up mainly by Vanuatu and Nauru. As PICs are at the same time importers of food stuff and of other items, including machinery and equipment, fuel and manufactured goods, their trade balances are highly negative except in the cases of Nauru (phosphates), Papua New Guinea (minerals, timber) and Solomon Islands (timber, fish). See Table 1 of this Annex.

2. As described in the following chapter, agricultural trade occurs under a number of agreements in addition to the Uruguay Round Agreement on Agriculture. Australia and New Zealand, the EU, Japan and USA absorb the bulk of PIC exports. Intra-regional trade is small, doubtless mainly due to similarity of commodities on offer. Exports are therefore vulnerable to strong competition from larger low-cost countries having greater comparative advantages.

3. The need to diversify the export base away from traditional commodities has been acknowledged by all Governments who are now committed to facilitate the upgrading of the production and the exploitation of niche markets. In this context, food quality and safety remain crucial issues for the PICs. As pointed out by the Honourable Minister for Agriculture, Forestry and Fisheries and Meteorological Services, Samoa at the official opening of a regional workshop held at Apia¹ “..... many of our problems, I believe, are common to many of our countries. Those include, but are not limited to, the following:

- capacity to meet quarantine requirements of importing countries;
- the need to fully assess the costs of supplying markets for exports;
- the need to be able to supply the export markets or agro-processing as required;
- the need to address fully post-harvest handling, including packaging, to project good impression on overseas markets;
- the effects of over supply in markets impacting negatively on prices to producers; and
- government policies relating to taxation and levies which impact on markets.”

¹ FAO Regional Workshop on Improved Agricultural Marketing, Apia, Samoa, 13-16 April, 1999.

B. PREFERENTIAL MARKET ACCESS CONDITIONS¹

4. Most PICs' products are traded under various preferential trade regimes, including unilateral (non-reciprocal) preferential schemes as well as reciprocal regional integration agreements. The non-reciprocal preferences include the Generalized System of Preferences (GSP), the temporary trade regime under the ACP-EU Cotonou Agreement, the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA) and the Australia-PNG Trade and Commercial Relations Agreement (PATCRA). Furthermore, Pacific LDCs² are also eligible for more advantageous preferences recently offered by major GSP preference-giving countries, most notably the EU.

Non-Reciprocal Schemes

5. Non-reciprocal schemes differ from each other in their country coverage, product coverage, depth of margin of preferences, as well as their legal status in the WTO. In general, preferences granted to a selected group of countries (i.e. Cotonou Agreement and SPARTECA) offer more benefits in terms of wider product coverage and deeper preference margin. They are also more legally secure without arbitrary changes by the preference-giving countries, than those offered under GSP which are unilateral. Notwithstanding their mostly voluntary nature, LDC preferences offer the most advantageous benefits to LDCs by virtue of both product coverage and preferential margins (for the most part, duty free).

6. The Cotonou Agreement aims to change and improve ACP-EU cooperation in social, political and economic areas to bring about poverty reduction in the ACP States. One of the objectives as regards trade relations has been to convert the previous non-reciprocal preferential system which necessitated requesting GATT/WTO waiver to be WTO consistent, into a new fully WTO compatible regime. A lack of agreement among the parties to the modalities of the new trading arrangements led them to agree under the Cotonou Agreement (Article 36) to continue for a preparatory period until 31 December 2007 the system of non-reciprocal preferences. This means that all industrial products and most agricultural products will enter the EU duty free as was the case under the Lome Convention. For purposes of maintaining the non-reciprocal preferences during this preparatory period, another WTO waiver is needed. Thus the EU with the ACP States, submitted to the WTO a new waiver request in March 2000. By September 2001, the waiver had not yet been granted by the WTO.

7. The Cotonou Agreement also provides for a general framework and modalities for further negotiations with a view to devising permanent WTO-compatible trading arrangements after the preparatory period. These arrangements will include Economic Partnership Agreements (EPAs). The EPAs are to be negotiated during the preparatory period, starting September 2002, and would take effect from 1 January 2008. The EPAs will entail reciprocal trade agreements between EU on the one hand and individual or sub-grouping of ACP States on the other. For those ACP States that do not accept an EPA arrangement, alternative trading arrangements would be established for them by the EU in consultation with them. The alternative arrangement could

¹ This chapter is based on "Challenges and Opportunities: Multilateral and Regional Trade Policy Environment for Commodity-Based Development of Pacific Island Countries". Paper prepared by B. Onguglo and T. Ito, UNCTAD, for the Regional Workshop on the Constraints, Challenges and Prospects for Commodity-Based Development in the Pacific Island Countries, 18-20 September 2001, Fiji.

² Kiribati, Samoa, Solomon Islands, Tuvalu and Vanuatu.

include improved GSP preferences. Finally, the ACP LDCs, or for that matter all LDCs, can benefit from the special preferences provided under EBA.

8. The SPARTECA is a non-reciprocal trade agreement under which Australia and New Zealand grant duty free and unrestricted or preferential market access for virtually all products originating from the PICs. SPARTECA was signed by most Forum Island Countries (FICs) at the Forum's Eleventh Meeting in Kiribati on 14 July 1980, and came into effect for most FICs from 1 January 1981. Its objectives include accelerating FICs' development through expansion and diversification of their exports to Australia and New Zealand. The current list of FIC signatories to SPARTECA includes the 14 FICs. The Agreement includes provisions for general economic, commercial and technical cooperation, safeguard provisions relating to anti-dumping and countervailing measures, suspension of obligations and provisions for general exceptions, as well as for impact on fiscal revenue. The Agreement also provides for special treatment and assistance to be extended to the Smaller Island Countries (SICs) with regard to Cook Islands, Kiribati, Nauru, Niue, Tonga, Tuvalu and Samoa.

9. PNG and Australia have established since the independence of the former in 1975 a non-reciprocal free trade area providing duty-free access of all exports of PNG to Australia, with some exceptions (PATCRA). The excluded goods include certain sugar imports, beverages, tobacco and mineral fuels (Schedules A and B). For PNG all products are excluded (Schedules C and D).

Reciprocal Regional Trade Agreements (RTAs)

10. Another avenue for preferential market access is through reciprocal regional trade agreements. The PICs are increasingly members of one or more RTAs. The benefits that could be drawn from such regimes are the same as unilateral trade preferences, except that reciprocal preferences are to be granted, thus the markets of the exporting countries are also to be opened to preferential access to their trading partners. Potentially, reciprocal opening of markets offer economic efficiency gains as long as these cause more trade creation than diversion. Increased import competition within the liberalized area also contributes to increasing competitiveness of domestic industries by enabling provision of cheaper and wider range of products available to domestic consumers and industries. However, reciprocal market openings may have costs in terms of structural adjustment of production structure of a country with attendant de-industrialization and heavy social costs.

11. **PNG/Fiji Trade Agreement.** The agreement was formed by the two countries in August 1996 (noting that both countries are also members of the MSG (see below)). The agreement covers 45 agricultural and manufacturing products, including chilled or frozen mackerel as well as certain dairy products including cheese; fruit such as pineapples; tea and other beverages; spices such as chilli; cement; wood and wood articles; and clothing. Negotiations are on-going aimed at expanding the product coverage. Eligible Fijian goods enter PNG at zero tariff but are levied a 10% VAT (value added tax). Most eligible agricultural products from Fiji are subjected to quarantine approval.

12. **Melanesian Spearhead Group (MSG) Trade Agreement - Fiji, PNG, Solomon Islands and Vanuatu.** The MSG was formally launched in 1988 to promote political cooperation among members. In 1993, the MSG Trade Agreement was concluded among the founding

members. It initially covered duty-free entry of only three commodities, one from each member: tea from PNG, beef from Vanuatu, and canned tuna from the Solomon Islands. Revenue collected on eligible imports are not to exceed those applied to similar goods if produced domestically. Safeguard provisions allow any member to suspend obligations should imports increase so as to cause serious damage to existing industries. Furthermore, parties may abrogate their obligations should they decide to develop new industries. There are other clauses that allow parties to rescind obligations including restrictions for BOP and anti-circumvention reasons. Members are committed in principle to extending the coverage to ensure that duties and other trade restrictions are eliminated between the parties. In 1995, the coverage of eligible products was extended to 140 tariff lines, and an agreement, yet to be ratified, was reached in 1997 to expand the list to 150 items. Eligible products now include edible fruit and nuts, coffee, coconut-milk powder, jams, cement, and certain wooden furniture. Fiji has not been given the same preferences as other members, but has had to negotiate them on a bilateral basis.

13. **Asia Pacific Economic Cooperation (APEC) - PNG.** The PIC member of APEC is PNG. It joined APEC in 1994. APEC economies are committed to the Bogor objectives of voluntarily achieving free trade and investment in developed economies by 2010 and by 2020 for developing members. Liberalization is to be comprehensive by including agriculture and services, and non-discriminatory based on the concept of “open regionalism”. Food, chemicals and transport sectors are proposed for the so-called “Early Voluntary Sectoral Liberalization (EVSL) initiatives”.

14. **Pacific Island Countries Trade Agreement (PICTA).** Developing Forum Island Countries will liberalise towards other FICs within eight years up to 2010 and the Small Island States and LDCs will do so within 10 years until 2012. For fixed and specific tariffs, members have the option to convert them to *ad valorem* tariffs or to reduce them according to an alternative schedule. PICTA enters into force after six countries have ratified. The Agreement provides that the Compact Countries (Federated States of Micronesia, Palau, Republic of Marshall Islands) in light of the circumstances of their relationship with the USA, will be given an additional period of three years to sign the Agreement (Forum Trade Ministers Meeting 28 June 2001, Apia, Samoa).

C. NON-PREFERENTIAL MARKET ACCESS

15. The Agreement on Agriculture (AoA) is the multilateral discipline governing agricultural commodities and process agricultural goods, including processed foods, dairy products and some garment products. It contains multilateral disciplines most relevant to commodity diversification of Pacific Island countries in terms of market access, export competition and domestic support, as well as food security and non-trade concerns. Products covered by the Agreement, as defined in its Annex 1, include not only basic agricultural products such as wheat, milk and live animals, but the products derived from them such as bread, butter and meat, as well as all processed agricultural products such as chocolate and sausages. The coverage also includes wines, spirits and tobacco products, fibres such as cotton, wool and silk, and raw animal skins destined for leather production. Fish and fish products are not included, nor are forestry products.

16. Under the AoA, WTO Members have committed themselves to converting existing quantitative restrictions (quota) into tariffs by calculating tariff equivalent (tariffication) and reduce the amount by an agreed proportion (36% for developed and 24% for developing

countries) by the end of implementation period (by 2000 for developed and by 2004 for developing countries). The AoA prohibits the use of agriculture-specific non-tariff measures including quantitative import restrictions, variable import levies, minimum import, prices, discretionary import licensing procedures, voluntary export restraint agreements and non-tariff measures maintained through state-trading enterprises. In any tariff lines, Members are required to reduce at least 15% for developed and 10% for developing countries. The LDCs were exempted from the obligation to reduce tariffs (as well as domestic support and subsidies) while required to bind all tariffs. The products subject to “tariffication” include major temperate zone agricultural products. The tariffs resulting from the tariffication process account, on average of the developed country Members, for around one fifth of the total number of agricultural tariff lines. For the developing country Members, this share is considerably smaller. Following the entry into force of the AoA in 1995, the tariffs on virtually all agricultural products traded internationally are bound in the WTO. Many developing countries have bound their previously unbound tariffs at “ceiling” levels, i.e. at levels higher than the applied rates prior to the WTO.

17. The AoA explicitly excludes fish and forestry products. Those sectors fall within the purview of general rules under GATT 1994, and presumably to the Agreement on SCM. Therefore the general multilateral disciplines on trade in goods, including MFN and national treatment obligation, prohibition of quantitative restrictions, and reduction and binding of industrial tariffs under GATT 1994. For some developed countries, the fishery sector is seen as a “sensitive sector”, being characterized by the extensive use of production subsidies, and import tariffs remain relatively high (e.g. in the EU). Being outside the AoA, the fisheries sector is subjected to GATT 1994, thus the use of subsidies in the sector is supposed to be governed by the general rules on subsidies, namely the Agreement on Subsidies and Countervailing Measures, which provides stricter disciplines on subsidies than those in AoA. While agricultural subsidies, be it domestic or export, are subject to reduction commitments under SCM, certain subsidies, in particular export subsidies, are prohibited, and certain specific subsidies if found to be trade distorting are also forbidden or subjected to countervailing duty action by trading partners. Given the extensive use of subsidies in the fisheries sector, however, it is not clear how the existing strict rule on subsidies for industrial products are applicable to the fisheries sector. At the very least, it has been established that those fisheries subsidies have resulted in global over production of fish and undermining sustainable management of fishery resource. This aspect of fishery subsidies is subject to discussion in WTO Committee on Trade and Environment.

D. AGREEMENT ON THE APPLICATION OF SANITARY AND PHYTOSANITARY MEASURES (SPS) AND ON TECHNICAL BARRIERS TO TRADE (TBT)

18. The Uruguay Round of Multilateral Trade Negotiations included negotiations between countries on removing non-tariff barriers in the areas of food safety and quarantine, while maintaining appropriate levels of protection for consumers and for plant and animal health. The result was the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the revised Agreement on Technical Barriers to Trade (TBT). Both Agreements came into force on 1 January 1995; they are binding for all World Trade Organisation (WTO) Members (see Appendix to this annex).

19. The purpose of these Agreements is to ensure that measures established by Governments to protect human, animal and plant life and health are scientifically justified and are not used as a disguised restriction to trade. Together, these two Agreements cover all aspects of

food standards, including food safety and quality and additional concerns such as labelling, consumer protection, bio-technology, food irradiation, and 'organic' food production.

The Agreement on the Application of Sanitary and Phytosanitary Measures

20. The SPS Agreement recognises that while countries have the right to take sanitary and phytosanitary measures for the protection of human, animal and plant life, those measures should be applied only to the extent necessary to achieve their objective and be consistent with recognised scientific evidence. The basic objective is to limit the use of measures that may restrict trade to those that are justified to provide the level of protection that is necessary for the importing countries.

21. To achieve this, the SPS Agreement sets out detailed rights and obligations to enable Members to determine the food safety levels and animal and plant health protection required in their country. Member governments themselves must set levels in a consistent manner based on scientific principles and using acceptable risk analysis methods. SPS measures can take the form of national food laws and regulations to protect consumers against contaminated food and quarantine measures to prevent the entry of animal and plant diseases.

22. With regard to international harmonisation, the SPS Agreement recommends that WTO Members should base their national standards on international standards, guidelines and other recommendations developed by the relevant international organisations, including the Codex Alimentarius Commission, the International Office of Epizootics, and the relevant international and regional organisations operating within the framework of the International Plant Protection Commission. Countries can, however, apply more stringent standards than international ones, if they can show a scientific justification for the additional stringency.

23. Codex standards, guidelines and other recommendations are presumed to meet the requirements of the SPS Agreement. National regulations which are consistent with Codex meet the requirements of the SPS Agreement. The SPS Agreement calls on countries to harmonise their national standards based on Codex.

24. The SPS Committee is looking to Codex and FAO/WHO to provide information on risk assessment and how Members can properly apply this process. The Committee will continue to coordinate discussion and comment on risk assessment and can then table the results/information provided by Codex and FAO/WHO at Future Committee meetings.

25. SPS measures must be adapted to the specific area (which may be a country or a part of a country, or areas of several countries) based on an assessment of the specific sanitary characteristics of that area, by looking at the level of prevalence of specific diseases or pests, eradication or control programmes, and international guidelines which may be developed. The concept of pest/disease-free areas and areas of low pest/disease prevalence should be recognised; and where relevant the exporting country shall provide the necessary information to show an area is pest/disease free and is likely to remain so, and shall give the importing country rights of inspection and testing.

26. The SPS Agreement calls for assistance to developing countries to enable them to strengthen their food safety and animal and plant health protection systems. Members shall

provide technical assistance to other Members, especially developing countries, for example in areas of processing technologies, research and infrastructure (including national regulatory bodies). It may be in the form of advice, credits, donations or grants. Members may use this to seek technical expertise, training and equipment which will enable them to meet SPS measures in their export markets.

The Agreement on Technical Barriers to Trade

27. The Agreement on Technical Barriers to Trade (TBT) is a revision of the Agreement of the same name first developed under the Tokyo Round (1974-1979) of the GATT negotiations. The TBT Agreement was developed principally for the purpose of ensuring that technical standards and procedures for assessment of conforming with technical regulations and standards (as may be used in international trade) do not create unnecessary obstacles to that trade. The TBT Agreement covers all products, including industrial and agricultural products.

28. The TBT Agreement covers aspects of food standards related specifically to quality provisions, nutritional requirements, labelling and methods of analysis, with the exception of sanitary and phytosanitary measures which are covered by the SPS Agreement. It includes a large number of measures designed to protect the consumer against economic fraud.

29. The principal discipline of the TBT Agreement is that standards and technical regulations must have a legitimate objective, be applied in proportion to the objective, be transparent and non-discriminatory between domestic and imported goods. Standards and technical regulations refer to product characteristics or related processes and production methods, and may include or deal exclusively with terminology, symbols, marks, packaging or labelling requirements as they apply to a product, process or production method.

30. For the purpose of the Agreement, a 'standard' is considered to be a set of rules for voluntary application by industry, etc.; while a 'technical regulation' is a standard applied under lay by Government. Codex standards contain elements of both, but are primarily models for technical regulations.

Codex Responses to the Uruguay Round Agreements

31. The world-wide recognition of the importance of ensuring the quality and safety of food for the world's population and the important role of international food trade in economic, social and human development, led to the establishment of the Joint FAO/WHO Food Standards Programme in 1962. This Programme is implemented through the establishment of the inter-governmental body known as the Codex Alimentarius Commission.

32. The words *Codex Alimentarius* are Latin, meaning 'food law' or 'food code'. This accurately describes the Codex Alimentarius: it is a collection of food standards developed and presented in a unified, codified manner, together with associated material such as Codes of Hygienic and Good Manufacturing Practices, recognised methods of analysis and sampling, and general principles and guidelines. The Codex Alimentarius contains standards for all the principal foods whether processed, semi-processed or raw in the form that they reach the consumer.

33. *Codex* also denotes a process: the careful, deliberative process of elaborating standards, codes of practice, guidelines and other Codex recommendations, and keeping them current and up-to-date. For more than 30 years, the Codex Alimentarius Commission has viewed the harmonisation of national food standards as a basic goal. The Codex Alimentarius procedures for the elaboration of standards are designed to ensure the highest level of consultation between all interested parties.

34. The March 1991 FAO/WHO Conference on Food Standards, Chemicals in Food and Food Trade set out a programme for the revision of Codex Alimentarius standards, guidelines and related texts, as well as the working procedures of the Codex Alimentarius Commission in anticipation of the outcome of the Uruguay Round. Codex standards have been much simplified and emphasis has been placed on elements which are clearly governed by the provisions of the SPS and TBT Agreements. The food safety aspects of Codex standards have been re-examined to ensure that they are in conformity with the science-based risk assessment principles stressed in the SPS Agreement.

35. FAO recognises the importance of an effective food control system in all countries in order to protect consumer's health and to compete successfully in international trade. For more than 20 years, FAO has been providing technical assistance to developing countries to help them establish and apply effective national food control systems.

36. The first objective of FAO's food control programmes is to ensure that domestic food supplies and foods entering international trade meet the minimum essential quality and safety barriers specified in Codex standards. The second objective is to ensure that regulatory measures applied at the point of entry are consistent with Codex standards and national obligations under the Uruguay Round Agreement.

Table 1. Foreign Trade

	Exports	Imports ^{1/}	Balance ^{2/}	Year	Principal Export Commodities
	(US\$ million) ^{3/}				
Cook Islands	3.3	38.4	-35.1	1998	Copra, fresh and canned fruit, coffee, fish pearls
Federated State of Micronesia	10.6	83.4	-72.7	1996	Fish, garments, banana, black pepper
Fiji	593.6	968.5	-375.0	1997	Sugar, garments, gold, timber, fish
Kiribati	6.3	39.1	-32.8	1997	Copra, coconuts, seaweeds, fish
Nauru	25.3	15.2	10.1	1997	Phosphates
Niue	0.3	4.5	-4.1	1996	Canned coconut cream, copra, honey, fruit, root crops
Palau	3.1	81.5	-78.5	1996	Trochus, tuna, copra, handicrafts
Papua New Guinea	2,430.5	1,465.1	965.4	1998	Oil, gold, copper ore, logs, palm oil, cocoa, fish
Republic of Marshall Islands	12.4	59.8	-47.3	1997	Fish, coconut oil, trochus shells
Samoa	10.1	99.4	-89.3	1996	Coconut oil and cream, copra, fish, beer
Solomon Islands	193.1	158.0	35.2	1996	Timber, fish, palm oil, cocoa, copra
Tonga	10.3	68.5	-58.3	1997	Squash, fish, vanilla beans
Tuvalu	0.3	6.0	-5.8	1997	Copra
Vanuatu	33.8	88.1	-54.3	1998	Copra, kava, beef, cocoa, timber, coffee

Source: SPC, Pocket Statistical Summary, 2000/PIFS

^{1/} Principal import items generally include foodstuffs, machinery, capital goods, manufactured goods, fuel.

^{2/} Differences in balance due to rounding.

^{3/} The trade data, originally expressed in Australian \$, have been converted into US\$ by using the following exchange rate:
US\$ per A\$: 1998 – 0.6294; 1997 – 0.7441; 1996 – 0.7829 (IMF market rates, period average).

Table 2. Membership of PICs in Regional and Multilateral Trade Agreements

	SPARTECA	Pacific ACP States	Melanesian Spearhead Group	Compact Free Association Members	LDCs	WTO
Cook Islands	X	X				
Federated States of Micronesia	X	X		X		
Fiji	X	X	X			X
Kiribati	X	X			X	
Nauru	X	X				
Niue	X	X				
Palau	X	X		X		
Papua New Guinea	X	X	X			X
Republic of Marshall Islands	X	X		X		
Samoa	X	X			X	(X)
Solomon Islands	X	X	X		X	X
Tonga	X	X				(X)
Tuvalu	X	X			X	
Vanuatu	X	X	X		X	(X)

Source: UNCTAD, EU.

Note: (X) = acceding countries.

ANNEX 3

APPENDIX

URUGUAY ROUND AGREEMENTS

1. The UR Agreements¹ represent a milestone in the multilateral trading system: for the first time, agriculture has been incorporated under operationally effective rules and disciplines. The UR commitments in agriculture, forestry and fisheries cover improved market access and disciplines on domestic support and export subsidies. The commitments regarding market access are central to the broader package of inter-related liberalizing commitments aimed at significantly improving conditions of competition and opportunities for trade in agricultural products. The UR Agreements also provide for limiting the scope for circumvention of the new commitments.

2. The UR achievement is contained in a series of agreements and ministerial decisions and declarations annexed to the Agreement, which established the World Trade Organization (WTO). Among the numerous components of the UR Agreements, five have particular relevance for PICs. They are the:

- Agreement on Agriculture (AoA);
- Agreement on the Application of Sanitary and Phytosanitary Measures (SPS);
- Agreement on Technical Barriers to Trade (TBT);
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS); and
- Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries.

The Agreement on Agriculture

3. The main provisions of the Agreement on Agriculture (AoA) are aimed at improving market access (Article 4), disciplining domestic supports (Article 6), and reducing export subsidies (Article 9). In all three areas the main thrust is to reduce past production- and trade-distorting practices and to facilitate a fair and market-oriented agricultural trading system. The specific commitments of each WTO member are contained in the Country Schedules that form an integral part of the AoA. Within each of the three main provisions of the AoA, developing countries are given special and differential treatment usually in terms of wider latitude in their policy options as well as longer implementation periods. A number of agricultural commodities (e.g. rubber and jute) as well as fish and fish products and forestry products are not covered by the AoA, however these products are covered under other provisions of the UR Agreements, including the Agreements on TBT, SPS, and TRIPS.

¹ This Appendix draws heavily from “FAO Technical Assistance and the Uruguay Round Agreements”, Second Edition, FAO, Rome 1998, and from “The Implications of the Uruguay Round Agreement on Agriculture for Developing Countries: A Training Manual”, FAO, 1998.

4. **The market access provisions** of the AoA include two main features: **bound and reduced tariffs** and **minimum access commitments**. The AoA prohibited the use of trade measures other than ordinary tariffs, including such non-tariff barriers as quantitative import restrictions, variable import levies, minimum import prices, discretionary import licensing, non-tariff measures maintained through state trading enterprises, voluntary export restraints and similar border measures except in specific circumstances¹. Countries using non-tariff barriers were required to convert the average rate of protection provided by non-tariff barriers during the base period (1986-88) into a tariff equivalent using a prescribed methodology known as tariffication, thereby establishing a base rate of duty for each product covered by the agreement from which agreed reductions were taken.

5. **The disciplines on domestic supports** in the AoA seek to lessen the distorting effects of domestic agricultural support policies on production and trade. The AoA marks the first time that a close link between domestic agricultural policies and trade policies has been formally recognised in international trade law, and it enshrines the principle that limitations may be placed on the formation of domestic policy. While in principle the AoA may constrain the policy options of developing countries, in fact it is unlikely to do so both because of the nature of their agricultural support policies and because of specific terms of the agreement. The AoA was primarily designed to affect policies in developed countries where domestic agricultural subsidies, often used in conjunction with export subsidies, were seen as unfairly distorting world commodity markets to the detriment of producers elsewhere. In contrast, the AoA recognizes that the total effect of all policies in many developing countries constitutes a tax on the agricultural sector that domestic agricultural support policies in developing countries are often justified as being part of a broader economic development agenda.

6. Export policies of developing countries have generally concentrated more on export restraints than on export subsidies. These policies have taken the form of export taxes, quotas and prohibitions. The use of such measures on trade in foodstuffs is disciplined in the AoA, but developing countries are exempt from the disciplines unless they are net exporters of the particular foodstuff in question. The country instituting an export restriction or prohibition must give due consideration to its effects on the food security of importing countries, and must notify the WTO Commitment on Agriculture as far in advance as possible regarding the nature and the duration of the restraint.

The Agreement on the Application of Sanitary and Phytosanitary Measures

7. The SPS Agreement concerns the application of measures associated with the protection of human, animal and plant health in such a way that they do not constitute a means of arbitrary or unjustifiable discrimination between WTO members where the same conditions prevail or as a disguised restriction on international trade. This Agreement recognizes that governments have the right to adopt sanitary and phytosanitary measures but that such measures should be applied only to the extent necessary to achieve the required level of safety. The SPS

¹ The main exceptions to the general prohibition on the use of trade measures other than ordinary tariffs are the special safeguard (SSG) provisions of Article 5 that are available only to countries that have undergone tariffication, and measures maintained under balance of payments or other general, non-agricultural specific provisions of the WTO Agreement.

Agreement promotes the harmonization of sanitary and phytosanitary measures on the basis of international standards, where they exist; however governments may apply more stringent measures if there is a scientific justification. In the interest of facilitating trade and promoting transparency, the SPS Agreement requires members to publish their sanitary and phytosanitary measures affecting imports and notify the WTO of any changes made to those measures. Developing countries were given two years, and least-developed countries five years, beyond the entry into force of the UR Agreements (the deadline for developed countries) to bring their sanitary and phytosanitary measures affecting imports into compliance with the SPS Agreement. Members agreed to give developing country members special consideration, including technical assistance, in the preparation and application of sanitary and phytosanitary measures.

The Agreement on Technical Barriers to Trade

8. The TBT Agreement seeks to ensure that technical regulations and standards, including packaging, marking and labelling requirements, and procedures for assessing conformity with technical regulations and standards do not create unnecessary obstacles to international trade. It recognizes that a country has the right to take necessary measures, at a level it considers appropriate, to ensure the quality of its exports; the protection of human health or safety, animal or plant life or health and the environment; and to prevent deceptive practices. A country may also take the necessary steps to ensure that those levels of protection are met, as long as the measures or actions taken to implement them do not create unnecessary obstacles to international trade. The TBT Agreement encourages, but does not require, countries to adopt international standards.

The Agreement on Trade-Related Aspects of Intellectual Property Rights

9. The TRIPS Agreement recognizes that widely varying national standards in the protection and enforcement of intellectual property rights and the lack of a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods have been a growing source of tension in international trade relations. Accordingly, it encompasses relevant international intellectual property agreements, provides for adequate intellectual property rights and includes effective enforcement measures to protect those rights. The TRIPS Agreement obliges Members to ensure that intellectual property rights can be effectively enforced by foreign rights-holders as well as by nationals; and permit effective actions against the infringement of intellectual rights that are fair and equitable, not unnecessarily complicated or costly and do not entail unreasonable time limits or unwarranted delays. Of particular interest to agriculture in the TRIPS Agreement are issues related to intellectual property rights over plant varieties, animal breeds, related technologies and germplasm.

PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 4
REGIONAL COOPERATION

ANNEX 4
REGIONAL COOPERATION

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APPENDIX: Regional Priorities for Agriculture Disciplines

ANNEX 4

REGIONAL COOPERATION

A. INTRODUCTION

1. Initiatives in support of economic development and, more specifically, in support of the agricultural sector in Pacific Island Countries (PICs) are available at the national, regional and international levels. Regional organizations have always collaborated on important regional issues, within the framework of the Council of Regional Organizations in the Pacific (CROP) and its sectoral working groups and at the level of individual professional staff. In terms of regional organizations in the Pacific, the main ones include the Pacific Islands Forum, the Pacific Islands Forum Secretariat, the Pacific Community, the Secretariat of the Pacific Community, the South Pacific Forum Fisheries Agency, the University of the South Pacific School of Agriculture and Institute for Research, Extension and Training in Agriculture, the South Pacific Regional Environment Programme, the International Board for Soil Research and Management, the South Pacific Geo-Science Commission. The Food and Agriculture Organization's Sub-Regional Office for the Pacific Islands is the main international organization in the sector¹.

B. REGIONAL ORGANIZATIONS

Pacific Islands Forum

2. The Pacific Islands Forum, formerly South Pacific Forum, represents Heads of Government of all the independent and self-governing Pacific Island Countries including Australia and New Zealand². The Forum is the region's premier political and economic policy organization. Forum leaders meet annually to develop collective responses to regional issues. The meetings are chaired by the Head of Government of the Host Government, who remains as Forum Chairman until the next meeting. Immediately after the Forum meetings, the post-Forum dialogue is conducted at Ministerial level with Forum dialogue partners (Canada, People's Republic of China, European Union, France, Indonesia, Japan, Republic of Korea, Malaysia, Philippines, United Kingdom and the United States). The Dialogue remains the primary consultation vehicle for multilateral assistance to the region.

3. The Forum's administrative arm, known as the Pacific Islands Forum Secretariat, is based in Suva, Fiji. It acts as the secretariat for Forum-related events, implements decisions by the Leaders, facilitates the delivery of development assistance to member states, and undertakes the political and legal mandates of Forum meetings. The Secretariat is funded by contribution from member governments and donors.

Pacific Islands Forum Secretariat

4. The Pacific Islands Forum Secretariat (PIFS) is headed by the secretary General who is responsible to the Forum and to the Forum Officials Committee (made up of representatives from all Forum Governments) which oversees the Secretariat's activities. The Secretary General

¹ This annex is largely based on: Forum Secretariat, Review of Regional Initiatives and Priorities in the Agriculture Sector by the Council of Regional Organizations in the Pacific (CROP) Land Resources Working Groups, Crop Land Resources Working Paper Group No. 1, Suva, Fiji, October 1999.

² Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

is also permanent Chair of CROP which brings together eight main regional organizations in the Pacific region: (i) The South Pacific Forum Fisheries Agency (FFA); (ii) Pacific Islands Development Programme (PIDP); (iii) Secretariat of the Pacific Community (SPC); (iv) South Pacific Applied Geo-Science Commission (SOPAC); (v) Pacific Islands Forum Secretariat (PIFS); (vi) South Pacific Regional Environment Programme (SPREP); (vii) South Pacific Tourism Organization (SPTO); and (viii) The University of the South Pacific (USP).

5. The Secretariat comprises four Divisions: Development and Economic Policy, Political and International Affairs, Trade and Investment, Corporate Services.

(i) **The Development and Economic Policy Division.**

Mission: Help members to develop sustainably by providing policy advice and technical assistance on development and economic issues.

Strategies:

- Provide advice and technical assistance to build capacity in economic management;
- Coordinate sustainable development issues with other agencies;
- Follow-up the outcomes of regional meetings on economic management;
- Advise members on the handling of economic infrastructure, natural resources, and social issues.

(ii) **Political and International Affairs Division.**

Mission: Promote Forum interests, and provide members with policy advice on international relations, law enforcement and political, legal and security issues.

Strategies:

- Analyse international developments and what they mean for the Forum;
- Maintain dialogue with countries and agencies which affect Forum interests;
- Generate international support for Forum positions on major issues;
- Provide legal drafting assistance;
- Encourage regional law enforcement cooperation.

(iii) **Trade and Investment Division.**

Mission: Help members to improve their trade and investment performance through sound policy advice and technical assistance.

Strategies:

- Policy advice to Forum Member Governments and Private Sector technical assistance;
- Develop export markets and products;
- Support Forum initiatives and export development, investment, tourist and trade;
- Promote Trade and Investment in the region through trade offices (Auckland, Sydney, Tokyo, Beijing).

The Marketing and Product Development Section is directly responsible for the identification of market opportunities for products produced by the Forum Island Countries (FICs), assist the countries to ensure their products meet the exact specifications of the market, assist them to better understand the marketing system in each targeted market, and to ensure that their products are priced reasonably.

The Division is also directly engaged in post-harvest handling activities such as cleaning, grading and sorting, storage, drying, inspection of export quality, clipping, bagging, packaging and then marketing, including market negotiation. The post-harvest handling training programme is an on-going programme, which is held on an annual basis.

(iv) **Corporate Services Division.**

Mission: Provide comprehensive and cost-effective administrative support services.

Strategies:

- Ensure the support services meet best practice standards for quality, cost-effectiveness, responsiveness and accountability;
- Provide comprehensive management control and accountability;
- Foster a commitment to innovation, quality service and excellence;
- Maximise returns to the Secretariat from its assets and resources.

Secretariat of the Pacific Community

6. The Secretariat of the Pacific Community (SPC) services the Pacific Community with its 27 members¹, and provides technical advice, training and assistance in economic, social and cultural development to 22 countries and territories of the Pacific Region. The Secretariat is headed by a Director General and two Deputy Directors General, based in Suva, Fiji and Nouméa, New Caledonia. The three administrative Divisions cover Land Resources, Marine Resources and Social Resources. The Secretariat also provides information services, including library facilities, publications, translation and computer services.

7. The SPC's Agriculture Programme is based in Suva, Fiji. The Agriculture Programme is one of several components of the Land Resources Division of SPC that also includes forestry, regional media, community education, and communication projects relating to AIDS and population. The mandate or core function of SPC's Agriculture Programme is to provide technical support, training and information for national and regional agriculture programmes in sustainable agriculture production, resource economics, plant protection, and animal health. The goals of SPC's Agriculture Programme are to contribute to economic and social well-being of the people of the Pacific Islands through sustainable agricultural development. The programme's mission statement is that of a dynamic responsive programme that addresses the current and future needs of Pacific Island agriculture. The Agriculture Programme has four key objectives which address the current as well as the major emerging issues in the agricultural sector of Pacific Island countries and territories:

- Increase efficiency and sustainability of agriculture;
- Improve food security and public health;
- Facilitate trade in agricultural products; and
- Decrease impact of natural disasters.

8. General strategies of the Agriculture Programme include:

- Promote meaningful exchanges with our stakeholders to identify emerging issues and changing priorities in the agriculture sector;
- Network with people and external agencies at international and regional levels (including CROP organizations), and national level (government agencies, NGOs, CBOs, farmer groups) to improve public awareness of SPC's agriculture programme and solicit feedback on its relevance and effectiveness;
- Strengthen internal linkages within SPC Land Resources Division to ensure better integration across disciplines, in particular integration of the Forestry and Agriculture Programmes;

¹ American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Republic of Marshall Islands, Tokelau, Tonga, Tuvalu, United Kingdom, USA, Vanuatu, Wallis and Futura Islands.

- Investigate funding opportunities at a regional and international level to support national priorities, and assist agricultural ministries/departments to secure donor funds for priority projects;
- Provide countries with timely information to assist decision-making;
- Include gender in agricultural planning and implementation;
- Promote inclusion of food security and gender in project evaluation and formulation of project proposals; and
- Assist countries to develop an integrated approach to sustainable agriculture development.

9. The Agriculture Programme is divided into four sections, comprising animal production and health services, crop improvement services, plant protection services, and resource economics and agriculture information services. In January 1998, Phase II of the EU-funded Pacific Regional Agriculture Programme (October 1994 to December 1999) became part of the SPC Agriculture Programme with projects and activities that included farming systems, at all agriculture, seeds and planting materials, tissue culture services, agriculture information services and others. A draft financing proposal for a follow-up project “Development of Sustainable Agriculture in the Pacific (DSAP)” was discussed at a SPC/EU workshop held at Nadi, Fiji 31 October to 2 November 2001. The project - purpose is “to increase sustainable agricultural production of farm families in participating countries” will be an integral part of the SPC Agriculture Programme. The previous accomplishments of Phase I and II of PRAP in training, technical assistance and the development of technologies provide a foundation for this project.

10. SPC provides technical assistance and guidance through consultations, needs assessments, regional technical meetings and national meetings and workshops. These include the Regional Technical Meetings of Plant Protection (RTMPP) for plant protection matters, the meetings of the Pacific Plant Protection Organization (PPPO) for quarantine matters, Regional Technical Meetings of Heads of Veterinary Services (RTMHVS) for animal health matters, and the Regional Conference of Permanent Heads of Agriculture and Livestock Production Services (PHALPS) for general policy and technical matters relating to agriculture. Guidance is also provided through the annual meetings of the Committee of Representatives of Governments and Administrations (CRGA) and the biennial SPC Conference.

South Pacific Forum Fisheries Agency (FFA)

11. Located in Honiara, Solomon Islands, FFA promotes cooperation in fisheries among coastal states in the region; collects and disseminates information and advice on the living marine resources of the region, including management, exploitation and development of these resources; provides assistance in the areas of law (treaty negotiations, coordinating surveillance and enforcement), fisheries development, research, economics and information management.

USP School of Agriculture (USPSOA) and Institute for Research, Extension and Training in Agriculture (IRETA)

12. The University of the South Pacific School of Agriculture and IRETA are based in Samoa. The mission of both the School of Agriculture and IRETA is to assist in meeting the needs and improving the well being of the people of the South Pacific by:

- Providing agricultural education to a wide range of people, directly through its teaching programmes and indirectly through its training of teachers and advisers; and
- Developing and adopting new technology to improve food production and extend opportunities through balanced rural development that is sensitive to long-term community needs for resource conservation and sustainable development.

South Pacific Regional Environment Programme (SPREP)

13. SPREP was formerly established in 1993 and is based in Samoa. Its core function is to provide assistance to protect and improve South Pacific countries environment and to ensure sustainable development for present and future generations. This assistance is provided in all sectoral issues in the region, including mining, agriculture, forestry and marine. The SPREP Action Plan for Managing the Environment of the South Pacific Region 1997-2000 set out its objectives and strategies and provided a framework for a regional approach to address environmental issues of the South Pacific region. The Action Plan, *inter alia*, included the following strategies:

- coordinating regional activities addressing the environment;
- monitoring and assessing the state of the environment in the region including the impacts of human activities on the eco-systems of the region and encouraging development undertaken to be directed towards maintaining or enhancing environmental qualities; and
- reducing, through prevention and management, atmospheric, land based, fresh water and marine pollution, strengthening national and regional capabilities and institutional arrangements.

14. SPREP's focus on the agricultural sector is to assist PICs in relation to the issue of agricultural chemicals and their impact on the environment and the promotion of close collaboration between the environment and the agricultural sectors. SPREP is also actively promoting the introduction of traditional sustainable agriculture practices such as agro-forestry and alley-cropping through the conservation area management programme.

International Board for Soil Research and Management (IBSRAM)

15. IBSRAM's mission is to contribute to poverty alleviation and food security in developing regions through research and related activities that promote sustainable land

management (SLM). The mode of operation of IBSRAM, within the context of this Mission Statement, is both to promote and to conduct research and related activities globally in partnership with National Agriculture Research and Extension Service (NARES) by building links between national and international research organizations in developing and industrialised countries. IBSRAM uses networking or consortium mode of operation to further its focus through a partnership approach with participating NARES. For the South Pacific it is known as PACIFCLAND or Management of Sloping Lands in the Pacific network. PACIFCLAND sloping lands network is a research network on the management of sloping lands for sustainable agriculture in the South Pacific. IBSRAM's regional activities in the Pacific are coordinated from its office at Koroniva Research Station near Suva in Fiji.

South Pacific Geo-Science Commission (SOPAC)

16. SOPAC is mandated to, *inter alia*, develop resource policy, and advise on the management and development of onshore and offshore mineral and aggregate resources; meet the needs for water resources, waste management, health and sanitation through the provision of resource policy, management advice and appropriate information and training; assist decision makers and planners to develop coastal zones and extract resources while protecting them from degradation; support national authorities in disaster management activities. SOPAC activities of direct concern to the agriculture sector relate to the vulnerability of the sector and are concerned primarily with water resources and disaster mitigation.

Food and Agriculture Organization (FAO)

17. The FAO Office based in Apia, Samoa, was upgraded in 1996 to the Sub-regional Office for the Pacific Islands (known as SAPA), as a tangible reflection of the Organization's desire to decentralize and bring its operations closer to its beneficiaries, that is to the people of the Pacific. With regard to the structural set up, technical officers based at SAPA work closely with their "mother" divisions in FAO Headquarters, Rome and the FAO Regional Officers based in Bangkok, Thailand.

18. Since its inception, SAPA has convened four meetings for South West Pacific Agriculture Ministers. The Communiqués of these meetings have provided the basis to build activities while taking into consideration the Rome Declaration and Plan of Action adopted at the World Food Summit, Rome 1996. Identified opportunities for further work and cooperation that will likely generate mutual benefits include: agricultural and policy development analysis, agricultural trade, plant protection and quarantine system, fisheries trade and statistics, gender issues and integrated livestock farming systems.

C. CROP REGIONAL DEVELOPMENT STRATEGY

19. The variation of membership amongst regional organizations – some comprising independent island states only and others including the non-independent territories and administrations – has created a potential for duplication and overlap of activities within the mandates of these organizations. Emanating from a decision taken by the then South Pacific Organizations Coordinating Committee (renamed to "Council of Regional Organizations in the Pacific – CROP") in late 1997, the Forum Secretariat was requested to develop, in consultation

with other regional organizations, a Working Paper on agriculture. The aim of this paper was to assess complementarity, duplication and overlap between existing and proposed regional initiatives in the agricultural sector, and also to identify regional priorities in the agricultural sector.

20. A review of the activities of regional organizations working in the agricultural sector to identify who is doing what, and to identify priorities and attempt to rationalize implementation of activities to achieve greater efficiency and effectiveness is well within the ambit of the CROP Regional Strategy process. Improved cooperation and collaboration in addressing the needs of the sector are important for the membership of CROP and non-CROP organizations alike. Minimising duplication is an effort to maximise use of scarce resources should be an over-riding concern of all. The CROP Regional Development Strategy is an attempt to establish a system or framework of planning and coordination in order to improve the allocation and utilization of limited resources available under regional programmes. The Strategy is a compilation of 10 sectoral programme strategies, one of which is the Land-Based Resources Sector that includes the agriculture sector.

D. INITIATIVES AND PRIORITIES IN THE AGRICULTURE SECTOR

21. For the purpose of the “Review of Regional Initiatives and Priorities in the Agriculture Sector”, the current project activities of the Regional Organizations had been grouped into seven relevant disciplines, namely: (i) Plant protection; (ii) Crop production and diversification; (iii) Animal health and production; (iv) Soils and farming system; (v) Agriculture value-adding and marketing; (vi) Agricultural policy and statistics; and (vii) Capacity building and training.

22. Based on project titles, the review attempted to identify overlaps of project activities between organizations. Conclusions drawn were intended only as a guide for further consultations and discussions in the Land-Based Resources Working Group. Taking into account the gaps identified by the Working Group, the Review has determined areas of top priority in each of the agricultural disciplines. In assessing priorities, it was assumed that national priorities are reflected in the cluster of activities within the disciplines by agency (see Appendix):

- (i) **Plant Protection-Related Activities.** FAO’s plant protection information materials are distributed by the SPC-Plant Protection Information System and SPC-Pacific Plant Protection Organization. There is continuing need for these organizations to consult each other and work closely on information.
- (ii) **Crop Production and Diversification.** Initiatives under this category by agencies appears to have some form of overlap and perhaps duplication. The degree to which the activities overlap and duplicate each other is not identifiable due to lack of information. For tropical fruit production, for example, there is potential overlap between activities taken by FAO on fruit crop production and those by SPC on tropical fruits improvement. It is therefore recommended that these two agencies collaborate and share resources to enhance activities under this food item.

- (iii) **Animal Health and Production.** There is no duplication nor overlap of activities between agencies. However, collaborative efforts are recommended between FAO, SPC and IRETA on future projects.
- (iv) **Soils and Farming Systems.** Projects under this category portray complementarity and it is suggested that potential collaboration could be enhanced between SPC, FAO, USP/IRETA and others (e.g. SPREP).
- (v) **Agriculture Value Adding and Marketing.** There appears to be no overlap between activities under agricultural processing (IRETA, SPC and PIFS).
- (vi) **Agricultural Policy and Statistics.** Agencies involved in agricultural policy (SPC, SOPAC, SPREP, FAO and PIFS) should work together to develop a strategy for speeding up the process of incorporation of sustainable agricultural practices in national policy framework. Concerning agricultural statistics, there appears to be some overlap between projects undertaken by ADAP¹ and FAO and it is recommended that the agencies involved collaborate in establishing data bases.
- (vii) **Capacity Building and Training.** Capacity building is bound to cut across institutions and disciplines. Given the nature of capacity-building, it is suggested, where necessary, agencies should collaborate and that specific training needs should be coordinated through one or two agencies. It is suggested that all agencies concerned (USP/IRETA, SPC, SOPAC, ADAP and FAO) consult and collaborate on capacity building.

¹ The Agriculture Development in the American Pacific (ADAP) Project was launched in 1988 by the US Department of Agriculture (USDA) to serve as a mechanism for the Pacific Land-Grant institutions (universities and colleges) to share and focus resources on priority areas of common concerns and interest on a regional basis in the “American Pacific” region.

ANNEX 4

APPENDIX

REGIONAL PRIORITIES FOR AGRICULTURE DISCIPLINES

Disciplines	Top Priority Areas	Regional Importance
Plant Protection	<ol style="list-style-type: none"> 1. Fruit Fly (Control, Surveillance and Eradication) 2. Control of Taro (Beetle and Blight) 3. National Quarantine (Training, Information, Legislation) 4. Control, protect & eradicate Giant African Snail 5. Contingency Plans for Pests & Diseases Outbreak 6. Genetically manipulated organisms (GMOs) 7. Invasive weeds (Biosafety Protocol Issues) 8. Import Risk Analysis (IRA/IPA) 9. Pest Status 10. ICPM Standards 	<p>Very high Very high Very high</p> <p>High High High High High Very high Very high</p>
Crop Production & Diversification	<ol style="list-style-type: none"> 1. Genetic improvement of planting materials (seeds, disease free and resistance) 2. Development & improvement of Taro (genetic, high yielding, disease resistant and drought tolerant) 3. Tropical Fruit Crop Production (fruit tree development/improvement, banana black leaf resistant cultivar) 4. Vegetables production (all aspects) 5. Preventive measures for crop losses 6. Tree Crops Development 7. Kava Production 	<p>Very high</p> <p>High</p> <p>Very high</p> <p>High High High Very high</p>
Animal Health & Production	<ol style="list-style-type: none"> 1. Disease Surveys (disease surveillance & reporting) 2. Animal Production (genetic improvement, breeding, all aspects) 3. Quarantine (legislation, etc.) 4. Feed (improvements all aspect) 5. OIE Standards 	<p>High Very high</p> <p>High High Very high</p>
Soils and Farming Systems	<ol style="list-style-type: none"> 1. Soil Management (include erosion, conservation, rejuvenation and improvement) 2. Farming System for Sustainable Development 3. Soil Survey and Classification 4. Atoll Cultivation 5. Soil Analysis 	<p>High</p> <p>Medium Medium High Medium</p>
Agriculture Value-Adding and Marketing	<ol style="list-style-type: none"> 1. Export Marketing and Trade (includes penetration, promotion) for Kava, Black Pepper, Flowers, and Medicinal plants) 2. Market Intelligence (demand etc.) 3. Quality Management (include post harvesting) 4. Food Processing (fruit and root crops) 5. Coconut Product Diversification 6. World Trade Organisation Agriculture Issues 7. Agri-processing 8. Kava Extraction 	<p>Very high</p> <p>High High High Medium Very high Very high Very high</p>

PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 5
COST ESTIMATES

ANNEX 5
COST ESTIMATES

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ANNEX 5

COST ESTIMATES

A. MAIN WORKING HYPOTHESIS

1. The following working hypotheses were used for the calculation of RPFS costs:
 - RPFS is structured in three technical components (Trade facilitation, Agriculture policy and legal advice and Demand Driven interventions at country and community level) plus one overarching component for Programme management, Monitoring and evaluation;
 - RPFS is a multi phase programme; the first phase for which detailed cost calculation is presented will have a four years duration;
 - COSTAB has been used to structure project costs;
 - Cost elements have been classified according to five **investment** and two **recurrent** costs categories:
 - Technical assistance and studies (investment)
 - Training and workshops (investment)
 - Equipment (investment)
 - Contracts with service providers (investment).
 - Transport allowances (investment)
 - Salaries (recurrent)
 - Field allowances (recurrent);
 - All costs have also been classified at Regional or Country level according to the proposed geographical managerial responsibility ;
 - The proposed cost estimates for training and workshops reflect actual prices verified for recently run operations by FAO-SAPA regional office in the context of TCP projects;
 - Given the regional nature of the programme and the “demand driven” design, lump sum forfeits were often used in the compilation of detailed cost tables, to take account for possible variations in unit costs in the different countries; all costs are in US\$.
2. Two sets of tables are presented in this annex: a) Detailed cost tables, one for each of the three pillars plus programme implementation, and b) Summary tables for the whole programme, including:
 - Programme costs by components and by year;
 - Programme costs by expenditure accounts;

- Programme costs by components and by sources of funding (external donor, governments contribution and rural communities participation);
- Programme costs by areas of implementation (regional or country level).

B. COMMUNITY AND COUNTRY BASED INTERVENTIONS

3. To estimate the cost of **community/country-based interventions** in a demand driven environment the following assumptions were made:

- An initial **Awareness Raising /Sensitisation** workshop would be organised and managed at country level, including the preparation of country specific documentation on the role of domestic agriculture to food security, options and opportunities and workshop facilitation to be entrusted to local skilled resources;
- The country level workshop would be followed by **Information/Awareness raising campaign** to be implemented at provincial level; capacity building funds would be managed accordingly at country level for i) workshop organisation and ii) for project identification/preparation; retraining of some technical and extension staff (at country and provincial level), community development and NGO personnel, CBO, etc., may also be required. Specific commitments would be decided according to proposals received by candidates interested to receive technical retraining according to their own need assessments; this should reflect some of the areas most solicited by the rural communities due to concentration of technical demand for farmer's based initiatives (for instance on topics like IPM, organic certification, marketing and processing techniques, etc.);
- The implementation of **food security farmer's based initiatives** would be financed only on demand expressed by each community and will be executed following a farmers centred learning approach with the assistance of some selected/agreed service provider; the latter might have been previously associated with one or more of the capacity building initiatives sponsored by the programme.

Demand Driven Interventions for Income Generating Activities

4. To calculate the size of the funds to be allocated for demand driven interventions, three different types of initiatives are used to illustrate the estimated requirement for matching grants; all initiatives focus income diversification to take advantage of the new environment and opportunities created by the other pillars of the programme:

- **Module I:** represent interventions of training nature : US\$2,500/micro project, including US\$750 as direct contribution from the participating rural community;

- **Module II:** are interventions of similar training nature, though in the budget there is an extra provision (up to US\$5,000/microproject) for the construction of small-scale infrastructure (for water harvesting, road improvement, etc.) or other civil works which are essential to achieve the expected results. The overall budget is US\$7,500/micro-project, including US\$750 as direct contribution from the participating rural community; and
- **Module III:** in this case the budget includes up to US\$3,000/microproject as an extra provision for marketing and processing equipment; the overall budget is US\$5,500/micro project, including US\$750 as direct contribution from the participating rural community.

5. The total unit cost of US\$2,500 for Module I is based on an average cost for a 1-2 years long farmers centred learning initiatives (25 farmers, 2 facilitators, 3 meetings/month during 4 months, repeated twice). This would allow for instance to promote the establishment of one farmers' fields schools (FFS) which might focus a wide range of different topics:

- integrated production and pest management (IPPM) for horticultural crops,
- improved fertility management and organic production,
- seed production and rapid multiplication of vegetative material,
- rearing of small animals, and
- improved animal health including the establishment of para-vet clinics,
- improved artisanal, coastal fishery, etc.

Indicative budget for demand-driven interventions geared to income diversification

Item	Quantity	Unit Cost (US\$)	Module I	Module II	Module III
Farmer facilitator fee – daily allowance	2 trainers/3 times * 4 months * 2	15	720	720	720
Inputs	lump sum		200	200	200
Civil works, Equipment	lump sum		200	5,000	3,000
Fungible material	lump sum		230	230	230
Participants contribution	10-30%		750	750	750
Staff allowances for follow-up work documentation of progress/ impact /sustainability	lump sum	400	400	600	600
Total cost for 2 years activities, of which (matching grant US\$)			2,500 (1,750)	7,500 (6,750)	5,500 (4,750)

6. The matching grants fund for farmers based initiatives would therefore cover inputs and equipment for demonstrations, local trainers/facilitators allowances as well as transport allowances and food for participants. The initiative is supposed to be supported during a minimum

of 2 consecutive seasons. Community participation has been estimated at 30% of the total cost of the base module (training initiative) to account for the field, labour and local material used during the training/demonstrations period.

7. The total allocation for farmers based initiatives is based in the following absorption projections at country level:

- 40 initiatives/year for PNG, of which 20 training and 10 each for infrastructure and marketing;
- 20 initiatives/year for medium countries (6), of which 10 training and 5 each for infrastructure and marketing;
- 10 initiatives/year for small countries (7), of which 5 training and 5 for infrastructure and marketing.

8. It should be kept in mind that these estimates are mainly intended to provide an average figure from where it is possible to calculate the total amount that should be made available for country based interventions based on an average absorption capacity according to the different country size and population. Therefore this projection should be used with a high degree of flexibility. In each country RPFS will seek to establish contractual arrangements with a range of different partners, with different resources and cost-sharing capacity; the actual cost of a single activity could be higher or lower than these indicative figures.

Technical Assistance

9. A second type of fund would be available under the RPFS to provide TA to address specific technical topics; this fund could be used by each country to respond to particular needs or to upgrade the capacity of staff or farmers groups in any specific technical field. Besides typical initiatives like technical studies and survey on technical topics it is intended that the funds may be used as well to finance the following:

- national and international technical assistance that may be required by training institutions to develop training curricula (for farmers centred learning initiatives, including the preparation and multiplication of training material) according to participatory training needs assessment ; and
- facilitation and transport costs and allowances in case of regional study tours within and outside the countries.

The table below presents a summary of the projections that have been used to estimate the total allocation for Demand driven interventions for Income Generating Activities.

PACIFIC ISLANDS FORUM: Regional Programme for Food Security
Annex 5: Cost Estimates

Detailed Costs (US\$)	Unit	Quantities					Unit Cost	Total
		2003	2004	2005	2006	Total		
I. Investment Costs								
A. Information and support to farmers communities								
Awareness workshops on role of domestic agriculture in food security /a	l.sum	7	7	14	-	28	5,000	140,000.0
Province level awareness workshop on food security /b	l.sum for 10 ws	26	-	-	-	26	3,000	78,000.0
Local TA to assist with formulation of community based interventions	p/m	30	70	60	40	200	1,000	200,000.0
Subtotal Information and support to farmers communities								418,000.0
B. Community Level Investments for IGA /c								
Farmers based interventions - Mod. I /d	l.sum/group/season	60	100	200	100	460	1,750	805,000.0
Farmers based interventions - Mod. II /e	l.sum/group/season	30	50	100	50	230	6,750	1,552,500.0
Farmers based interventions - Mod. III /f	l.sum/group/season	30	50	100	50	230	4,750	1,092,500.0
Farmers contributions /g	l.sum/group/season	120	200	400	200	920	750	690,000.0
Subtotal Community Level Investments for IGA								4,140,000.0
C. Technical Assistance /h								
RTA - IPM /i	p/m	4	6	6	6	22	10,000	220,000.0
RTA - Environmental Impact Assessment /j	p/m	4	6	6	6	22	10,000	220,000.0
NTA - on topics to be identified /k	p/m	4	6	6	6	22	4,000	88,000.0
Subtotal Technical Assistance								528,000.0
Total								5,086,000.0

/a To be repeated twice in each country; budget include preparation and facilitation
 /b 4 for PNG, 3 for Fiji, Solomon and Vanuatu; 2 for Cook, Tonga, Samoa; 1 for other countries
 /c IGA : Income Generating Activities
 /d 20/year for PNG; 10/year/countries II (6); 5/year/countries III (7); including crop, small livestock and fish production
 /e same country proportion as per previous item
 /f same country proportion as per previous item
 /g Same farmers contribution, in kind or cash, irrespective of the nature of the initiative.
 /h To address technical topics at country level
 /i including travel
 /j including travel
 /k including travel

C. PROGRAMME COST

10. The overall programme cost for 4 years is US\$ 11.475 million; the distribution by component and by source of funding is as follows:

	The Government		Donor financing		Rural Communities		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
1. Trade facilitation	-	-	2,410,000	100	-	-	2,410,000	21
2. Agricult. policy assistance	-	-	760,000	100	-	-	760,000	7
3. Demand driven interventions for IGA	-	-	4,396,000	86	690,000	14	5,086,000	44
4. Programme Implementation	952,000	30	2,267,400	70	-	-	3,219,400	28
Total Disbursement	952,000	8	9,833,400	86	690,000	6	11,475,400	100

11. All other tables are presented in the appendix 1.

Table 1. Trade facilitation

Detailed Costs

	Unit	Quantities					Unit Cost	Totals				
		2003	2004	2005	2006	Total		2003	2004	2005	2006	Total
I. Investment Costs												
A. Food quality & safety standards												
1. Elaboration of food standards and guidelines												
ITA in food technical standards /a	p/month	3	3	4	4	14	20,000	60,000.0	60,000.0	80,000.0	80,000.0	280,000.0
Training in food quality at country level /b	l.sum	7	7	7	7	28	5,000	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
Workshops on international quarantine standards /c	l.sum	7	7	7	7	28	5,000	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
Overseas short training /d	l.sum	10	10	10	10	40	10,000	100,000.0	100,000.0	100,000.0	100,000.0	400,000.0
Equipment for inspection and analysis of food products	l.sum	-	4	5	5	14	10,000	-	40,000.0	50,000.0	50,000.0	140,000.0
Elaboration of food standards and guidelines /e	l.sum contract	-	1	1	1	3	10,000	-	10,000.0	10,000.0	10,000.0	30,000.0
Food regulations information study	l.sum	-	1	-	-	1	10,000	-	10,000.0	-	-	10,000.0
Subtotal Elaboration of food standards and guidelines								230,000.0	290,000.0	310,000.0	310,000.0	1,140,000.0
2. Pest surveillance activities												
Two years contract to prepare pest list /f	l.sum	1	-	-	-	1	24,000	24,000.0	-	-	-	24,000.0
RTA - pest risk assessment at country level /g	p/m	7	7	7	7	28	10,000	70,000.0	70,000.0	70,000.0	70,000.0	280,000.0
Subtotal Pest surveillance activities								94,000.0	70,000.0	70,000.0	70,000.0	304,000.0
Subtotal Food quality & safety standards								324,000.0	360,000.0	380,000.0	380,000.0	1,444,000.0
B. Legal framework review and updating												
ITA - Legal advisory services /h	p/month	2	2	2	2	8	20,000	40,000.0	40,000.0	40,000.0	40,000.0	160,000.0
RTA - Legal advisory services /i	p/month	2	2	2	2	8	10,000	20,000.0	20,000.0	20,000.0	20,000.0	80,000.0
Workshop organization at regional level /j	l.sum	-	1	-	1	2	32,000	-	32,000.0	-	32,000.0	64,000.0
Subtotal Legal framework review and updating								60,000.0	92,000.0	60,000.0	92,000.0	304,000.0
C. Promoting intra regional trade												
Background analytical studies	l.sum contract	2	2	2	2	8	10,000	20,000.0	20,000.0	20,000.0	20,000.0	80,000.0
Workshop organization on intra-regional trade /k	l.sum	-	1	-	1	2	5,000	-	5,000.0	-	5,000.0	10,000.0
Subtotal Promoting intra regional trade								20,000.0	25,000.0	20,000.0	25,000.0	90,000.0
D. Commodity development programs /l												
ITA to facilitate discussion /m	p/month	2	2	2	2	8	20,000	40,000.0	40,000.0	40,000.0	40,000.0	160,000.0
RTA to facilitate discussion at country level /n	p/month	2	2	2	2	8	10,000	20,000.0	20,000.0	20,000.0	20,000.0	80,000.0
Workshop/capacity building at country level /o	l.sum	7	7	7	7	28	5,000	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
Subtotal Commodity development programs								95,000.0	95,000.0	95,000.0	95,000.0	380,000.0
E. Marrakesh agreement and multilateral trade negotiator												
Feasibility study on transitory measures safeguarding food security	l.sum	-	1	-	-	1	10,000	-	10,000.0	-	-	10,000.0
Review of needs of compensatory measures /p	l.sum	-	1	-	-	1	42,000	-	42,000.0	-	-	42,000.0
Study on impact of WTO at country level /q	l.sum	3	4	3	4	14	5,000	15,000.0	20,000.0	15,000.0	20,000.0	70,000.0
Capacity building in multi-lateral trade negotiation /r	l.sum	3	4	3	4	14	5,000	15,000.0	20,000.0	15,000.0	20,000.0	70,000.0
Subtotal Marrakesh agreement and multilateral trade negotiator								30,000.0	92,000.0	30,000.0	40,000.0	192,000.0
Total								529,000.0	664,000.0	585,000.0	632,000.0	2,410,000.0

\a Including international travel

\b 50 persons (including private sector)*3 days ; 2/country; cost includes transport allowances

\c Two weeks courses for 12 people

\d Two weeks visits for 3 people (3 per country: fishery, crops, livestock)

\e One each for crops, animal and marine products

\f to be performed in years 1,2,3

\g two weeks per country

\h Including international travel

\i Including international travel

\j 30 persons*5 days - including transport allowances

\k including travel for 25 participants

\l 3 months studies including workshop to discuss findings to be coordinated at country level

\m Including international travel

\n Including regional travel

\o 30 persons*3 days - including transport allowances

\p Study including regional workshop to discuss findings

\q One study to be conducted in each country

\r Training/workshops to be conducted in each country

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Table 2. Agriculture policy assistance

Detailed Costs

(US\$)

Unit	Quantities					Unit Cost	Totals					
	2003	2004	2005	2006	Total		2003	2004	2005	2006	Total	
I. Investment Costs												
A. Harmonization of agricultural and trade policies												
ITA - agric. policy advise /a	p/month	2	2	2	2	8	20,000	40,000.0	40,000.0	40,000.0	40,000.0	160,000.0
RTA - agric. policy advise /b	p/month	2	2	2	2	8	10,000	20,000.0	20,000.0	20,000.0	20,000.0	80,000.0
Workshop organization at country level /c	l.sum	3	4	4	3	14	5,000	15,000.0	20,000.0	20,000.0	15,000.0	70,000.0
Subtotal Harmonization of agricultural trade policies								75,000.0	80,000.0	80,000.0	75,000.0	310,000.0
B. Analysis of socio-economic constraints												
ITA to facilitate discussion /d	p/month	2	2	2	2	8	20,000	40,000.0	40,000.0	40,000.0	40,000.0	160,000.0
RTA to facilitate discussion at country level /e	p/month	2	2	2	2	8	10,000	20,000.0	20,000.0	20,000.0	20,000.0	80,000.0
Workshop/capacity building at country level /f	l.sum	7	7	7	7	28	5,000	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
Workshop/capacity building at regional level /g	l.sum	-	1	-	1	2	35,000	-	35,000.0	-	35,000.0	70,000.0
Subtotal Analysis of socio-economic constraints								95,000.0	130,000.0	95,000.0	130,000.0	450,000.0
Total								170,000.0	210,000.0	175,000.0	205,000.0	760,000.0

\a Including international travel

\b Including international travel

\c 30 persons*3 days - including transport allowance

\d Including international travel

\e Including regional travel

\f 30 persons*3 days - including transport allowances

\g 50 persons*5 days - including air tickets and allowances

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Table 3. Demand driven interventions for income generating activities

Detailed Costs
(US\$)

	Unit	Quantities				Total	Unit Cost	Totals				
		2003	2004	2005	2006			2003	2004	2005	2006	Total
I. Investment Costs												
A. Information and support to farmers communities												
Awareness workshops on role of domestic agriculture in food security /a	I.sum	7	7	14	-	28	5,000	35,000.0	35,000.0	70,000.0	-	140,000.0
Province level awareness workshop on food security /b	I.sum for 10 ws	26	-	-	-	26	3,000	78,000.0	-	-	-	78,000.0
Local TA to assist with formulation of community based interventions	p/m	30	70	60	40	200	1,000	30,000.0	70,000.0	60,000.0	40,000.0	200,000.0
Subtotal Information and support to farmers communities								143,000.0	105,000.0	130,000.0	40,000.0	418,000.0
B. Community Level investments for IGA/c												
Farmers based interventions - Mod.I /d	I.sum/group/season	60	100	200	100	460	1,750	105,000.0	175,000.0	350,000.0	175,000.0	805,000.0
Farmers based interventions - Mod. II /e	I.sum/group/season	30	50	100	50	230	6,750	202,500.0	337,500.0	675,000.0	337,500.0	1,552,500.0
Farmers based interventions - Mod. III /f	I.sum/group/season	30	50	100	50	230	4,750	142,500.0	237,500.0	475,000.0	237,500.0	1,092,500.0
Farmers contributions /g	I.sum/group/season	120	200	400	200	920	750	90,000.0	150,000.0	300,000.0	150,000.0	690,000.0
Subtotal Community Level Investments for IGA								540,000.0	900,000.0	1,800,000.0	900,000.0	4,140,000.0
C. Technical Assistance /h												
RTA - IPM /i	p/m	4	6	6	6	22	10,000	40,000.0	60,000.0	60,000.0	60,000.0	220,000.0
RTA - Environmental Impact Assessment /j	p/m	4	6	6	6	22	10,000	40,000.0	60,000.0	60,000.0	60,000.0	220,000.0
NTA - on topics to be identified /k	p/m	4	6	6	6	22	4,000	16,000.0	24,000.0	24,000.0	24,000.0	88,000.0
Subtotal Technical Assistance								96,000.0	144,000.0	144,000.0	144,000.0	528,000.0
Total								779,000.0	1,149,000.0	2,074,000.0	1,084,000.0	5,086,000.0

\a To be repeated twice in each country; budget include preparation and facilitation

\b 4 for PNG, 3 for Fiji, Solomon and Vanuatu; 2 for Cook, Tonga, Samoa; 1 for other countries

\c IGA : Income Generating Activities

\d 20/year for PNG; 10/year/countries II (6); 5/year/countries III (7); including crop, small livestock and fish production

\e same country proportion as per previous item

\f same country proportion as per previous item

\g Same farmers contribution, in kind or cash, irrespective of the nature of the initiative.

\h To address technical topics at country level

\i including travel

\j including travel

\k including travel

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Table 4. Programme Implementation - M&E
Detailed Costs
(US\$)

	Unit	Quantities				Total	Unit Cost	Totals				Total
		2003	2004	2005	2006			2003	2004	2005	2006	
I. Investment Costs												
A. Preparatory activities at regional level												
RTA for preparation of materials, workshops and courses /a	p/month	3	-	-	-	3	6,000	18,000.0	-	-	-	18,000.0
RTA for facilitation of workshops and training events	p/month	0.5	-	-	-	0.5	6,000	3,000.0	-	-	-	3,000.0
Programme launching workshop /b	l.sum	1	-	-	-	1	50,000	50,000.0	-	-	-	50,000.0
Publication of documentation and media	l.sum	1	-	-	-	1	10,000	10,000.0	-	-	-	10,000.0
Subtotal Preparatory activities at regional level								81,000.0	-	-	-	81,000.0
B. Monitoring and evaluation												
1. Methodology development study /c												
RTA to develop impact assessment methodology	p/months	2	-	-	-	2	6,000	12,000.0	-	-	-	12,000.0
Field evaluation of assessment methodology /d	l.sum	2	-	-	-	2	5,000	10,000.0	-	-	-	10,000.0
Service provider to finalise and implement participatory impact assessment methodology	l.sum/country	14	14	14	14	56	3,000	42,000.0	42,000.0	42,000.0	42,000.0	168,000.0
Subtotal Methodology development study								64,000.0	42,000.0	42,000.0	42,000.0	190,000.0
C. Preparatory activities at country level												
NTA for preparation of materials, workshops and courses /e	p/month	6	-	-	-	6	5,000	30,000.0	-	-	-	30,000.0
NTA for facilitation of workshops and training events /f	p/month	6	-	-	-	6	5,000	30,000.0	-	-	-	30,000.0
Programme launching workshop /g	l.sum	14	-	-	-	14	3,000	42,000.0	-	-	-	42,000.0
Publication of documentation and media	l.sum	14	-	-	-	14	2,000	28,000.0	-	-	-	28,000.0
Subtotal Preparatory activities at country level								130,000.0	-	-	-	130,000.0
D. Programme management												
CTA	p.m	12	12	12	12	48	15,000	180,000.0	180,000.0	180,000.0	180,000.0	720,000.0
Field allow. to monitor implem. of farmers'initiatives /h	10 w/d	222	222	222	222	888	300	66,600.0	66,600.0	66,600.0	66,600.0	266,400.0
Travel allowances /i	l.sum/country	22	22	22	22	88	10,000	220,000.0	220,000.0	220,000.0	220,000.0	880,000.0
Subtotal Programme management								466,600.0	466,600.0	466,600.0	466,600.0	1,866,400.0
Total Investment Costs								741,600.0	508,600.0	508,600.0	508,600.0	2,267,400.0
II. Recurrent Costs												
Country level coordinator /j	p/y	14	14	14	14	56	12,000	168,000.0	168,000.0	168,000.0	168,000.0	672,000.0
Food day committee Operating expenses	l.s	14	14	14	14	56	5,000	70,000.0	70,000.0	70,000.0	70,000.0	280,000.0
Total Recurrent Costs								238,000.0	238,000.0	238,000.0	238,000.0	952,000.0
Total								979,600.0	746,600.0	746,600.0	746,600.0	3,219,400.0

la One specialist/componet

lb 5 days * 50 participants; include travel and DSA

lc To propose an implementation framework for M&E

ld The methodology proposed to be tested/adapted in the field in 2 countries

le 0.5 months * 12 countries

lf 0.5 months * 12 countries

lg 2 days * 60 participants

lh @ 30 \$/day; 30 wd/month/country I;10wd/months/countries II; 5 wd/month/countries III

li for air tickets within the region; countries I*3 times; countries II and I*1 time.

lj One RPFS facilitator at country level

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Components Project Cost Summary	(US\$)			(US\$)			Base Costs
	Local	Foreign	Total	Local	Foreign	Total	
1. Trade facilitation	2,410,000.0	-	2,410,000.0	2,410,000.0	-	2,410,000.0	21
2. Agricult. policy assistance	760,000.0	-	760,000.0	760,000.0	-	760,000.0	7
3. Demand driven interventions for IGA	5,086,000.0	-	5,086,000.0	5,086,000.0	-	5,086,000.0	44
4. Programme Implementation	3,219,400.0	-	3,219,400.0	3,219,400.0	-	3,219,400.0	28
Total PROJECT COSTS	11,475,400.0	-	11,475,400.0	11,475,400.0	-	11,475,400.0	100

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Project Components by Year -- Base Costs
(US\$)

	Base Cost				Total
	2003	2004	2005	2006	
1. Trade facilitation	529,000.0	664,000.0	585,000.0	632,000.0	2,410,000.0
2. Agricult. policy assistance	170,000.0	210,000.0	175,000.0	205,000.0	760,000.0
3. Demand driven interventions for IGA	779,000.0	1,149,000.0	2,074,000.0	1,084,000.0	5,086,000.0
4. Programme Implementation	979,600.0	746,600.0	746,600.0	746,600.0	3,219,400.0
Total PROJECT COSTS	2,457,600.0	2,769,600.0	3,580,600.0	2,667,600.0	11,475,400.0

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Components by Source of Funding
(US\$)

	The Government		Donor financing		Rural Communities		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
1. Trade facilitation	-	-	2,410,000.0	100.0	-	-	2,410,000.0	21.0
2. Agricult. policy assistance	-	-	760,000.0	100.0	-	-	760,000.0	6.6
3. Demand driven interventions for IGA	-	-	4,396,000.0	86.4	690,000.0	13.6	5,086,000.0	44.3
4. Programme Implementation	952,000.0	29.6	2,267,400.0	70.4	-	-	3,219,400.0	28.1
Total Disbursement	952,000.0	8.3	9,833,400.0	85.7	690,000.0	6.0	11,475,400.0	100.0

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Areas of Intervention (US\$)	Regional level	Country level	Total
	<u>interventions</u>	<u>interventions</u>	
Regional level	2,089,000.0	-	2,089,000.0
Country level	240,000.0	9,146,400.0	9,386,400.0
Total PROJECT COSTS	2,329,000.0	9,146,400.0	11,475,400.0

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Expenditure Accounts by Components (US\$)	Trade facilitation	Agricult. policy assistance	Demand driven interventions for IGA	Programme Implementation	Total
I. Investment Costs					
A. TA and studies	1,792,000.0	480,000.0	728,000.0	823,000.0	3,823,000.0
B. Training and workshops	344,000.0	280,000.0	218,000.0	130,000.0	972,000.0
C. Equipment	140,000.0	-	-	-	140,000.0
D. Service provider contract	134,000.0	-	4,140,000.0	168,000.0	4,442,000.0
E. Transport allowances	-	-	-	1,146,400.0	1,146,400.0
Total Investment Costs	2,410,000.0	760,000.0	5,086,000.0	2,267,400.0	10,523,400.0
II. Recurrent Costs					
A. Salaries	-	-	-	672,000.0	672,000.0
B. Field allowances	-	-	-	280,000.0	280,000.0
Total Recurrent Costs	-	-	-	952,000.0	952,000.0
Total PROJECT COSTS	2,410,000.0	760,000.0	5,086,000.0	3,219,400.0	11,475,400.0

PACIFIC ISLANDS FORUM
REGIONAL PROGRAMME FOR FOOD SECURITY

ANNEX 6
LOGICAL FRAMEWORK ANALYSIS

ANNEX 6

LOGICAL FRAMEWORK ANALYSIS

Goal (Ultimate Objective)	Objectively Verifiable Indicator (OVI)	Means of Verification (MOV)	Assumptions
Contributing to the stabilization of food security at national and household levels PURPOSE (Immediate Objective)			
1. Adjust to changes in the international trade environment	Changes introduced in domestic trade policy	Periodic reporting from MOA, Chamber of Commerce concerned	Trade is an attractive option for countries with exportable products which have and international comparative advantage
2. Diversify and increase regional and intra-regional trade	Number/types and volume value of agricultural produce traded	Customs Office reports, trade statistics	The need to diversify the export base away from traditional agricultural commodities is acknowledged by all governments
3. Pursue Marrakesh Agreement follow-up and prepare for Multilateral Trade Negotiations on Agriculture (MTNA)	Relevant studies and workshops on capacity building	Programme of work of ministry concerned	Member countries make efforts to enhance their capacities in WTO matters
4. Coherence of agricultural and trade policies	Policy statements from national Ministry of Agriculture (MOA) and Ministry of Commerce/Trade	Periodic reporting from Ministry of Agriculture/Commerce Trade	National agricultural policy is compatible with national strategy for sustainable reduction of food insecurity
5. Strengthen institutional capacity of related ministries and public institutions, in the analysis of socio-economic constraints	Increase in requisite skills and capacity of staff in relevant institutions.	Periodic reporting from institutions concerned	Governments pursue their efforts towards the achievement of food security at national and household levels with a clear concept of the role of the agricultural sector
6. Support income generation at community level	Official policy statements	Periodic reports from national planning, central banks.	A more efficient and sustainable agriculture will lead to increase in domestic food supplies and generate additional income in rural areas

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Annex 6: Logical Framework Analysis

Goal (Ultimate Objective)	Objectively Verifiable Indicator (OVI)	Means of Verification (MOV)	Assumptions
7. Addressing country-specific technical constraints	Requests submitted to ministry/technical institutions concerned	Periodic reports from national extension service	The bulk of the population continues to live in rural areas with agriculture, fisheries and forestry as main source of livelihood; off-farm, agriculture-related activities evolving.
OUTPUTS			
1.1 Food quality and safety standards adjusted, trade barriers reduced	Changes introduced into existing standards and trading practices	Notification by national institution concerned	Government and private sectors are committed to improve technical standards
2.1 Foreign trade in agriculture diversified and increased	Changes in the composition of foreign agricultural trade, number of commodity programmes developed	Agricultural import/export statistics	National commodity programmes are compatible with regional trade policy
3.1 Package of transitory measures for safeguarding food security for FICs prepared, capacity in WTO matters enhanced	Existence of safeguarding measures	Notification by ministry concerned	Governments actively support MTNA
4.1 Coherence of national and regional agricultural and trade policies enhanced	Comparison of national and regional agricultural policies	Comparative policy analysis	Member governments agree on harmonising agricultural policy at regional level
5.1 Capacities of relevant public and non-public institutions strengthened at national level	Improvements in ability to address critical issues concerning role of agriculture in poverty reduction and food security	Review of MOA work programmes	Relevant institutions respond to RPFS interventions
6.1 Incomes generated in communities of intervention	Increase in household income and expenditure	Periodic reporting from MOA and communities	Research results relating to improved crop and animal production available. Scope for intensification and diversification exists

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Annex 6: Logical Framework Analysis

Goal (Ultimate Objective)	Objectively Verifiable Indicator (OVI)	Means of Verification (MOV)	Assumptions
7.1 Specific technical constraints at country/ community level removed	Measurable progress in technical field concerned	Community self-assessment reports	There is a positive response to programmes under RPFS at community level
INPUTS			
1.1.1 Workshops on harmonization of food quality and safety regulations with those of major trade partners and Codex Alimentarius	Number and location of workshops held	Records of ministry concerned	Governments in the region are seeking opportunities to promote intra-regional trade as one avenue towards diversifying production and enhancing sustainability
1.1.2 Elaboration of standards and guidelines including legal aspects for products of importance within the region	Number and types of products covered	Records of ministry concerned	Standards and guidelines to be applied by all FICs
1.1.3 Equipment for the inspection and analysis of food products	Type and quantity of equipment delivered	Annual reports of national institution concerned	Shortage of specific equipment likely to exist in each of the FICs
1.1.4 Review of WTO-compatible domestic policy instruments and analysis of their feasibility	Feasibility of domestic policy instruments established	Review of domestic policy instruments	Coherence of policy instruments at regional level
1.1.5 Supply-side study complemented by an analysis of import markets	Study and analysis undertaken	Review of documentation concerned	Coherence of studies at regional level
2.1.1 Studies and workshops aimed at identifying opportunities in intra-regional trade in agriculture and obstacles to its growth and possible solutions	Number of studies and workshops conducted	Records of national institution concerned and RPFS	Governments in the region are seeking opportunities to promote intra-regional trade as one avenue towards diversifying production and enhancing sustainability

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Annex 6: Logical Framework Analysis

Goal (Ultimate Objective)	Objectively Verifiable Indicator (OVI)	Means of Verification (MOV)	Assumptions
3.1.1 Trade policy workshops and country studies	Number of policy workshops and country studies	Records of national institution concerned and RPFS	Effective participation in MTNA requires a detailed knowledge of domestic trade-related issues
4.1.1 Workshops, seminars, training sessions aiming at coherence of national agricultural policies with regional policies	Number of workshops, seminars and training sessions held	Records at national and regional level; RPFS monitoring reports	Reference is made to earlier technical cooperation activities
5.1.1 Workshops at country and regional levels on analysis of socio-economic constraints	Number and type of workshops held	Annual reports of relevant institutions	Monitoring consolidated at different levels of administration
6.1.1 Awareness workshops at country level and technical assistance at community level to help formulate demand-driven interventions in support of farmer training and income generating activities	Number of workshops and training sessions held, number of interventions at community level	Periodic reporting from MOA. Community self-assessment reports	Local authorities/communities and farmers endorse RPFS interventions
6.1.2 Income generating micro-projects at community level	Number of micro-projects executed	Periodic reporting from ministry concerned. RPFS monitoring reports	Central governments, provincial and local authorities are supportive to community initiatives
7.1.1 Technical expertise in specific subjects to individual countries on request	Number of p/w by type of expertise and country	Community self-assessment reports and records from RPFS and national authorities	MOA of the country concerned screens the request for technical expertise