

## PAPUA NEW GUINEA

<b>Capital:</b>	Port Moresby
<b>Land Area (km<sup>2</sup>)</b>	462,000
<b>Sea Area/EEZ (million km<sup>2</sup>)</b>	3.1
<b>Islands (No.)</b>	Several large and some 600 small islands
<b>Population (No.)</b>	4,790,800 (2000)
<b>Annual Growth (%)</b>	2.3
<b>Density (inhabitants/km<sup>2</sup>)</b>	10
<b>Rural Population (% of total population)</b>	85
<b>GDP (US\$ million)</b>	4,740.7 (1997)
<b>Agricultural GDP (% of total GDP)</b>	26 (2000)
<b>GDP per caput (US\$)</b>	1,100 (1997)
<b>Currency</b>	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. The Agricultural Sector

**Agriculture in the Economy.** Agriculture is the dominant economic activity in Papua New Guinea, providing livelihood for about 85% of the total population, either through subsistence agriculture or the cultivation of cash crops. The sector has a distinctly dual nature: traditional small holder farming systems, and the cash crop sub-sector producing for exports (e.g. plantations) and the urban markets (especially for import replacement). Forestry contributes less than crops to rural livelihoods, but is the second largest foreign exchange earner after mining.

**Land Use, Farming Systems and Institutions.** The agricultural potential is great, because of the abundance of fertile land and tropical climate. Of the 30% of land considered

suitable for agricultural development, only one-quarter is regularly under production and about another quarter is used at lower levels of intensity. The remaining half is far from villages, with poor market access and customary ownership restrictions. About 90% of the land with agricultural potential is held under customary land tenure within which clans grant to individual families the right to use, but not transfer, parcels of land. With increasing population growth and the spread of cash crops, the sustainability of the traditional use systems has been challenged.

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, bananas, 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 crop 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.

It is estimated that about one third of land has forestry production potential, but 70% of that area is still unlocated. Although most forests are owned by customary owners and clans, the Government issues logging licenses to private operators.

### **Major Challenges and Constraints**

Major challenges facing PNG in increasing domestic food production and improving food security are decreasing/insecure world market prices for the major export crops (cocoa, coffee, rubber, palm oil), increasing demand for food imports (cereals, beef, mutton), environmental degradation (deforestation, soil erosion), and marginalization of the rural poor. The Government has identified a number of key constraints to overcoming these challenges:

- low productivity and production of agriculture crops, closely related to low farmer commitment;
- overvalued exchange rate reduces international competitiveness on the world market and requires government subsidies to keep production economically viable, to maintain employment and farm household incomes;
- unstable yields as a consequence of increasing soil erosion, declining soil fertility, increasing disease and pest pressure;

- low and declining share of national government budget to the Department of Agriculture and Livestock, from 9.3% in 1985 to approximately 2.0% in 1994;
- poor public service terms and conditions are disincentives to retaining high quality and experienced professional staff in rural areas;
- weak linkages between farmers, extension and research;
- poor transportation and infrastructure system increases production and transport costs, hinders market access and dissemination of new technology and market information;
- lawlessness in rural areas and existing land tenure system prevents villagers from working gardens and also increases costs particularly for plantations, buyers and processors; and
- culturally-related constraints slow the establishment of farmer co-operatives, and are the major source of land disputes.

### **Strategic Options**

Consistent with the goals and commitments of the World Food Summit, PNG intends to pursue a dual track approach, which offers the best option for fostering agricultural development. Such an approach requires: creating a positive environment for increased production on the cash (tree) plantations; and addressing the needs of the smallholder sector, which is still the backbone of PNG agriculture. The first requires improvement of macro-economic policies, reforms, trade interventions and infrastructure. The latter requires a systems approach for upgrading agricultural services, especially for an improved and more adequate research and extension. Based on participatory analyses of existing farming systems in the different agro-ecological zones, constraints, potentials, options and related risks should be identified and taken as the basis for recommendations towards sustainable agricultural development and resource management.

## **C. Project Interventions: Income Generation Activities**

### **I. Development of Domestic Rice Production**

The project will assist in developing a smallholder rice production in order to encourage local food production in support of the National Food Security Policy and ultimately reducing rice imports.

The Japanese Government through JICA has been providing support in the areas of technical assistance, equipment and funding for smallholder rice production. Recently, JICA in collaboration with local consultants have carried out a consultancy work on the study of smallholder rice production in five model provinces. The Chinese Government through Taiwan has been carrying out variety and production trials in the country in support of the idea of local rice production.

In consultation with farmer leaders, youth, women, institutions, community leaders, NGOs and Community Based Organizations (CBOs), the project is geared towards addressing food insecurity at the farm household level, create employment opportunities, income

generation and improve nutritional status. At the national level the project will contribute to GDP and reduce dependency on imports.

- Increased local rice production
- Farm Machinery made available for milling
- Trainings conducted

## **II. Development of a Fruit Tree Industry**

The tree fruit industry in PNG is relatively untapped in many cases. PNG has fruits like mango, paw paw, citrus, banana, and nuts like cashew and macadamia nut that are yet to be vigorously promoted and developed in both intensified and diversified systems of small holder based farming. There is substantial market overseas for some of these nuts.

This project will specifically develop nurseries, extension material and training programmes for farmers in citrus, cashew and macadamia nuts. The project will also look at ways to develop export markets

DAL currently maintains the only citrus germplasm collection in the country but without an effective nursery programme. The citrus nursery is in a run down state.