

# MAKING AGRICULTURE COMMERCIAL IN PNG

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In PNG, 97 percent of land is under customary ownership and 85 percent of people 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 (Currey, 1993:90-91).

The agriculture sector is very important as it provides the highest rate of employment (29 percent) , caters for sustenance to 85 percent of population and contributes over 20 percent of Gross Domestic Production and contributes about 13 percent of total exports (Orlegge, 2010)..

Agriculture relates to changes in environment, changes in production system and social and political changes (Denoan and Snowden, 1981:1).

Agriculture is the catalyst for any other business or economic ventures in the country.

The government has 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 PMTP, removed NPMA and reduced funding to NDB 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 due to exchange rate fluctuations (Orlegge, 2008; 2010).

The National Government announced major policy objective and frameworks such as Export Driven Economic Recovery Policy (2002), Vision 2050; PNGSDP 2010-30; MTDS 2015-17; 2018-2022, NADP 2007-2016; White Paper on Agriculture; Rice Policy; Food Security Policy; and SME Policy. For example, in PNGSDP 2030, coffee and meat production target is set at 6 million bags and 400 metric tonnes. After going past 2015, the production has not gone over half or one third of target despite so many interventions and funding in the sector.

In this presentation, we look at how we can develop and change our strategies from small gardening and animal husbandry to using more than 1-2 hectares with necessary farming tools and equipment and working in areas that are accessible to communication, transport infrastructure and markets.

PNG 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).

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.

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, and where (Orlegge, 2008).

There have been arguments whether land in customary custody (97 percent) is productive or the small percentage of alienated land is more useful to the economy. Many argue that customary land is not utilised fully to enable economic development. Similarly, it is argued that the 3 percent alienated State land is the most arable, accessible and fertile but the State has in many cases lost control and cannot enable successful utilisation (Orlegge, 2008:76).

Most plantations and pastoral land are located at Arona and Asaro valleys (EHP), Waghi and Baiyer valley (WHP) and Sugu Valley (SHP); Ramu Valley (Madang) and Markham Plains (Morobe). 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 government established land settlement schemes in WNBP – Hoskins (oil palm), Gulf – Murua, Central – Upulima and Cape Rodney and East Sepik - Gavien (rubber) and EHP – Arona and Madang – Dumpu and Morobe - Markham (cattle) but tensions between the settlers and their descendants and those from the area would make it difficult to establish new resettlement schemes, which will create ethnic conflicts.

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 (Currey, 1993:107).

In keynote address on the Export Driven Economic Recovery Strategy (2002-2007), Prime Minister Grand Chief Somare said that Papua New Guineans are excellent farmers and horticulturalists but must ensure these the prospects for horticultural and other crop production are based upon a firm foundation, with the right planting material, sound production and post-harvest knowledge (Somare, 2003: 17).

Agriculture contributes significantly (25 - 28 percent of GDP) but deteriorating transport infrastructure and increases in prices. the Government is to organize and provide sufficient technical and financial support to develop the following activities 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).



The role of the state in promoting private sector development is to provide support to the institutions that undertake business activity. The constraints of private sector in Pacific are:

- a) Poor provision of public goods that support an efficient and effective 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, costly communication.
- c) Underdevelopment 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 affected by land rights issues.
- e) Poor investment policies where lack of sound macro economic management and trade and investment policies to promote productivity and growth.
- f) Land rights issues are major contradiction in unclear land rights and resulting difficulty in using land and collateral (Holder et al, 2004:2-8).

## **REALITIES IN UNDERSTANDING THE AGRICULTURE SECTOR IN PNG**

In colonial era, terms such as Planters, Graziers, Farmers, Settlers and Growers was used to describe persons who were engaged in full time or part time farming of tea, coffee, cocoa, rubber, tobacco, copra or running poultry, piggery and cattle ranches.

The colonial government and even the Farmers and Settlers Association in the 1950-70's proposed that indigenous persons should be encouraged to plant sizable plots of say coffee that is to supply the expatriate plantations and factories (McWilliams, 2003).

The next best approach to encourage indigenous to become fulltime farmers was through the Land Resettlement Program of 1960-70's to move people from highly populated areas to Agriculture Resettlement Schemes. A family was given up to 2-3 hectares of land to plant commercial crops such as rubber (Murua, Gavien), oil palm (Hoskins), coffee (Kindeng), cocoa (Vunapalading) on the 2 hectares and use the 1 hectare for food garden and residential area.

Today, farming to raise funds to pay for school fees, head pays, bride price and mortuary feasts. When certain amount of funds is earned and the person/s have made their contribution to these events, farming activity is reduced or not undertaken at all. What is the motivation for the person?

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, own labour or family input and capacity to afford farming inputs such as chemicals and fertilisers and feeds. It could be raising poultry – 100 birds at K40 to raise K4, 000 for school fee or K2, 000 from a coffee harvest for bride price.

We can talk about supply chain; value chain; food security and improved nutrition or import substitution policy but the question is whether that matters to the person who has cultural and social obligations to fulfil.

In the coffee industry they say “Lukautim Kofi na Kofi bai LukautimYu” which is a cultural and safety network slogan. We talk about mortuary feasts, bride price, compensation etc. to “six moon” and that relates to the coffee season. The DAL and CIC talk about post-harvest handling and quality. I want to pose a question. If someone dies tomorrow; we say “pikim wanwan Kofi na mipla planim man long Sande”. The red, brown, yellow, orange berries are picked and are sold as cherry or we say “wan san”. Quality is affected. It has become a cultural crop.

In another scenario, 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 strain on available finance to hire separate transport and logistics to take to the market. Is it worth the time to plant crops that is expensive to take to markets?

The problem we have experienced and is still common now is that amount of time a person takes to have the whole two hectares planted. We have been given bush knives and grass knives, axes and spades and bow saws which was the method of farming in the 1800s in PNG as well as in Australia, USA, UK and elsewhere. Imagine a husband and wife working with bush knife and spade to clear and dig 2 hectares of land? Are we using efficient technology?

The DAL and commodity boards know the Government targets to increase agriculture production; improve quality and ensure affordable prices to meet local and national demand. We know that one person has a vegetable garden, cultivates coffee and spice and has five goats and has inland fish farm. That one person is visited by FPDA, CIC, Spice Board, Livestock Development Corporation, DPI –Fisheries and NAQIA – Veterinary in six different vehicles in six different days. Are we getting value for resources r should that be done by one entity?

The World Bank has funded Private Public Arrangement Program in coffee and cocoa since 2010 and could have spent over K100 million. We hear and read about million seedlings nursery and rehabilitation programs. Under this program, the World Bank is promoting the 1800's farming style by giving bush knives and bow saws to clear and prune 2 hectares of 50 year old coffee and cocoa trees. It could be taking four weeks but a mechanised sprayer and chainsaw could do the grass clearing and pruning in 4 days.

And to add to the insult, the annual coffee production figure has not gone over 800,000 bags whilst in cocoa it's still at 400 metric tonnes. Obviously, the first harvest for tree crops is three years and by now, it's over ten years and there should have been increases in acreage of planting from the million seedlings nursery and also show a marginal rate or show increases and gradual increases in the production after year 4.

By now, we know that Kup Ogut and Sinake Giregire airfreighted fresh vegetables out from Hagen to Madang and from Goroka to Port Moresby from 1950-60's. Kabiufa High School airfreighted fruit and vegetables from Goroka right around the country from 1970-1990s. It was not affordable for the ordinary people and it was basically to service the mining projects, hotels and the expatriate supermarkets. It was done by other nationals with airplanes in the 2000's and also the failed Green Revolution airfreighting K20,000 worth of coffee bags and spending K50,000.

The Government is telling the people of Kikori and Goilala to grow vegetables to sell in Lae or Port Moresby. The Kikori farmers would pay K1, 000 one way on plane plus freight to Port Moresby or pay K200 passenger fee and freight by banana boat to Kerema and pay K50 plus freight cost by truck to Port Moresby. Consider the same scenario for the Goilala farmer. They could be selling 5 potatoes for K50 whilst the Highlanders are selling theirs at K10. Maybe for exotic or family reasons, someone may buy it.



The people know the various issues affecting them such as 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.

There must be coordination to ensure that land available for cultivation and animal husbandry is accessible to transport, communication and marketing infrastructures as well as closer to consumers. We must bear in mind that our people or farmers have their own requirements to fulfil and they must be able to compensate themselves for their land, labour, transport costs etc.

## STRATEGIES

Although there are other factors causing the stagnated growth of the agriculture sector particularly in increasing production and area under acreage, the State mechanism had also contributed significantly in this problem.

It is high time to review the past and highlight the causes of failure in agriculture sector. Various policy options must be taken to utilize the vast customary land and labour available in the rural area and move agriculture production from informal economy or subsistence, high labour intensity into the formal economy with mechanised farming methods.

The biggest problem is disjointed sectoral policies and programs with connectivity and synergies. Eg World Bank funded PPAP program in coffee and cocoa, there is component for transport planner and road infrastructure, which should be addressed by the Department of Transport and Works.

The PNGSDP 2010-2030, used economic land 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 produced.

There is no mechanism or connection between DLPP, DAL and DCI and Office of Cooperative Societies as to the mechanics to bring State or customary land into productive use and coordination to engage cooperatives. At present, the DAL, commodity Board, Kumul Agriculture Ltd, Cooperative Societies Unit and NDB are all developing their own Plantation Rehabilitation Scheme.

All DAL Livestock and Research Stations must be revived. These are to be converted in Model Training and Extension Centres where farmers are given hands on experience in one-two days in all aspects. This includes the tree crops, horticulture and livestock and farm management.

To develop and expand the industry requires improving capacity and capability of implementing agencies and related organizations through 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 or suppliers, processors, and manufacturers). This must all be identified from the beginning to ensure that various inputs are available to achieve the required outputs (Gonapa, 2010:55).

## **Access to Land and Improving Land Management and Tenant Farming**

It has been concluded that the State has lost control over those land classified as State Lease such as Kindeng and Waghi Valley where coffee plantations has been vandalised and production lost through law and order problems.. The State must now conduct an audit on State Agriculture Lease and 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. The State should subdivide and grant individual's titles to former customary landowners and other interested persons with conditions that it would be transferred to the next available clan user. All individuals' allocated land should subscribe to the cooperative principles, where the State or the private sector under the Private Partnership Arrangement could organise communal processing and marketing facilities.

Those agricultural, business and pastoral and special purpose lease that are currently tenanted should have lease conditions 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 with other crops.

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 crops. Most have been abandoned due to mortgage with NDB and commercial banks or landowner discontent. Liabilities of defunct Business Groups cannot be discharged by individual members as per the Business Group or Land Incorporation Acts, the State should declare or request the banks to discharge the mortgage and return the land for use by individual customary owners.

## **Land Access to Transport, Electricity, Water and Communication Infrastructure**

The government should not encourage everyone to engage in market farming. It should focus on both state lease and customary land that extends three (3) kilometres radius from national highways and major provincial trunk roads. The Okuk, Ramu, Buluminski, Magi, Hiritano and Sepik Highways, are sealed and some have electricity and telephone lines connected or mobile phone coverage thus reducing costs of production and providing access to markets.

There is great potential for State and Customary land commencing from Moreguina to Kempwelch, Bautama, Laloki, Sogeri, Brown and Vanapa River, Kairiku to Malalaua and Kerema, which has accessible road infrastructure, communication and electricity facilities to engage in agriculture (food, tee crops and livestock) production and transported to NCD.

## **Mechanized Farming**

To be able to produce the required quantity and to deliver at the required time requires us to shift away from spades and bush knives. We have farmers digging one hectare with spades which is time consuming and wastage of labour.

We must encourage farmers to use brush cutters or bush wackers, mechanised ploughs and tillers and knapsack sprayers, wheel barrows, tractors and trucks. Also, tariff on these items must be zero rated so that cost of production goes down and production increases.

## **Training, Extension and Advisory Services**

The Organic Law on Provincial Reforms have strangled the extension services. National and provincial policies in agriculture differ.

We have the various commodity boards, national DAL and DPI going in different vehicles to visit a farmer. E.g. CIC does its own extension and soon FPDA goes to see the same farmer for his citrus and then DAL for apiculture. There must be coordinated or a specialist agency created to pool vehicle and resources for all agencies to utilize in extension and training services.

## **Taxation, Tariff Reforms**

The taxation and tariffs that are suitable for the big firms must be simplified and smallholders must be able to utilise these. Also, it will assist them to keep proper records. The Loss Carried Forward provision must be explained and utilized including double depreciation on farm equipment and GST rebates etc.

## **Secured Markets**

To expand the industry requires innovative marketing strategies within own communities. We need to target our higher education institutions, hospitals and jails that provide meals. 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.



## **Marketing Support and Marketing Cooperative**

Various business forms cannot utilise abundant land, labour resource of people and their capital and possibly their entrepreneurial ideas on a large scale. The National Government must encourage the utilisation of cooperatives to empower Papua New Guineans to own the factors of production and to focus on marketing cooperatives.

There are good examples of trading and marketing cooperatives. The Mainland Holdings (Finschaffen, Menyamy, Bulolo, and Orokaiva Cooperatives) involved in crocodile and chicken farming, coffee buying and processing, electrical and maintenance and transport and haulage. Namasu (Native Marketing & Supply Ltd) diversified into plantations, shipping, coffee processing and exports to be known as Kambang Holdings with Lutheran Shipping being the flag bearer. In the Highlands, the Farmset Ltd (Farmers & Settlers Cooperative Ltd) is the leading agricultural supply company.

## **Research & Development**

Research must be focused on current issues. Stop researching whether to plant coffee under banana trees and make biogas from coffee husks. We should look at what fertilizers to apply at certain age of coffee trees or cocoa. The issue of whether to establish nurseries in poly bags or in the ground should stop. It use be focused on how much money will be spent on a hectare to get the maximum output.

Research should be looking at impediments that affect farmer's capacity and the cultural practice and how much time a farmer spends in the farm and doing other things. Also we must look at the management capacity of the farmers and their level of engagement in the sector. We must also look at the economic returns on farmers engaged in labor and farming, transportation, wastage in lines and actual selling at markets and if in Port Moresby, how much the costs of the relatives expenses on food, water, power is not factored into the farmers cost.

## **Marketing Research and Policy Coordination and Implementation**

The DAL should focus on traditional food crops for food security and coordinate research between the various commodity boards, NARI and NRI. Also, we have absence of international market trends and market research.

### **Land as Collateral and Individualisation of Production**

From the outset, it must be known that whatever lease – customary or state, we can have, 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). Many ‘communal’ developments depended on outstanding individuals for their support. The State must ensure individuals utilize customary or state land to grow crops and livestock and contribute to the marketing cooperative.

## **Effective Monitoring and Evaluation and Update of Statistics.**

All Government policies looks at increased production, income earning and employment opportunities to mitigate poverty and in long term providing a healthy and wealthy society. Despite the good intentions off the NADP and K100 million committed every year, the implementation and evaluation of the NADP was a total failure. As to date, nobody can state what has transpired and what can be measured and how the Plan has achieved to date and what needs to be done. Also, through DSIP, the DAL cannot provide details on various interventions in the districts such as in research, development, extension, training, and capacity building.

## **CONCLUSION**

Farmers are faced with so many problems and decide when and what to do to earn income. More or less, they have taken stock of their situation and have learnt their lesson from the farming systems and processes encouraged by state agencies. They cannot continue to grow two hectares of cabbage knowing the inability of the State to assist and enable cheap production of marketable produce from their land and labour resources.

we must look changing the way we have been doing Agriculture in PNG.

To achieve a viable and sustainable and competitive agriculture sector, we must change the production strategies to throw away bush knives and spades and encouraged mechanised tools and equipment to improve efficiency in production and reduce costs.

We must encourage them not to engage in farming to pay for cultural obligations but to continue to work and save for these cultural obligations and to pay for school fees and health services.

We must encourage people as individuals to utilise land for production which are closer to roads and communication and markets.

We 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.

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.

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... Overtime, these enterprises suffered due to business expectations, management issues and also landowner and shareholder discontent and lack of government services.

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. This is the implementation period rather than rewriting the same policies and giving it new name and time frame.



To make Agriculture commercial the Government is to organize and provide sufficient technical and financial support to : -

- (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).

Thank you.

Lets do things differently.