

## Of ‘Blind Men’ and ‘Green Frogs’ – Political Economy of Sago Palm

Terence Miro Laufa

### Abstract

There are two aims pursued in this study. Firstly, this study uses a political economy approach to critically conceptualise a theory towards a mode of production for the sago palm in Papua New Guinea. Couched within the broad framework of the ‘Sago Modernity Project’ the study provides a spatiotemporal evaluation for defining and refining both the internal (PNG) and external (importing countries) modes of production, so as to bring to sharper focus the socio-economics of the supply side of producing high quality sago starch for domestic and international markets. The existing inadequacies and strains in sago starch production from policy development and implementation at the national level right down to the general management of traditional micro-scale processing of sago starch within sago using agrarian societies in PNG are highlighted, compared and contrasted with lessons of experience drawn from Malaysia, a leading sago starch producer in the world. Secondly, this study also aims to revisit and revitalise issues that were raised at the first national sago conference held in October 1999 at PNG University of Technology, which called for the establishment of a National Sago Council to coordinate activities on sago research and issues around the country.

**Keywords:** Department of Agriculture & Livestock (DAL), National Sago Council (NSC), Papua New Guinea (PNG), political economy, Sago Modernity Project (SMP), sago palm, sago starch, sago using agrarian societies (SUAS)

### Introduction

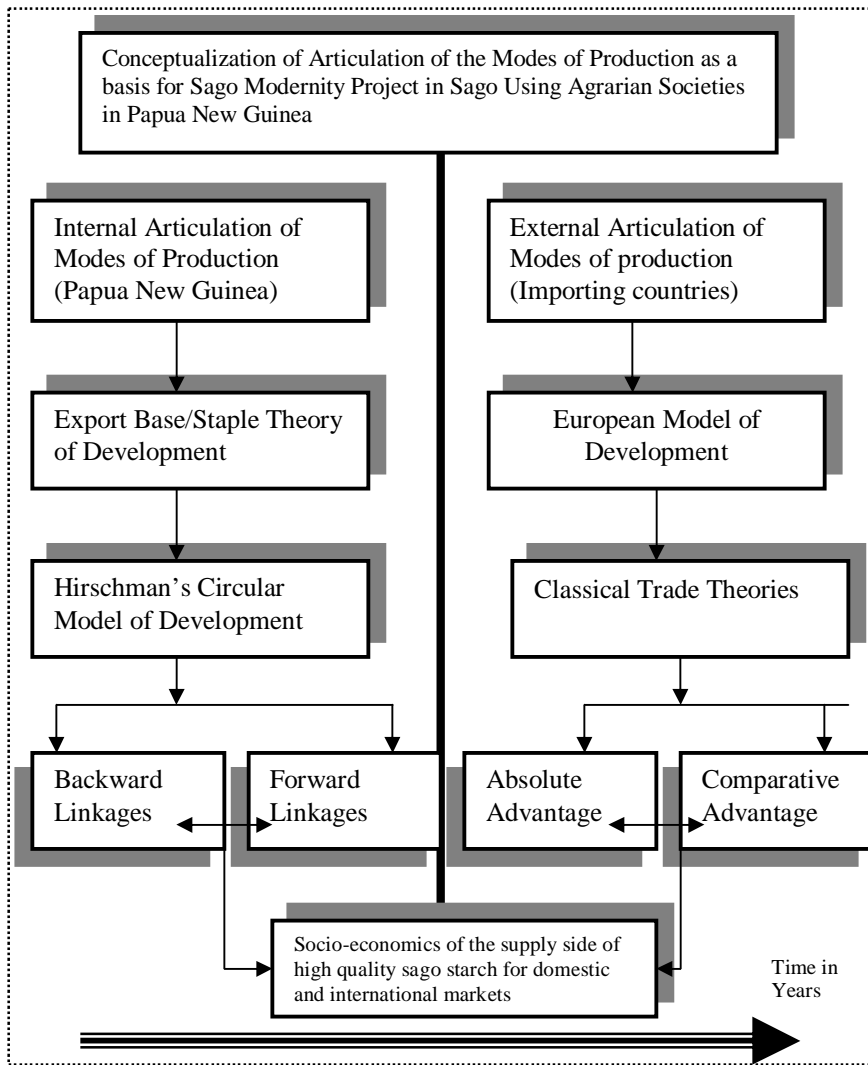
It shall be argued that many countries throughout the world, including PNG, are committed to development in the sense of promoting socio-economic objectives from a noble point of view. Lane and Ersson (1990:10) taking the issue further, raise the question as to what these actual accomplishments are in regard to a country’s developmental objectives. The immediate answers to what development ‘ought to be’ is viewed through a whole plethora of existing paradigms, approaches, policy prescriptions and simulations, in whatever permutations for either raising income levels or promoting economic growth to support welfare concerns of a country’s citizens. This means that we cannot escape the clutches of values or normative formulations of the concept of development. Thus the acceptable or required levels of socio-economic development, let alone the pertinent aspects of development are value-ingrained.

Therefore, development in whatever form or shape, essentially a process captured in spatiotemporal context, has now become embraced in the key issue of enhancing security from being vulnerable to either idiosyncratic risks (such as unemployment, harvest failure etc.) or from covariant risks (macroeconomic shocks and natural disasters). Chapter 8 'Helping poor people manage risks' of the *World Development Report 2000/01: Attacking Poverty* eloquently covers these risks, under the broad framework of providing opportunity, empowerment and security. Development valued from security-related consideration has been given prominence. For instance, Duffield (1998:11) observes that promotion of development has not only become synonymous with pursuit of security, but has become a prerequisite for sustainable development. Thus one way of minimising risks within societies is the moral imperative and obligation on the part of authorities and willing private individuals to complement each others' efforts to build the assets of people so that they can have a more secure life by providing opportunities for them to participate meaningfully right at the household level.

A fundamental aspect of political economy is the assessment of transformation, or the key concept of change (Hettne 1995a:4; Martins 1982:161). How does a change occur and why does it occur under certain conditions and not others, with respect to its causal factors to explain the status quo, notwithstanding the fact that societies are non-static in essence? Thus, this study adopts this political economy approach in viewing how societies purportedly change and how they relate to the factors that caused them to change. Changes within social structures and obligations occurs as a resultant force of the market-driven economy captured over different temporal conditions and is accompanied by the inevitable attitudinal changes, which would then reflect adaptive behaviour with different social obligations and orientations towards other members of society.

It goes to suggest from this viewpoint that society is undergoing a transformation to adopt and adapt to conditions, either from within or from external forces beyond its immediate control. Some conceptual and theoretical innovations of this study are explored so as to link these to the central issue of the underutilization phenomena of sago palm (see Laufa 2004a, 2004b, 2004c). A key issue of concern for the present study is to explain the mode of production of sago palm industry in PNG with a view to pointing out some modifications to the present system of production. As Stinchcombe (1983:243) observes, 'in order to define a distinct mode of production, the more ecological, technological, economic organizational and population details one requires to be similar, the fewer workers and firms the resulting mode will include. Stinchcombe (1983) further argues that the choice of the level of detail is a strategic one, and for a given purpose, the boundaries around a mode of production may be ecological, technological, economic organizational, or population. To situate the discussion in this context is to explore some of the unique salient features of the sago palm industry in PNG, and likewise, re-establish or locate its appropriate mode of production, with respect to the four key critical requirements, as suggested by Stinchcombe (1983).

**Figure 1: Showing ‘linkages’ and ‘advantages’ of the sago palm mode of production**



Spatiotemporal perspective of sago starch commercialization in sago using agrarian societies in PNG to be initiated in time, which addresses the political economy of development of transformation question

Source: adopted and adapted originally after Laufa (2004a), p.43.

Thinking with concepts provides a logical way of clarifying how the linkages and advantages of the sago palm mode of production can be enhanced and made more effective and efficient in sago using agrarian societies in PNG. Related theories with respect to explaining the political economy of transformation in societies have been used to construct both the theoretical and epistemological foundation for this study, of which a case reference for sago

using agrarian societies is being made to Malalaua in Gulf Province of PNG (see Laufa 2004a, 2004b, 2004c). There are three theoretical arguments to be provided, of which its critical utility and intellectual values from development economics viewpoint can be applied to other sago using agrarian societies in PNG. Firstly, on absolute advantage and comparative advantage theories, both classical trade theories; secondly, on European model of development, making specific references to articulation of the relations of the modes of production; thirdly, on export base or staple theory; and fourthly, on Hirschman's circular model of development. A brief explanation of these concepts is presented here, so as to enlighten the discussion to follow hereon.

### **Classical trade theories: 'absolute' advantage and 'comparative' advantage**

The Classical trade theories of absolute advantage and comparative advantage are some of the oldest principles in economics, which were developed and popularised by Adam Smith and David Ricardo (Classical Political Economists), in their efforts to explain social philosophies bordering on how to strike a delicate balance between order and chaos in society during the eighteenth and nineteenth centuries in England. The contentious matter then was linked to the spreading influence of the market economy, penetrating deeply into the daily lives of ordinary people and was eroding the patterns of social status and defined obligations in the medieval times in mainly Western Europe then. Adam Smith (1723-1790) was a great Scottish expounder of economic liberalism and the policy of *laissez-faire* (Fusfeld 1990:19). Likewise, David Ricardo (1772-1823) was an English economist famous for his theories of economic development and international trade.

Adam Smith based his social philosophy on the idea that individual liberties and exercising those liberties, in matters of personal choices was the surest and most rational behaviour for maximising wealth of a society, thus individuals acting upon their own self-interest was perceived as a necessary condition for a free and fair society, which would not only enhance wealth creation and distribution within a society, but would also seek to maintain harmonious relationships between people as it were, in principle. In doing so, it is argued by Stokes (1992:15), that 'Smithian self-interest is guided by the fundamental dignity of man as a moral and social being seeking to gain approval of his peers'. Smith's celebrated work, *An Inquiry Into the Nature and Causes of Wealth of Nations* in 1776, was an attempt to point out the unfair practices of economic nationalism promoted by mercantilists in pursuing trade in return for more gold, so as to acquire and accumulate more wealth, at the perils of their subjects, whilst pursuing exporting manufactured goods in exchange for more gold as receipts from exports.

According to the Smithian and Ricardian notions of 'absolute advantage' and 'comparative advantage' theories of trade, it was generally assumed that out of absolute advantage (abundant supply of a particular good), there was also a simultaneous condition of absolute disadvantage (scarcity or resource poor) existing at a different location (country or household) and that negotiations of

those absolute conditions provided the fertile ground for trade to flourish and whatever bargaining power one had, was the basis for establishing the principle of comparative advantage. Put in another way, one was in a comparatively advantageous position to supply a particular commodity and should focus all efforts on this and leave the rest to others. Specialisation of labour was then necessary for trade benefits to be derived theoretically, whereby one was better off concentrating on goods that one could produce at a relatively low cost.

Accordingly, conventional and contemporary modified trade theories argue that the classical trade theories more or less address only the supply side of the equation and do not really pay adequate attention to demand conditions. Other factors such as trade restrictions such as quota, tariffs or even transactions costs entailed in trade, and more importantly, trade which arises out of necessity (scarcity) and overabundance (surplus) conditions, does not necessarily involve only two goods at any one time, as suggested by Classical Comparative Advantage Model (Mannur 1983). Though this is an apparent weakness of the classical trade theories; its main strength is that it sought to explain the nature of trade as arising out of need to exchange goods that one did not possess, thereby suggestive of society maintaining harmony and being better off gaining from trade relationships. At a level of generality and considering the 'benefits of trade', it is argued, by producing the cash crops which can be grown most efficiently, the household (or the country) can maximise its income, and use this income to buy whatever it needs from whoever can produce it cheaply.

### **European model of development**

Hettne (1995b) observes that the European model of development promotes the idea that it is imperative for any country to increase its development capacity by expanding its domestic and international market relations and maximizing its comparative advantage by carefully articulating domestic production within the confines of the world economy (Hettne 1995b). Just as feudal Europe, practicing a pre-capitalist mode of production prior to the advent of capitalism, which eventually saw the demise of feudal structures of production revolving around landlords and peasants, it was argued that other developing societies should not blame capitalist expansionist ideas, but rather articulate their pre-capitalist modes of production with contemporary capitalist modes of production.

Larrain (1989:16) argues that Leys and other French authors like Meillassoux and Dupré promoted this 'articulation of the modes of production theory'. This was a reaction against the castigations of the international market system by Andre Gunder Frank and other dependency theorists regarding the Unequal Exchange Thesis (UET) resulting from trade relations between a developing country and a developed country, as it were, though not necessarily the case. Articulating domestic production relations with the world economy simply means how a country can harmonize domestic production with the world economy. In regard to external articulation, it stresses the need for introducing the national economy to the best conditions outside via export-oriented strategies (outward-looking) development strategies.

Taking the European model of development into consideration, it shall be argued that PNG should sell her commodities, both goods and services, to other countries based on the pricing and demand conditions outside. Assessing the prevailing external demand conditions from this viewpoint, it is advocated that PNG should concentrate on what it can produce best at a relatively low cost to the best price conditions offered externally. This is where the notion of comparative advantage situation arises, which also borders on specialisation or division of labour for a particular good under the rubric of classical trade theories. To achieve the fundamental aims of the European model of development, it is essential on the part of PNG to adopt market-friendly policies and adapt it sparingly where appropriate and practicable.

This is where the policy environment assumes an ever increasingly important role in spearheading development tasks that promote national capacity building by involving all tiers of governmental structures, be it national, provincial or even at the district level. Harmonious efforts at these levels of administrative structures have the added benefit of having positive effects on the national and local rural economies. Neat assumptions underlying economic theories only seek to inform policy making; however, decisions taken during critical or crucial stages of implementation, have the overriding determining factor whether the production relations, say, for the sago palm industry are sufficient for translating rhetoric into reality and that is the bottom line to what the European model of development seeks to impress upon policy makers. Relevant policies that may provide the basis for advancing the sago palm starch commercialization process in PNG are explored in the next section shortly. In principle, harmonising domestic production efforts, say, for export commodities also need one or more critical stages of appropriate technology support, so as to add value for at least higher returns to the national economy can be captured and explained within parameters of the export or staple theory.

### **Export base or staple theory**

Auty (1995) points out that the 'export base theory' or the 'staple theory' as it is sometimes called, originated from the view that development occurs in processes and reinforces each itself. This is manifested in about four categories of linkages, namely: backward linkage, forward linkage, fiscal linkage, and final demand linkage as was reflected in the industrial revolution in Europe. Stokes (1992), on a similar vein, postulates that the industrial expansion in Europe, thanks to the industrial revolution, was not merely a historical event, but it also reflected and brought to the fore a cultural revolution, which witnessed a significant and widespread appeal for pursuing the good and beautiful life, using technology to reduce labour time and thereby enhance harmony then. Against that setting, it was argued that coal extracted from a coal mine, was akin to an export crop, which could provide the much-needed stimulus for developing other sectors around it and eventually was to lose its influence, as other sectors became more competitive and developed their own client base in good time.

It can therefore be argued, too, that the completed Bereina-Malalaua road has further developed the potential for promoting socio-economic growth and development for Gulf and neighbouring Central Provinces respectively or PNG as a whole, if commitment, efforts and resources are directed towards this end. Gulf Province, being a sago growing area, can transform its staple food crop (sago) into an export product, so as not only to generate sufficient income for the province, but likewise, contribute to the foreign exchange earnings for PNG in the long run (Laufa 2004a, 2004b, 2004c). This aptly reflects the underlying principle of the export base theory, which places emphasis on the export of primary products, rather than upon industrialization (Auty 1995). The export base theory was later modified by the Hirschman (1958) circular model of development, which has been a source of inspiration for development economics, further promoting the central ideas and motivations behind forward linkages and backward linkages in a perceived development undertaking, which will be afforded attention in the discussion to follow. Thus, the four categories of linkages triggered by the expansion of exports of a primary product are illustrated in Table 1 below.

**Table 1 Explaining the categories of linkages for export promotion of a primary product**

Category of linkage	Explanation
Backward linkage	The establishment of firms to provide inputs to the export staple.
Forward linkage	The establishment of firms to process the staple product prior to its export.
Fiscal linkage	The spending of government tax revenues levied on the staple.
Final demand linkage	The activities set up in response to the local spending of wages and profits by labour and owners.

Notes: These working definitions couched in the Export Base theory were adapted from Richard M. Auty's *Patterns of Development: Resources, Policy and Economic Growth*. Source: Laufa (2004a:50).

Auty (1995) further explains that the underlying assumptions, which, seek to promote the export base theory, are described as occurring in a five-stage sequence. Using Auty's five-stage sequence prescriptions for export promotion, the case of the sago palm as a staple is addressed and placed within that context for further analyses. For instance, in the initial stage, the people in sago using agrarian societies in Gulf Province identify sago, in which the province has comparative advantage, and make requisite plans to have this primary product exported. The second stage is characterised by expanding production, which yields external economies (such as improved transport networks) that lower the average cost of production and further boost the province's competitiveness. From this perspective, the Bereina-Malalaua road enters into the development scene to promote further linkages in essence. At this stage, investment picks up momentum for the export product (sago),

whereby foreign investors or local businessmen establish sago-processing plants, among other things. In the third stage, the demand for packaging, machinery and spare parts (backward links) and for additional processing (forward links) occurs.

In the fourth stage, the fiscal and final demand linkages take on a more prominent role, as capital overflows strongly into the non-basic or residentiary sector of the economy. Some cases in point could include, among other initiatives, vanilla farming, cane furniture production, eel farming, some of which may eventually be exported. On the other hand, a growing share of government spending occurs on basic infrastructure (street lighting, guesthouses, sewage, community halls etc.), so as to provide the investment climate for economic take-off for firms and motivated individuals to proactively participate in the economic life of the nation, especially in relatively underdeveloped rural sago using agrarian societies. Once the export product (sago) reaches its maturity, it will no longer be the dominant force in the economy.

### **Hirschman circular model**

Professor Albert Hirschman's circular model of development, which came to the fore in 1958, is developed along the lines of promoting forward and backward linkages, which are borrowed and modified after the export base or staple theory. Hirschman (1958) called this entire process of linkages covered in the discussion on export base theory as the cumulative self-generating momentum. After the first cycle of growth is completed, a new spiral of growth is initiated at a higher threshold.

### **Traditional trading of sago starch and clay pots: revisiting a barter trade system in pre-1950s period**

A barter trade system (a salient feature of pre-Capitalist modes of production) between the people of Gulf and Central Provinces existed well before the introduction of the monetization process, which was deeply entrenched in the mercantilist period, whereby imperialism played a significant role in the process. The Gulf people exchanged sago starch for clay pots with the Motuan tribe of Central Province. This traditional barter system (sago starch-clay pot) was called, *Hiri Trade*, and existed until the mid 1950s, at any rate, coexisted alongside the 'mercantilist aspirations' of former colonial powers then. Hettne (1995a) refers to 'mercantilism' as the pursuit of 'stateness', or state-building practice, on the part of colonial powers, whilst the process of colonial rule was experienced throughout the world under varying circumstances; it was more or less a historical process very much equated with imperialism.

Bill Warren (1980), in his book, *Imperialism: Pioneer of Capitalism*, gave an eloquent account on the subject, in describing its roots and devastating effects on societies ushered into the ideals and aspirations behind capitalism, or better still, individualism as a linchpin of economic liberalism. The exploitative manner of extracting raw materials from the colonies (periphery) by the



colonial powers (core) for industrial expansion back home was argued, by many dependency theorists such as Andre Gunder Frank (1966), as the cause of underdevelopment in the developing countries. Reflective of contemporary international state of affairs, the once overemphasised dependency theory, bordering on the unequal exchange thesis as arising out of international trade, is rather outmoded and lacks credibility and vigour, as much of the underdevelopment efforts or lack of progress is championed by local elites themselves within developing countries, according to false development paradigm advocates' position. Put bluntly, the core-periphery structure is no longer an inter-state affair in its entirety, as its roots and determinations of its own logic have been adopted and adapted to new territorial havens on an intra-state basis.

In assessing and explaining the existing strains and inadequacies of promoting market-based economy within sago using agrarian societies in PNG, it would be an interesting case to link and compare the sago commercialisation efforts of the Tommy Kabu movement in Koravake village in Baimuru District, Gulf Province during the 1950s (Ulijaszek 1995 citing Maher 1958) to that of sago using agrarian societies in Malalaua District. Clearly, the movement as Ulijaszek (1995) argues was an initiative to imitate the modern Western States ideals of promoting economic growth, using market-based mechanisms of trade. Through his food and nutritional status surveys on the Koravake people Ulijaszek (1995) confirmed that the newly settled village of Koravake after the 1950s, was born out of the belief that cleared parcel of land was to be made available for planting new sago groves or plots, so as to realise its full potential by trading with others, as opposed to harvesting from wild stands (see Ulijaszek 1982, 1995). This attempt to imitate economic ideals of the Cultural West could be evaluated as an associative and adaptive learning process and is conceived as an epitome of experimenting with what is described as a 'Modernity Project' by Stokes (1992). This, in a large measure, demonstrated that an attempt was made to articulate the pre-Capitalist modes of production of the sago palm to that of the prevailing capitalist modes of production, so as to effectively participate in international trade through exporting sago starch to the developed world and elsewhere. Meanwhile sago using agrarian societies in Malalaua District were around the same time trading sago starch for clay pots, as was pointed out earlier.

Both cases illustrate that sago using agrarian societies throughout PNG, did have the motivation to trade with others, though captured in different contextual dimensions, it can be argued that the Koravakeans of Baimuru District were better attuned to the logic of the market economy and envisioned how they would imitate western nations to improve their lives further, unlike the Malalauans on the eastern coast of Gulf, who were more into barter trade with clay pot traders from Central Province.

Taking a cue from the Classical trade theories, it clearly showed that a barter trade in this particularistic setting arose out of the need to complement one's resources, as a form of utility thereby alluding to the possibility that both trading parties were better off. Whilst the motivations for sago starch trade are

acknowledged, the Koravake case's material aspirations were not realised, and probably remains a historical precedent of a failed effort for sago starch commercialization in PNG. From hindsight, the ethics of development issue, in considering different socio-cultural views, belief systems, norms and practices to a large extent, holds the view that, 'let them [indigenous people] fail first' so that in time they may be able to recognise and acknowledge their own failures before they can repeat various tasks related for the purposes of socio-economic development, with a more positive mindset.

Considering a past failure as a heuristic device, as was illustrated in the Koravake case, it is perhaps an opportune time to recreate the necessary conditions for advancing sago starch commercialization, so as to realise its full potential, especially for sago using agrarian societies in PNG. Thus replicates of the Koravake dream can be transferred, adopted and adapted for the larger processes of societal transformation within these visibly underdeveloped societies. Reawakening the consciousness of sago using agrarian societies is just an initial phase of the perceived sago commercialisation process in PNG from a spatiotemporal perspective. This essential process must be accompanied by serious efforts to motivate and empower people to participate as important stakeholders; otherwise, the same recurring problems of 'start-stop recycling syndrome' of yesteryears will hijack the process again. It is hoped that the commitment to the overall success in commercializing sago starch from traditional mode of production to a higher level of adaptive technologically induced level of sago starch processing would promote further changes as is required this time around. Assuredly, reviewing some recent initiatives for prompting calls for commercialization of sago starch would provide the motivation to move forward, thus negating the connotations of underutilization of sago palm in essence (Laufa 2004a, 2004b).

### **Motivational macro setting of the sago palm situation in PNG**

The main motivation for commercializing sago starch production has been explored at the national level in the past, as the potentiality of not only creating gainful employment but also stemming the tide on excessive import of starch, especially rice. This initiative is more in line with governmental and community efforts to raise the level of export competitiveness of PNG's products in the global market, and sago starch, if developed to world standards is no exception. While exploring the idea of utilizing sago palm as a cash crop on a grand commercial scale is not new (*op. cit.* Newcombe *et al.*, 1980; Barrau 1959) the quest for contributing new sources of ideas, knowledge and originality show promise, if research and development are encouraged and pursued in tandem with other development imperatives on the part of PNG. Situated in that context, the discussion to follow makes a brief mention of the Malaysian experience, particularly the stunning success story of Sarawak, which is a leading area in commercial sago production and produces about 1% of the total starch in terms of global production standards.

Bujang and Ahmad (1999:84), in considering the world's consumption of sago starch, put it between 200,000 to 300,000 tons per annum, which accounts for

about 3% of the total world market. At any rate, Sarawak's success story could be emulated, should PNG give adequate attention and resources to fully tap into the sago-starch industry, of which countries like Malaysia and Indonesia have enjoyed a comparative advantage for some time now. These countries have moved from traditionally oriented starch extraction and processing methods to modernized automated factories of one or more critical steps for more commercially oriented purposes, as is found in Riau, Indonesia (Jong 2001) and Sarawak in East Malaysia (Oates 1999; Ohto *et al.*, 1983; Sato *et al.*, 1981, cited in Laufa 2004a, 2004b, 2004c).

### **Revisiting the first sago national conference of 1999 as a national development agenda for action**

Heightening awareness on sago research and development in PNG from the viewpoint of its multitude of uses has added new dimensions to one of the country's staple food, especially in low-lying marshy lands, as was showcased a decade ago. At the first national sago conference held at the PNG University of Technology in October 1999, it was observed that commercialization of sago starch would generate employment in sago growing areas (Gulf, Western, Morobe, East Sepik and Sandaun provinces) of the country. What was highlighted at the conference was the growing amount of sago coming into the local markets meaning there was a need to adopt and provide initiatives to commercialise the product.

Moreover, there was a common pledge to assess the environmental effects, let alone examine the various processing, uses, handling, quality and health issues of sago starch in each community. The possibility of making other products from sago, identifying and providing necessary support for the appropriate scales of processing was also observed. Likewise, the conference highlighted the need for research and development in management agronomy of sago palm plantation, genetic conservation of different varieties of sago palms and propagates (plant materials) for development.

Other pertinent resolutions of the first national sago conference called for policy initiatives on how best to utilise sago starch, which was to be developed by sago growing provinces. In line with this resolution, there was a further call for the establishment of a National Sago Council (NSC) to co-ordinate activities on sago research and issues around the country. Finally, there was a common pledge to set up national, regional and local production and distribution of information or materials and processing of sago. It is therefore logical to consider these national initiatives for research and development of sago palm starch and its other derivatives within the framework of existing national policy, especially within the areas of agriculture, trade and promotion.

### **Policy setting: is there a national sago policy for sago production in PNG?**

From the first national sago conference of 1999 to now (a decade later), there is no specific national sago policy in PNG, though other national policies albeit

partially, especially in the agriculture sector make references to the sago palm industry. Major policy initiatives of the national government have been greatly influenced by global agricultural conditions, be it food programs, food security, self-sufficiency in local food production and consumption. Therefore the policy setting at the national level be it in agriculture or for trade and commerce draws its scope and character; in one way or another, exclusively from global trade conditions, which ultimately and necessarily does shape district level socio-economic conditions. This top-down approach in policy planning, as is quite reflective of policy making in developing countries is normally the channel through which welfare aspirations and its eventual undertakings are seen to be functioning, within a national development program aimed at mitigation and reduction of the detrimental relative and absolute conditions of poverty in both urban and rural areas.

In practice then, different projects either donor-funded or national government-funded are specifically tailored to suit various components of a national development program, amidst obstacles and fears that projects may collapse, or rather deviate from its initial goal, depending on the capacity of local institutions and personnel, tasked to undertake these activities. Rondinelli (1993:118) from a remedial perspective observes that, 'one way of coping with uncertainty, complexity and ignorance is to recognise that all development projects are policy experiments, and plan them incrementally and adaptively by disaggregating problems and formulating responses through processes of decision-making that join learning with action'. This is a logically sound argument to ascribe to for policy makers and implementers genuine in promoting societal changes for the betterment of a particular society, be it affluent one or one below the poverty line; however, this is often a difficult issue to cope with, as there are still more uncertainties and rigidities in the realm of policy making and project implementation that can result from such undertakings. In the end, national policy development for sago appears to meander indefinitely and purposelessly among the vast marshes of intellect and culture.

### **National agricultural policies**

The National Department of Agriculture and Livestock has the mandate over national agricultural policies in PNG, with able research assistance and policy advice on crop varieties, agronomy, among other things, supplied and complemented by the National Agriculture Research Institute. PNG being an agricultural producer country earns much of her gross domestic product from the exports of primary commodities such as coffee, tea, pyrethrum, rubber and the like. Export promotion policies are very much influenced and driven largely by the vagaries of the international market supply and demand conditions because of its price taker role. At the global level, major international agricultural policies promoted by the Food and Agriculture Organisation of the United Nations, International Food Policy Research Institute, or even the International Fund for Agricultural Development are largely captured, synthesised and reflected in national agricultural policies. These involve food security schemes and food self-sufficiency and productivity

in the midst of depressed export prices of primary commodities and the need to combat poverty amongst different categories of households under varying income situations. A tactful and terse response to the rising food needs among other pressing issues in agriculture is reflective of the promulgation of the National Food Security Policy (2000-2010), which is a genuine attempt at addressing agricultural and food crop and cash crop management systems in a coordinated manner in PNG.

### **National Food Security Policy (2000-2010): Can it be a key driving force for sago starch commercialization in PNG?**

Striving to achieve food security at all levels of society has been an important concern as is manifested in the promulgation of the National Food Security Policy 2000-2010 in May 2000. This is an initiative of the PNG Department of Agriculture and Livestock which calls for concerted and coordinated approach from all concerned peoples, organisations and institutions to systematically attack food insecurity on all fronts. In fact, the food security work program that outlines the strategic framework for National Food Security 2001-2015, has fourteen sub-components, and lists sago and other traditional staple crops in sub-program 1. Here the strategy adopted for sago and other traditional crops will seek to promote, develop and where necessary conduct adaptive research to address the production, marketing and post-harvest related problems of these crops (Department of Agriculture and Livestock, 2000). An Asian Development Bank's research publication, *Agricultural Biotechnology, Poverty Reduction, and Food Security* also points out that agricultural biotechnology will contribute to poverty reduction and food security if scientists can develop technologies to increase quality and yields of food crops, and the technologies are adopted by small farmers (Asian Development Bank, 2001).

Implementing the national food security policy throughout the country, it could also be argued that sago palm in PNG, would not only serve as an important food and income source, but would also minimise the threat of food insecurity, which in one way or another is caused by heavy dependence on imported foods, such as rice. Woodward (1995) argues that food security after all, whether at the household or the national level, does not mean producing all the food one needs, but rather being able to acquire it. The acquisition aspect points to several other key issues such as food production and distribution amongst various income levels in a community (see Percy 1996). Questions relating to how this food is to be distributed and by what means, and perhaps equally important, do the people affected have the means to purchase or obtain these produced food, are bound to arise naturally. A few years earlier the Brandt Commission (1983) suggested that countries can rely on trade to make up for deficits and that greater freedom of trade in food would also help price stability and supplies (see The Brandt Commission 1985:127-8).

### **Conclusion**

Four critical remarks can be made of this study. Firstly, the political economy of sago palm mirrors the structural embodiment of the traditional mode of sago

starch production in sago using agrarian societies, of which transformation to negate the ‘underutilization phenomena’ is largely a function of promoting the Sago Modernity Project from a postmodernism stance. Secondly, the leaner ‘structuralism’ approach needs to be reconciled with the more flexible ‘postmodernist’ stances on development of sago using agrarian societies that is attuned to the logic of the market, of which supply and demand management is critical to the future success of the Sago Modernity Project. Thirdly, the productive capacity of the sago starch as an exportable product for Papua New Guinea needs to be factored into the modernist paradigm that harmonises both the internal and external modes of production of the sago palm. Fourthly the study critically observes that the single most difficult challenge in the political economy of transformation of sago using agrarian societies with respect to commercialization of sago starch on a large-scale as equated with the Sago Modernity Project is how to enable PNG sago farmers to benefit from increased agricultural productivity made possible by modern science and machinery.

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### **Author**

Terence Miro Laufa holds a PhD and MA in Development Studies from Nagoya University, Japan. Dr Laufa has been a lecturer in Strategic Management Division of the School of Business Administration at the University of Papua New Guinea since 2006. He has several publications in academic journals both local and international and his past and current research interests include: political economy of natural resource management, sago palm studies, corporate governance, systems thinking, industrial clusters, and gender and aid effectiveness. He was a 2009 Bixby Fellow to the Beahrs Environmental Leadership Program from June 26 to July 18, 2009 offered by the College for Natural Resources, Center for Sustainable Resource Development at the University of California at Berkeley. He was also a pioneer trainee director with the NASFUND Board in its Young Trainee Directors Program from February 2007 to December 2008. He consulted for the European Union in assisting the GoPNG with the formulation of the RED program to PNG under the 10<sup>th</sup> EDF and has consulted for the United Nations Fund for Women on Gender Equality and Aid Effectiveness in PNG.