

# PALAWIJA NEWS



The CGPRT Centre Newsletter

Volume 18, Number 2

June 2001

## Food Security Strategies for Selected South Pacific Island Countries

*Pantjar Simatupang and Euan Fleming\**

### Executive Summary

This paper is a summary of the results of the research project "Food Security Strategies for Selected South Pacific Island Countries (SouthPIC)", which are published separately in four country study reports and a workshop proceedings:

- (i) Food Security Strategies for the Republic of Fiji by Hiagi M. Foraete (Working Paper No. 55, 2001)
- (ii) Food Security Strategies for Papua New Guinea by Passingham Bukley K. Igua (Working Paper No. 56, 2001)
- (iii) Food Security Strategies for the Kingdom of Tonga by S.M. Halavatau and N.V. Halavatau (Working Paper No. 57, 2001)
- (iv) Food Security Strategies for Vanuatu by Shadrack R. Welegtabit (Working Paper No. 58, 2001).
- (v) Food Security in Southwest Pacific Island Countries, workshop proceedings, edited by Pantjar Simatupang and D.R. Stoltz (Monograph No. 40, 2001).

The "SouthPIC" project was formulated based on observations that although historically there is little evidence of chronic food shortage in the South

Pacific island countries, some new emerging trends may have gradually eroded the adaptive strength of the national food security systems in the region. This is the main hypothesis to be assessed in the country studies of this project. However, the food security issue in South Pacific island countries is complex. The appropriate food security strategies and policy options can be formulated properly only through a comprehensive study. Accordingly, the outcome of this project is intended to help the governments in South Pacific island countries to assess the extent of food insecurity, and devise appropriate food security strategies and formulate policy options.

The general objectives of this project are to analyze food security conditions in selected South Pacific island countries and to formulate appropriate policy options for their food security strategies. Three specific objectives are:

### IN THIS ISSUE

<i>Food Security Strategies for Selected South Pacific Island Countries</i> <i>Pantjar Simatupang and Euan Fleming</i> .....	1
<i>Message from the Director</i> .....	3
<i>Food Security Conditions and Problems in South Pacific Island Countries</i> <i>Pantjar Simatupang and Euan Fleming</i> .....	5
<i>Commodity Export Diversification and Poverty Reduction in South and South-East Asia</i> <i>Budiman Hutabarat</i> .....	16
<i>CGPRT Centre News and Activities</i> .....	18

\* Team leader and regional advisor, SouthPIC Project. Taken from Food Security Strategies for Selected South Pacific Island Countries, Working Paper No. 59, CGPRT Centre.

1. To analyze food supply and demand balance and its dynamics at the national level in terms of:
  - (i) agricultural resource endowment and utilization, supporting infrastructure and related institutions, with an emphasis on food production capacity;
  - (ii) food production policy, realization and risks;
  - (iii) food import and export potentials, constraints, policy, realization and risks;
  - (iv) domestic food trade, distribution policy and market dynamics;
  - (v) domestic food demand for household consumption and other uses;
  - (vi) national food balance, and its dynamics; and
  - (vii) national food strategies and policies.
2. To assess food security at the household level in terms of:
  - (a) food availability and risks at local markets and in households;
  - (b) ability of household members to access the food they need, and its related risks;
  - (c) household food consumption patterns, food composition and allocation among household members, differentiated by age and sex;
  - (d) nutritional quality and sufficiency of household food consumption, differentiated by age and sex; and
  - (e) government strategies and policies related to household food security.
3. To identify a food security strategy and formulate policy options to improve food security in the respective countries.

The study was conducted using the latest “sustainable food security” paradigm, in which six criteria were analyzed for food security: food availability, access, utilization, stability, self-reliance (autonomy) and sustainability. Food availability, access and utilization determine adequacy. Stability and self-reliance determine vulnerability. Sustainability determines long-term persistence of food security. Using these criteria, food security in the participating countries was evaluated using a food security performance evaluation matrix (Table 1). In addition to economic and geo-bio-physical conditions, food security performance is also affected by social and political institutions.

Sustainable food security can also be viewed within a hierarchical system of, in descending order,

global, regional, national, sub-national/local (e.g. provincial), household and individual levels. Higher order food security is a necessary but not sufficient condition for lower order food security. The performance evaluation matrix (Table 1) was used to analyze food security at three levels of the food security hierarchical system: national, provincial and household.

**Table 1 Food security performance evaluation matrix.**

Principal determinants	Average Adequacy	Vulnerability		Sustainability
		Stability	Self-reliance	
Food availability	✓	✓	✓	✓
Food access	✓	✓	✓	✓
Food utilization and distribution	✓	✓	✓	✓

The countries that participated in the project are Fiji, Papua New Guinea, Tonga and Vanuatu. They were selected on the basis of similarities in traditional food staples (roots and tubers), dominant cultures (Melanesian and Polynesian), physical conditions and resource endowments, size, stage of economic development and geographical region. There is also a degree of diversity among the four countries for the purpose of contrast. All countries are ESCAP members that are infrequently invited to participate in CGPRT Centre projects.

Based on the framework, the main study subjects of the project are:

- food security performance and its determinants at the national and household levels;
- food security risk-coping institutions; and
- feasibility of regional cooperation in food security.

The project was conducted by the CGPRT Centre with the assistance of one regional advisor, and partnership with one institute and one national researcher from each participating country. The regional advisor rendered advisory services to the Centre and the national researchers on various aspects needed for successful implementation of the project. The national researchers were assigned to conduct the country studies. The partner institutes played roles as supervisors of national researchers and as contact institutes in disseminating the project outputs to their appropriate end-users. The preliminary findings were discussed in a regional workshop in Sydney, Australia, on 12-13 December 2001. Publication and dissemination was conducted by the Centre, which was also responsible for overall coordination.

---

---

## ***Message from the Director***

Although socio-economic research is definitely important for agricultural and rural development, it has been said that the work force of socio-economic researchers is not sufficient in many countries regardless of the developmental stage of agriculture and the nation.

Socio-economic research is in general expected to contribute more direct and real benefits of society than natural sciences. Socio-economic research stands closer to the people than natural sciences because of its more direct and more rapid effects on society through corresponding institutional arrangements. This means that socio-economic research is more closely connected with the government and administration. Consequently, socio-economic research institutes are often regarded as potential instruments in the governmental organization.

In the meantime, I have often heard counter-complaints between agricultural research staff and administration staff on the treatment of research results in governmental organizations. Namely, the research staff blame insufficient use of their research results and policy recommendations by the administration staff, and, in contrast with this, the administration staff are not satisfied with the usefulness of those results provided by the research staff.

I have no intention to judge which is true. Maybe, both are true. Then, I would like to say

that this discord should be solved through more intimate and timely discussions by both sides for the conceptualization of research subjects and the programmes of research implementation. Agricultural socio-economic research, as a matter of course, should be planned and implemented in timely fashion in accordance with research needs and well-thought out long term strategies of agricultural development.

Finally, I would like to ask those research staff working for the development of agriculture to provide society with quantitatively and qualitatively sufficient and authentic information, on which the government and administration staff would be able to formulate effective policies. At the same time, I would like to stress that an independent status should be guaranteed to the socio-economic research in terms of ensuring academic stance of the research staff. I heartily expect to see well balanced and capable organizations for the sake of the agricultural development in every developing country in the region.

*HARUO INAGAKI*

P.S. I am leaving the CGPRT Centre at the end of June. I would like to thank all of the readers of Palawija News and those who supported the Centre all through my six years tenure. Dr. Nobuyoshi MAENO will succeed me in July.

The organization of the project was as follows:  
Overall Coordinator and Supervisor:

Dr Haruo Inagaki, Director, CGPRT Centre

Team Leader:

Dr Pantjar Simatupang, Programme Leader,  
Research and Development, CGPRT Centre

Regional Advisor:

Dr Euan Fleming, Associate Professor, University  
of New England, Australia

National Experts:

Fiji: Mr Hiagi Foraete, Acting Principal Agricultural  
Officer, Ministry of Agriculture, Fisheries and  
Forest

Papua New Guinea: Mr P.B.K. Igua, Project  
Leader, National Agricultural Research  
Institute

Tonga: Dr Siosua Halavatau, Head of Extension  
Unit, Ministry of Agricultural and Forestry

Vanuatu: Mr Shadrack R. Welegtabit,  
Research Department, Reserve bank of  
Vanuatu

The fundings show that despite having limited arable land, a disadvantageous geographical location and space, a small country size, and being prone to natural disasters, South Pacific island countries have managed to avoid acute food insecurity. All countries manage to procure sufficient food through domestic food production and

---

---

importation. National food security is, however, in a potentially precarious condition in both the short run and long run. The major issue in the short run is temporary food insecurity due to vulnerability to various natural disasters, which are endemic in South Pacific island countries. Through generations of experience, the people of these island countries have adapted well to their harsh living environment. They have developed various indigenous mitigation mechanisms, such as diversified and sequential farming systems, egalitarian resource tenurial systems, risk pooling social institutions (mutual-help organizations), indigenous food preservation techniques, wild food reservation areas and out-migration, effective enough to prevent acute temporary food insecurity induced by the endemic natural disasters. Perhaps, the most serious concern now is long-term sustainability of the national food security systems. The indigenous wisdom has been eroding due to modernization processes and population pressure. Domestic food production capacity and productivity have shown declining trends and all countries have become increasingly dependent on food imports.

Provincial and household food security are of more serious concern than national food security. Although the degree of segmentation varies by country, national food security follows a dualistic structure. Rural food security systems and urban food security systems are either separated or weakly related, chiefly due to deficiencies in marketing infrastructure. Food availability in rural areas primarily comes from local production, whereby access to food by household is determined by access to natural resources (arable land and artisanal fishing grounds). As long as natural resources are abundant, rural food security systems remain strong and sustainable. The most vulnerable provinces are those with high population pressure. The most vulnerable households are poor, with inadequate command over resources to produce subsistence foods and cash income. With the exception of Tonga, all countries studied are facing increased rural poverty that has become a serious threat to household food security in rural areas. One of the main causes in Papua New Guinea and Vanuatu is a high population growth rate, but Tonga and Fiji have managed to avoid this problem through emigration.

Food availability in urban areas is heavily dependent on food importation. A household's access to food is determined by its purchasing

power. The most vulnerable groups are the poor, who lack entitlements due to their low income-earning capacity. This is mainly a result of unemployment, underemployment or employment in low-paid and unstable jobs. A high urbanization rate and low capital investment for employment creation are the two most important determinants of urban food insecurity. Urban poverty, and hence food security, have been increasingly serious problems in Papua New Guinea, Vanuatu and Tonga.

The more serious problem in South Pacific island countries is nutritional insecurity. Both under-nutrition and over-nutrition are prevalent. Under-nutrition is caused by food insecurity or intra-household mal-distribution of foods among household members. Food insecurity is largely a poverty phenomenon, while intra-household mal-distribution of foods is a cultural phenomenon: husbands and older sons have first priority to access the foods available in the home. Women and children are the groups most vulnerable to under-nutrition, which is prevalent in Papua New Guinea, Vanuatu and Fiji where food insecurity is also prevalent.

Over-nutrition is a syndrome of affluence that is prevalent among the middle- to high-income socioeconomic groups due to over-eating of foods. Its basic cause is an inappropriate lifestyle due to what could be termed "unbalanced modernization". This is the adoption of modern tools and transport, and the availability of off-farm jobs that reduce energy consumption. On the other hand, eating habits remain traditional, featuring big meals and a high frequency of eating. Over-nutrition is highly prevalent in all South Pacific island countries and is arguably the most important issue of food security in the region.

Strategy and policy recommendations for each case study country are elaborated in the respective country reports. In general, the core issues that should be placed as the top priority of the national policy makers are:

- (i) Chronic food security faced by poor households in both urban and rural areas of Papua New Guinea, Vanuatu and Fiji;
- (ii) Over-eating syndrome in all countries;
- (iii) Natural disaster induced temporary food security problems in all countries;
- (iv) Changes in traditional farming systems and their impacts on food security and resource sustainability; and

- 
- 
- (v) Social and demographic changes and their impacts on food security, priority and resource sustainability.

South Pacific island countries have undertaken only limited trade of food commodities. The scope for regional cooperation includes:

- (i) Collaborative research and development on traditional crops that are common among the countries;
  - (ii) Development of regional disaster preparedness and coping systems; and
  - (iii) Development of regional agricultural research and development networks.
- 

## Food Security Conditions and Problems in South Pacific Island Countries

*Pantjar Simatupang and Euan Fleming\**

### Dietary patterns

Dietary pattern is a result of the interaction between food availability (supply) and food access and preference (demand). Naturally, the traditional diet in South Pacific island countries was based on domestically produced food items. The traditional food staples as the main sources of energy are taro, yam, sweet potato, cassava, banana and breadfruit. The main sources of animal protein are seafoods, chicken and pig. The main sources of vitamins are various leafy vegetables. If consumed in an appropriate quantity, the traditional diet should be sufficient to meet nutritional requirements for a healthy and active life. In fact, nutritionally, the traditional staples contain more essential micro-nutrients than the introduced staples (Table 1). Moreover, the traditional dietary pattern has been an optimal adaptation to local resource endowments, environmental characteristics and social setting for sustainable food security. Accordingly, in a largely autarkic economic regime, the traditional dietary pattern was the most appropriate one to guarantee sustainable food security.

Contacts with foreign cultures and economies have induced significant changes in dietary pattern in many areas of South Pacific island countries. Immigrants and travellers bring their particular food preferences and dietary patterns. Europeans introduced wheat-based staples such as bread and the Irish potato. Asians introduced rice and wheat-based staples, and some varieties of vegetables. These introduced dietary patterns were therefore mostly based on imported food items. The opening up of the economies provided strong forces for the rapid adoption of the introduced dietary patterns, not only by migrants and their descendants but also by the indigenous people in the region. Consequently, the dominant role of the traditional diet has been eroding gradually.

The rapid substitution of the traditional dietary pattern by introduced dietary patterns is irreversible and will continue in the future for the following reasons. First, the traditional foods have been and will remain more expensive than their imported substitutes. On one hand, the price of domestically produced foods will continue to increase because of increasing costs of production, due to declining productivity, and increasing demand due to population growth. On the other hand, the prices of imported foods, rice and wheat in particular, have declined due to the fact that global supply shifts have outweighed demand shifts in the world market in recent times. This has occurred in large part because of rapid technological change, which has not been matched in the root crop industries that predominate in South Pacific island countries.

Second, the introduced dietary patterns are more suitable for an "instant and convenient lifestyle", the basic characteristic of a modern society where the value placed on time is high. Such a pattern of life has already begun to emerge in the urban areas of South Pacific island countries. The traditional food items, such as taro, yam, sweet potato, cassava, banana and breadfruit, are bulky and sold in large bundles (15-30 kg). They are mostly available in local markets and in fresh (and hence perishable) form. These factors make their procurement inconvenient and storability is quite limited. In contrast, imported food items such as rice and wheat flour are available in a variety of stores, can be bought in small quantities, and can be stored for a few months. Processing, preparation and cooking methods for traditional foods are labour-intensive and time-consuming whereas the imported foods may be cooked with automatic appliances.

---

\* Team leader and regional advisor, SouthPIC Project. Taken from Food Security Strategies for Selected South Pacific Island Countries, Working Paper No. 59, CGPRT Centre.

The imported foods are also easily sold in “ready to eat” or “fast food” forms (Table 1).

Third, the increasing need for cash induces agricultural commercialization whereby farmers sell the more expensive traditional foods for cash and buy cheaper imported foods to satisfy their own food needs. This practice has been occurring in many areas of Fiji, especially in peri-urban areas where marketing is not a limiting factor. Commercialization of farming is inevitable as the village economy becomes increasingly monetized

and material aspirations of the rural people increase.

Fourth, the urbanization rate will remain high due to population pressure and a desire for better education and an urban lifestyle. As explained previously, the introduced dietary patterns are more suitable to such a lifestyle than are the traditional diets. Moreover, urbanization will increase the number of poor people who prefer the cheaper imported foods to the more expensive locally produced foods, or can only afford the former.

**Table 1 Comparative characteristics of traditional foods and imported foods in South Pacific island countries.**

Characteristic	Traditional Diet (Indigenous Foods)	Introduced Diet (Imported Foods)
1. Origin	Domestic produce	Imported produce
2. Price	More expensive	Cheaper
3. Procurement convenience		
a. Buying place	Traditional markets	Shops or stores
b. Size of purchasing unit	Large	Variable
c. Bulkiness	High	Low
d. Cleanness	Low	High
4. Cooking process (manual)		
a. Time requirement	High	Low
b. Labour requirement	High	Low
c. Cleanness	Low	High
5. Automatic cooking alternative	Non-existent	Existent
6. Ready to eat/fast food forms	Not available	Available
7. Nutritional quality (non-energy)		
a. Minerals	High	Low
b. Vitamins	High	Low

There are two opposing views of the impacts of changing dietary patterns towards the consumption of more imported foods in South Pacific island countries, outlined above. The pessimistic view of the dietary changes towards more imported foods is that it has negative impacts on national food security. First, it causes a greater dependency on imported foods and decreasing food self-sufficiency. Increasing dependency on foreign suppliers increases uncertainty of national food availability and exposes national food markets to international market fluctuations. Second, food importation requires foreign exchange and hence can cause balance of payments problems. Being small countries, South Pacific island countries have a limited capacity to control and absorb external risks. Third, dietary change causes nutritional insecurity. It is argued by some that the imported foods are inferior to the traditional food in terms of nutritional quality. In particular, the traditional staples contain more essential minerals and vitamins than the imported ones (Table 2). As mentioned above, an influx of high fat-content meat, mutton flaps in particular, is considered to be one of the main

causes of obesity problems in South Pacific island countries. Fourth, food imports depress domestic food production. Imported foods are cheaper and more consistent with consumer preferences, and hence can easily out-compete locally produced foods. Increasing dependency on food import, therefore, worsens the already bad nutritional security problem.

Optimists, however, argue that higher consumption of imported foods is nothing to worry about. First, food importation diversifies the sources of food procurement and consumption patterns, and hence reduces vulnerability of national food security to domestic food production risks. This is especially important for those South Pacific island countries prone to natural disasters. Food importation is thus most important in mitigating food availability risk by providing an effective risk-coping mechanism against domestic food production shortages. Second, food importation is an efficient market adjustment mechanism in an open economy that facilitates optimal resource allocation, which is welfare-enhancing rather than welfare-worsening. Open-market operations hasten economic growth,

increasing household income, improving the balance of payments and enhancing food security. As a simple proof, South Pacific island countries import cheap foods and export high-value products, and so food importation facilitates higher rates of economic growth by utilizing their comparative advantage. A country with a high income per capita and healthy balance of payments should not experience national food insecurity even though its population is highly dependent on food imports. Third, there is no evidence that food imports have had negative impacts on the domestic production of food products. Fourth, some imported foods are cheaper than domestically produced traditional foods and hence more affordable. Availability of cheap imported foods enhances the food security of poor households in urban areas of South Pacific island countries by increasing the food entitlements of poor households. Fifth, it is illogical to say that the inferior nutritional quality of some imported foods must inevitably cause nutritional problems. Unbalanced nutritional intake is a reflection of unbalanced diets, which in turn are a reflection of individual food choice. Food importation should not

be blamed as the culprit of a problem of unbalanced diets. The problem of unbalanced diets is educational, demanding improved dietary knowledge, and cultural, requiring lifestyle changes.

These conflicting views have strong arguments, but we lean towards the optimistic view that food imports need not be bad, although they can be if they form part of unbalanced diets. In the long run, food importation, or market liberalization in general, should enhance national food security. In the short term, however, it could undermine national food security by leading to worsening nutritional security. Governments in South Pacific island countries should institute, as a precondition, education programs on nutrition, health and lifestyle matters if they are concerned about the low nutritional value of food imports. They can also help make locally produced foods more competitive with imports by developing marketing infrastructure, abolishing market distortions and conducting good governance, in order to minimize the negative impacts of market liberalization on national food security.

**Table 2 Composition of some common foods in Vanuatu per kg.**

Item	Energy (kj)	Protein (g)	Fat (g)	CHO (g)	Fibre (g)	K (mg)	Ca (mg)	Thia (mg)	Vit. E (mg)
Taro	339	0.8	0.4	19	0.7	264	28	0.07	2
Yam	338	2.0	0.1	18	1.5	271	7	0.04	4
Rice	509	2.3	0.2	28	0.8	10	4	0.03	T
Bele	229	3.4	2.0	6	1.5	376	431	0.14	
Carrot	111	0.9	0.1	6	4.4	235	29	0.07	4
Mango	268	0.7	0.2	15	2.1	225	10	0.06	1
Rawfish	458	21.4	2.4	T	0.0	353	29	0.07	
Crab	456	19.2	2.3	1	0.0	166	226	0.03	4
Veal	674	29.2	4.8	0	0.0	355	8	0.18	T

Source: Welegtabit (2001).

### Dual structure of food security systems

One salient feature of national food security systems in South Pacific island countries is their dualistic structure. They comprise two distinct and weakly related rural and urban components. Rural food markets are either very thin or do not exist. Urban food markets are either weakly integrated with or completely separated from rural food markets. The main reason for this dualistic structure is underdeveloped food marketing infrastructure, transport and telecommunication deficiencies, in particular.

The core elements of rural food security systems are family farming and artisanal fisheries,

which are the economic base of most rural areas in South Pacific island countries (Figure 1). Their strength is determined to a large extent by the availability of arable land and artisanal fishing grounds, both of which have limited sustainable production capacity. As long as national resources are sufficiently abundant, the egalitarian traditional institutions will remain intact and the rural food security systems will remain strong and sustainable. Accordingly, the most important dynamic forces that determine the sustainability of the rural food security systems are population growth and the ratio of population to arable land and artisanal fishing grounds. Population pressure increases resource

---

---

scarcity, thus limiting access to sufficient resources and inducing institutional changes that increase the intensity of resource exploitation. Scarcity-induced institutional changes cause a breakdown of egalitarian tenurial systems and hence reinforce the barriers to access to sufficient resources to some members of the population. Increased resource exploitation can increase short-term productivity but at the expense of declining long-term total factor productivity. Consequently, the rural food security systems will gradually weaken.

Another dynamic force that determines the sustainability of the rural food security systems is modernization, as rural societies become more exposed to external markets and cultures. Modernization increases material aspirations, for cash income in particular, and induces marketization of the rural economy that in turn induces agricultural commercialization and reinforces institutional changes. Increasing allocation of resources for cash income reduces the amount of resources allocated to subsistence food production. Agricultural commercialization induces transformation of the rural food security systems from mainly subsistence-based farming toward semi-commercial or pure commercial farming. Given that marketization is efficiency-enhancing, this transformation process should have a net positive impact on the food security systems. But, if the markets are not efficient, the net impact may well be negative.

The urban food security system is summarized in Figure 2. Urban food security systems are characterized by market exchange. Self-produced foods from food gardens are appropriately considered as the product of survival or risk-coping mechanisms for the poor segment of urban households. Because most urban households rely on market exchange for their food procurement, the key factors of urban food security are food availability in the markets, either through domestic or import procurements, and a household's ability to command or purchase food (entitlement). The availability of sufficient foreign exchange to import foods is a necessary condition to guarantee urban food availability. Household purchasing power is a sufficient condition to guarantee household food security. Foreign exchange availability is determined by macroeconomic performance, in particular GDP, employment, balance of payments and inflation, whereas household purchasing power is determined by household real income.

It should be clear from the above discussion that rural and urban food security systems are different (Table 3) and only weakly related. Market connections are weak because inter-provincial trade is still limited due to infrastructure constraints. Perhaps the most important integrating factor is the migration-remittance connection. As discussed earlier, the urbanization rate is very high and family ties remain strong in most South Pacific island countries. The strong family ties induce exchanges of goods and money among relatives between rural and urban areas.

Accordingly, food security conditions and problems in South Pacific island countries can best be analyzed by using the dualistic systems paradigm. Indeed, the degree of dualism may differ between provinces within a country as well as between countries, depending on trade patterns and economic integration.

The most important determinant of long-term food security in urban areas of South Pacific island countries is urbanization. The very high urbanization rate has caused a high urban unemployment rate. Unemployed persons are generally rural migrants who are poorly educated and unskilled. Unskilled labourers mostly work in the construction sector on a temporary basis. Their employment is therefore low-paid and unstable. They are the poorest segment of the urban population. It can be concluded that the most important underlying causes of food insecurity in urban areas of South Pacific island countries are the high unemployment rate, low-paid jobs and unstable employment.

The food procurement side of the urban food security systems is highly dependent on imported foods. As explained in the previous section, imported foods are cheaper and their characteristics are more suitable than traditional foods to meet the preferences of urban people. Through imports, food availability can always be assured as long as foreign exchange is available, suggesting that food importation is good for urban food security. But a high dependency on imported foods makes urban food security vulnerable to both external disturbances, such as food embargoes, international food prices and transportation costs, and internal disturbances.<sup>1</sup>

---

<sup>1</sup> Due to recent civil unrest, the macroeconomic performance of Solomon Islands (a South Pacific island country not specifically covered in the project) has been disastrous and its ability to import food and other essential items is close to zero at present (March 2001).

Figure 1 Rural food security system.

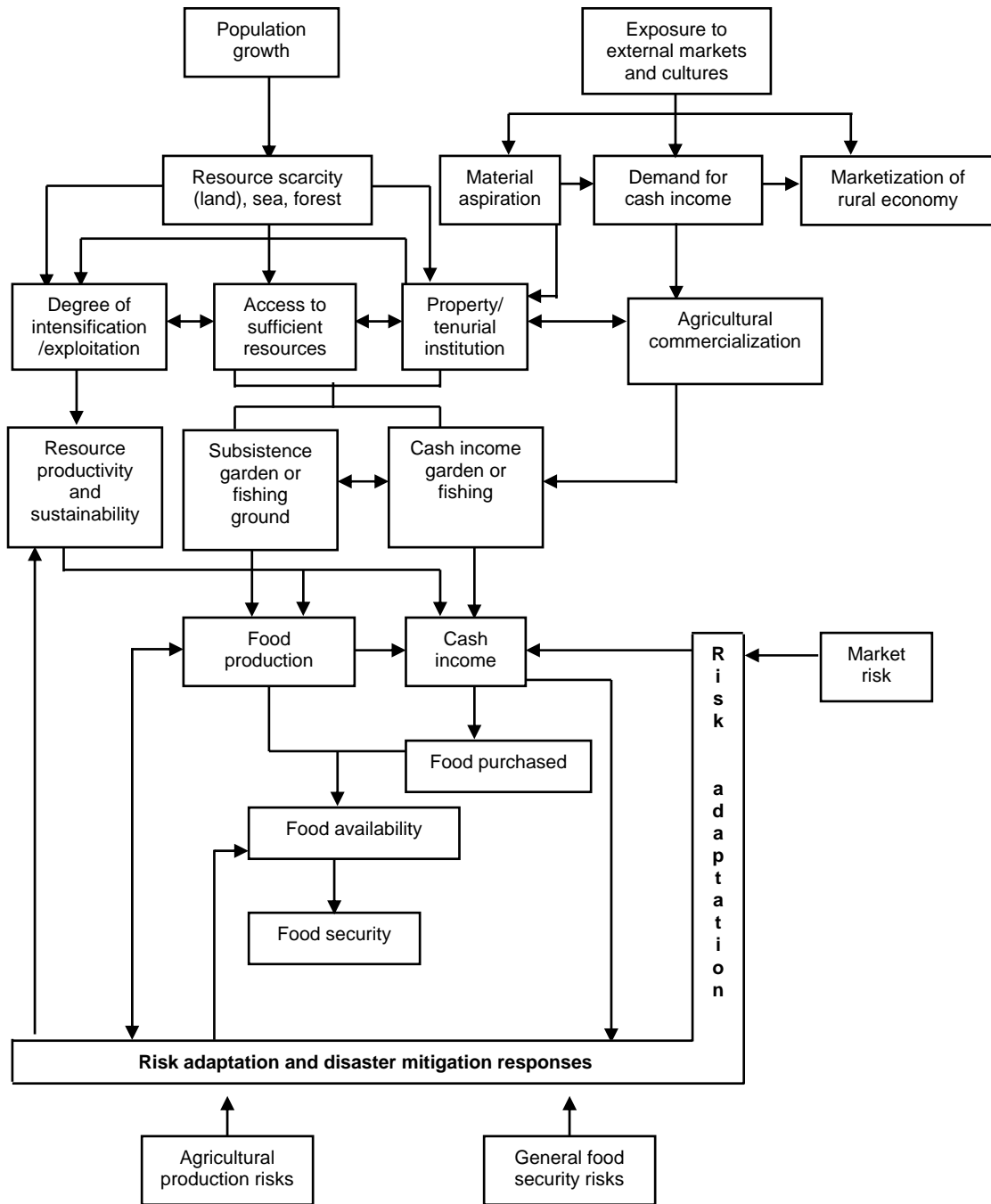


Figure 2 Urban food security system.

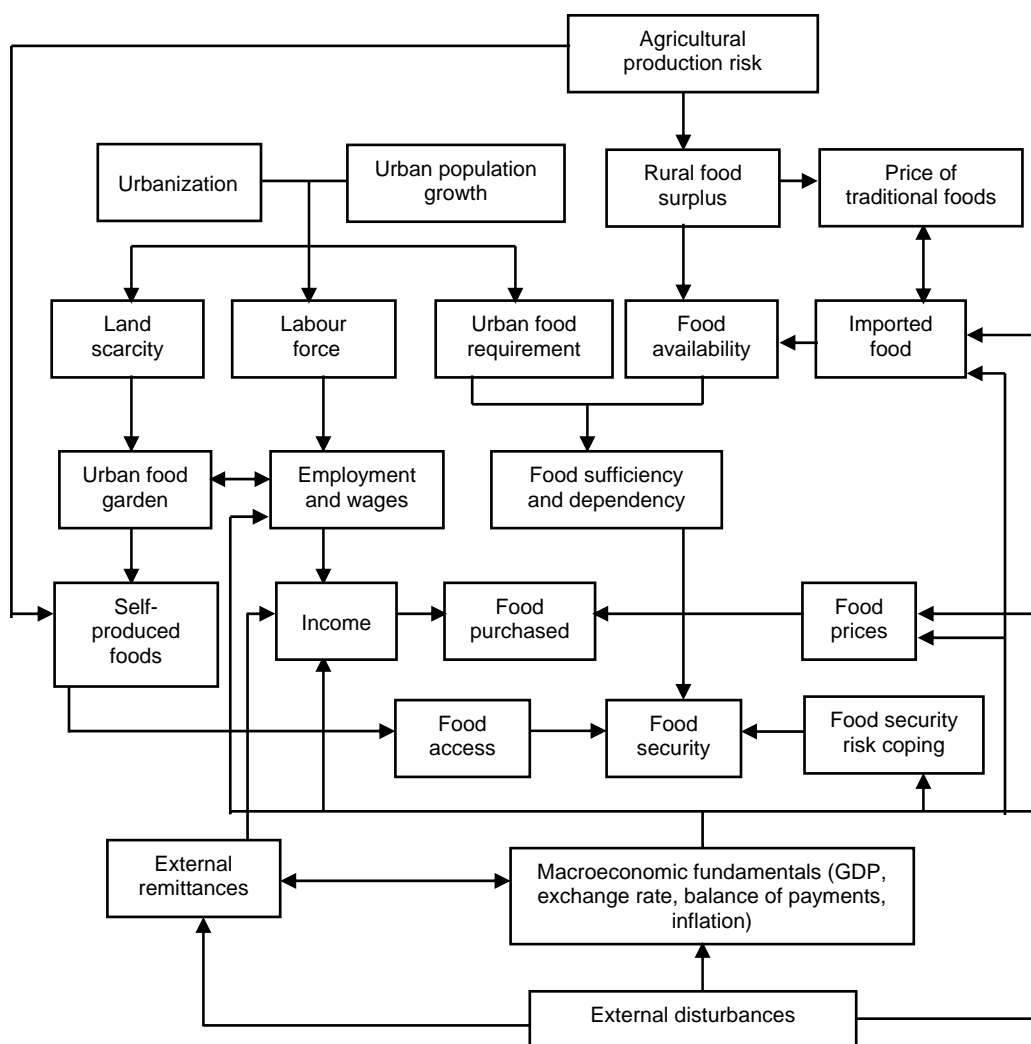


Table 3 Basic characteristics of rural and urban food security systems.

Characteristic	Rural food security systems	Urban food security systems
1. Main foods	Traditional foods	Imported foods
2. Main procurement systems	Self produced	Purchased
3. Main limiting factor	Access to land and fishing ground	Permanent and well paid jobs
4. Main risk factors	Natural disaster (food production related risks)	Macroeconomic and food market disturbances

### Food security risks and vulnerability

Food security risk refers to the probability that some people in some place for some of the time fail to have access to adequate food due to some unpredictable events. In other words, food security risks are the probability of some group of people falling into food insecurity due to unpredictable events or risk factors. Depending upon its severity,

the food insecurity problem can be reflected in either hunger or famine. Its duration may be temporary, prolonged or permanent. A short-term disaster causes temporary food insecurity, whereas a disaster with a prolonged impact can cause chronic food insecurity.

The main foods eaten in the rural areas of South Pacific island countries are still locally

produced traditional foods.<sup>2</sup> Most rural households produce a substantial part of their subsistence food needs. Rural food markets are thin and segmented. Accordingly, food security risk is primarily determined by local food production risk. Macroeconomic and external market disturbances do not have significant effects on rural food security. The most significant threats to rural food security are natural disasters, which could devastate traditional food production.

As stated above, the main foods of urban people in South Pacific island countries are now imported foods and the role of traditional foods is minor and declining over time. There is the potential for traditional foods to be wholly substituted by imported foods in urban diets. Hence, because disturbances in domestic food production can be neutralized by adjusting imported food supply, the level of domestic food production need not have a significant impact on urban food security. Accordingly, natural disasters, a rural phenomenon in South Pacific island countries, have only minor impacts on urban food security. The major risk factors of urban food security are macroeconomic and external market disturbances, and occasionally internally generated civil disturbances.

The food production environment in South Pacific island countries is fragile and prone to natural disasters, which can be divided into three categories:

- (i) physical natural disasters: cyclones, floods, drought, frost, volcanic eruptions, earthquakes, tsunami and sea-level rises;
- (ii) biological disasters: incursions of agricultural pests and diseases; and
- (iii) environmental disasters: soil erosion, coastline erosion, degradation of land production capacity and over-fishing.

The occurrence and severity of impacts of physical natural disasters that pose a serious threat to food security in rural areas vary by province and country (Table 4). Cyclones are the most prominent and widespread disasters. With exception of the highlands of Papua New Guinea, all South Pacific island countries, and Fiji and Vanuatu in particular, have been subject to cyclones from time to time. Frosts, on the other hand, only occur in the highlands of Papua New Guinea.

**Table 4 The vulnerability of South Pacific island countries to natural disasters.**

Natural disaster	Fiji	Papua New Guinea	Tonga	Vanuatu
1. Cyclone	High	Low	High	High
2. River flooding	High	High	Medium	High
3. Tsunami	High	High	High	High
4. Earthquake	Medium	High	Medium	High
5. Land slide	High	High	Low	High
6. Drought	High	Medium	High	Medium
7. Frost	-	High	-	-
8. Volcanic eruption	-	High	Medium	High
9. Coastal flooding	High	High	Medium	High

Source: Excerpted from McGregor (1998).

The impact area and effective time of each natural disaster is generally limited. As an event, a cyclone can last anywhere from several hours to some days. A drought can last for several months. Each natural disaster has a discrete end, but its impact could be devastating to food crop production and cause severe food shortages and temporary food insecurity in some areas of South Pacific island countries. The most vulnerable people live in isolated rural areas that depend solely on local food production. They could suffer from famine if their food gardens were destroyed by a natural disaster and if emergency food aid were not available in time. Catastrophic disasters occasionally occur in the remote mountainous areas of Papua New Guinea.

Biological disasters inflicted by pests or diseases can cause greater long-term food shortages than physical natural disasters. Unlike natural physical disasters that have a discrete end, a major pest or disease outbreak is open-ended and may never cease. Over time, the distributed impacts of biological disasters can be devastating. Moreover, biological and physical disasters can have reinforcing impacts. Physical disasters can seriously disrupt a delicate ecological balance and lead to a rapid proliferation of pests or diseases. Pests and diseases can weaken crop resistance or tolerance against physical disasters. The impacts of biological disasters on the agricultural and general economy in South Pacific island countries have been, on balance, far worse than any physical disaster such as a cyclone. Biological disasters pose a serious threat to both rural and urban food security.

Some recent examples of devastating biological disasters in South Pacific island countries are:

- The incursion of coffee leaf rust in Papua New Guinea in the mid-1980s necessitated a large

<sup>2</sup> The definition of a traditional food is relative. For example, sweet potato is commonly regarded as a traditional food in the diets of people in most South Pacific island countries, yet it was introduced in the region quite recently.

---

---

investment of industry, government and aid funds to control the disease.

- The incursion of yellow zucchini mosaic virus and watermelon one virus into Samoa and Western Viti Levu in Fiji has made it difficult to grow cucurbits such as watermelon commercially.
- The establishment of papuana beetle in Viti Levu has excluded many growers from lucrative export markets.
- The incidence of taro leaf blight in Samoa meant the loss of the country's most important staple and major export earner.
- The entry of melon fly into Solomon Islands has made it difficult to grow any member of the cucurbit family.

Commercial crops, fruits and leafy vegetables, in particular, are more vulnerable to pest and disease outbreaks than staple food crops. Most of the newly introduced commercial crops, such as watermelon, squash pumpkins, zucchini and Chinese cabbage, are less tolerant of pests and diseases than traditionally grown crops. They are generally planted in large areas as a monocrop. Because they make significant contributions to export earnings and GDP in some South Pacific island countries, pest outbreaks on these crops can cause serious macroeconomic problems and lead to food insecurity in both rural and urban areas.

Fruit flies (family Tephritidae) are the world's major pests affecting fresh fruits and fleshy vegetables, and are of major concern in every South Pacific island country. There is at least one, and usually more, endemic species of fruit fly present that can damage up to 90% of cucurbit plants. Production of cucurbits becomes very difficult in areas where these flies have become established. Ominously, these pests can move very quickly from one region to another and from one country to another.

Environmental disasters are manifested in degradation of the food production capacity of land and fishery resources arising from human activities. They include indiscriminate burning, deforestation, unsustainable cropping practices and overexploitation of fishery resources. Indiscriminate burning and deforestation induce soil erosion and can lead to degradation of land suitability and capacity for agriculture. Deforestation also undermines the food security systems by destroying trees, which used to act as shields to protect food gardens against cyclones, and wild foods, which

used to be the reservation foods used as part of risk-coping mechanisms. Substitution of the sustainable traditional cropping systems by unsustainable cropping systems reduces long-term soil fertility and leads to unsustainable food security systems. Overexploitation of fishery resources leads to continuous depletion and eventually extinction of fish resources. Environmental disasters underline the long-term sustainability of national food security systems. The process goes very slowly and is hardly noticed.

## **Food security conditions and problems**

### *Food availability*

In general there is no chronic food availability problem in South Pacific island countries. Despite limitations in marketing infrastructure, domestic food systems and international markets work quite effectively in supporting national and provincial food availability in all countries. Although most countries in the region are small (microstates) and have limited arable land, all of them can rely on their domestic food production for the major source of their national food procurement. Yet all are food-deficit countries and food imports have been increasing. However, they have so far had sufficient foreign exchange to finance food imports to meet the food deficit gap.

Rather than adequacy, an important common issue of food availability in South Pacific island countries is vulnerability. Population settlements are widely scattered in these island countries and, except in urban areas, food markets are generally underdeveloped and segmented as transportation infrastructure linking areas of settlement is still underdeveloped. Because South Pacific island countries are prone to natural disasters that can have devastating impacts on domestic food production, temporary food shortages can lead to acute provincial food insecurity, although foods are abundant nationally. However, the quick flow of foods from surplus provinces to deficit provinces is impossible due to transport constraints. Improving provincial food distribution is one of the most important challenges faced by governments in all South Pacific island countries in order to strengthen their national food security systems.

---

---

### *Provincial distribution and household access to food*

Even where market forces bring about an efficient and prompt distribution of foods from surplus areas to deficit areas in South Pacific island countries, they do not guarantee consistent food entitlements across provinces. This is because of the often vast inter-provincial and rural-urban differences in incomes and wealth.

In South Pacific island countries, the food accessibility issue should be evaluated using the dualistic view of national food security systems. The backbone of rural food security systems is subsistence farming (including fisheries). Most food consumed within the household is self-produced. In such a system, food production (availability) is sufficient to ensure household access to adequate food and hence household food security, regardless of the ability to transfer food between areas. The most critical element is resource availability. So far, with the exception of Fiji, most households in rural areas of South Pacific island countries have had access to agricultural land and fishing grounds adequate to produce food to meet their subsistence needs. This is the main reason why there has been no chronic food insecurity in rural areas.

The situation in Fiji is significantly different. The rural population consists of indigenous Fijians and Indo-Fijians. All land is owned by indigenous Fijians, and so Indo-Fijians may only use agricultural land within the existing leasehold system. Agricultural commercialization is more widespread in Fiji than in other South Pacific island countries, and the rural economy is highly monetized as the rural economic development has been largely devoted to cash crops for export. Accordingly, food access in rural Fiji is a matter of labour employment as well as access to resources. Poverty is a continuing problem in rural Fiji. Traditional institutions, such as family networks, now often fail to provide a safety net for the poor and disadvantaged people.

Average income per capita in urban areas of South Pacific island countries is quite high, and no South Pacific island country should be classified as a low-income country. But income distribution is highly unequal. The country studies indicate that the incidence of poverty is quite high in the urban areas of Fiji, Papua New Guinea and Vanuatu. Furthermore, the numbers of urban unemployed workers in South Pacific island countries are growing rapidly, due to migration and natural population growth. On the other hand, job creation is proceeding slowly, due to low investment growth.

As an example, the urban economy of Vanuatu generates only 500 new formal sector jobs for the additional 3000 urban migrants each year.

### *Risk mitigation*

The fact that historically there has been no acute food insecurity in South Pacific island countries may lead some to wonder why this could happen in such a harsh and disadvantageous environment. It is explained by the presence of effective food security risk-mitigation mechanisms. Risk mitigation is a measure or action taken to minimize the negative impacts of food security risks. It may be divided into three types. The first type, *risk management*, includes all anticipative actions to minimize the negative impacts on food production and income before a disaster occurs. Second, *risk coping* includes all actions taken during the event of a food crisis to prevent acute hunger and to facilitate early recovery. Third, *risk avoidance* is an action to leave the disaster impact area permanently.

Perhaps the most important risk management strategy to minimize household vulnerability to food security risks is the maintenance of the indigenous values of modest and harmonious ways of life, strong family relationships and high social solidarity already referred to above. It should be noted, however, that in Fiji this customary tenurial system discriminates against Indo-Fijians who do not have rights to land. This is becoming an acute problem for many Indo-Fijian families. Many land leases currently coming to the end of the original lease period have not been renewed, forcing Indo-Fijian families off the land and into a state of extreme poverty.

Another important risk-pooling institution is the informal mutual support systems among family, clan and community members. This is a set of informal relationships of obligations, reciprocity and rights to expect certain things. In Papua New Guinea, this is called the "wantok" system. This system has adapted well to the changing physical, economic and social environments, and tends to be more important in rural areas than urban areas. For Tongans, this system has even been extended to foreign countries. Intra-family and inter-family transfers have been a very important means of assisting households in need. In fact, for Tonga, international transfers form an integral part of the

---

---

national economy and national food security system.

There are also contingency plans set up by the government and non-government organizations (notably, churches) to provide a safety net for poor and disenfranchised people, and rescue programs against natural disasters.

The extent and strength of indigenous relationships and institutions vary by country. The most intensive and strongest ones appear to be in Tonga and Papua New Guinea. They still exist in Vanuatu, but have been eroding significantly, and are probably now least significant in Fiji. Fiji is not an egalitarian society but one with deep inequalities. Despite the much vaunted strengths of tradition and community, family networks now fail to support some of the poorest and disadvantaged sufficiently if, indeed, they ever did.

Another important risk management measure is the adoption of a farming systems approach. As discussed in previous sections, traditional farming systems in South Pacific island countries are the result of adaptation to the local environment over generations. Achieving sustainable food security is the primary objective of the traditional farming system, which is a hidden strength of the food security systems. The introduction of commercial monocropping systems may increase farmers' incomes but it also increases their vulnerability to natural disasters.

Preserving food with indigenous techniques and conserving wild foods in forests are also risk-coping strategies to reduce vulnerability to food production risks.

The last choice, if food security risk is permanent and unbearable, is risk avoidance, whereby people migrate from rural areas. This phenomenon is indicated by the high urbanization rate in all South Pacific island countries and a high rate of inter-island migration in Vanuatu, which is mainly caused by the pressures of food insecurity. Emigration to other countries may also be interpreted as a mechanism to avoid food security risks or to ease population pressure on the land.

Despite growing food insecurity in urban areas, some coping strategies have developed to avoid the problem, such as the purchase of cheap imported foods, borrowing and asking for transfers from relatives.

The people of the South Pacific island countries are survivors of quite dangerous living environments, having adapted well to their natural

environment over generations. They have developed effective risk mitigation measures to prevent acute food insecurity. Although precarious, food security systems in South Pacific island countries have proven to be quite resilient, although they are now under greater pressure than they ever have been in the past.

### **Nutritional security problems**

The more serious problem faced by all South Pacific island countries is nutritional insecurity. Food security is achieved, if adequate food (quality, safety, socio-cultural acceptability) is available and accessible for and satisfactorily utilized by all individuals at all times to achieve good nutrition for healthy and happy life. Nutritional security is more than the conventionally defined food security. Food security is a necessary but not sufficient condition for nutritional security. Food insecurity implies nutritional insecurity, but food security does not imply nutritional security. Satisfactory utilization of food is the additional requirement for food security to imply nutritional security.

A nutritional problem (malnutrition) is reflected in either under-nutrition or over-nutrition. Under-nutrition is caused by a deficiency of nutrient intake or under-eating. Failure to access adequate food (food insecurity) must imply under-eating and hence under-nutrition. On the other hand, even if access to food is unlimited, under-nutrition as well as over-nutrition may still occur if food utilization is not satisfactory. Food utilization refers to intra-family food preparation and food allocation that determines individual food intake. Under-nutrition can be caused by either failure to access adequate food (food insecurity) or misutilization of food, whereas over-nutrition is caused by misutilization of food.

Under-nutrition caused by failure to access adequate food is predominantly a poverty phenomenon. Some household members may suffer from under-nutrition because they do not have sufficient income to buy the food they need. A survey conducted in 1990/91 found that 10% of Fijian households had incomes too low to afford a minimum standard of living. Poverty is an undercurrent in all communities in Fiji. It is not concentrated in rural or urban areas or in any ethnic group. It was also reported that poverty causes food insecurity and malnutrition in Papua New Guinea. Poverty is especially serious in urban areas in

---

---

Vanuatu, due to the high urbanization rate. Poverty is not a serious problem in Tonga, however.

Another cause of under-nutrition is improper intra-family food distribution. There is a tradition that the father and the older sons should have priority in the consumption of food available in the home. This may explain why under-nutrition is prevalent among children and women. In Fiji, malnutrition severely affected 6% of children and moderately affected a further 21% of children in 1980. The situation has been improving and, by 1993, only 1% of children were severely malnourished. However, anemia remains a major public health problem affecting 40% of young children and 30% of women.

Children and women are the groups most vulnerable to malnutrition in Papua New Guinea. Protein and energy malnutrition is the most important form of malnutrition with prevalence among children by province ranging from 19.4% to 56% in 1982-83. Medical records from maternity and child clinics show that the prevalence of protein and energy malnutrition among children under five years old increased from 10% in 1980 to 27.6% in 1990. Although precise estimates of their prevalence are not available, nutritional anemia and iodine deficiency are widespread in Papua New Guinea, especially among children and women. Under-nutrition is not a significant problem in Tonga since most households have access to sufficient food (food-secure). In Vanuatu, about 23% of children 0-5 years of age were underweight due to under-nutrition in 1983.

The problem of malnutrition can also be attributed to a lack of knowledge by indigenous people of how to prepare nutritious meals. The introduction of exotic tropical fruits, nuts and vegetables has tended to attract more attention than traditional varieties. Research is lacking on traditional food crops and their potential as substitutes for imported foods. Governments pay little attention to the scope for improvement of traditional food crops and for making people aware of the usefulness of these crops. People prefer imported food to domestic foods, ignoring the fact that most imported foods might be nutritionally inferior to some domestically produced foods.

Over-eating, which induces over-nutrition, is a more serious problem in South Pacific island countries. Rather than a poverty phenomenon, over-nutrition is more a phenomenon of affluence. It is prevalent among people in the middle and upper classes who have incomes high enough to afford

excessive amounts of foods, participating in many feasts. The prevalence of over-nutrition is highest in Tonga and lowest in Papua New Guinea among the four South Pacific island countries under study.

While almost all Tonga households are food-secure, a large number of them are not nutritionally secure. The 1986 National Nutrition Survey found 10% of men and 39% women were obese. Over-nutrition seems to be increasing. A more recent survey indicated that 32% of adults were overweight and 42% were obese. Changes in dietary patterns to include more low-quality imported foodstuffs exacerbate the problem of over-nutrition, as does the change to a more sedentary lifestyle. Many people command more off-farm cash income and hence do not need to work as hard on their farms, becoming less active and burning off fewer calories. Over-nutrition has been linked to various non-communicable diseases (NCDs) such as overweight, obesity, diabetes and heart disease.

It was reported that only 40% of the population in Fiji had healthy weights in 1993. Obesity was found to be a serious health problem amongst women over 35 years of age. Overweightness was also apparent in children under five years of age. About 12% of people in Fiji suffer from diabetes. Ischaemic heart disease and high blood pressure caused the deaths of 41% of Indo-Fijian and 28% of indigenous Fijians in 1990. Between 1982 and 1990, death rates in people over 20 years increased by 30% among indigenous Fijians and 40% among Indo-Fijians. High blood pressure is more common in the urban population. It is also argued that one of the main causes of malnutrition has been the change to a poorer quality diet and more sedentary lifestyle, exacerbating the adverse effects of over-nutrition.

Although specific figures are not available, over-nutrition has been increasing in Vanuatu. The incidence of diabetes and hypertension was two to three times higher in urban areas than in rural remote areas. As in Tonga and Fiji, over-eating interacts with the high consumption of poor-quality imported foods to cause malnutrition. In general, people in rural areas are living on healthier diets than their urban counterparts.

Over-eating is not as dramatic or severe in Papua New Guinea as in other South Pacific island countries. This problem primarily occurs in urban and booming rural areas (mine sites, logging areas and big project sites), where people have high cash incomes and a less active lifestyle. Over-nutrition

---

---

has become increasingly serious, however. The morbidity of diabetes mellitus increased from 2.8% in 1979 to 7.1% in 1993, and hypertension increased from 5.2% in 1979 to 9.6% in 1993.

Besides deteriorating dietary patterns and more sedentary lifestyles, some indigenous values and cultural beliefs also contribute to the high prevalence of over-nutrition in South Pacific island countries. There is a traditional belief that a big and fat body is beautiful, masculine, healthy and socially desirable. This belief had a degree of validity in the past when physical strength was necessary for survival. The traditional habit of eating big meals is in line with the need for a big body. Modernization in the transport, agricultural and health sectors, and lifestyle changes have reduced the need for a big body. Yet, the old beliefs, social values and eating habits persist. The inconsistency between the change in lifestyle, on one hand, and the beliefs, social values and eating habits, on the other hand, is one of the main reasons why over-nutrition is endemic in South Pacific island countries.

Another explanation is the high frequency of cultural festivities and family parties in all South Pacific island country communities. Most cultural festivities and family parties entail the consumption of large quantities of food and drink. Attending social festivals is a social obligation and the family party is part of an intricate pattern of reciprocity. Accordingly, most people in South Pacific island countries, the middle and upper classes in particular, attend many parties. This social phenomenon frequently results in over-eating and leads to over-nutrition and needs to be tackled through a social education campaign. People should be educated to beware of the danger of over-eating and the specious validity of the belief that a fat and big body is good.

It can be concluded that both under-nutrition and over-nutrition are of serious concern in South Pacific island countries. Under-nutrition is chiefly caused by poverty-induced food insecurity. The most vulnerable groups are the poor households in both urban and rural areas. In rural areas, the basic cause of poverty is limited access to productive resources and economic infrastructure. In urban areas, the basic cause is unemployment and underemployment due to the fact that increases in urban population are not being matched by commensurate increases in job opportunities. As such, it can be said that the root of the problem is population pressure and under-investment.

On the other hand, over-eating causes over-nutrition. It is not a food security problem in the sense of food inadequacy. The most vulnerable groups are the rich who have the ability to command plenty of food. This problem is a social phenomenon that arises from an inconsistency between beliefs, lifestyle and eating habits. Lifestyle changes rapidly in line with modernization, whereas eating habits remain based on the old values and cultural beliefs. This problem can only be solved through social education.

---

## Commodity Export Diversification and Poverty Reduction in South and South-East Asia

*Budiman Hutabarat\**

In recent decades, countries in the South and South-East Asia region have enjoyed substantial agricultural commodity growth in response to the world market demand. These countries have been adjusting the production mix of their agriculture and diversifying away from cereals to non-cereal products. But agricultural exports still depend on a few major commodities such as rice, pulses, coffee, tea, palm oil, rubber and its products, jute, cotton, timber, and fishery products.

The boom in production was attainable due to some policy arrangements in the form of subsidies in agricultural inputs such as fertilizer, seed, credit and investment grants and development of irrigation systems. These measures are still in place today on rice, cassava, maize and soybean in China, Indonesia, Pakistan, the Philippines, Thailand and Vietnam. Guaranteed price and price support programs, import tariff and non-tariff barriers were also implemented to protect these commodities in these countries.

Agricultural research and extension and other investment established by governments have contributed to the improvement in productivity and quality of many commodities such as, maize, baby

---

\* Programme Leader, Research and Development, UN/ESCAP CGPRT Centre and Economist at the Centre for Agro-Socio-Economic Research and Development (CASERD), both located in Bogor, Indonesia.

---

---

corn, cassava, oil palm, cotton and shrimp. Private firms also have been playing a significant role in research and extension of agricultural inputs such as seeds, fertilizers, insecticides, and farm machinery. Some countries have even set policies to facilitate exports with special credit and financial services that result in the reduction of marketing and exporting costs.

With favorable policies and government investment, all farmers are able to diversify their products. These agricultural booms have generated considerable incomes to rural communities and the economy in the region. However, the sustainability of agricultural development has been contested by changing market structure and conditions that show declining trend but increasing volatility in world primary commodity prices markets, and a universal trend to minimize government intervention and rely on market mechanisms. The second issue is how agricultural diversification could contribute to the reduction of poverty that remains impinged on most Asian countries. So far, only part of the benefit from agricultural development has accrued to small farmers in remote rural areas, and the partnership of private sectors with smallholder farmers in marketing and trading matters is loose. This was the concern put forth by UNCTAD and ESCAP to be discussed at the regional workshop on April 3-5, 2001 in Bangkok, Thailand. The objective of this note is to summarize the highlights of the discussion.

From observation of global trade, for the least developed countries (LDCs), including most Asian countries, loss of market shares has been of much more concern than adverse movements in their commodity terms of trade. This implies that it is more important to maintain competitiveness on open world commodity markets than to pursue stable or improved commodity prices. To regain lost market shares, the LDCs need to secure more permanent access to traditional markets and seek new markets and build domestic capacity to address supply constraints.

In the domestic markets of LDCs, on one hand farmers are often forced into a vicious cycle of borrowing funds for production and subsistence needs after revenues from their previous harvests are exhausted and selling their succeeding harvest to their creditors at low prices or high interest charges. On the other hand, users of products also suffer from lack of a transparent mechanism from producers to accumulate stocks, as their storage

and other facilities are limited and highly dependency on multi-layered market channels. This is indicative of inefficient product markets, where processors or users pay more for their raw materials or inputs and producer farmers receive less from their harvests.

The workshop recognized that in order to speed up the dissemination of improved technological packages needed by farmers, research, extension, and credit agencies should work together with farmers' groups. A high level of planning and coordination and market intelligence are also required to deal in export markets that involve smallscale farmers and private sectors. This necessitates a thorough analysis of supply capacity including strengths and weaknesses, world demand and market opportunities, and consultation with concerned stakeholders and the development of marketing infrastructure in South and South-East Asia.

The development of marketing infrastructure to enhance commodity trade and smallholder agriculture requires at least three major steps:

- (1) macro-economic policy reforms are designed to move towards market liberalization in goods, services, and capital and foreign exchanges. All these commodities need to be put in the same economic playing field. This policy is necessary for economic development but not sufficient as already demonstrated by the observation made above.
- (2) infrastructure and logistical systems are required to enable market outlets and destinations to expand and maintain efficiency. This includes expansion and improvement in transportation system [roads, rails, ports (sea and air)], telecommunication and power supply, health and sanitation, and financial markets.
- (3) institutional, legal/regulatory development will establish and preserve maximum effective participation from market players. This can be addressed by imposing regulation on legal ownership of financial intermediaries or warehouses; strengthening the capacity of private sector in particular those of small-scale traders and smallholder's organizations, and establishment of regulatory institutions to reduce performance risk exposure of economic agents.

As the commodity financing and exchange system is improved along with the improvements in productivity, profitability, and competitiveness, the

---

---

small farmers will benefit from a more secured financing for their production activities, while at the same time protecting themselves from price risks

and fluctuation at harvest time. Consequently, small farm producers can be expected to avoid the vicious cycle of poverty.

---

## CGPRT Centre News and Activities

---

### SouthPIC

The following reports were published and distributed:

1. Food Security Strategies for the Republic of Fiji (Working Paper No. 55)
2. Food Security Strategies for Papua New Guinea (Working Paper No. 56)
3. Food Security Strategies for the Kingdom of Tonga (Working Paper No. 57)
4. Food Security Strategies for Vanuatu (Working Paper No. 58)
5. Integrated Report: Food Security Strategies for Selected South Pacific Island Countries (Working Paper No. 59)
6. Food Security in Southwest Pacific Island Countries: Proceedings of a Workshop Held in Sydney, Australia, December 12-13, 2000 (CGPRT No. 40)

The project was completed at the end of June 2001.

---

### FEED

The first year funds for the two-year research project "Prospects of Feed Crops in South Asia (FEED)", funded by the Government of Japan, were allocated in April. All four countries, India, Nepal, Pakistan and Sri Lanka, expressed their willingness to participate in the project in response to formal invitations. The appointment of national experts and a regional advisor is proceeding.

---

### ELNINO

As planned, the country studies for the 1<sup>st</sup> phase were finished in May 2001. The draft (1<sup>st</sup> phase) and planning (2<sup>nd</sup> phase) meetings were held on 15-16 May 2001 at the CGPRT Centre, with participation of the regional advisor (RA), national experts (NEs), project leader (PL), and Centre's

staff. At the draft meeting, preliminary results of the regional study and draft country reports were presented. The RA made general and specific comments on both studies. The framework of the reports and methodology of statistical analysis was also proposed. It was agreed that contents of the report and methodology applied might differ by country depending on its unique condition. Publication of the first country reports is to be completed by October 2001. At the planning meeting, each NE presented the work, and the PL presented guidelines for the case studies, while the RA elaborated on the scope of the study and analytical methods. The country studies for the 2<sup>nd</sup> phase started in June 2001 and are planned to finish in April 2002.

---

### IS/DB

#### *Information Services:*

- During 16-26 April 2001, an official trip was made to ESCAP, Bangkok to prepare an exhibition for the 57<sup>th</sup> ESCAP session. The exhibition was created to provide adequate information on the Centre's role and function by displaying graphs, charts, pictures, photos and beautiful drawings of CGPRT crops and their uses. The exhibition was successful promoting better understanding of the Centre among ESCAP member countries and the Secretariat staff.
- Three country reports (Tonga, Fiji and PNG), one integrated report and the proceedings of the SouthPIC projects have been published and distributed.
- A graphic design course is in progress starting from 29 April 2001. It will include a total of 20 hours of training sessions participated in by seven Centre staff. The course will enable the staff to design and create covers, logos, cards, etc using the latest programs, such as: Corel Draw, Adobe Photoshop and Page Maker.

---

---

### Database

The database section activities include:

- Preparation of an updated statistical profile entitled "CGPRT Crops in the Philippines, 1990-1999".
  - Construction of agricultural databases for Nepal including data selection, input and processing since 1976.
  - On-going support for the ELNINO project, particularly in downloading and preparing data in a suitable format from FAO source.
  - Restructuring and renewing the CGPRT home page.
  - Continuation of the Feed Crops Study in Asia.
- 

## Administration

The director attended the 57<sup>th</sup> ESCAP session held in Bangkok, Thailand, 19-25 April 2001 and presented an introductory statement of the CGPRT Centre. Seven countries expressed appreciation and support to the Centre's activities in their country statements.

---

## MAPSuD/Metropol

An inventory of the current situation and needs of Asia and Pacific countries in the field of socio-economic and policy analysis of CGPRT crops is in progress. This inventory aims at identifying the current human resources, topics and methods applied as well as future needs in terms of training. It starts with a two-step survey of Asia and Pacific research or development centres conducting activities on socio-economic and policy aspects of CGPRT crops.

For this first-step survey a short questionnaire has been prepared and will be sent to these centres (Centres Survey). The answers provided by the respondents will be used to tailor the second step of the survey (Units Survey) which consists of a more detailed questionnaire to be applied at unit level (Department, Program, etc.) within these centres. Key respondents have been identified and contacted in order to complete the list of institutions to be contacted in Asia and the Pacific. Among all countries in the region, a list of priority target countries has been established.

The results of both Centres and Units Surveys will be entered in a database and made available for

all participating centres from Asia and the Pacific. These results and quantitative data from other sources will also be analysed and conclusions drawn. These will be largely circulated and will also be used by the CGPRT Centre to identify priority areas for the development of training activities for technical staff of Asia and Pacific national centres, as well as for the identification of domains where collaborative research or development activities should be implemented on a cross country basis.

---

## ECOPOL

### Mission to Vietnam, 11 – 25 May 2001

As an activity of the ECOPOL-S project, the objective of the mission was to train a group of Vietnamese scientists to the use of tools for prospective analysis; the first part of the mission was also used to train them in the techniques and methods of multiple stakeholder conciliation and mediation for policy definition.

1. Training on techniques and methods of multiple stakeholder conciliation and mediation for policy definition

This training was held in collaboration with the authorities of Ha Tay and Nam Dinh Provinces, the local stakeholders, and allowed the ECOPOL-S project to train four Vietnamese scientists from the Vietnam Agricultural Science Institute (VASI) on how to organise and lead discussions with multiple stakeholders, all involved in the evolution of a commodity chain, towards the definition of proposals for action and policy definition.

2. Training on tools for prospective analysis

This training was held in collaboration with the VASI and the Institute of Agricultural Economics at the VASI Centre from the 21<sup>st</sup> to the 24<sup>th</sup> of May, 2001 and allowed the ECOPOL-S project to train eleven Vietnamese scientists.

---

---

---

### CGPRT Centre

The Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (CGPRT Centre) was established in 1981 as a subsidiary body of UN/ESCAP.

### Objectives

In co-operation with ESCAP member countries, the Centre will initiate and promote research, training and dissemination of information on socio-economic and related aspects of CGPRT crops in Asia and the Pacific. In its activities, the Centre aims to serve the needs of institutions concerned with planning, research, extension and development in relation to CGPRT crop production, marketing and use.

### Programmes

1. Research, which entails the preparation and implementation of studies covering production, utilization and trade of CGPRT crops in the countries of Asia and the Pacific.
2. Training of national research and extension workers,
3. Information and documentation which encompasses the collection, processing and dissemination of relevant information for use by researchers, policy makers, and extension workers.

### Palawija News

Contributors are invited to submit concise summaries of significant social research related to CGPRT crops for publication. Figures (graphs or tables) may accompany the article. All articles are subject to editing to meet space limitations.

Please send all queries relating to articles in *Palawija News* to Publications Section, CGPRT Centre, Jalan Merdeka 145, Bogor 16111, Indonesia.

*Palawija News* is distributed free of charge to interested individuals and institutions. Please send address corrections and additions to the Distribution Officer, Publications Section.

CGPRT CENTRE  
Publications Section

Editor: Douglas R. Stoltz  
Production: Agustina Mardiyanti  
S. Tayanih (Yayan)  
Distribution: Fetty Prihastini  
Printer: SMK Grafika Desa Putera



CGPRT Centre  
Jalan Merdeka 145,  
Bogor 16111, Indonesia  
Telephone: (62-251) 343277, 356813  
Fax: (62-251) 336290  
Cable: ESCAP CGPRT Bogor  
E-mail: [cgprt@indo.net.id](mailto:cgprt@indo.net.id)  
URL: <http://www.cgprt.org.sg>  
Database: <http://www.cgprtstat.org>

Palawija News  
Volume 18, Number 2