

MELANESIAN LAND TENURE AND MANAGEMENT SYSTEM AND ITS IMPACT ON AGRICULTURE PRODUCTIVITY IN PNG

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ABSTRACT

In PNG there are two types of land, 'customary land' and 'alienated land, the latter represents about 3 percent of all land in the country but includes most significant, prime, best suited for agricultural production and urban land. Most people produce food for own subsistence and engage in cash crops to earn income to pay for other food requirements for education, health and other social obligations. Despite people being engaged in agriculture and food production, not everybody is self-sufficient in dietary requirements or food nutrition. The production of crops and livestock is not based on the needs of the market but what they perceive as necessary to be sold. The land area utilised for that purpose and the production volume is subject to availability of land, including the costs of farming inputs such as chemicals and fertilisers and feeds.

Land availability and management is required for productive purposes in agriculture in terms of agricultural research, extension and advisory services and training. Those essential components must be provided to enhance maximum land utilisation. The objectives of this article is to identify the problems associated with land and its mismanagement and utilisation and provide strategies and justifications to assist the agricultural sector to increase and sustain food production which will provide food security and nutrition, income and employment opportunities.

The establishment of increased number of formal market farmers (targeted at households), as catalyst to increasing agriculture production in terms of quality and affordable food to meet local and national demand. This will revolve around the utilisation of customary and state land through the land mobilisation models such as standalone or cooperatives or business groups. Those farming groups should be provided with updated capacity building training in project cycle management and finance and are ably supported by technical officers in terms of sustainable advisory, monitoring and extension services backed by the provision of processing facilities and marketing outlets.

INTRODUCTION

PNG has long history of agriculture some 10,000 years ago which is evident today in that it continues to sustain the majority of the population in which more than eighty percent reside in the rural area who produce tree crops for sale and food crops for subsistence (World Bank, 1991:11). In fact, the agriculture sector is an important economic sector providing 29 percent of wage employment which is highest compared to other sector, whilst it also provides indirect employment or sustenance to 85 percent of population or direct employment for 1.6 million persons (World Bank, 1991:3-4).

Furthermore, it accounts for 27 percent of Gross Domestic Production (GDP), contributing about 13 percent of total exports. However, the agriculture sector remains subsistence oriented with almost all rural families engaged in production of both staple food crops as well as cash crops (World Bank, 1991:60).

The agriculture sector has been the catalyst for any other business or economic ventures in the country. Denoon and Snowden contend that agriculture cannot be isolated from the country's experience as almost everybody is directly or indirectly dependent for income and sustenance. Agriculture is prominent as it relates to changes in environment, changes in production system and social and political changes (1981:1). Donaldson and Good reinforced it by stating that agriculture production is obvious and is of primary importance. It is the basis of a country's economic and social reality, that is, in the value of Gross National Product (GNP), in value of exports or in way of life of the great majority of people or in all three (1988:1).

In recent years, there have been issues raised in the local media through press statements and government policy statements and articles and discussioned by National Research Institute dealing with the Special Purpose Agriculture Business Lease (SPABL) resulting in the Commission of Inquiry into SPABL. The Land Reform agenda has been pursued by the State anchored at NRI since 2005 and there have been policy and legislative changes since then. There has been argument for and against the Land Reform issues including the issuance and usage of SPABL and customary land and its conversion for use by customary owners.

However in this discussion, the focus is on whether the land available through State Lease, SPABL or the Land Lease-Lease Back process, customary land or land available under other arrangement contributes to increased agriculture productivity catering for the leaseholders and customary landowners and those who lease or sublease customary land (SPABL) and others.

The 1973 Commission of Inquiry into Land Matters (CILM) accepted that rural agriculture productivity must increase to provide surplus of food for towns as well as targeting markets. The CILM noted that Papua New Guinean villagers wanted to make cash income, as well as meet subsistence needs, and that the inability of some villagers to secure access to sufficient land for the purpose was a cause of movement to the towns. The CILM also acknowledged that land tenure conversion schemes and the use of customary mechanisms to purchase individual holdings from the clan (especially in societies which emphasis matrilineal succession) were increasing; and that land- short people needed better mechanism to acquire land (Ward in Denoon& Snowden, 1981:250).

The CILM recommended the registration of group rather than individual titles, with individuals of the group holding subsidiary *occupation rights* (fixed –term or heritable) or *leases* from the

group. Larger scale direct- dealing (including direct leasing) was to be discouraged, and most dealings were to be through the government, which would reap the increased value of land for the whole community, rather than private individuals who should become wealthy *rentiers*. But some direct dealing, in small lots, under strict bureaucratic controls, was recommended (Ward, 1981: 251).

At the outset, it must be established that irrespective of whatever lease – customary or state, it is immaterial when that Lease and any rights associated to it is not protected nor recognised by certain formal institutions such as banks, developers and even former customary landowners or people who reside near or around a particular land (Orlegge, 2008).

In his keynote address on ‘Export Driven Economic Recovery Strategy’, Grand Chief Sir Somare said that Papua New Guineans are excellent farmers and horticulturalists. Subsistence agriculture, supplemented by some cash cropping, is the real backbone of our economy and provides the majority of households with their provisions. Farmers are highly responsive to new opportunities, as demonstrated by the drive to vanilla, but we must make sure that these industries and the prospects for horticultural and other food crop production are based upon a firm foundation, with the right planting material, sound production and post-harvest knowledge to ensuring quality products. (Somare, 2003: 17).

Therefore, the discussions will demonstrate how state institutions, private and non-state sector participants can work together to utilise and manage land (state and customary land) to increase and improve agricultural production, processing, manufacturing and exports and income.

STATUS OF LAND AND LAND UTILISATION IN PNG

PNG has long history of agriculture at about the same time as in the Middle East some 10,000 years ago (Bourke & Harwood, 2009). There are twenty myths about PNG agriculture, which was dispelled and these of significance to this conference is that food production is keeping with population growth; PNG is not food deficit country; importation of rice is not increasing rapidly and many do not rely on imported rice; most of the land is not suitable for agricultural production and agricultural production is not constrained by customary land tenure (Bourke & Harwood, 2009).

There are two types of land ownership in PNG; customary land’ and ‘alienated land. The latter represents about 3 percent of all land in the country but includes most significant, prime, best suited for agricultural production and urban land (Denoon in Denoon & Snowden, 1981:171).

For instance, the Gazelle Peninsula, had early European contact had most land alienated since the 1800’s until independence, had most prime and suitable agricultural land heavily cultivated under copra and cocoa plantations. In the Highlands, most plantations and pastoral land are located at Arona, Aiyura and Asaro valleys (EHP), Waghi valley (WHP) and Sugu Valley (SHP). Most agricultural and pastoral lease in Madang and Morobe are located in Ramu Valley and Markham Plains. In Milne Bay, Oro and West New Britain Provinces, oil palm plantations occupy large tracts of rich fertile valleys whilst the local inhabitants are relegated to the fringe or periphery or the hills and mountainous area (Orlegge, 2008:76-77).

The majority of the informal sector participants are involved in the agriculture sector in the cultivation of tree crops and food crops and fishing in coastal villages. Due to limited services

and secondary processing (manufacturing) in rural areas, the availability of cash highly depends on their location and access to markets (Kidu, 2003: 96).

Most people produce food for own subsistence and engage in cash crops to earn income to pay for other food requirements or for education, health and other requirements. Despite being engaged in agriculture and food production, not everybody is self-sufficient in dietary requirements. In coastal villages, people have fish and banana but have problems in growing greens whilst in Highlands; kaukau is heavily cultivated followed by greens but there is a lack of meat production. The farmers do not necessarily grow fruit and vegetable or livestock as commercial ventures. Farmers cultivate crops and engage in livestock husbandry to raise funds to pay for school fees or bride price, feasts and related community obligations. The production of crops and livestock is not based on the needs of the market but what they perceive as necessary to be sold.

The land area utilised for that purpose and the production volume is subject to availability of land, excluding the costs of farming inputs such as chemicals and fertilisers and feeds. A person with access to 2 hectares of arable land may be willing to plant the whole area with kaukau instead of planting a hectare now and the other hectare later, which can be time consuming as well as a strain on available finance to hire separate transport and logistics to take produce to the market.

When the income objective is achieved and the persons have made their contribution to social events at the community level, production is reduced or not undertaken at all. Hence, there must be coordination to ensure that land available for cultivation and animal husbandry and is accessible with the support provided by transport, communication and marketing infrastructures.

Although the available land is managed properly to bring it into production, government services in the forms of research, extension, advisory services and training have regressed over the years. Despite little or lack of extension services, farmers have persevered and have some control over the industry and finding own niche markets. This is evident in the supply of fresh vegetable to Port Moresby or Lae to certain educational institutions, supermarkets, hotels and retailers) without specific control and direction by the Government.

LAND USE AND LAND TENURE SYSTEM IN PNG

It is necessary to review literature on land tenure, land utilisation and mobilisation of State and customary land by the State for business and economic activities. Further, we examine the connection between land, agriculture and food production and the opportunities available that can be utilised to promote food security and nutrition and income generation.

Land Tenure

The present land law of Papua New Guinea recognizes two types of land “customary land” and “alienated land”. The latter represents roughly 3 % of all land in the country but includes a much more significant percentage of the best plantation land and valuable urban property. The term “customary land” appears simple and self-explanatory. It describes the land subject to customary laws of occupation, usage, inheritance and other rights, which may exist. There is, however, an underlying uncertainty as to the legal status of rights and root of title in customary land (Denoon in Denoon & Snowden, 1981, 171).

The alienated land includes those classified as State Lease and Freehold and includes those used by the Government such as city, towns, district stations and agriculture and forestry research and experimental stations. Apart from the millions of hectares of land been leased back through SPBAL, the State has formal control over less than 1-2 percent of total alienated land. The State has lost or has no control nor does it intend to utilise most State Lease located outside of the immediate urban periphery (Orlegge, 2008).

There are debates concerning the ownership and usage of customary land based on the tenure system where land is owned by the clan. In modern situation, especially in dealing with alienated land, the efficient structure of property rights has 4 main characteristics viz: -

- a. Universality: all resources are owned and all entitlements completely specified
- b. Exclusivity: all benefits and costs of using the resources accrue to the owner.
- c. Transferability: all property rights can be transferred from one owner to another in voluntary exchange.
- d. Enforceability: property rights are secure for involuntary seizure or encroachment by others.

In the PNG customary arrangements, property rights do not have the characteristics and are difficult to comprehend. Formal land demarcation and recognition is expensive even when there are no disputes and land administration is weak. Further, community attitude to land will probably prevent the government from developing a new settlement schemes on vacant alienated land and limit migrants from taking up land for farming. People from land shortage area will continue to emigrate and if they cannot obtain land will move to urban centres and cause unemployment in towns (Curey, 1993: 107).

The government established land settlement schemes in WNBP (oil palm), Central and East Sepik (rubber) and EHP and Madang (cattle) have tensions between the settlers and their descendants and those from the area and it would be difficult to establish new resettlement schemes, which will continue to create ethnic conflicts.

In the 17th Waigani Seminar, Powers argued that the commonly held view that clan ownership of resources, especially land, is a hindrance to development is completely wrong. Powers stated that completely individualizing the ownership of resources would create more social and economic problems than it would solve as this issue deals with the economic foundation of life in Papua New Guinea (Powers in Hughes & Thirlwall, eds, 1987: 156).

Despite many comments and various issues taken on customary land, the one major issue that has remained to this day is that customary land tenure is complex in that a person could have rights in widely dispersed plots and he could trace descent through different lineage so that he had a wide choice of possible rights which could be activated. Also, at any one time any plot could have a number of potential claimants. Further, an individual or group could at any time grant another individual or group the right to use land. Rights to land were often distinct from the rights to produce from the land (Ward in Denoon & Snowden, 1981). Such trend of ownership may pose disputes for the purpose of development.

In 1987, the East Sepik Provincial Government ventured into a noble initiative to determine ownership and land usage rights, by passing the Customary Land Registration Act and the Provincial Land Act. The laws were enacted to ensure the registration of the clan as a

landowning group and the means for the clans to organize themselves to secure a corporate identity to utilize customary land. In order to register the clan must demonstrate who they are and what they own to the satisfaction of government land investigation officers. At the village level this involves allocating everyone in the village to one clan or another, or to none (Powers in Hughes and Thirlwall, 1987: 160).

Land Disputes Settlement At Village Level

The investigation of clan membership is conducted with relationship to property rights in the members as owners, hence, necessary to distinguish full ownership rights from usage rights. This question is complicated by the fact that traditional clan members did not view themselves as owners but rather as members. Being members they have rights to use the land, whilst others say that as members they own as well as use it. Powers stated that the then elders must distinguish such rights from usage rights ceded to non- clan members by custom or granted on a permission basis (Powers in Hughes &Thirlwall, 1987: 161).

The process governing access to land is flexible in that they enabled mobility and the possibility for an active person to increase the amount of land under his control. A person could activate rights in one area at the same time as relinquishing rights in another. Rights to use land could also be transferred to full rights of control by uninterrupted occupation, acceptance to membership of the host group, by adoption or the establishment of fictive kinship links with the original land user. The activation of such rights was largely a political process depending on the person's ability to mobilize group support for his or her claims and actions (Denoon in Denoon& Snowden, 1981, 176).

With introduction of farm crops and livestock and cash economy, such paved the way for the emergence of 'big peasants' in the Highlands. These 'big men' could plant coffee as individuals on land, which they *controlled* rather than owned. Many 'communal' developments in fact depended on outstanding individuals for their support. These men often becoming de facto individual businessmen at the expense of the group, through their ability to control the land allocated to the schemes, as well as funds and profits (Denoon in Denoon& Snowden, 1981: 182). This relates to the utilization of customary land through business groups and 20 hectare coffee blocks and also in the acquisition of plantations under the Plantation Redistribution Scheme.

Recently for instance, the afore-mentioned process was activated when my cousin and I (Wilson) were in Goroka. A clan elder called a meeting to discuss land issues. Cousin X is employed in Port Moresby and has been home intermittently and sent his wife to Goroka. The clan elders and members said that since he is first born, the two cousins must relinquish all coffee garden planted by the father, whilst they can occupy land that they had cultivated themselves. The clan elders said it was their duty to intervene. Hence, traditional land tenure of clan ownership exists and it is the usage that is vested in individuals and can change and two or three individuals can divide the same plot. They can decide how benefits are distributed based on their own consensus. It is village governance structure that determines the ownership of resources including land.

How will clan payments be shared?

Clan members will be entitled to share in any distributed clan payments. Clan associates will not receive any share or cash distributions right. The clan may decide to spend some of such

money on some improvement to clan life rather than cash distribution. The clan should decide on a formula for cash distribution to prevent arguments. These clan payments come to the clan for the use of clan owned property (Powers, in Hughes &Thirlwall, 1987: 165).

Powers stated that the change to individual ownership of land by clan members and allocation of land to clan owned business would hasten the disappearance of traditional commons. Over the next generation certain adjustments of existing usage patterns will be necessary. Certain hardworking individuals will take up much more land than others who are less gifted or less energetic. This could lead to great inequalities in the future. To balance this trend it is suggested that eventually clan members will pay rent or land tax to the clan (Powers in Hughes &Thirlwall, 1987: 167).

It is now becoming apparent that the State must look at ensuring agricultural production utilizing customary land through individual control of land. For example, the cooperative concept as well as reforms with Land Registration Act and Land Groups Incorporation Act, requires mobilization of land, however, individuals should grow crops and raise livestock so they could contribute to the marketing cooperative. Further a greedy clan elder, being appointed Chairman of Land Group could have access to rental payments from clan land controlled by other clan individuals, even when land that he is in control does not contribute to the rentals or profits.

Therefore, this illustrates the need to promote and encourage the individualization of economic production and not to wait for individualization of land tenure, which could result in profits from the land and even the land been transferred out of the clan ownership to others who have ownership and control of resources, who could dominate at expense of clan members who are weak or have feuds or problems within the clan. In the reforms, the group rights would be protected by legal title, however, individualized land tenure control and usage of benefits from that land could emerge at the expense of other group members, producing a class of land short or landless villagers.

In recent resource projects, the chairman of land groups are making all noises and claiming development funds and other benefits whilst the real land owner, whose land is affected lives in the village, whilst his rights are dictated to by others and may end up with less benefits.

According to Dame Kidu, for the rural areas, land legislation can longer be ignored. The issue of Customary Land Registration with the Head Title to remain in perpetuity the property of the landowning group must be addressed. This will enable small- scale informal sector production to progress to larger scale commercial production in the hands of landowners. The NEC and parliament should revisit the issue of Customary Land Registration legislation that can both empower and protect landowners Kidu, 2003:98).

Any direct dealing in customary land, by circumventing the legal and established procedures such as in registering title deeds in names of corporations and companies, other than individuals or clan consented and recognized land groups, in the Special Purpose Agriculture and Business Lease for more than 25 years as in the now Commission of Inquiry into SPABL is a sure way to deprive villagers of their land unless there were strict government controls over such dealings.

Land Mobilisation for Agriculture Production

At the end of the war (1942), people moved back to their shattered villages and re-established their subsistence gardens and then launched a series of unprecedented initiatives in an attempt to achieve equivalence with Europeans, almost all were based on rice growing and utilised some form of cooperative movement, frequently known as “Kampani” (Allen in Denoon & Snowden, 1981, 113). After the Pacific War, important changes occurred in the approach to development and the Administration placed emphasis on the development of communal cash cropping on supposedly “communal” land, such as that initiated for the Mekeo rice schemes.

Full cooperatives were developed from loosely formed organizations such as the Rural Progress Societies that evolved in villages all over PNG; however they all failed in the long run. Disputes arising from the use of land for the schemes, problems of leadership and the flagging interest of groups unaccustomed to the new bases of economic cooperation, led to the redirection of emphasis towards family rather than communal enterprise. This policy of encouraging individual family farming was firmly established by 1956 (Denoon in Denoon & Snowden, 1981: 176). This cannot be verified as the Administration was still encouraging cooperatives; even in 1970's to engage in coffee and cocoa projects.

As late as 1955, there was noticeable absence of Papua New Guineans in large-scale commercial agricultural production and business ventures. Epstein, Parker and Reay (1971:14) stated that the pattern of economic growth reflected expatriate dominance in commercial enterprise, based on foreign investment. They postulated that the PNG economy would be based indefinitely on primary industry and that the involvement of Papua New Guineans in ensuring change was increasing but with some unevenness. Further, they highlighted that indigenous farmers had nearly as much land as expatriates and produced most coffee but their business activity was largely confined to trade stores and trucking services. It was highly regulated by colonial administration at that time.

The communal copra plantations in Papua and “kampani” (rural progress and cooperative societies) faced problems of lack of capital, high costs as a result of monopoly, and competition and suffered from lack of expertise. In using the collective form to resolve a series of different problems the administration failed to tackle adequately the set of problems basic to them all being lack of capital, lack of expertise and inadequate supervision which confronted all the Rural Progress Societies. The problem of access to market was resolved by the planter-middlemen and by the large merchant trading companies; but they in turn created problems of competition, monopoly and monopsony. But, although as collective enterprises, the Rural Progress Societies “failed”, they were for some men stepping-stones to greater wealth and political power (Denoon & Snowden, 1981: 156).

It is critical that one must examine the various opportunities and challenges to progress in the agricultural sector in terms of affordable food prices and food security. PNG is endowed with rich natural resources such as gold and copper deposits, large oil and natural gas reserves, and extensive forest and maritime fisheries. Furthermore, it has a dualistic economy in which capital intensive enclave oil, minerals, and forestry sectors dominate, but about 85 percent of the population derive their livelihood from agriculture, mainly low productivity, labour-intensive farming and tree crops, and barely been affected by development in the rest of the economy (Asian Development Bank, 1995:3).

Based on ADB consultations, it was critical about the need to support other sectors of the economy wherein it highlighted that the availability and adequacy of financial services, particularly credit, which remains a major constraint to the development of non- mining private sector. It said that a major effort is required to expand the *financial sector* and increase its contribution to the diversification of the non- mining economy, which will require restructuring of the Rural Development Bank (now National Development Bank), rescheduling of the plantation sector debt (which affected production as well as capacity to survive) to the banking system, and introducing of new micro- credit schemes for private sector (Asian Development Bank, 1995:17).

The informal sector contains the greatest energy and the country's greatest potential if properly supported, rather than the greatest threat as some perceive it. The concept of the nucleus enterprise, where a larger business, such as an agricultural estate or central fish farm, provides proven opportunities to develop existing and new industries, through a process of training, production and marketing support and partnership must be supported (Somare, 2003:17). This is a sustainable approach for smallholder development into large operations.

It was pointed out by Moses Maladina (Maladina, 2003:61- 64) then Minister for Agriculture & Livestock that in PNG, two assets that are freely available to people is *skills in farming* and the *land*, which the subsistence farmer can put those two assets together to earn an income on a constant basis. He stated that benefits of having cash is the fundamental issue that will alleviate poverty, generate wealth, reduce law and order problems, help parents pay for school fees, kerosene, clothing, airfares and all other necessities.

The biggest challenge for the government is to help the farmer to sell his product. He further stated that to improve production levels particularly with tree crops such as coffee and cocoa, it required funding on seasonal basis because these are seasonal crops, hence the government should provide some form of credit facility at favourable conditions for farmers, such as low interest rates through recapitalisation of the Rural (National) Development Bank.

These are some challenges that were highlighted hence, the need to review the actions taken by the government over the years. From 2002, the National Government through the Export Driven Economic Recovery Policy introduced various initiatives such as food security, National Agriculture Development Plan, Land Mobilization and cooperatives movement to enable the people to mobilize their labour and land resources with capital and skills to increase agricultural production including food and engage in income earning opportunities to grow the economy.

Despite problems in implementation of food security program, NADP and cooperatives, the Government through home grown innovative and research has approached the issue of land mobilization from within PNG context, which at present is progressing but albeit very slowly. Despite the issues in implementation of government policy on land mobilisation and food security and agriculture production mentioned, there had been problems in enabling all factors of production to be combined to achieve governments intended objectives.

AGRICULTURE PRODUCTIVITY AND LAND USE

In PNG 97 percent of land is under customary ownership, whilst 85 percent of the people live in rural area and survive on agriculture for subsistence and for cash. According to Curey about 75 percent of people of PNG are involved in or depend on a mixture of gardening for food and

production of tree crops or vegetables for sale. Another 8.5 percent live in remote areas and garden exclusively for subsistence and 4.5 percent work exclusively in modern cash based farming. Smallholders produce 96 percent of all agricultural produce, almost all the food and 75 percent of coffee, 65 percent of cocoa, 66 percent of copra and 35 percent of oil palm (1993:90-91). In PNG, smallholder farming systems produce increasing supplies of food to support the growing population even though some land has been permanently allocated to cash crops (Curey, 1993: 93).

By 1966, the Colonial Administration Crown Land, which was leased for business and other purposes, could be listed on 3 or 4 pages only and for the Highlands, it was next to nothing. Most land was leased for plantations – copra, cocoa, and rubber and for grazing. By 1981, most literature on land indicated that 3 percent comprise alienated land; but to date there has not been any surveys to indicate that the actual 3 percent is still available.

In PNG, 3 percent of land is alienated by the State, which equates to about 600,000 hectares of alienated land, which is divided as follows: -

- 30,000 hectares in freehold (citizens only)
- 60,000 hectares for public purpose
- 200,000 hectares leased to private organizations (stakeholders)
- 310,000 hectares has little information about status and use.

Part of state holding in underdeveloped land usually in area of low population density that has not been cleared or has been abandoned by previous owners and is available for settlement scheme or other purposes. For example, the State holds 50,000 hectares of land in WNBP and may use for agricultural settlement or forest planting after the land has been logged. It would require labour from other provinces (Curey, 1993: 106).

The World Bank commented that farmers confined to small areas with small herds, combined with the policy of encouraging the conversion of individual usufructuary rights over clan land to freehold title, tend to continue and expand the creation of potentially non-economic holdings. The World Bank suggested that the development of large areas of land for cattle farming as single undertaking would be advisable (Denoos & Snowden, 1981:161. This resulted in the acquisition and lease of land in Arona, Ramu and Markham Valley for indigenous farmers to graze cattle rather than developing small non-economic farms.

The traditional land tenure system of Papua New Guinea has frequently been held to be an obstacle to rural development and increased productivity. The complex intersecting rights of individual subsistence cultivators, and of descent groups associated with the land, do require a constant process of adjustment to meet the circumstances of death and succession, marriage out of the community and adoption into it, and the exchange of rights with neighbour groups (Ward, 1981: 249). Curey concluded that due to the Land tenure strategic difficulties, there will probably be no new plantations on land that is not already alienated and that there will be little development of privately owned plantations on any land even if commodity prices rise, hence the future of coffee and other commodity crops and modern farming rests on the smallholder farmers (1993:107). Today, the plantation sector has largely been decimated.

The important issue is that of the ownership and economic mobilization of the means of production in Papua New Guinea society is based on the communal (clan) basis, where there must be clear distinction between ownership of the means of production and management or

employment of the means of production, that is, land and labour (Powers in Hughes and Thirlwall, 1981: 157). In PNG the land is communally owned, whereas labour is individually owned and is increasingly utilised individually. However, there is tendency for this communally owned land to become increasingly individually owned. Also, it is increasingly difficult to get anyone to work communally.

Further, people require cash, hence the process of permanent transfer of the means of production (land) into the control of individuals other than communal. In essence, the cyclical nature of land use for subsistence production gave way to cash cropping of plantation crops, which use land on a permanent basis. However, as mentioned on the traditional land tenure system, leaving clan members to utilize land in modern society could mean competition.

Where there is competition, there are winners and losers so the advantaged and the enterprising will win and the less advantaged, less gifted and less energetic, and their descendants will eventually become cut off from the means of production, with an inevitable impact on urban drift, unemployment, crime and other ills of modern society. In many areas the social breakdown so far has occurred not from the inevitable competition for the means of production but from the inability of the traditional resource management system to make adequate use of the village resource based in a productive manner such as in peri urban villages e.g. Asaroyufa (Goroka) and Motu Koita, Ahi in Lae etc. (Powers, 1987: 158-159).

The country is covered with myriads of 'cattle projects', 'cocoa projects' or 'coffee projects' many of which are subject of personal loans from the Development Bank (now NDB), and frequently launched on land subject to a Clan Land Use Agreement, which individuals have secured sole rights to use a defined portion of the land of their clan for a defined period of years. The Agreement does not permit the holder to alienate his interest, and the clan's rights to reversion seem secure and the agreements are generally honoured (Ward in Denoon & Snowden, 1981: 253).

A great deal of coffee, cocoa and copra is produced on customary land, and again tenure problems do not seem to be a serious inhibition. Some villagers (by virtue of bigman status, marriage connections etc.) have much better access to land than others. The pre-emption (for long term tree crops) of lands formerly in the gardening cycle, is intensifying effective land shortage for some Papua New Guineans, and contributing to the movement to towns of people unable to generate a cash income in the villages. (Ward, 1981: 253).

Although individual enterprises are most numerous there is considerable evidence that groups of villagers are seeking to grow cash crops on areas of customary land set aside for that purpose, and modifying traditional tenure rules for the purpose. The growing feeling that individuals who have planted up portions of the land are acting selfishly, may lead to an increase in group based enterprises (Ward, 1981: 254). However, group or communal enterprises have failed miserably such as the rural progress and cooperative societies.

In agriculture, the government has over the years initiated programs such as the Business and Land Incorporation Acts; Plantations Redistribution Scheme of the 1970's; 20 hectare coffee and cocoa blocks of the 1980's. It was a success initially but when the State withdraw some assistance such as Plantation Management Training Program; removed National Plantation Management Agency and reduced funding to Rural Development Bank and created many commodity boards and decentralised extension services, problems began appearing. Some were caused by external issues such as closure of Bougainville mine, shocks of fluctuations in world

commodity market price and costs of imports for use in agricultural production rising due to exchange rate fluctuations (Orlegge, 2008; 2010).

The informal sector and large businesses must complement each other, especially in rural areas where both need each other because people own the vast majority of the land. The people must be empowered with the knowledge and the skills to convert their land to be a productive commodity, rather allowing the people's most valuable resource (land) to remain idle and as a nation we will stagnate and perhaps be choked by our most valuable rural resource- our customary land (Kidu, 2003:93).

LAND USE AND FOOD SECURITY POLICY ISSUES IN PNG

Food Production, Nutrition and Consumption

Since late 1400's certain food crops such as bixa, cassava, lima beans and sweet potato were brought into the country by European explorers or came across from Indonesia where it was introduced or from those cultivated in Asia or the Pacific (Bourke, 2009). Since settlement of the country in early 1870.s colonists and missionaries introduced certain crops such as beans, pumpkin, corn, pawpaw, water melon, mangosteen, durian, orange, lemon, custard apple, guava and new varieties of banana and in the 1940's such as peanut, common bean, Chinese taro and pakchoi (Bourke, 2009). Some of these are now considered as staple crops such as corn, kaukau, beans, beans and banana in the rural area. Also colonist and others introduced livestock such as cow, goats, sheep, European honeybee, ducks, chicken and European pigs. Those introduced food crops and livestock are cultivated in certain area due to soil, climate, geography and topography.

For example, the European honeybees (*A. mellifera*) were first introduced into PNG in the late 1940's from Australia for research purposes. Research results indicate bees (*Apismellifera*) at lowland altitudes and climatic conditions cannot produce good quality honey. Around that time, some expatriate missionaries and planters in the Highlands region were farming bee for production of honey for household consumption to cater for their dietary requirements. Hence, bee farming and honey production was localized in the EHP and generally in the Highlands (Orlegge et al, 2010:7; Orlegge&Gonapa, 2011:52).

Most of the food grown is consumed in the producing household. Most of food consumed in PNG is produced within and in 2006, it was estimated that 83% food energy and 73% protein consumed in PNG was produced in PNG and the balance was imported. In 1996, rural villagers obtained 84% of food energy from locally grown food, whilst in urban area, 50% was sourced locally. Urban people consumed more rice, wheat based foods, soft drinks and beer and less root crops and banana (Bourke & Harwood, 2009:131).

Diets vary across the country, particular between rural and urban. Imported food (rice, flour, oil) provide fifth of food energy in diets in urban centres and considerably less in remote locations. The contribution of sweet potato in dietary energy in Yabakogl village in Sinasina District, Simbu province decreased from 76% in 1956 to 53% in 1981 and from rice, wheat based foods and corn increased from 4% to 22%, due to cash income from coffee sales and in Ontong Java Atoll, contribution of imported foods increased from 27% in 1971 to 51% in 1981 and importance of local foods such as coconut, taro and fish decreased. Since 1980, sheep meat imports is more than beef with decline in consumption of tinned meat, fresh meat and tinned mackerel and increase in tinned tuna, caused by relative costs of meat and fish (Bourke

&Harwood, 2009:131). For example, tinned tuna at K3.00 (Port Moresby) is cheaper and is able to feed more than 6 people whereas corned beef at K9 and fresh meat and fish at K5 (a piece) and above cannot feed more than 6 people.

Cause of high cost of agriculture production

According to Gage (2003), agriculture contributes 25 and 28 percent of GDP in 2000 and 2001. However, the fast deteriorating conditions for roads, wharves, bridges and airports are a matter of extreme concern. He also highlighted the reason for price discrepancy is attributed to the huge cost of transport freight subsidy since 1992. PNG does not benefit from free trade rather hampered in its development and should adopt policies that should enable growth in agriculture (2003:87-88).

Accordingly, the main challenge for the Government is to organize and provide sufficient technical and financial support to stated programs to adopt the following strategic interventions viz: -

- (a) assist plantations and farmers' organizations capable of receiving and disseminating extension messages among individual farmers,
- (b) coordinating the marketing of produce and the supply of inputs,
- (c) undertaking small- scale communal investments for irrigation, agro- processing or storage;
- (d) providing mechanism for channelling investment resources into local communities, either through the banks or under the village service program credit schemes or various micro- credit schemes under supervision of NGOs and local government (Asian Development Bank, 1995: 18).

Gage(2003) stated that main weakness in agriculture sector is inadequate financing arrangement available where commercial banks developed attitude that it is very risky to lend to agriculture sector. This perception was developed due to Bougainville, volcanic eruptions in Rabaul, negative effects of law and order and low coffee prices in highlands resulting in coffee plantations defaulting in loan in Highlands (2003:88).

According to Holder et al, the role of the state in promoting private sector development is to provide the institutions that undertake business activity. The institutions in turn derive the transactions assets faced by business and ultimately the incentive for individuals to undertake entrepreneur activities. Generally incentives in the Pacific are poor transitivity cash are high and the institutions as well as state are both intrusive and exclusionary for potential and existing business people. They highlighted the constraints of private sector in Pacific are:

- a) Poor provision of public goods that support efficient and effective operations of private sector.
- b) High cost operating environment – increase in costs of input due to remoteness, difficulty in coping economies of scale due to small returns based on costly communication.
- c) Under-development of financial markets where banks located in urban centres and outreach to low income households and extremely limited credit extended to indigenous base such as agriculture and fishing

- d) Natural resource issues where communities heavily depended on agriculture and fishing industries but are affected by land rights issues.
- e) Poor investment policies where lack of sound macroeconomic management and trade and investment policies to promote productivity and growth.
- f) Land rights issues are major contradiction in unclear land rights resulting in difficulty in using land as collateral (Holder, 2004:2-8).

However, in reality, the food production (traditional and introduced fruit and vegetables and livestock and fisheries) industry, as in other industry like cash crops (tree crops), cultural tourism, tourism and cottage industry intended for people in rural areas to mitigate poverty and encourage development, despite the various national government goals, these are not provided sufficient funding and resources. For example, in 2010, all resource centres of DAL such as Erap, Benabena and Menifo laid off all staff and had no funding for their operations. This has negatively impacted on DAL and Livestock Development Corporation (LDC) which could not access, breed and distribute cattle purchased with NADP funds from Markham Farming in Morobe province.

Government's Strategic Intervention Programs (Cooperative Concepts and Scheme)

In the 1960-70's, the Government provided the policy for indigenous involvement in business through promotion of cooperatives, business groups and near independence with the Plantation Redistribution Scheme and eventually an entrepreneurial class involving the nationals, and their resources such as customary land, labour (sweat equity) and cash contributions. It was established that individual do not have the financial capacity and skills to enter into large-scale enterprise, hence, the concept of cooperatives was envisaged to kick start entrepreneurial drive in the pre independence era. Hence, the need to introduce cooperatives to reinvent the wheel of the 1960-70's to enable people to contribute labour and capital and land, which were available in rural area.

The National Government realized that cooperatives must be revived and it did so in 2000 and has established the Public Investment Program (Orlegge, 2009). Until the communal ventures and spirit of working together and in competition such as seen in the Highlands is encouraged, PNG would not tap into the huge customary land, labour and contributed capital through communal ventures.

From 2002, the National Government through the Export Driven Economic Recovery Policy introduced cooperatives movement to enable the people to mobilise labour and land resources, coupled with capital and skills – which are now captured in the cooperative concept. The Government has even went to lengths to allow cooperatives to be granted direct export license for export of various commodities with the intent to cut out middlemen and enable its members to have direct access to international prices.

Presently, many cooperatives are registered with the Office of Cooperatives. These co-operative societies are mainly based in the rural areas whose members are predominantly farmers and are engaged mainly in agricultural activities such as cocoa, coffee, copra, vegetables, spices, retailing transportation among others. The production of the major commodities comes from individual small holders. If these smallholders can be mobilized through the co-operative societies, they can be able to do bigger things like direct exports and earn higher returns from their sweats, thus bringing about change and improvements to their living standards (Orlegge, 200: 87).

These co-operatives will have access to abundant customary land and labour but lack finance to effectively undertake viable business and economic activities. Financial institutions and commercial banks have stringent lending policies, which make it difficult for ordinary Papua New Guineans to

have access to these facilities. Co-operatives were very vibrant socio economic organizations during the colonial era where they were responsible for bringing goods and services closer to the people (Orlegge, 2008:87).

Now is the ideal time for the Government to take actions by reviewing the past and highlight the weaknesses or causes of failure of cooperatives with a view to bring the various policy options to bring the customary and labour from informal economy into the formal economy. By now we should know why cooperative model is selected and to establish the link between the informal economy (combining land and labour resources) with formal economy of capital and business skills including production, marketing and management. Page | 15

Land Reform Programs

The Government has been trying various policy options for the utilisation of the abundant land in the hands of the nationals (customary land) and also to utilise the underemployed population in income producing industries. There had been problems in enabling all factors of production to be combined to achieve governments intended objectives. The issue of usage of customary land and even the Customary Land Registration Scheme was opposed in the 1990's and early 2000's. In 1960's, cooperatives drew on clan financial and labour resources. In the 1970's, the need for national control of economy resulted in legal barriers removed so those nationals could own and operate business and to contribute effectively to national economic development. This resulted in business groups, development corporations and locally owned companies taking over expatriate plantations and business under government policy and assistance (Orlegge, 2008).

In 1970-80's, clans were organized into incorporated business and land groups to utilize customary land to engage in business. According to Powers (1987), for the clan to organize, has to participate in business as a single corporate entity in order to secure its future into the 21st century. The clan can be viewed at any point in time as a discrete group of people owning a discrete amount of land, hence a modern approach to management and to use the Companies Act which can support the life of the clan and bring about harmonious economic development (Powers in Hughes & Thirlwall, 1987: 159). The use of Companies Act would create problems when a clan member decides to sell his shares, which ultimately will affect the composition of persons with interest in a particular land, hence, the use of land and business groups where membership is restricted to clan members is ideal vehicle.

The Government has adopted the recommendations of the Lae Land Summit in 2005 by establishing a Taskforce to respond and implement various recommendations and policy options provided. These has resulted in administrative reforms in the Department of Justice & Attorney General, Department of Lands and Physical Planning and Magisterial Services to establish efficient land administration systems, single land court system and process to bring customary land into the formal sector and for customary landowners through new Incorporated Land Group (i.e. ILG) process to deal with customary land and to conduct business or enter into commercial arrangements.

In 2009, Hon. Sir Puka Temu, Minister for Lands and Physical Planning and Mining introduced the *Land Registration (Customary Land) (Amendment) Bill 2009*. He stated that in PNG, land in particular the customary land is central and essential to our lives. Therefore, the issue of reforms in customary land tenure whilst critically essential is indeed a very sensitive and emotional one as it is the very basis upon which our people sustain their livelihood. However,

due to the changes introduced by modern cash economy, the usage of customary land have changed. Instead of using slash and burn shifting cultivation, customary land is utilised to grow, coffee, cocoa, coconut or rubber plantations to enhance meaningful engagement in the cash economy. Because such land use is largely longer-term use and exclusive in nature, there are now tensions and signs of strains on customary land tenure where there are disputes (Draft Hansard, 2009:3-4).

It was further stated by Sir Puka Temu that the national government has a responsibility to ensure that it makes the necessary intervention to the social and economic changes that are spontaneously occurring so that there is no disunity and other social problems but peace and prosperity to all. The legislation is one of the first small steps towards reforms in customary land tenure to empower customary land owners in the whole of PNG to access their customary land for economic development in a fair, equitable and convenient manner under a legal system that is designed and structured to ensure that at all times, the customary landowners do not part with ownership of their land but continue to have control of their land through their collective corporate vehicle, the Incorporated Land Group (Draft Hansard, 2009: 5).

The legislations were designed to avoid protracted court battles over disputed boundaries and stifle the process of incorporation of the ILG. Further, it was to allow greater transparency and accountability into the management of ILG's by holding the ILG Committee responsible and accountable, through the imposition of a strong code of conduct, with strong fiduciary obligations, and the imposition of criminal sanctions where there is failure on the part of the management committee to discharge various duties and obligations imposed under the legislation (Draft Hansard, 2009:6).

In fact, some of the amendments introduced by the government is to deal with issue of governance, distribution of benefits and usage of customary land, wherein it was discussed above, where an errant clan elder can get more land or benefits where land under his actual use is not utilised but could gain more through control of factors of production and wealth or manipulates his clan give user rights to others. The amendment was to bring the ILG process into good governance structure and to ensure that the owners of the lands can make decision in consultation with Department of Agriculture & Livestock or other government agencies to engage in agriculture development, for instance for oil palm or coffee, they will then voluntarily register that land and secure it as a state lease. Even further, the Government through home grown innovative and research has approached the issue of land mobilisation from within PNG context, which at present is progressing smoothly.

National Agriculture Development Program

The most significant commitment by the Government in addressing the agriculture sector was highlighted in the NADP 2007-2016, where introduced food crops and livestock would be developed. The development and expansion of the food industry is consistent with the United Nations Millennium Development Goals; GoPNG PNG Vision 2050, PNG Development Strategy Plan 2010-2030, Medium Term Development Plan 2010-2015 and NADP 2007-2016, which looks increased production, income earning and employment opportunities to mitigate poverty and in long term providing a healthy and wealthy society.

Despite the good intentions of the NADP and K100 million committed every year, the implementation and evaluation of the NADP is a total failure. As to date, nobody can state what has transpired and what can be measured and how the Plan had achieved its purpose. In reality, in terms of implementing the NADP, funds are now given directly to Members of

Parliament through the District Support Program (DSIP). Therefore the implementing agencies including DAL cannot ascertain any achievements in food production and food security with adequate provisions of research, development, extension, training, and capacity building of farmers and the stakeholders.

Although the constraints have been highlighted, no holistic approach have been undertaken by state agencies to address them in a sustainable manner. The basic issue whether or not the people have a balanced meal and why land is available but the price of food is high in PNG, which cause people to complain and especially in the urban area, where disposable income can be limited hence, the choice of food consumed.

WAY FORWARD STRATEGIC INTERVENTIONS

It is high time; the Government take action by reviewing the past and highlight the causes of failure in land management and efficient agriculture production and productivity in PNG. A major obstacle to agriculture development and utilization of customary land is the absence of formal credit or finance. Various policy options must be taken to utilize the vast customary land and labour available in the rural area and move agricultural production from informal economy into the formal economy. Hence people can sustain themselves and pay for other food needs and to sell their surplus through easy access to the urban centres.

The people of PNG know the various issues affecting them such as from climate change, deteriorating communication and transport infrastructures, price discrepancy due to high cost of doing business including corruption and bureaucratic red tape, lack of or absence of technical, advisory, extension and training services in agriculture sector (caused by 1995 Provincial Reforms and establishment of various commodity and statutory authorities), poor access to and coordination in marketing of produce, high costs of farm supply inputs, absence or lack of financial and credit services and non-acceptance of state lease or even customary land as collateral, lack of support by government to businesses involved in the remote or rural area, which provide certain services the government fails to provide.

Although there are other factors causing the demise of locally owned enterprises the State mechanism had also contributed significantly in this problem. The State assistance such as land, finance, training and management expertise were not continued. Therefore, the Government must explain the rationale and must also provide the incentive for people to utilize the abundant customary land without any conflicts of the past recurring and encouraging downstream processing and marketing (Orlegge, 2008).

National Policy Framework for Sustainable Agriculture

Most of the food grown is consumed in the producing household mostly on customary land and those in urban centres on illegal squatters on state land which is negligible. Due to modern economy, diets are subject to cost of food and variety available and in certain cases; some traditional plant stock has disappeared whilst many grow crops that take less space and less time to mature or that requires fertilisers and pesticides, which also contribute to increased costs. In certain area where people engage in tree crops, most people rely more on income to cater for their food requirements and not many engage in fulltime subsistence farming or vegetable or livestock production for markets.

Although land is important for agriculture sector, enabling policies and strategies are vital. The biggest problem in PNG is the disjointed sectoral policies and programs. There must be connectivity and synergies between policies and programs. For example in the current World Bank funded PPAP program in coffee and cocoa, there is component for transport and infrastructure, which should be addressed by the Department of Transport and Works. The NADP stipulates increased use of land and cooperative societies but there is no mechanism or connection between DLPP, DAL and DCI and Office of Cooperative Societies to bring State or customary land into productive use and well-coordinated with the engagement of cooperatives. A recent case in point is the PNGSDP 2010-2030, which uses economic projection on customary land to provide targets for tree crops production. It projected production of 400 metric tonnes of livestock (beef included) and 6 million bags of green bean coffee, without stating which land, how and when such targets should be achieved.

The government must now review all the sectoral policy documents from 2002 including United Nations Millennium Development Goals; GoPNG PNG Vision 2050, PNG Development Strategy Plan 2010-2030, Medium Term Development Plan 2010-2015 and NADP 2007-2016, Cooperatives Societies Policy and National Land Development Program to assess their impact, outcomes and relevance in terms of their implementation.

The statements by elder statesman Sir Julius Chan that the recent MTDS are repetitions of the MTDS of 10 years ago and certain issues are recurring, which would mean that these are not achieved. In reality, there is no implementation program including its finance and undertaking of specific and important projects. It would seem that these grand statements are made to siphon off money from the government budgets and development funds. Despite two MTDS, its achievements are not quantified. Similarly, how many cooperatives are registered and actually operating and what acreage of land used is not known. Furthermore, in terms of land reforms, what acreage of customary land has been surveyed and titles issued remains unknown today.

PARTNERSHIPS FOR AGRICULTURE DEVELOPMENT IN PNG

The agriculture sector must operate with more government support as it deals with the wealth, health and wellbeing of the country. The horticulture has been supported by Fresh Produce Development Authority (FPDA) is inclined towards introduced crops hence more funding and focus be placed on long term traditional staple such as yam, taro etc. On other hand, the livestock and fisheries (small fisher folks on coast and inland fisheries) must be targeted by NFA in extension and support, whilst DAL resource centres must be revived.

People in rural area growing staples have relied on traditional methods of agriculture and most would have existed without support, encouragement and extension and training by relevant government agencies including DAL. It continues to exist because of the consumption needs and their families and not necessarily been encouraged by Government agencies such as Health for nutrition purposes, Department of Commerce Trade and Industry (DCTI) for by products or DAL for food security and relies on farmers own perseverance.

To achieve the intentions of the horticulture and livestock (including fisheries) industry, the usage and its land management must be addressed. The development plans of the sector must be consistent with the current government plans and priorities. It must embrace all-important aspects of the horticulture and livestock sector, which include important policy directives,

health, disease and quarantine control measures, product quality standards, marketing infrastructure, training and extension, and research and development. The agriculture industry should be geared towards promoting a healthy national GDP and add to the sustainability and livelihood of stakeholders in the industry.

In order to expand and sustain the industry, this requires improving capacity and capability of implementing agencies and related organizations through timely collaboration and regular consultation. This would include DAL, other Government agencies, farmer and industry associations and groups and farmers and industry participants (private, non-state actors and other international entities). For industry to prosper there is need for a coordinated approach involving government agencies, farmer and industry association, private sector (suppliers, processors, and manufacturers) and relevant stakeholders. This must all be identified from the beginning to ensure that various inputs are available to achieve the required outputs (Gonapa, 2010:55). There will be no need to increase the number of fulltime fresh produce farmers when there is no market and this will eventually destroy the industry.

The appropriate technical agencies such as DAL, Department of Commerce, Trade & Industry (DCTI), National Agriculture Research Institute (NARI), National Agriculture Quarantine & Inspection Authority (NAQIA), Livestock Development Corporation (LDC), Fresh Produce Development Agency (FPDA), Regional and Provincial Offices need to have capacity in terms of manpower, logistics and resources to undertake their functions effectively focussed on effective training, extension and advisory services (Gonapa, 2010). Both subsistence and part-time farmers must be encouraged and boosted with capacity building training with the objective of sustaining their supply chain through a partnership arrangement.

Strategies to revitalise Productive State Land

It has been concluded that the State has lost control over those land classified as State Lease in most rural area such as Kindeng and Waghi Valley where coffee plantations have been vandalised and production lost through law and order problems where the state has failed to intervene to protect its State Lease. Further, customary land in the usage of individuals promotes agricultural and business activity and is necessary for economic development and must be developed by individuals and not groups (Orlegge, 2008).

The State lost its control and influence in managing state land, thus it would take the State considerable time and resources to kick start any reform programs. The State must now conduct an audit on State Lease especially in rural areas. Most coffee plantations on State Lease in the Highlands have reverted to becoming bush land. Most have shareholder and mortgage problems, hence, the State should declare what is available and also ask the NDB and commercial banks to discharge the mortgage and ensure the land reverts back as vacant state lease for tenders. Most of such land are near or along main highways and trunks roads and must be brought into utilisation as service centres. If the State has no plans to engage in the purpose of original lease, it should subdivide and grant individuals titles to former customary landowners with conditions to develop for food production. Other portion of land must be allocated for model and demonstration farms linked to markets which should be in the custody of farmers association and local NGO.

The second phase is to conduct audit on agricultural, business and pastoral and special purpose lease group that is under production by leaseholders. The lease conditions must be checked to ensure the required improvements have been complied with. For example, the most pastoral

lease land in Arona Valley has been converted to coffee plantations and some excess land has not been cultivated. In the Ramu Valley and Markham Plains, some of pastoral lease land is not utilised or no grazing conducted because of the 1997 drought where fences were burnt and the cattle gone wild. The State can vary to lease from pastoral to agricultural and give conditions that excess land must be cultivated for food crops or livestock farming such as poultry, piggery, cattle or apiculture.

The third phase for the State to conduct an audit on SPABL (Lease-Lease back of customary land) of the former 20 hectare coffee and cocoa and other commodity projects and business group projects (State Lease-Leaseback of customary land). Most have been abandoned due to mortgage with NDB and commercial banks or landowner discontent or are being utilised by ‘bigmen’ for own ends without due regard for handing it back to the individual clan members. As the business groups are dormant or defunct and its liabilities cannot be discharged by individual members as per the Business Group or Land Incorporation Acts, and any loans cannot be repaid and is not viable for the banks, the State should declare or request the banks to discharge the mortgage. Those lands that have been held on by ‘bigmen’ using their manipulation of wealth or those discharged by the banks should be returned to individual landowners with usage rights to the customary land.

As in the case of plantations, these customary lands leased by the State and leased back are near or along main highways and trunks roads. For the State to step in and give back land the clan land users must be tasked to engage in effective production or the land would be transferred to the next available clan user with rights to develop that land. As this relates to customary land, the State should ensure all individuals’ allocated land should subscribe to the cooperative principles, where the State or the private sector under the Private Partnership Arrangement (PPA) should organise communal processing and marketing facilities.

Although the current land reforms loom at bringing customary land into the formal sphere, landowners are reserved not to register any land from anywhere until a trial and pilot project is undertaken to determine whether the immediate customary land can be brought into production. For example, if the State needs customary land in Marawaka (EHP) or Rabaraba (MBP) or Goilala (Central) to expand government station or to build schools, customary land can be registered for this land to be leased. However, should they wish to engage in cash agriculture, this should not be encouraged presently, as any production would be costly as it would rely on air transport and may not be feasible thus leading to farmers and landowners discontentment.

The State should pilot customary land registration within the 5 kilometres radius of declared urban centres where land can be used for direct agricultural production or leased to other business activities thus resulting in tangible results.

The next phase is to consider both state lease land and customary land that extends three (3) kilometres radius from national highways and major provincial trunk roads. Despite issues of road maintenance on the Okuk, Ramu, Buluminski, Magi, Hiritano and Sepik Highways, there is *vehicular* and communication access. Along the Okuk Highway from Yonki to Watabung (Kassam to Daulo Pass), the road is sealed with electricity and telephone lines connected, which is beneficial to people and farmers as cost of transport, communication and electricity is reduced and there produce can be transported to local markets and the excess sold to middlemen and other bulk buyers who transport to Lae, Madang and Port Moresby.

In the same vein, there is potential for State and Customary land commencing from Moreguina to Kempwelch, Bautama, Laloki, Sogeri, Brown and Vanapa River area, which has accessible road infrastructure, communication and electricity facilities to supply NCD and other marketing outlets such as schools and educational institutions and commercial shops in NCD. This can also be applied along the along trunk roads in from Pomio-Baining and Gazelle Districts to Kokopo and Rabaul as well as from Namatanai to Kavieng and from Sagarai and East Cape in Milne Bay Province.

In all area, some of the state and customary land must be earmarked for development of proper local markets with water and toilet and storage facilities. For example, traveller like secure locations such as 40 mile market at Markham and Yakumbu in Ramu where local farmers who cannot travel to Lae or Madang can sell their produce in bulk to buyers from the Highlands who buy and transport coconuts, taro and banana to resell in the Highlands.

Finally, the DAL and other government agencies must focus on traditional crops that do not cost so much to produce. Farmers who are along the main highways and trunks roads can engage in producing local banana, aibika, kaukau, local greens, australorp chickens and muscovy ducks that require local labour and traditional farming practice. There is no reason why aibika, banana, yam and taro and kaukau in sourced along the Magi and Hiritano Highway and Sogeri cannot be sold at process less than K0.50 in Port Moresby as cost of production is minimal with less imported farm inputs and access to reliable communication and transport services and market information as well as extension, Advisory and training services.

To expand the industry requires innovative marketing strategies within own communities. Farmers need to target higher education institutions that provide meals to students. In the next 5 years, considering that student enrolments in all 29 tertiary institutions and universities will increase, the current food production will never reach the supermarkets or the niche markets, as all will be consumed in schools.

The local consumption at institutional level will assist in downstream processing, import substitution and export earnings. The food industry needs to be supported and targeted to lift its profile to engage households in farming for their consumption and income earning opportunities that will have multiplier effect on associated activities such as seed and seedlings providers, suppliers of farm equipment and materials, training providers and consumers.

CONCLUSION

The level of education, advance in technology, increased awareness, law and order problems, depressed world market prices for agriculture crops, inflation, closure of Bougainville mine and its associated economic problems have all contributed to the shift in focus of the entrepreneurs and usage of customary and State land and their general contribution to politics, economic development and society in recent years (Orlegge, 2008; 2009; 2010).

Farmers are faced with so many problems that their income earning and business enterprises have collapsed. More or less, they have taken stock of their situation and have learnt their lesson from decline or their collapse or inability of the State to assist and enable cheap production of marketable produce from their land and labour resources. Despite the history of farmers and market oriented entrepreneurs still faced with the wider national problem of law

and order, lack of government support and landowner and shareholder discontent, many are still trying to venture out again but with caution in their investment.

Considering the above facts and the factors mentioned in the lack of government implementation and consistent follow-up for the industry to achieve its objectives and contribute to other national policies, we must look at how to expand the industry. To achieve a viable and sustainable food production industry to enhance nutrition, income generation and import replacement requires smart partnerships and innovative, sustainable and entrepreneurial farming system and agro processing and business-like approach and operations involving farmers, direct industry participants (processors, buyers and suppliers of goods and services), farmers and industry associations, private and the public sector and other non-state actors through use of land resources.

The most important fact is that times are changing, people are changing and so as their attitudes, the technology is rapidly advancing and the wider economic problems has taken its toll and has provided the occasion for both rural and urban sectors to refocus. This time, the focus of the government on how it can create a balance on the utilization of the abundant customary land and how it can revitalize its State Lease that it has abandoned in the rural area, which are large tracts of arable land.

Prior to Independence, the population was less than 2 million with abundant of land and free labor and willingness of people to co-operate and contribute resources to communal plantations and rural progress societies and co-operative societies. The people were willing to supply free labor, cash and even communal land for business activities. Overtime, these enterprises suffered due to business expectations, management issues and also landowner and shareholder discontent and lack of government services.

The usage of customary land for economic use such as trade stores, garages, coffee blocks and 20 hectare blocks on customary land was fundamental in the establishing business enterprise. The problems arose when customary land owners (persons with user rights) did not want non-clan members or those in charge of the business to benefit from their land and its output. In this presentation, state land in rural area and national and provincial road corridors must be utilized as they have access to existing communication, electricity infrastructure and easy access to government support and also to markets. Experience has shown that state leases included Lease-Lease Back land and individuals must utilize customary land with communal support in terms of processing and marketing and training support.

There is enough land, labour and skills, which requires capital or financial support as well as necessary support services from the government where individuals and clan members with land usage rights can utilize their state and customary land. In fact customary land usage does not inhibit development but it the right to use it and thus derive benefits that constraints customary land for economic development. This also applies to other unused or underutilized State land that has been discussed where individuals should be assisted and protected by the State and provided market access and support through cooperatives and the land registration so they can contribute to food production, food security and economic development particularly in the rural areas.

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