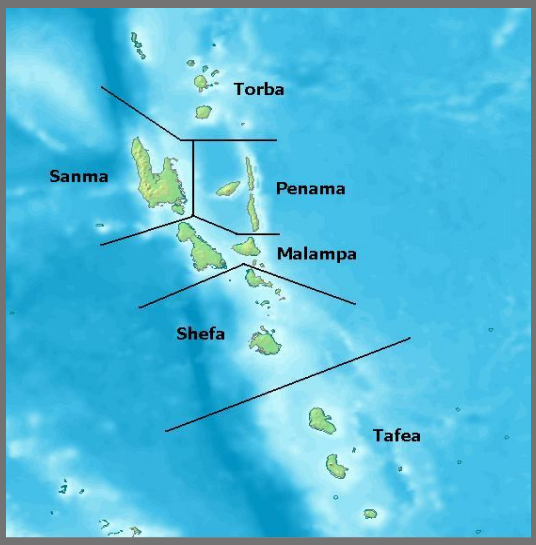
2012

Situation Analysis

Vanuatu Overarching Productive Sector Policy



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Introduction

As support to the policies and strategies contained in the Overarching Productive Sector Policy document, this situation analysis discusses agriculture's contribution to broad–based growth in the Vanuatu economy, analyses constraints to growth and identifies key strategies that would enable further productive sector growth. In addition the analysis is widened to cover the important socio-economic and political context of increasing growth.

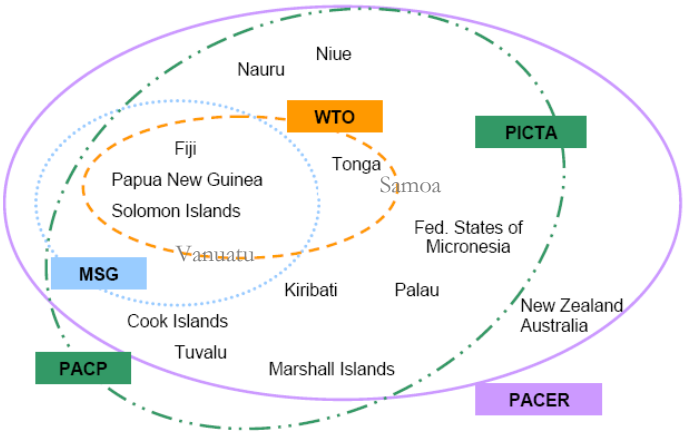
The analysis also recognises that many of determinants of agricultural productivity fall outside of the remit of the productive sector itself and also need to be addressed such as: land policies, labour availability and costs, infrastructure and transport costs, taxation, trade regimes and currency valuation, energy prices, commodity tariffs and protections, as well as shifting external market dynamics and trade negotiations. The policy assignment offered limited scope to address all these factors in detail, but they have been included in the discussion where appropriate, to indicate how they are relevant to policy formulation.

Policy Context

As a small open economy Vanuatu is subject to the volatility in the global economy. It faces the duel challenge of large fluctuation in global market prices for imports (food and fuel) and for the principal commodity exports. A move from subsistence production to an increasing production for markets means that agriculture is increasingly linked with other sectors of the economy. Globilisation and the inclusion of agriculture in international trade negotiations have made the sector increasingly sensitive to trade-related issues.

Every day the world of preferential trade is shrinking. Vanuatu is negotiating an Economic Partnership Agreement (EPA) with the EU, whilst Pacific trade officials have officially commenced negotiations for the agreement known as PACER-Plus (Pacific Agreement on Closer Economic Relations) which would seek to include Australia and New Zealand in a reciprocal free trade agreement with the Forum Island Countries. Vanuatu also has begun implementation of duty-free trading arrangements under the Melanesian Spearhead Group (MSG) agreement. From protectionism and dependence on a narrow range of commodities and export destinations, the country now faces a more liberal trading environment. But trade liberalisation initiatives imply future demand and supply shifts and dynamic adjustments in markets that will have far-reaching and unpredictable effects on agriculture trade.

FIG 1: Regional Economic Communities in the Pacific



At the same time, Vanuatu's small population and distance to major markets form significant barriers for developing the manufacturing sector. At present export marketing of agriculture products is largely focused on primary commodities with limited value adding in country. As a result

swings in global commodity prices impact significantly on stability of the country's external accounts and prosperity in the rural areas. The future is likely to bring continued external shocks as the global economy struggles to recover from the Global Economic Crisis and regain a stable and sustainable growth path. Developing and implementing a robust productive sector policy will enable Vanuatu to better manage the impact of these shocks on the economy and attain more sustainable broad-based growth.

The policy needs to identify what the government, supported by development partners, can do to facilitate equitable growth, and what are the elements of a sustainable growth strategy. This will largely centre on what the public sector can do to foster the development of institutions that facilitate private investment and the commercial contracting that underpins it. It is also about what the government can do to reduce the costs of doing business. This includes the issue of what kinds of investment the public sector itself should be undertaking, and it also concerns ensuring that public sector activity and policies do not depress or distort the pattern of returns to investment.

A vital principle for the productive sector policy must be that it is the private sector, not the public sector that will carry the main burden in generating growth. Given the government's limited resources, and taking realistic account of its capacity, it is clear that a conservative view of the role of government should guide the design of the productive sector strategies. The two key roles for the public sector should be in: (i) providing the public goods that promote social and economic development and (ii) improving equity. Matching the government's role to its capabilities requires choosing what to do, how best to do it and what not to do.

Recognising the current capacity of the government institutions in the productive sector, and their performance in delivering fundamental services, it would be unwise to add additional functions unless there is very compelling evidence that:

- ✓ they address a critical impediment to development (here it must be recognised that the private sector often finds ways of dealing with the absence of state managed functions);
- ✓ that policy prescriptions come from a realistic assessment of the context and need, rather than a 'formulaic' approach; and
- ✓ the function uses institutional structures that are appropriate to Vanuatu circumstances, rather than drawn from perceptions of best practice in the developed world.

The consultations undertaken and analysis of background information for preparation of the policy indicates that the highest priority is to remove impediments to investments that link rural producers, particularly smallholders, to domestic and international markets.

Without these links, rural producers will have little reason to increase efforts. There is a strong case to help rural producers gain knowledge of opportunities to improve productivity of cash crops: but they will have little incentive to adopt technologies and practices if there is no opportunity to increase cash incomes from higher volumes and values of sales.

A common perspective in some rural societies (and government circles) is to regard traders as avaricious, leading to efforts to try to find ways to supplant their services. In fact, it is traders that will increasingly provide the links from farmers to markets, for outputs, inputs and useful knowledge. The advantage that they have over governments is that their own resources, and their future prosperity, are at stake when they decide to provide services. The critical public policy challenge is to make sure that traders are subject to competition. The effect of unnecessary regulation serves to reduce competition and encourage rent-seeking which has been well illustrated over recent years through the experience of the VCMB.

There is also a strong case for public action to ensure that small-holders can access knowledge about ways of improving performance of subsistence agriculture as demographic pressures will inevitably put pressure on traditional practices and the ability of subsistence agriculture to provide sustenance for the whole population.

In terms of government action, the foregoing suggests that the strongest priority has to be given to upgrading transport and communication infrastructure, establishing sustainable systems to maintain this infrastructure in the future, and continuing to remove regulatory impediments to profit-oriented investment in transport and communication services. Tax reform will also be needed to remove the heavy direct and indirect taxation of rural exports. It will also be necessary to find ways to better manage natural resources to maintain sustainability.

Implementation of the policy will need to be guided by a realistic assessment of the current capacity of sector stakeholders particularly government (and the capabilities likely to be achieved in the foreseeable future). Government failure has been a cause and symptom of many of the disincentives that now limit investment in the sector. Technocratic solutions must be matched with well resourced, competent and non-corrupt government institutions, or they will not work.

Policy Process and Political Context

Policy is the result of interactions among a multiplicity of actors and organisations with particular interests and ideas about what course of action should be taken. The sum of these interactions constitutes the policy process. And the policy process is part of a wider environment, or context. Understanding context is vital to understanding and engaging more effectively in policy processes.

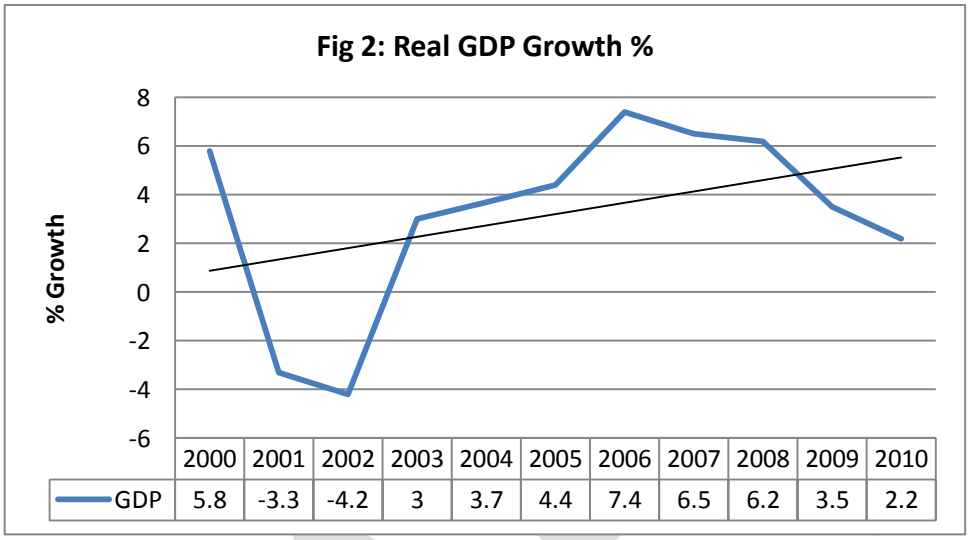
While the principles of agricultural development are well known - for example, farmers need to be linked to markets and improved technology needs to be provided - their application in particular contexts requires careful analysis. It might be considered a truism to say that it is far easier to write a good strategic policy document than to get it implemented. There have been many good policy recommendations about how to get Vanuatu's agriculture moving over the years, but too often these have foundered. In large part this is because of a narrow focus on the 'technical' dimensions of policy, with too little attention paid to the complexities of policymaking in particular contexts. Successful policy reforms need 'drivers of change' – those who have the political will, show strong leadership and are able to mobilise local resources in a consensual way. This requires a strong and stable government where firm decisions can be made and maintained, thus providing a consistent policy environment for private investment.

Vanuatu has a history of political instability, with nine prime ministers between 1995 and 2004. From 2004 the country enjoyed four years of relative political stability (and good growth). But in September 2008 instability returned. Between September 2008 and July 2010, the Vanu'aku Party coalition survived numerous no confidence motions. In early December 2010, the coalition lost a vote of no confidence, and a new Prime Minister from the People's Progress Party was appointed. After a number of successive motions of no confidence, the Union of Moderate Parties had its leader elected new Prime Minister. Appointments of three short-lived prime ministers followed as successive constitutional court cases were addressed through the judicial system (ADB, 2011).

But the underlying social stability in Vanuatu and the country's ability to make transitions of power peacefully are fundamental factors that help sustain the foundations for growth.

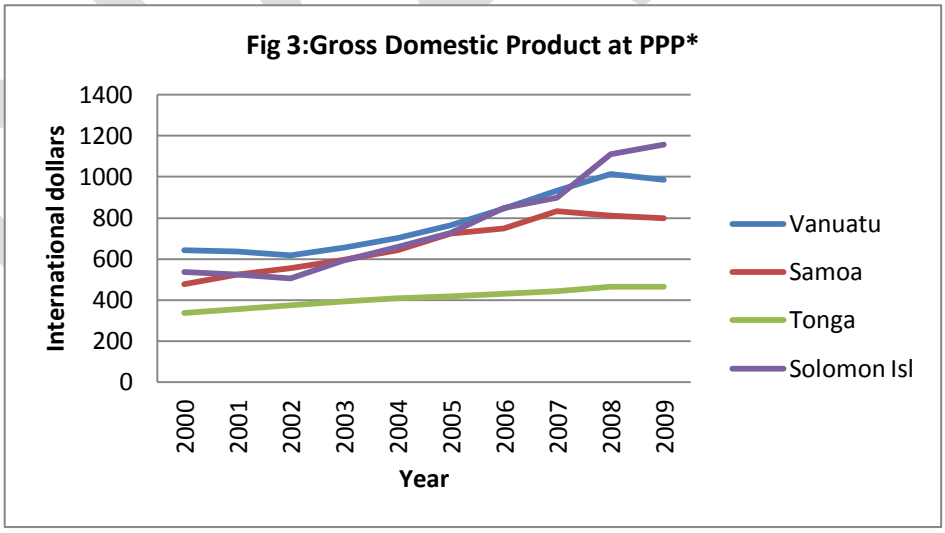
Economy

Vanuatu's economic growth over the last eight years has been impressive averaging 4.6% per annum (Fig. 1). Earlier this decade average income per capita was about the same as it was 25 years earlier, but despite the high population growth rate (average 2.3% between the 1999 and 2009 Population Census)this situation is being turned around by high and sustained growth[1]. By 2009 Vanuatu's GDP per capita had reached VT 269,204 (approx US$ 2,523[2]).



Source: ADB Key Indicators for Asia and the Pacific 2011

Economic performance compared to other Pacific neighbour countries over the period 2003 – 2009 has been good (Fig.2). In the last two years Impacts of the Global Economic Crisis (GEC) have seen growth tempered, but still remain positive.



Source: ADB Key Indicators for Asia and the Pacific 2011

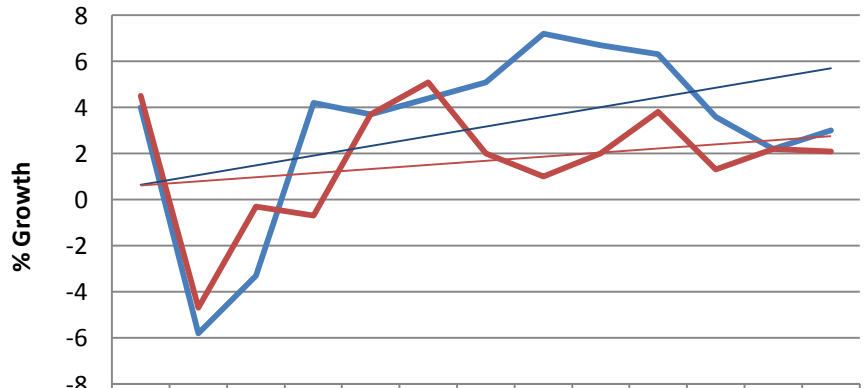
[1] The average GDP growth rate per person employed from 2005-2008 was 2.7% compared with -0.7% from 2000 -2004 and 0.8% from 1995-1999 (MDG Report, 2010)

[2] Vatu 106.7 = 1US$, 2009 Exchange rate, source IMF

*Purchasing Power Parities (PPPs) are currency exchange rates obtained by comparing the prices of identical goods and services in different countries. These price comparisons are made by dividing the price of a specific good or service in one country by the price of the same item in another country.

Tourism has been a major driver of recent growth. Between 2006 and 2010 visitor arrivals have increased by 86% from 68,179 to 126,693 and day visitors on cruise ships have almost doubled from 85,700 in 2007 to 140,388 in 2010. Cruise ship stops are forecasted to increase from 200 in 2011 to 300 in 2012. But with tourism activities and employment opportunities focused primarily in urban areas this is contributing to the high rate of rural-urban migration and the resultant urbanisation, particularly in Shefa province. Other areas contributing significantly to growth have been construction, expansion in real estate, finance and increasing overseas development assistance (particularly the US Millennium Challenge Corporation road construction project). The productive sector (agriculture, forestry and fisheries) has also grown over this period, but at a slower rate (Fig 3).

Fig 4: Real GDP and Agriculture Growth Rates 1999-2011



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GDP	4	-5.8	-3.3	4.2	3.7	4.4	5.1	7.2	6.7	6.3	3.6	2.2	3
Agriculture	4.5	-4.7	-0.3	-0.7	3.7	5.1	2	1	2	3.8	1.3	2.2	2.1

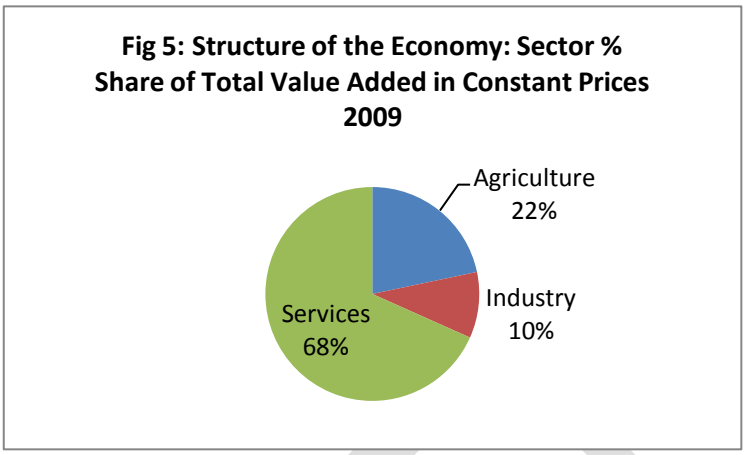
Source: VNSO

The blue and red linear trend lines in Figure 3 indicate the relative growth rates of GDP and Agriculture. During the decade 1999 to 2009 the agriculture sector grew by an average of 1.6 percent per annum whilst the overall economy grew by an average of 3.3 percent per annum and the population growth rate over the same period was 2.3 percent per annum. The underperformance of the agriculture sector is of considerable concern to Government in its urgent task to develop agriculture to meet the food needs of the rapidly growing population of Vanuatu and also to achieve higher sustainable broad-based economic growth to create employment and raise incomes.

In 2009 (latest data available) the structure of the economy was dominated by the service sector (68%); followed by agriculture (22%) and a smaller industry sector (10%). But 76 percent of the population still resides in rural areas and food/cash production activities (agriculture and fisheries) continue to employ the greatest percentage of the labour force[3] , either in commercial efforts, or more commonly, in self-sufficiency endeavours (HIES 2006). Whilst subsistence agriculture continues to contribute significantly to both incomes and food security, in many cases calculating the value of subsistence production in the national income (gross domestic product) is not complete. Thus the official estimate of around 20% for agriculture's share in GDP undoubtedly underestimates the sectors' importance to living standards in Vanuatu.

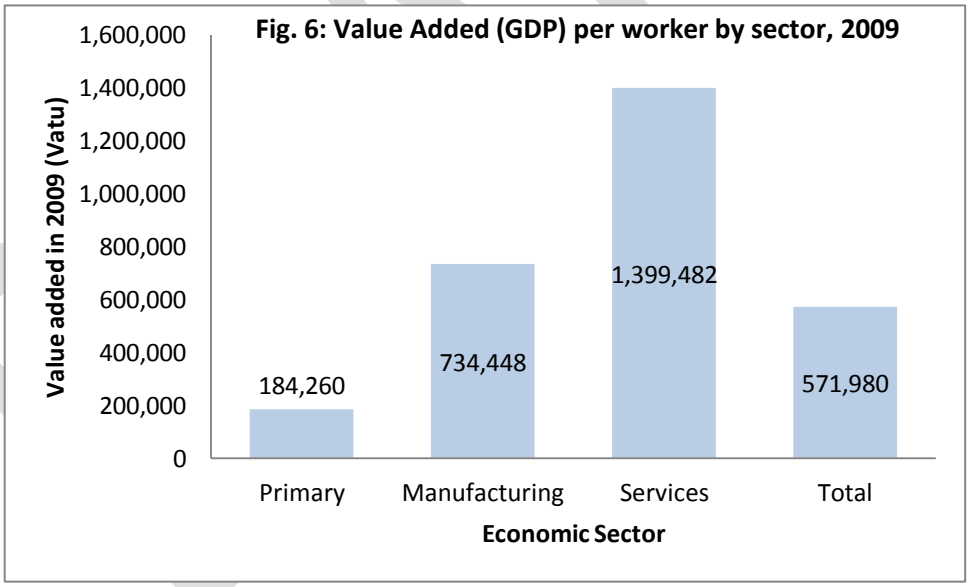
[3] Estimated 64% of labour force occupied in agriculture in 2009, Population Census Report Vo. 2

The distribution of the shares of economic value added depicted in Figure 4 clearly does not match the distribution of labour; with the majority of the national labour force working in agriculture and a much smaller proportion employed in services and industry sectors.



Source: ADB Key Indicators for Asia and the Pacific 2011

This means that the GDP generated per worker varies greatly between sectors and is much smaller in the agriculture sector than in manufacturing or services sectors (Fig 5.). Clearly an agriculture worker adds much less (monetary) value to the economy than a worker in manufacturing



Source: Vanuatu National Population Policy 2011-2020 (page 7)

or services. This is a compelling argument to focus greater policy attention on increasing productivity and value adding in the agriculture sector from which most of the population derives their livelihood.

Furthermore, Vanuatu has often been characterised as a dualistic economy, with high disparities in income distribution between those in the formal, largely urban based economy, and those in the informal rural economy. Income distribution and inequality estimated by the Gini Coefficient, a measure of inequality, indicate that the level of inequality in Vanuatu is approximately the same in all areas except for Port Vila. Nationally the Gini coefficient is estimated to be 0.41, the same in Luganville (0.41) and 0.40 in rural areas compared with 0.46 in Port Vila. Again this shows the higher

levels of inequality in Port Vila than in the other regions. Although there are very wide differences in expenditure per capita between the poorest and better-off households, the larger household size in the poorest households means that the overall share of expenditure incurred by these households is higher than might otherwise be expected (VNSO, Analysis of the 2006 HIES,2008).

In the case of Vanuatu such an aggregated measure needs to be interpreted cautiously, particularly when comparisons are made between countries, given that most people derive at least part of their livelihoods outside the cash economy. However, this indicator can be useful to monitor trends in broadening of economic inclusiveness. What is apparent is that Port Vila based economic growth is unlikely to trickle down to much of Vanuatu's rural population. Therefore, growth derived from small holder agriculture and in community tourism based outside Vila will likely be far more broadly based and socially and economically sustainable.

Fiscal Policy

Fiscal policy includes central government's (Ministry of Finance and Economic Management) decision to tax and spend. Vanuatu's fiscal position is generally judged to be sound. Public debt is low at 20 percent of GDP and budget deficits have been low for a number of years[4]. Unfortunately, government's revenue at around 18 percent of GDP (excluding grants) is also considered low compared to other Pacific Island Countries. As the revenue system relies heavily on goods and services tax and customs duties (tariffs and excise) increasing pressure will be put on revenue by regional trade liberalisation processes. The structural weaknesses in the revenue system constrain government policy space and also limit government spending for key infrastructure development and other possible support to productive sector growth. Currently the MAQFF sector departments directly supporting the productive sector receive less than 3% of government budget (Fig 5). Departmental budgets are therefore low and a significant proportion is used for staff costs with limited amounts available for operational costs[5]. Donor financing is currently the main source of development spending, but support to the sector needs to be more smoothly administered. Completion of this long-awaited Productive Sector Policy should help facilitate more targeted and coordinated donor support for the sector.

Box 1 Vanuatu Revenue System

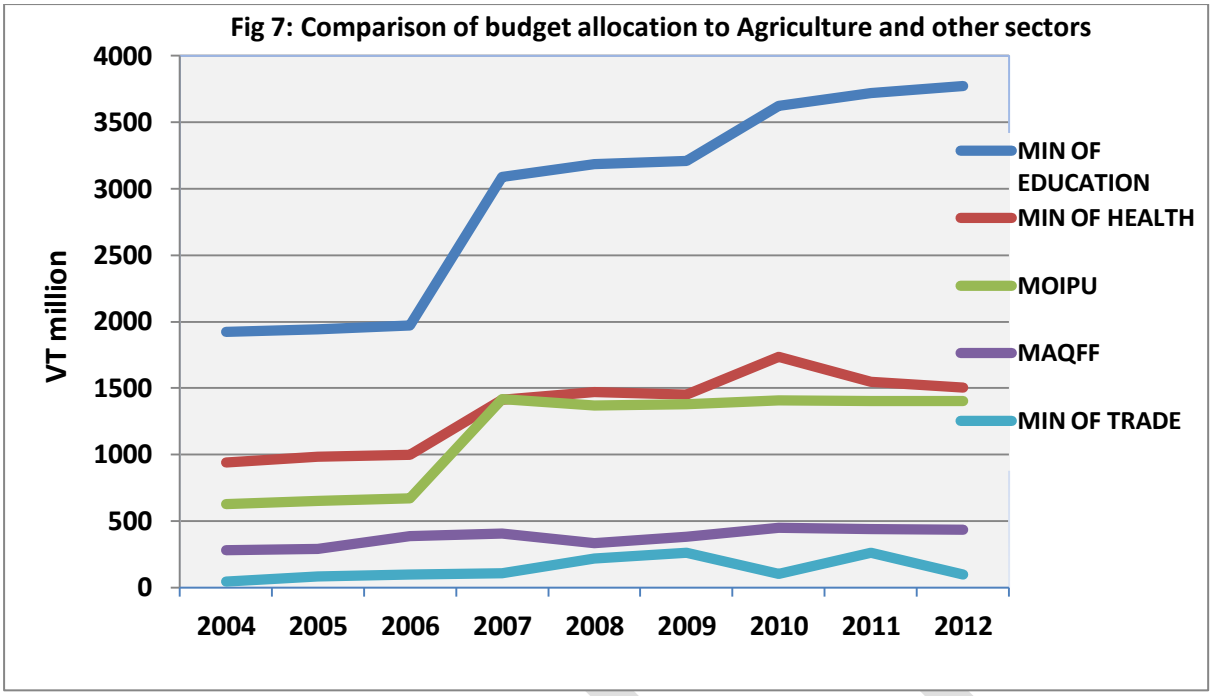
VAT, excises, and import duties account for about 80 percent of tax revenue in Vanuatu and there is no corporate or personal income tax. The main characteristics of the current tax system and revenue performance are as follows:

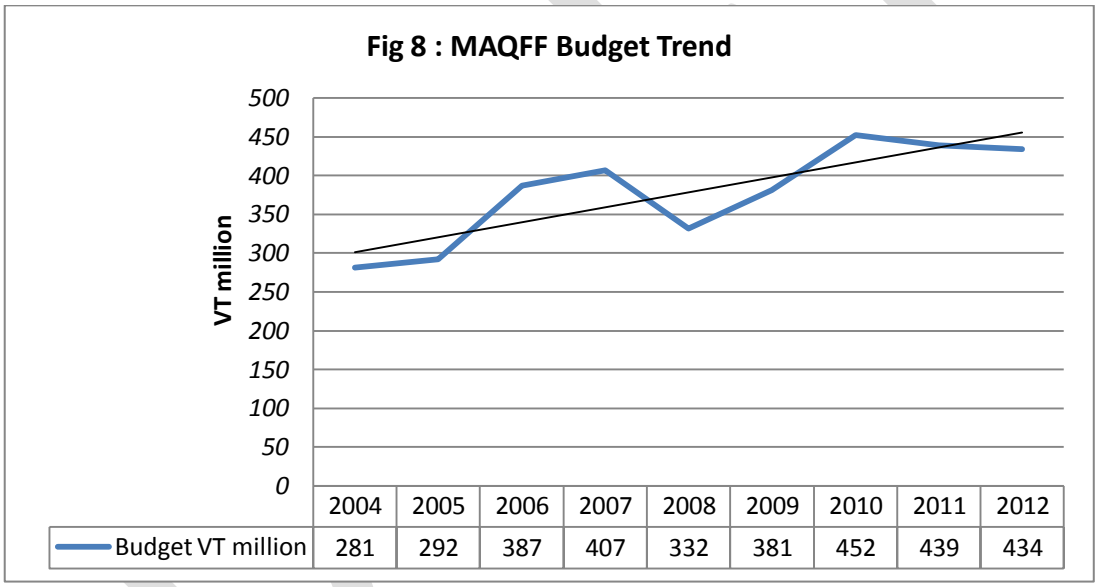
- *VAT.* The VAT rate is 12.5 percent. Exemptions are relatively limited.
- *Excises.* Excises are levied on alcohol, tobacco, fuels, seafood, meat, flour and sugar related products. The rates have been increased from low levels in recent years to partially compensate for the decline in import duties.
- *Import duties.* Import duties are levied on a large range of goods. They account for about 6 percent of GDP, which is broadly in line with peers in the region. Although import duties are currently one of the major components of tax revenue and they are expected to decline gradually due to trade liberalisation processes.

(***Source: IMF***)

[4] IMF Article IV 2011 Staff Report

[5] In the 2011 budget for MAQFF the payroll consumes 68% (Vt.293,775,894) leaving only 32% (Vt.140,036,024) to carry the MAQFF operational activities. In the Forestry Department the payroll consumes 82% with 11 of the 53 statutory posts being vacant.





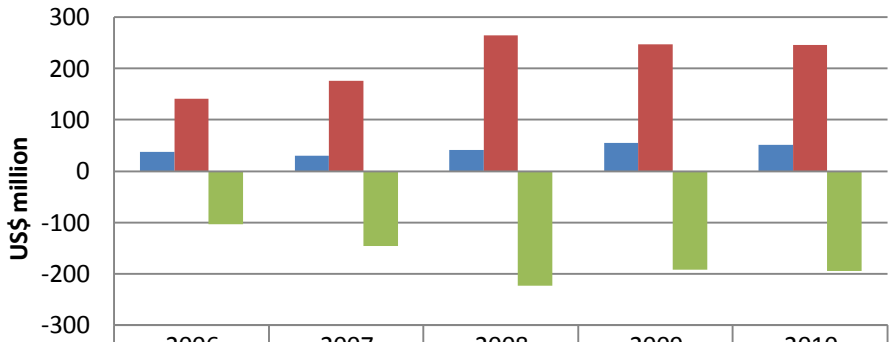
Source: MAQFF

Low budgetary allocation to the productive sector continues to be a key constraint which has reduced human resources and service delivery by government institutions. Although budget share to the MAQFF has shown a general upward trend (a 64% increase 2004 to 2011) the total allocation is still insufficient to fully deliver the outputs in their Corporate Plan. As a result government support activities increasingly depend on *ad hoc* project funds which threaten the sustainability of service provision. The Productive Sector needs a predictable level of funding that recognises its status as a "priority economic sector" and a major source of employment. However, with continuing fiscal constraint and need to keep a balanced budget prospects for increases in budget allocation for agriculture are not good. It will therefore be critical that available funds (including those from development partners) are well coordinated and targeted to prioritised policy actions and service provision is streamlined and efficient. This will require good coordination between support ministries to ensure complementarities in programmes and not duplication. The move towards MAQFF focusing on production, Trade focusing on market access and Industry on processing and manufacturing is a positive sign.

Trade and Market Access

Despite Vanuatu's "economic success" it still runs a significant merchandise trade deficit with imports being some 5 times higher than exports (Fig. 6). As a small open economy, where almost all manufactured goods and increasing amounts of food and fuel are imported, foreign exchange earnings are vital.

Fig 9:Trade Balance US$ million

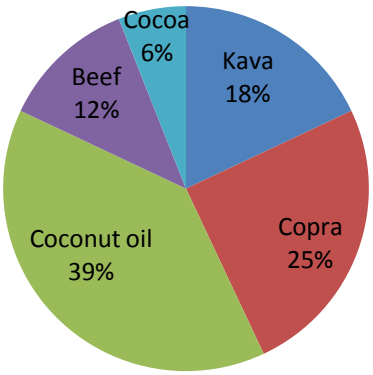


	2006	2007	2008	2009	2010
Exports (fob)	37.7	29.7	41.7	55.2	51.4
Imports (fob)	141.2	176	265.2	247	246.3
Balance	-103.6	-146.4	-223.4	-191.9	-194.9

Source: IMF Article IV 2011 Staff Report

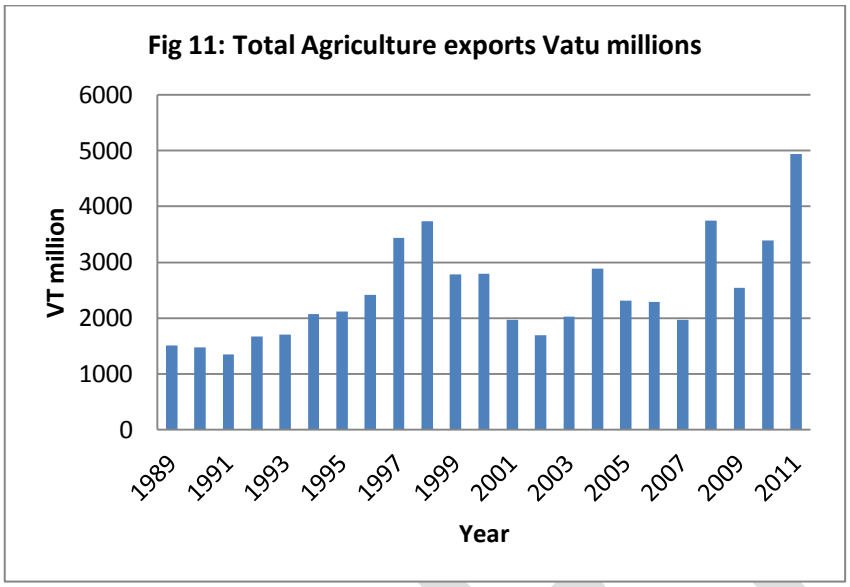
While the goods trade deficit is large (29 percent of GDP) the current account is balanced by tourism receipts and inflow of private and official transfers (ODA). Agriculture products make up the bulk of merchandised exports dominated by five products coconut oil, copra, kava, beef and cocoa (Fig 5). But Vanuatu has also developed small volume exports of premium grade spices and coffee, sawn timber, and marine products. Relative to neighbouring Pacific countries of a similar size this constitutes a good diversification of the agriculture sector. What is needed now is to consolidate production and improve quality to increase export volumes and prices for these key products by increasing competitiveness in higher value markets. In Vanuatu domestic (intra-island) transport and port handling costs constitute a major share of FOB price and it will, therefore, be critically important to improve efficiencies in this area in order to raise export competitiveness.

Fig 10: % Share of main agriculture exports 2011



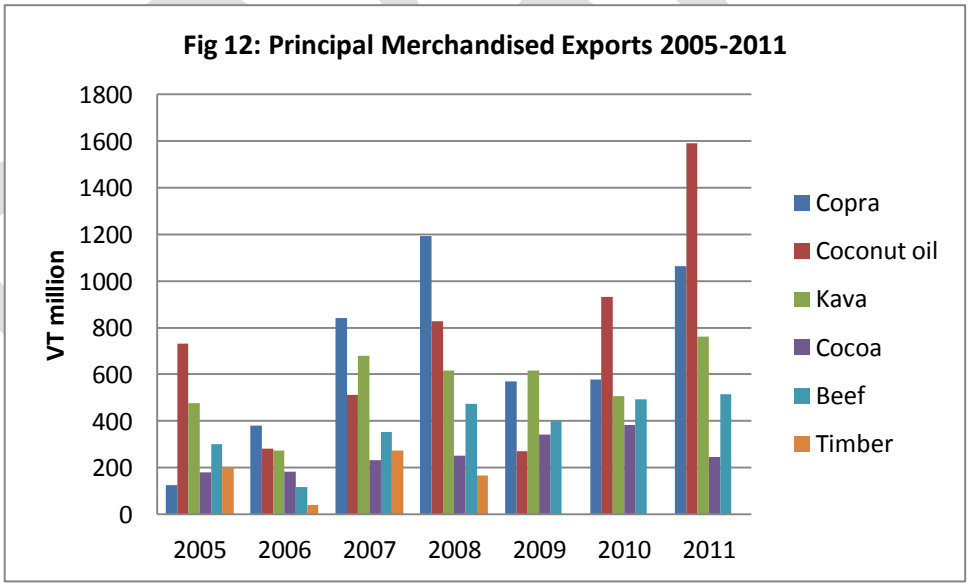
Source: VNSO December 2011 Quarterly Report

Export performance over recent years has been solid despite some year-on-year variation due largely to shifts in global commodity prices and some production issues in the coconut oil industry and more recently the cocoa sector (Figs 8 & 9).



Source: VNSO Quarterly Indicators 2011

The five main agricultural commodity exports noted above contributed some 85% of total agricultural exports in 2011.



Source: VNSO Quarterly Statistical Indicators 2011

The value of copra exports increased significantly in 2011 due to higher world copra prices, as did coconut oil due to increased production and prices. In contrast, the value of cocoa exports fell in 2011 due to lower production (poor weather) and marketing difficulties. Kava showed an increase in 2011 despite a slight fall in prices and increasing concerns over quality, and beef exports were maintained with a drop in output from Santo being more than compensated by an increase in numbers from Port Vila and higher world beef prices.

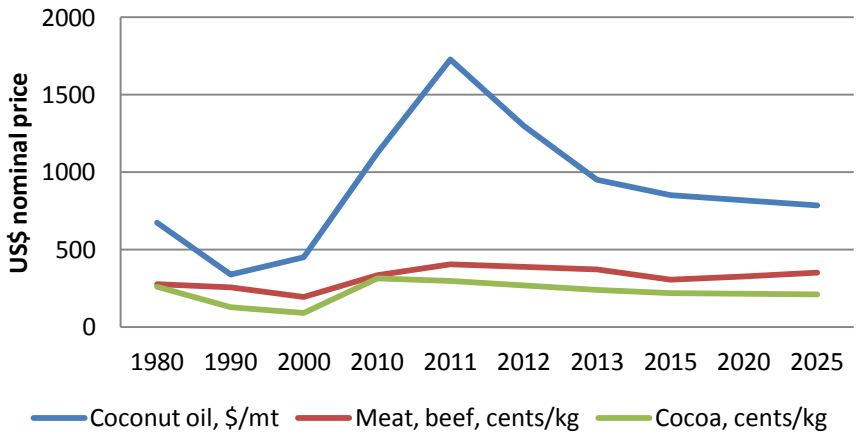
Going forward, both strengthening export performance and forming stronger linkages with the growing tourism sector (to retain in country more of the tourist dollar) will be important to contain any pressures on the balance-of-payments and reduce dependence on external grants. Also moving exports more into higher value niche products which sell into markets with greater demand price elasticity will be important to offset the vagaries and volatility in the global commodity markets and rising fuel costs.

The continued opening up of the economy in recent years means that exchange rate policy is increasingly important to the nation's economic prospects. The main objective of exchange rate policy is to ensure that export oriented industries remain competitive in overseas markets whilst at the same time minimising imported inflation. The exchange rate for the vatu is managed by pegging it to an undisclosed trade-weighted basket of currencies. In 2011 The IMF[6] assessed the Vatu to be moderately overvalued relative to its medium term fundamentals in the range 8-13%, but also stated that "*there is considerable uncertainty in these results mainly because external balances are heavily influenced by a small number of factors (tourism and foreign aid) and these factors could be quite volatile going forward*". Real appreciation of the vatu adversely affects international competitiveness of export oriented industries (Tourism and Agriculture). Given that most merchandise exports are denominated in US dollars, the current weak US dollar has turned the terms of trade against Vanuatu's main export commodities. In contrast, the recent appreciation of the Australian dollar against the vatu is expected to boost tourism spending and improve beef exports to Australia. Trading in high value products is again an appropriate way to offset some of the impacts of exchange rate fluctuations.

Outlook for exports

The variations in exports reflect cyclical global commodity movements and therefore the vulnerability of the Vanuatu economy to such swings. Value adding presents a means to both increase export values and to soften the swings as the gap between raw materials and consumer prices is reduced. Coconut oil prices have risen strongly over the last decade, but according to World Bank Price Forecasts prices are likely fall over the next three years before levelling out to prices which are still considerably higher than those experienced during the 1990s. Cocoa prices have increased but began to decline in 2012; this trend is predicted to continue. Beef prices have shown a significant rise in recent years with quality grass-fed beef receiving a premium price and the future market for beef looks strong with a growing demand in middle income countries and China.

Fig 13: World Commodity Prices and Forecasts

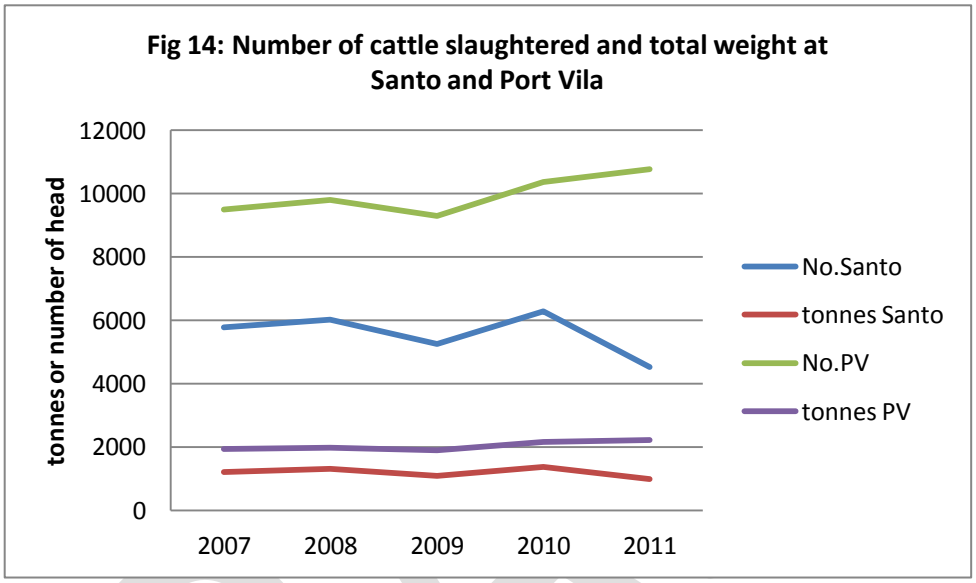


Source: World Bank www.worldbank.org

[6] IMF Article IV 2011 Staff Report

Beef

Beef exports make a significant contribution to GDP with the value of total sales of beef and hides at VT 545 million in 2011. This is a remarkable achievement in the Pacific for a country to supply much of its domestic market needs, as well as supply a significant export market in quality grass fed beef. However, beef production on Santo Island is declining due to various factors including inadequate investment, the unsustainable size of some of the larger estates and poor farm management, especially the inability to curb weed growth. In contrast, numbers and the weight of cattle slaughtered in Port Vila are increasing such that the total value of Vanuatu exports was maintained in 2011. The number and weight of cattle slaughtered at each location are shown in Figure 10.



Source: VNSO Quarterly Statistical indicators 2011

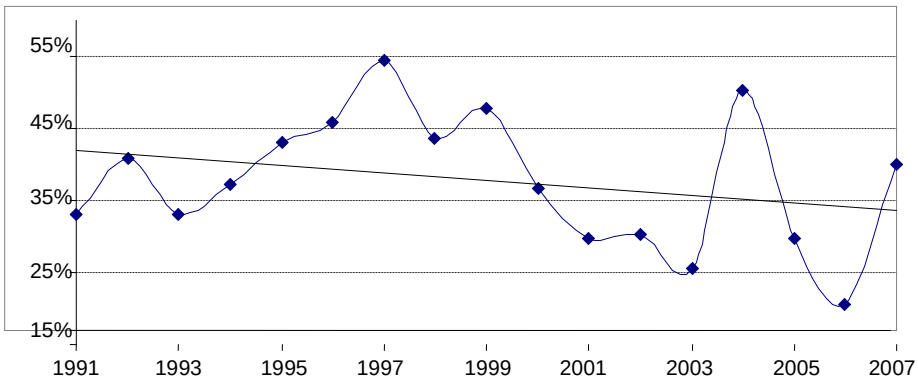
There is a need for improved pasture management and weed control along with access to improved breeds to allow genetic improvement in the beef sector as a whole to increase production and productivity. Small beef farmers face market access difficulties due to high transportation costs to reach markets, lack of credit, inadequate government extension programs and the lack of any cattle market/auction facility, or an annual agricultural show to allow farmers to meet and show livestock for sale or breeding.

Coconut

Copra and coconut oil remain important export commodities. Indeed over the last two decades coconut product exports have averaged over 35% of total domestic export earnings (Fig. 11). In 2010 the value of coconut products (VT 1, 572 million) was greater than the value of kava, cocoa and beef exports combined (VT1, 386 million). But the coconut industry is based on outdated, labor-intensive production systems and return to labor is extremely low. Nevertheless, coconuts afford opportunity for the smallholder to move in and out of copra production depending on the cash needs of the household, the prices on offer, and the demands of the household's time from other activities. This flexibility is one of the major attractions of coconuts to small holders. Furthermore, there is low risk in terms of production and marketing. Coconuts are therefore likely to remain an important industry in Vanuatu for some years to come. The main areas to focus on are improvement of processing facilities (particularly drying) and gaining added value through oil refining and virgin oil production and more whole nut processing. Greater policy emphasis on bio-energy would also be beneficial to sustainable growth in the industry. With potential increased demand for coconuts replanting of old coconut stands (not expansion through new plantings) will be required. However,

the efficiency and costs of inter-island shipping will remain the most crucial factor in the industries competiveness.

Fig 15: Coconut product export earnings as a % of total domestic export earnings



Source: Andrew McGregor & David Hopa, 2008

Kava

Kava plays an important role in the lives of ni-Vanuatu, especially in social gatherings and traditional ceremonies. It is arguably the most important crop in the Vanuatu farming system. Production is widespread involving over 20,000 households or 52% of total households (VNSO, 2007 Agriculture Census). The large domestic market dominates with over 50 *nakamals* in Port Vila alone[7]. But there is also a significant export trade which has increased markedly in recent years, despite a significant setback when kava was banned from European markets justified on suspected health risks. The main marketing issue is quality for both the domestic and international market with poor quality kava entering the market due to the pressures of demand. Whilst consumers would be expected to limit this trend (and have in Europe), there appears to be little consumer awareness locally, and government support on food safety grounds appears lacking, despite there being existing legislation on Kava quality standards which are not being enforced. The direction for (re)development in the sector should be towards marketing kava as the high value organic specialty crop that it is. This would mean certified organic cultivation systems (for purity), correctly selected varieties (for chemotypes with desired kavalactone properties), harvested at maturity (3-5 years of age), differentiating the parts of the plant used (roots being the best) and instituting a traceability system (geographic origin). Maintaining rigorous quality standards along these lines should see kava grow to be Vanuatu's principal cash and export crop in high value markets (Vincent Lebot, personal).

Cocoa

Over the last decade, Vanuatu's cocoa production has oscillated around 1,000 to 1,200 tonnes. The value of cocoa exports showed an upward trend between 2005 and 2010, but suffered a decline in 2011 (Fig 8 above). Cocoa is a good cash crop for Vanuatu smallholders because it can be integrated into food gardens or grown under mature coconuts. Over the last decade formation of cocoa grower associations has enabled small farmers to upgrade quality and consistency of their production which has helped them access higher value markets with better returns to the growers.

[7] FAO Vanuatu Market Study Report 2011, estimated there were 53 nakamals (kava drinking houses) in PV

Through the Vanuatu Organic Cocoa Growers Association (VOCGA) the returns from cocoa have been significantly increased while still remaining a component of the traditional farming systems. In addition, world cocoa prices are currently at their highest level in real terms for two decades, but these highs are forecast to decline as supply from West Africa and South America increases. With increasing global competition in premium markets it will be essential for Vanuatu producers to sustain quality production and productivity to remain competitive.

With the development of a market for single origin certified organic cocoa with a French chocolate manufacturer (KAOKA) in a niche market for about 300-400 tonnes (about one third of Vanuatu's total production), the returns to labour for VOCGA members growing cocoa under coconuts was double what it was under previous marketing arrangements. Unfortunately, access to this market suddenly ended in 2010 as KAOKA could not procure sufficient throughput from Vanuatu (Pierre Chanel Watas, personal communication). This reflects the fragility of the market and vulnerability of Vanuatu growers. There remains considerable scope to further improve farmer returns by increasing productivity. Yields remain low and could be significantly improved through better management – particularly in the areas of pest management (rats), pruning and sanitation (black-pod). Currently the cocoa pod borer and vascular-streak die back are absent from Vanuatu cocoa growing areas[8] and it will be essential to maintain biosecurity vigilance to sustain this status. Greater extension programmes based on the Integrated Pest and Disease Management (IPDM)/Farmer Field School methodology is required.

The Cocoa Growers Alliance (CGA), established under POPACA, was an effort to replicate the success of VOCGA and move growers into higher value niches. However, despite the access of the co-operatives established under POPACA to cocoa processing (fermenting and air drying) facilities capable of producing high value cocoa, poor quality management by the co-operatives, and their subsequent inability to market their cocoa to higher value niches, has left CGAs growers in the relatively lower-value market for conventional cocoa.

Organics

Vanuatu's comparative advantage is seen by many to be in organically grown products. The organic industry continues to grow worldwide into a burgeoning market. Sales globally in 2010 were valued at US $60 billion, with many international markets growing by more than 20% per year. U.S. sales alone for organic food and beverages have grown from US$ 1 billion in 1990 to US$ 24.8 billion in 2009[9]. The New Zealand Organic Report 2010, prepared by the University of Otago, shows the total value of the NZ domestic market for organic products has increased to NZ$ 315 million, and the Australian Organic Market Report 2008 records retail sales of AU$ 600 million for organic produce in Australia.

This ever increasing demand for organic produce should offer some real market opportunities for Vanuatu agriculture products which can capitalise on the country's clean green image. The major challenge facing Vanuatu is to establish the institutions and infrastructure to ensure the integrity of organic supply chains and to extend and maintain internationally accredited certification to small organic producers and processors throughout the country. At present, organically certified products being exported from Vanuatu have included only cocoa, and vanilla[10]. But organic cocoa exports unfortunately were halted in 2011 due to supply chain issues. A small amount of organic virgin coconut oil may be exported in 2012 (Andrew McGregor, personal communication).

[8] These diseases are a major problem in PNG.s main cocoa growing areas.

[9] Sources: Organic Monitor and the World of Organic Agriculture – Statistics and Emerging Trends 2010

[10] In 2010 there was 187 tonnes of organically certified cocoa (fob value VT52 million) exported – in 2011 these exports fell to only 88 tonnes. To this should be added around 600 kg of organically certified cured vanilla bean equivalent that were exported (fob value VT2.6 million in 2011)

Whilst there is justified interest in developing organics in the Vanuatu, it should be clearly understood that organic farming is a set of principles and practices for ecologically sustainable agriculture which are much aligned with traditional farming approaches already existent in the country; whereas certified organics is an agribusiness which requires all the rigors of any modern commercial farming supply chain including: economies of scale, consistency in quantity and quality of supply, and a profit motive where the "bottom line" is the ultimate measure of success. It is these business characteristics of certified organics, as with other commercial enterprise development in Vanuatu that continues to pose the biggest challenge in the country's socio-cultural and geographical context.

To further develop niche organic markets will require a robust certification process, adoption of minimum quality or grading standards, reliability of supply, effective transport and marketing systems and a reasonable return on investment for all involved in the value chain.

Domestic market trade

The domestic market for local food produce (including limited processed goods) is growing with urban centres of Port Vila and Luganville expanding. Products with a good demand on local markets include kava, beef, fish, root and tubers, coconuts and a wide variety of fruit, vegetables and nuts, eggs and some small livestock (chicken and pigs). Tanna Coffee has also developed a substantial domestic market share.

The main Port Vila fresh produce markets (Central, Morobe and Fresh Water) provide a sales outlet for producers around Efate and the near shore islands of Emau, Moso, Lelepa, Pele, and Nguna. They also provide a market outlet for major producers of food crops from as far as Sanma in the North and Tafea in the South. Following the completion of the upgraded Efate Ring Road an increased number of roadside markets have also been establish. The ring road markets are being established with the assistance of the Shefa Provincial Government, the UNIFEM, and NZAID[11].

But the government authorities currently do not implement any regular market surveys and there are few studies which are easily accessible for use by planners. This is a serious limitation for evidence-based policy making. It is also a limitation for private sector planning and investment. With growing demands on Port Vila fresh produce markets due principally to rapid urban population growth, but also to some extent from likely increased demands from the tourist sector on the one hand, and potential negative impacts of climate change, rising fuel costs and high global food prices negatively impacting food supply on the other hand; the need for good data for effective decision making has never been greater.

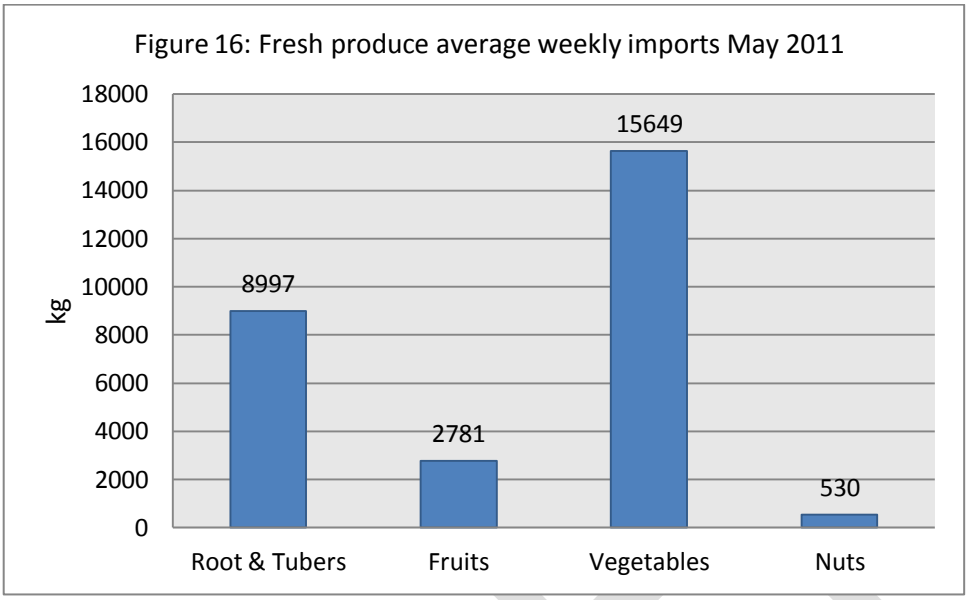
A system for a quarterly market survey which is designed to collect quantity of produce (crops, fruits, vegetables, firewood, and livestock) brought to market, quantity sold and prices has been prepared. However, this has not to date been implemented because of insufficient resources. The Vanuatu National Statistics Office (VNSO) recognise that formal market information is generally lacking and consider that this is one area that has been neglected given its importance to farmers and for policy makers.

Currently there are significant quantities of fresh produce imports. The main types of fresh produce imported are; root & tuber crops (cassava, potato), fruits (including grapefruit, lemon, mandarin, mango, oranges, pineapple, raspberry, banana, and melons), vegetables (including beans,

[11] Mael, J (2011). Vanuatu Domestic Market Study: The potential impact of increased tourist numbers on the domestic market for selected fresh vegetable produce. FAO.

head lettuce, carrots, cucumbers, tomatoes, onions, sweet corn and garlic) and a small quantity of nuts (including chestnuts, cashew, pistachio and walnut). The average weekly fresh produce imports during May 2011 are shown in Figure 13.

Figure 16: Fresh produce average weekly imports May 2011



Source: VNSO

Total average weekly imports of fresh produce reached almost 28 tonnes with vegetables holding the largest share at 15.6 tonnes, followed by almost 9 tonnes of roots and tubers, 2.8 tonnes of fruits and 0.5 tonnes of nuts. This represents a significant opportunity for domestic substitution. But competitiveness of local produce will be critically dependent on government's success in lowering the costs of doing business particularly in relation to utility costs and domestic transport costs.

Improved road and domestic shipping services along with better market houses and postharvest handling and storage facilities are essential requirements for boosting domestic trade in agriculture and fisheries products. Where national transport links are poor, food imports can continue to be more competitive than local products. When municipal marketplaces offer a good array and quality of produce they make a major contribution to small business development and food security. A policy priority therefore is to continue to improve domestic market infrastructure (including for livestock and fisheries products) as a means to stimulate local food production and improve rural incomes. Domestic marketing is largely the responsibility of women and they should be fully involved and leading initiatives in planning of market developments and market management.

Agriculture –tourism linkages

The two productive sectors agriculture and tourism seem to offer the best opportunities for inclusive economic growth in Vanuatu and therefore the promotion of linkages between tourism and agriculture should help create economic opportunities, build resilience in rural communities and enhance sustainable development in both tourism and agriculture sectors.

The most obvious area for strengthening linkage is in the supply chain for tourist consumption products – foods and beverages, crafts, cosmetics, flowers and ornamentals, essential oils, massage oils and spa products etc – thus reducing dependence on imported goods to supply tourist market needs and the leakage of foreign exchange. To service the tourist market local producers need to find profitable and competitive ways to meet tourism industry demand for volume, quality, regularity and safety requirements. The ability of local agri-food systems to meet these

requirements will be dependent both on agriculture supply factors (natural resource base, farming systems in place, agro-processing and marketing capacity) and the kind of tourism development (mass tourism, high end niche, health and wellness, eco-tourism etc). The exposure of tourists to specific local products could also help export market penetration when returning home such visitors help build a domestic demand.

A challenge for policy is both to ensure that tourism growth is sustainable and that the benefits that accrue from increased visitor numbers are maximised in country value added and that any increased wealth is equitable shared with poorer rural communities. Strengthening linkages and creating synergies between tourism and agriculture should help harness the tourist dollar to achieve the objectives of sustained and equitable growth.

To date growth and development in the agriculture and tourism industries have been pursued separately and policy and institutions have not been geared toward fostering positive linkages. How significant the challenge is to adjust this approach and what the magnitude of the potential rewards for doing so may be is currently not well defined. Furthermore, examples of positive linkages which may exist and approaches being used to promote these linkages have not been well documented.

Table 1 depicts some of the factors influencing the strength of linkage between agriculture and tourism in supply chains for local products.

Table 1 Factors influencing the strength and type of linkage between tourism and agriculture

Demand related factors	Supply related factors	Market and intermediary factors
• The kind of tourism development; type of visitor, accommodation with respect to ownership, size and class • Tourism industry maturity • The degree of promotion for local cuisine and the capacity to use local produce creatively in hospitality kitchens	• Natural resource base; physical limitations on production (crops, livestock and fish) • Entrenched production patterns (e.g. plantation crops for export) • The quantity and quality of local production • Price competiveness of locally produced agriculture products • Technology and processing limitations • Health and safety standards in practice	• Policy framework • Marketing and infrastructure constraints • Supply adjusted to demand • Spatial and temporal patterns of supply (including seasonality in demand and supply)

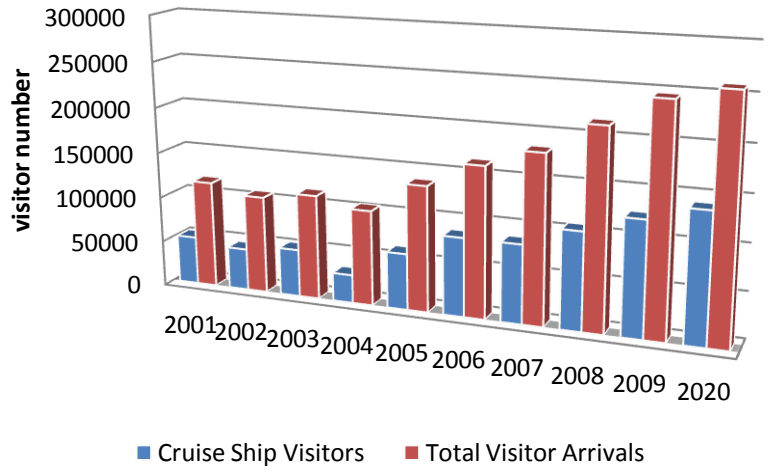
Source: adapted from brief No 3, Business Implementation of Pro-Poor Tourism Series
www.propoortourism.org.uk

Some other important areas of potential interaction between the two sectors include transportation, communications, utilities and other service provision. Transportation is a particularly important area for linkage in the Vanuatu context. Improving transportation infrastructure and services primarily to accommodate and boost tourism could bring positive benefits for agricultural trade on both domestic and international markets. The level of airline services in the region is largely dependent on passenger numbers; these same airline services provide potential freight capacity for fresh produce exports (e.g. fish, horticulture and floriculture). However, the type of plane the airline carrier uses can be critically important in regards to available cargo space. Budget carriers tend to use narrow-bodied planes with limited cargo space. Another possible positive transportation interaction can be the extension of road networks to facilitate tourism, but which also serve to better link agricultural areas to markets (e.g. the new Efate Ring Road). There is also possible potential for synergies on inter-island shipping to enhance economic viability of some routes.

But interactions between the two sectors need not necessarily be positive. Indeed Tourism and Agriculture may compete for resources – land, labour, capital, water, freight capacity, and port handling facilities. Furthermore, the type of tourism development may significantly preclude some areas of opportunity for linkages (e.g. Cruise Ship tourism). The nexus between the two sectors and the environment is a crucial area for policy concern. A boom in tourism in Vanuatu could result in a possible loss of natural resources including prime agricultural land. In contrast, 'environmentally friendly' agriculture can help sustain the Vanuatu's pristine natural environment which is ultimately, the major attraction for tourism in the region.

The tourist sector has been growing rapidly over recent years with total visitor numbers surpassing 250,000 in 2010 (Fig 13), but more than half of these visitors are cruise ship passengers who spend limited time (and money) on-shore.

Fig 17: Vanuatu Tourism Arrivals 2001-2010

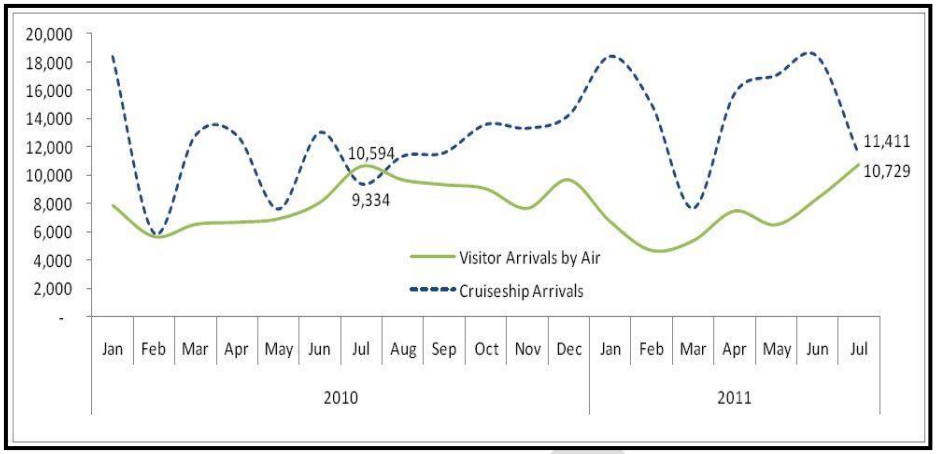


Source of data: http://www.tms.com.vu/statisitics1.html

It would be anticipated that holiday makers, business travellers and cruise ship visitors will make different demands on various product markets, but currently data on visitor spend and appropriate analysis is not readily available to clarify the situation. Nevertheless, it can be assumed that these groups will make some market demand for food and beverages and a useful exercise would be to undertake focused surveys of demand from the food service sector.

Seasonality is a distinct feature of the tourism industry – with peaks reflecting the Australia/NZ winter period (especially school holidays) and summer holiday/ Christmas period (Fig 14) and seasonality is also a feature of fresh produce supply. Therefore there is a need for detailed comparison of supply and demand patterns for specific crops taking into account the seasonal nature of the different visitor groups and how much of this demand is being met by local as opposed to imported produce.

Figure 18: Monthly International Visitor Arrivals in Vanuatu (2010-2011)



Source: VNSO www.vnso.gov.vu

Supplying the tourist food market shares similarities with the export market, but without phytosanitary requirements and less demanding food safety certification.

Some Key Government Policy Areas: Market Access and Trade:

- Develop, rehabilitate and maintain transport infrastructure and recast policy to allow greater entry and destination service in the shipping sector
- Rehabilitate and maintain road network including farm access and feeder roads
- Strengthen domestic market infrastructure (market houses and post harvest storage)
- Facilitate telecommunications to allow competitive determination of costs and service provision to rural areas
- Rationalise import tariffs and remove export taxation and levies
- Streamline trade management systems
  - Cargo processing and handling (reduce stevedoring charges), quarantine management etc
- Support regulatory compliance for agricultural exports into external markets (quarantine protocols, food safety certification, HACCP and ISO standards etc)
- Strengthen linkages and synergies between agriculture and tourism

Factors of Production and Productivity

Land and Marine Resources

Over 90% of land is under of customary land tenure for use by family members while the remaining 10% is freehold and public land. The traditional land tenure system should ensure that all family and clan members have access to land; it is consistent with the country's strong kinship bonds and with customs that encourage traditional sharing of wealth. This communal approach provides an informal social support network that is still fundamental to ni-Vanuatu welfare and wellbeing. Nevertheless, the pressures of development and the growing desire of people to participate in the country's market economy have led to radical changes in patterns of landholding in some parts of the country.

Vanuatu now has an active land market. As AusAID's (2008a:48) *Making Land Work* report notes: "*Customary land in Vanuatu can be leased for periods of up to 75 years and there is an active market in customary land leases."* Leasing of customary land has been very effective in making land available for tourism and other uses. Most of Vanuatu's main island, Efate, has been marketed under 75-year leases and the land markets in the outer islands are now becoming active as well. Leased land area represent 46,866 ha, 28% of Santo good land and 67,795 ha or 74% of Efate total land. Many of these leases are registered as "agricultural" leases but it appears that limited agricultural development is on-going. In several cases, agricultural land leases have been converted to commercial use. The Strata Titles Act in 2000 effectively opened up a market in land by enabling leased land to be further subdivided and on-leased to other buyers and has thus intensified the land sales on Efate. The problem Vanuatu faces, therefore, is not that it lacks a land market but that the market is not well regulated, so that, for example, disputes about ownership are common. There is also discontent that landowners are not benefiting from subsequent subdivisions and development.

Losing access to customary farming land damages rural food systems, as livelihoods are lost and access to alternate income opportunities are mostly lacking in the rural areas. Land availability for food gardens and smallholder cash cropping is now being recognised as a constraint, as access to good land is becoming limited. For each island, a recent study has estimated the total area, good arable land area, coconut plantations (with grasslands), pure pastures/grasslands, the area under land lease titles and the average accessible good land per household). Vanuatu is often considered as not densely populated (country average of 19 person/km^2), but if population densities are expressed in ha of good arable land per household (ha/hsld. rather than in person/km^2) it gives a better representation of the constraints faced by households. The average area of good land per household (h) varies from 530 ha on the island of Tegua (North) to only 0.5 ha/h on Futuna (South), with a national mean of 10.2 ha/h.[12] The results indicate that the establishment of coconut plantations and permanent pastures represents a main cause of increased pressure on land use for food production (Table 1).

Table 2: Area of Good Accessible Land (Ha)

Total island Area	1,223,178	share
Good Land	492,117	40%
Lease Title land	139,929	**11%**
Plantation including pastures below coconuts	74,145	**6%**
Pastures (pure stands)	15,311	**1%**
Accessible Good Land	351,208	29%

Source: Simeone and Lebot, 2010

It appears therefore that for many areas there is now limited scope for increasing the area under cultivation. In some of the smaller islands with low percentages of good arable land and high population pressures, it is clear that there is very little scope for sustainable expansion. In most islands villages located on the ocean shores are now surrounded by coconut plantations which present a relatively unfertile area for food crop gardens. This means villagers must walk increasing distances (often kilometers) to their gardens. Absence of roads giving access to new land is therefore a major physical constraint.

[12] Simeone and Lebot, Spatial Representation of Land Use and Population Density, 2010

In a recent cocoa survey[13] lack of available spare land was identified as the main reason preventing farmers from responding to the strong price signals and planting additional cocoa, alongside a lack of time for managing any additional cocoa. Forty one percent of respondents declared that a lack of spare land was their main reason for not planting more cocoa, and 36% cited it as the second most important reason.

Land disputes in forest areas or areas with potential for development also continue to hamper forest development. Disputes about ownership of land and forest resources disrupt forestry operations, cause financial losses for forestry investors and limit the establishment of development projects. In the absence of comprehensive and updated national and regional land use plans, there is no clear process for identifying conservation and timber production areas or for enforcing any form of land use planning[14].

To deal with these conflicting demands on land, there is an urgent need for a well articulated and widely accepted land use policy, emphasising balance and trade-offs among different land-use options, and enabling close collaboration and coordination among the different Government authorities responsible for land, agriculture, livestock, forestry, climate change adaptation, provincial governments, customary chiefs and land owners.

Vanuatu Land Sector Framework (LSF) 2009–2018

The government has recognised the overwhelming need for land reform and the growing concerns expressed by both landowners and investors. It held a land summit in 2006 at which the existing laws and policies were assessed. The participants at the summit agreed to build on existing laws, policies, and systems including strengthening the Lands Tribunal to make ownership more certain. An outcome of the summit was the development of the LSF. Therefore, the productive sector policy should promote the *LSF 2009–2018* to develop policies that allow landowners to benefit t while facilitating access to land for development purposes.

Marine Resources

The Exclusive Economic Zone (EEZ) covers an estimated area of 680,000 km2 and the country shares maritime borders with New Caledonia, the Solomon Islands, and Fiji. In contrast to neighbouring Pacific Island countries which are endowed with large areas of fringing reefs, barrier reefs and lagoons, Vanuatu's inshore or shallow water areas are quite small. Inner reef areas are limited to narrow fringing reefs with the combined coral reef area covering an approximated 408 km^2. Other biologically important reef associated habitats, which include mangroves, estuaries and lagoons amount to 25 km^2 total area.[15]

Fisheries in Vanuatu can be divided into two main categories, offshore (≥ 12 nm) and inshore fisheries (< 9 nm) which are fished at the subsistence, artisanal and commercial levels. The commercial fishery mainly targets offshore tuna resources. In Vanuatu, tuna resources generate an estimated VT 100-200 million in access license fees annually. Since Vanuatu currently has limited capacity to exploit its tuna resources at a commercial level, the tuna industry is dominated by

[13] Cocoa Knowledge, Practices and Attitudes Survey, Vanuatu 2011: During April and May 2011, SPC worked with the Vanuatu National Statistics Office and University of Adelaide to develop the Cocoa Livelihoods Household Survey. This questionnaire is designed to identify influences on adoption of new cocoa management technologies, and the impact of efforts to improve marketing opportunities for ni-Vanuatu cocoa producers. 480 households on Malekula answered this survey.

[14] National Forest Policy

[15] W. and Aston, J. 2000. Status of coral reef fish resources of Vanuatu. The Regional Symposium on coral reef in the Pacific: Status and monitoring; Resource and Management; Noumea, New Caledonia. Cited by Jacob J Ranbani & Ragnar Arnason, 2006.

foreign vessels consisting mainly of long-liner fleets and a few purse-seine and pole and line boats. The Tuna Fishing Vanuatu Ltd. is the only tuna processor established in Vanuatu. The Fisheries Department is the competent authority for management, development and conservation of the Vanuatu fisheries. It grants fishing licences and implements Fisheries law, regulations and conservation management measures. The Tuna Management Plan lays down limitation of the fishing licences to 100 per year, but numbers issued often exceed this. There are also fishing licences for local vessels fishing within the EEZ and landing all their catch in Vanuatu ports, but the numbers issued are very low; only 10 in 2011[16]. Vanuatu currently has limited capacity to monitor its fishing waters and allowable catch. Greater financial benefits and closer supervision could be accomplished if more fish was landed/ transshipped in Vanuatu ports. A strategy to try and increase the amount of tuna landed and processed on shore in Vanuatu could be to require a stronger link between attribution of a fishing licence and the positive impact on the national economy.

Capital

Credit finance for the Agriculture sector remains problematic in Vanuatu. While credit has generally been available for the commercial sector and larger businesses, rural enterprises and small businesses continue to find it difficult to obtain loans. The amounts at issue are usually small and thus impose high administrative costs, and potential borrowers are unable to offer security demanded by commercial lenders. Access to capital through the Agricultural Bank, Commercial Banks and NGO micro-finance schemes is, therefore, important for the smallholder sector, as well as for small-medium sized trading, marketing and processing enterprises.

The Agricultural Development Bank has a mandate to provide loans for productive sector enterprises. The number and volume of loans grew rapidly in 2008/2009 as it started up and awareness spread though growth rates are slowing down in 2010 and are likely to decline further with the recent withdrawal of government subsidy. In 2010, there were a total of VT 395 million loan approvals. With about 60% of the outstanding loans being extended for agriculture and associated activities including cattle farms, fishing, forestry and marketing. However, mixed farming agricultural activities represented only 6% of total loans. Loans in Shefa province and Samna province dominate the portfolio despite the bank's efforts to market its services to the outer islands. It has also developed commendable lending policies in micro-finance to encourage women and has started a youth targeted scheme.

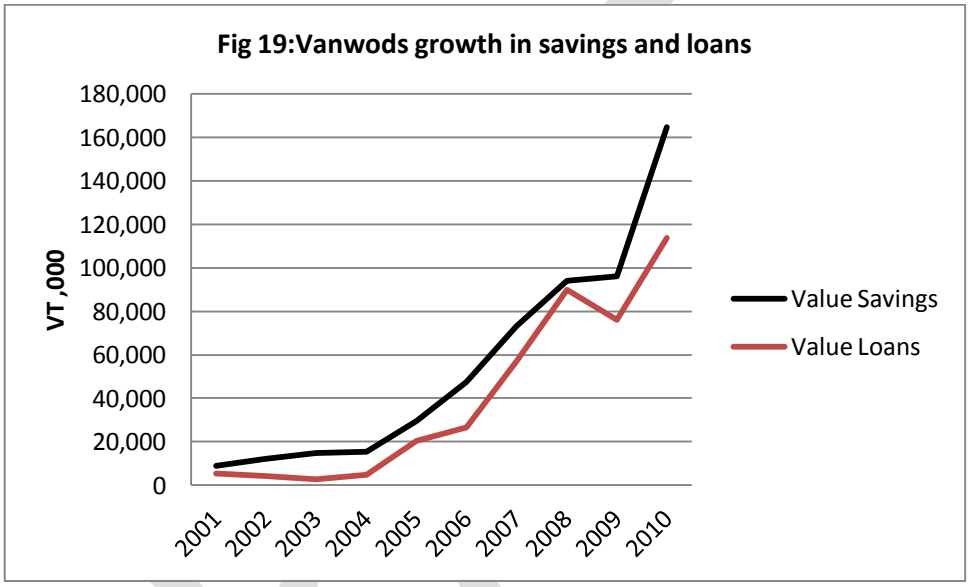
The bank's long term sustainability however is of concern. It has several problems to overcome: government withdrawal of its annual subsidy of VT 100 million, lack of any government guarantee, inappropriate collateral requirements, limited outreach capacity, the difficulty of reaching sufficient loan volume to be viable (due to insufficient demand); and in micro-finance, the difficulty faced by many Development Banks of providing a financially sustainable service to many small customers as well as potential high default rate in the absence of group lending approach.

In micro-finance **a** successful scheme is being operated by a local NGO Vanwods (Vanuatu Women in Development Scheme) based on the Grameen Bank model in Bangladesh. Vanwods provides a much needed savings service and small short term loans on a group level basis to smallholders, especially women. Growth has been impressive since 2007, when services were offered beyond the Port Vila area for the first time. Vanwod's operations are now established in North Efate, Santo, Malekula and Tanna. Several new products have also been launched including: Seasonal Employee Finance to assist RSE workers going to New Zealand and Australia; Solar Lights, which provide lamps powered by solar energy to members that they could repay through loans; and

[16] European Commission 2012 Evaluation Mission to Vanuatu

an innovative Sandalwood programme. The latter scheme involves Vanwods providing sandalwood seedlings to members which they can then use as collateral for bigger business loans in the future.

Vanwods is now self financing, as its savings well exceed its loans (Fig 19) and its interest rate differential is considerable (i.e. 20% interest rate on loans, 4% interest rate on savings accounts), but in line with acceptable practice for sustainable micro-finance operations. The institution has grown rapidly to meet strong demand and now operates in most of the larger islands. It employs 36 staff with its own in-house training unit. Currently there are about 5,600 savers and 3,500 borrowers with VT 165 million in savings and VT million 114 loans outstanding (personal communication, Acting Manager, Vanwods). Repayments rates are high due to the focus on women and group borrowing principles. The main constraint to continued expansion is the shortage of suitable trained staff to administer the schemes.



Source: Vanwods

The commercial banks such as Westpac, ANZ bank and the National Bank are also entering the rural financial services sector. The Vanuatu National Bank has launched a major project to improve access to financial services for rural households and businesses involving electronic banking services targeting remote rural locations. This would boost the 21 branch network throughout the islands already providing small loans for agricultural purposes and small village-based businesses, many of which are owned and managed by women.

The government is planning to review banking legislation and the regulation of small-scale lenders such as the VANWODS. Whilst customer protection is an important focus of such an exercise care must be taken not to undermine what clearly is a very successful and valuable service being provided to small savers and borrowers. There is a need also to explore innovative grant/loan financing schemes targeting small commercial farmers and merchant financing arrangements. Government should continue to foster the development of smoothly functioning and sustainable systems of finance which provide for: credit and savings facilities to smallholders; credit for working capital for traders and exporters; and finance for capital investments for agro-processors and agri-business.

Labour

Traditional farming systems in Vanuatu are labour intensive and few labour saving technologies are used. Mechanisation is not widespread and is mostly restricted to medium-to-larger scale

commercial agriculture. The smallholder food and cash crop production which predominates is done almost exclusively with family labour. The amount of labour available within a household is a key limitation for food production and for developing other cash enterprises. Migration from rural areas both to urban centers and overseas has become an increasing trend in recent years. In some provinces local food and cash crop production is now being constrained by lack of able bodied labour. The 2011 Cocoa Knowledge, Practices and Attitudes Survey noted that in addition to land pressure the major barrier to increasing cocoa production is competition for time from other production activities; yam gardens and copra, were the two main economic activities cited as competing for time. Labour availability and returns to effort with high labour input crops and lack of desire to produce/sell more produce when basic needs are met, have also been mentioned by stakeholders as important constraints at the smallholder level.

At the larger commercial farm level the present high wage structure for unskilled labor in formal employment[17] means that Vanuatu is no longer competitive in plantation agriculture and this will pose a constraint on the viability of larger scale plantation agriculture and forestry that relies on hired labor. Also the generous labour provisions provided under the 2008 Employment Act substantially increase the costs for businesses including for processing operations such as the abattoirs.

Increasing numbers (currently in excess of 2000 annually[18]) of ni-Vanuatu are participating in the Recogonised Seasonal Employer (RSE) schemes in New Zealand and more recently Australia. Whilst these schemes have been successful in bringing substantial economic benefits to families and communities they may, with workers being away for between 4 to 8 months a year, result in loss of labour for local food and cash crop production and for local plantation labour markets. But finding ways to capitalise on the acquired farming skills of returned RSE workers by sharing and mentoring within communities could bring additional benefits to local agricultural production.

Whilst there is an increasing number of unemployed youth in urban areas, attracting this labor pool back to farming in the rural areas will not be easy. Migration from rural areas is motivated by many factors; including improving income earning opportunities, to find better education, health, water and other services, and in some cases simply for a change of lifestyle. To encourage more stable and productive farming communities will therefore require a broad rural development approach encompassing more than just an agriculture development focus.

Knowledge, Information and Innovation

Extension

Extension services are provided by a mix of government and NGO/private sector services.

MAQFF consists of four departments: (i) Department of Agriculture and Rural Development (DARD), (ii) Department of Fisheries (DOF), (iii) Department of Forestry (DOF), and (iv) Department Livestock and Quarantine (DOLQ), each with its own extension service. The duties of the four departments are wide and each department has been heavily dependent on donor project funds resulting in variable services, sometimes more in line with project priorities rather than those of MAQFF. In the past, the extension services concentrated on the production of cash crops (cocoa, coffee, copra, and coffee) and cattle. In contrast the traditional food crops sector with subsistence

[17] In 2008 the minimum legal wage was set at VT26, 000 per month; an increase of 30%.
[18] Vanuatu Annual Development Report 2010, DSPPAC

food gardens and traditional pigs and chickens was largely neglected[19]. The extension services were well supported by several large donor-funded agricultural development programmes and officers were well equipped and housed with motorcycles, offices and operational funds. The services at present however are severely constrained by lack of resources, budget and staff vacancies particularly in the Forestry Department (Table 2).

Table 3: MAQFF Staffing Status 2011-2012

Programme Activity	Permanent	Contract	Vacant	Total
Ministry		18		18
Corporate	4		0	4
DARD	57		3	60
QLD	60		0	60
Fisheries	51		6	57
Forestry	42		11	53
Total	**214**		**20**	**252**
Capacity – Qualified Staff				
Ministry (cabinet)	5		MAQFF aggregate % qualified staff	
Corporate	3			
DARD	24			
QLD	46			
Fisheries	22			
Forestry	35			
Total	**135**		**58%**	

Source: MAQFF

A thorough review of extension services in Vanuatu was carried out in 2008[20] funded by NZAid. The review critically analysed the performance, strengths, constraints of the extension services provided by the government services, and use of associated research and training facilities, and services provided by NGOs and the private sector, from which the main findings are outlined below.

MAQFF's extension services have not recovered from the reduction in staffing and resources following the civil service strike and CRP. They do not have sufficient operational funds (salaries take up 70 percent of budget) for transport, to implement work programmes, supply extension material and provide management and supervision to operate as an effective service. Funding is constrained by the overall government budget.

Private extension services provide good services for selected commodities, but do not provide a nationwide coverage or address the broader needs of rural producers.

Specific issues affecting the government extension services were identified as:

- Governance and management problems
- Staff level and capacity limitations
- Compartmentalisation; MAQFF tends to work in isolation from other government and non-government service providers
- Funding and disbursement problems
- Lack of extension materials

[19] Taken from report as in footnote 2
[20] Review of Vanuatu's Agriculture Extension Services Greer Consulting Services June 2008

- Linkages to research - VARTC does not have capacity to produce and distribute applied research extension results and materials to producers

The report concluded that "*the needs of the rural producers are not being satisfied to an acceptable extent, and to meet the Governments development goals. The public extension services are constrained by funding, management and motivation and do not provide universal coverage. The more isolated areas are very poorly served by extension services*".

The review presented recommendations for the restructuring and rejuvenation of the extension services appropriate to Vanuatu. The main general recommendation was to set up an extension system, which encompasses service provision from all providers - government, NGO and private sector, as part of an overall system. A capacity building programme was suggested for the government extension services including (i) rationalise its staff and restructure through voluntary redundancy; (ii) provide training and logistical support for extension workers, including rationalise provincial offices and equipment; (iii) collaborate with NGOs and private sector service providers; and (iv) develop media for disseminating information. It was recognised that there would be considerable costs associated with this programme, which will require funding from both DPs and government.

As yet, no action has been taken to implement the recommendations of the report. Policy response is to restructure and rejuvenate the government services in conjunction with other private and NGO service providers, as outlined in this report.

In addition support should be added to developing innovative methods of extension suited to the conditions in Vanuatu, namely the many separate islands, a diverse population, high transport and logistical costs and a predominantly mixed farming system, such as a focus on farmer leaders and use of media, as practiced by FSA, to transfer information to farmers in distant locations.

NGOs

NGOs provide limited but effective extension services to farmers as well as a service provider to government and others. As a result of past development projects in the productive sector concentrating on promoting the production of commodities for export and the local market, marketing companies in the private sector also provide some extension to farmers (e.g. VOCCA, Venui Vanilla, Tanna Coffee and those formerly provided by the Chamber of Commerce).

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Syndicat Agricole Et Pastoral De Vanuatu (SAPV) or the National Farmers Association of Vanuatu, provides training, research, sales promotion and the sale of farm inputs (fencing materials, tools, livestock feeds, herbicides, poultry-raising supplies) and imports day-old chicks each year and distributes them to small-scale poultry producers on many islands. It provides facilities and administrative assistance to the FSA and is financed by an annual subscription and DPs.

FSA is a relatively small church based NGO but providing impressive examples of on-farm adaptive research and extension throughout the country and utilises a number of oversees volunteers in its work. It also acts as a service provider to government and other organisations. Funds are derived from various DPs. Its core on-going activities are extension to poultry and vegetable farmers, plus to vanilla farmers (through Venui Vanilla in the Spices Network), crop research (sustainable diversity farming systems, alley cropping and soil erosion work using Vetiver grass). It also works with the Rural Training Centres and Women's groups and has produced a number of useful extension brochures on chicken and vanilla production. It avoids duplicating other efforts in coconut, cocoa and coffee by cooperatives or processors.

The main local and international NGOs include FSA, Vanwods (micro-finance), Save the Children, World Vision, Live & Learn, Oxfam and the Red Cross. All undertake limited extension and training in agricultural production and income generation activities at rural village level. They are represented by the Vanuatu Association of NGOs (VANGO) as the umbrella organisation for NGOs.

The absorptive capacity of the NGO sector to expand with significant funding increases is limited due to lack of suitable trained and experienced staff. Policy response is to support the sub-sector with capacity building inputs in terms of training and provision of facilities and equipment to NGOs before any major expansion of their services could be envisaged.

Research

Research activities are currently minimal and generally inadequate to meet the needs of the productive sector. The Vanuatu Agricultural Research and Training Center (VARTC) is the main institution mandated to undertake agricultural research. It is supposed to undertake applied research and training, but it has little ability to influence agricultural development because it is under resourced and not integrated with the extension or training services. Currently it undertakes various small donor funded projects including for ACIAR (on cocoa), NARI (from PNG on capacity building), SPC (gene bank for climate change), root crop research (EU) and cattle breeding/AI services (in conjunction with FSA) and livestock development with a NZ volunteer. These activities are generally *ad hoc* project driven and are not integrated in any national research agenda. The large research farm on Santo was inherited from a former CIRAD project and is largely used to generate income (copra and cattle) because of an inadequate budget for the station's maintenance.

Policy response is to review priority research needs and develop a national research agenda with focus on adaptive research and to strengthen linkage with extension and dissemination of research results. VARTC role and capacity to deliver the agenda would be part of this review.

Training

About 55% of the working population is engaged in subsistence or unpaid family work and over 65% of the total working population are working in agriculture, forestry and fisheries in unskilled or basic skill roles. Only approximately 10% of national jobs available are in the high skills categories (requiring degree level qualifications)[21].

Given that a large proportion of school leavers will not be able to obtain formal jobs, increased emphasis should be placed on basic education, life skills, technical and vocational training, and skills for rural development. This will help youth become more productive in the village economy (agriculture, fishing and forestry). The policy focus will therefore be on demand driven, competency based training and skills programmes – notably apprenticeships and skills accreditation schemes.

There are a number of institutions currently involved in training (FSA, TVET, Rural Training Centres, NGOs, the VAC and formerly, the Agricultural Training School at Tagabe). But they are generally underfunded and inadequate to meet the needs of the productive sector. A significant challenge is to attract young people into the sector with the most innovative and intelligent youth tending to ignore agriculture for urban employment opportunities.

The Vanuatu Agricultural College, (VAC) based in Santo, was funded by the People's Republic of China and commenced limited operations in 2007 and has a mandate to be the main agricultural training institute. To-date it has only run short courses for farmers delivered by MAQFF and has not yet undertaken teaching diploma courses. It is under resourced and not linked to other training activities.

[21] Anon, Stage 1 Report on Issues and Policy Options for Improving Skills Development in Vanuatu

Training options should be evaluated and the purpose and scope of the VAC needs review in this context.

Market Intelligence and Information

An essential precondition for any successful productive enterprise is that there should be an identified and sustained market for the product. Market research and information is a useful tool in making such an assessment, but it is not currently supported by government to any extent. In general, the relatively small farmers and agribusinesses in Vanuatu do not have the resources and capacity for undertaking market intelligence studies to identify market potential and specific market opportunities, or for rigorous promotion of their products. Basic information on end markets has the character of a common good that is shared among chain operators and therefore there is room for government/ external development agencies to conduct, facilitate or commission both domestic and overseas market research as an essential contribution to chain upgrading.

The policy response is to support the commissioning of both domestic and overseas market research and collecting regular (weekly) domestic market information on quantities of produce marketed and prices of the products, supplemented by a monthly Market Survey report. This could then be followed by dissemination of market and technical information through broadcast media, newspapers and the internet. Support to market research into domestic and international markets would greatly assist prospective entrepreneurs in assessing market demand, quality and certification needs and facilitate a cost/benefit analysis for a particular enterprise.

Some Key Government Policy Areas: Production and Productivity

- Establish and maintain farm access feeder roads to open new land for food gardens.
- Increase the amount of Tuna landed and processed on shore in Vanuatu enforced through a stronger link between attribution of a fishing licence and the positive impact on the national economy
- Promote the further provision of appropriate group based micro-credit for smallholders to acquire the necessary inputs needed to boost production and productivity.
- Capitalise on the enhanced farming skills of returned RSE workers.
- Support the restructuring and rejuvenation of the extension services as laid out in the 2008 NZAid review report.
- Support the development of innovative extension methods for farmers in distant locations.
- Support increased tailored adaptive research, commencing with a review of future research priorities, particularly in traditional agro-forestry food gardens and the role of VARTC.
- Support increased training from school to college with an emphasis on practical skill and youth training – need for review of training needs and the role of VAC.
- Support capacity building inputs in terms of training and provision of facilities and equipment to NGOs in the productive sector.
- Support the collection of regular domestic market data and dissemination of this information.
- Support the undertaking of market research into domestic and export markets

Agribusiness, Processing and Value Adding

The agricultural processing and value adding sector comprises a heterogeneous group of about 30 private or cooperative agribusinesses[22] that vary in size, efficiency and contributions to the economy and to the rural population. They range in size from those processing and exporting bulk products such as copra, coconut oil and cocoa to those handling small quantities of high value niche products. There are three vertically integrated operations from producer to retailer: in beef, coffee and vanilla. Some processing utilise relatively advanced technology such as the sandalwood distilling and processing plant, the virgin coconut plant and the abattoirs, whilst some are lower technology based such as with kava. They have achieved a remarkable though erratic increase in total revenues in response to both domestic and export demand, increased world prices and the development of new opportunities in niche products that has helped the productive sector maintain a positive GDP growth.

Focus on Linkage to Smallholders

One of the strengths of this sector is that most of the agribusinesses are strongly linked to smallholder producers (with the exception of the beef industry) growing Vanuatu's main crops in mixed diversified farming systems, which has added value to community's natural resources and generated incomes in rural areas. In addition, many processors display good leadership, drive and enthusiasm with a high knowledge of technical production, processing and marketing methods, both domestically and overseas, which is passed on to growers through mainly informal producer training; however some of the agribusinesses have a high level of key person dependency.

In the beef sub-sector smallholder cattle supplies to the abattoirs have fallen due to lack of linkage to smallholder beef farmers and limited smallholder supplies due to the high transportation costs from other islands, mustering (loading) deficiencies, as well as lack of support to increase production (through extension in grassland management, improving access to credit, provision of breeding stock/AI services).

The policy response is that policies should be aimed at developing further processing of primary products for both domestic and export markets based on traditional crops and livestock grown by smallholders throughout the rural areas. This would ensure strong backward linkages to the rural communities who have the experience and the resources to produce them. It should involve significantly less risk than ventures into new exotic crops and would protect the subsistence base and strengthen food security.

There is however a number of constraints creating inefficiencies in the sector, or are inhibiting opportunities to add value, for which policy responses are needed to further develop the processing and export sector.

Supply/Capacity Utilisation

Insufficient supply of raw agricultural products leading to low capacity utilisation of equipment, or insufficient throughput for a particular market, is a common issue across the sector. A sample of companies interviewed gave the following plant percentage utilisation estimates with an average of only 46% reflecting the supply problems.

[22] 4 copra exporters, 3 main coconut oil processors and 4 cocoa exporters, about 10 producers of high value niche product including virgin coconut oil, vanilla, nagae nuts, noni juice, tamanu oil, spices, 2 beef abattoirs, 2 sandalwood processors 1 coffee processor and about 6 main kava exporters. This list is not exhaustive as it relates to the main processors/exporters and some are multi-purpose.

Table 4: Capacity Utilisation in Sample of Processors and Exporters

Company/Product	% Utilisation
Coconut Oil Production, Santo	52
Kava Store	29
Lapeta	53
Santo Meat Packers	63
Tanna Coffee	20
VAL Abattoir	30
Venui Vanilla	70
Average	**46**

Source Business Cost Competitiveness 2012 and team investigations

The reasons for insufficient supply to meet demand vary but include:

- the high cost of transportation, especially from outer islands, which is a major constraint throughout the productive sector;
- the high time and cost required to procure supplies of raw materials from scattered small farmers, especially where seasonal fluctuations occur, e.g with root crops for processing
- problems sourcing raw materials from small holders in remote locations in terms of getting information to farmers on supply and quality requirements;
- Sufficient incentive for producers to harvest available crops at certain times e.g. with coconuts and coffee, due to a combination of low relative returns to labour, low prices, or low basic needs requirements;
- low producer prices paid, as in the case of coconuts, due to export taxes imposed by government;
- Insufficient rural labour due to rural-urban migration;
- production shortfalls e.g. due to the ageing coconut trees, the generally low productivity of cocoa, or following extreme weather events;
- lack of on-farm, village level or local cooperative level processing equipment and associated skills e.g. solar driers in the fields to reduce the moisture content of nagae nuts, first steps in vanilla processing, driers and fermenters for cocoa production and improved/expanded processing facilities for value adding coconuts.

A growing trend is the establishment of small single purpose farms e.g. with coffee in Tanna, vanilla in the outer islands, nagae nuts and root crops on Efate, as “nucleus” farms which are integrated with small holder production and help secure overall supplies of produce to the processor/exporter. These generally have the benefit of higher levels of technical, management and marketing expertise.

Policy responses are to support increased production of raw materials to increase supplies to processing facilities in order to improve plant utilisation and viability. This includes addressing the issue of the negative impact of export levies, awareness building to improve motivation to harvest available crops and strengthening of extension, research and training to smallholder producers. Focus should be on supporting good performing market chain enterprises at or near the upper end of the value chain that can “pull” products through the value chain. Another response is the promotion, facilitation and capacity building of village-level value adding of coconut and cocoa products.

Government Levies and Tariffs

Export levies, import tariffs and duty free concessions on imported inputs impact on producers, processors and exporters operations and margins. Levies are currently applied on agricultural exports made up of a 2% provincial government tax and a variable levy paid to VCMB[23] of up to 6% The total tax (up to 8% of FOB price) acts as a disincentive to rural producers as it drives down the prices paid by the exporter who has to pay these taxes. This in turn leads to a continuation of inefficiencies in processing due to low throughput. Currently, the VCMB continues to collect the levy, but provides no tangible services to the industry. In addition, the National Industry Policy proposes to institute a value-added promotion levy on selected exports (to be used to promote value adding) but which could again have a negative impact on producer prices.

Tariff protection is being eroded with the various trade agreements and loss of LDC status in 2014. Two examples are: (i) the 35% tariff on imported coffee that currently protects the coffee industry from cheap coffee imports from PNG, and (ii) the 33% tariff relief in Japan for beef exported from the Santo abattoir, the removal of which when Vanuatu loses its LDC status may have serious consequences for marketing Vanuatu beef in Japan[24]. In trade negotiations whist it is important to identify the import-sensitive and special products to exempt from both tariff cuts and subsidy reductions because of development, food security, or livelihood considerations. It will be equally important to focus investment to increase the efficiency in local production and manufacturing to make them more competitive in the global marketplace.

Organic, Fair Trade and Vanuatu Origin Certification

The uptake of these market opportunities has been varied. Some products (cocoa, virgin coconut oil and processed nagae nuts) have shown that certification can offer significant export price premiums, while for others (spices and beef) these premiums have been minimal or nonexistent. For spices, organic certification has proven a useful tool in achieving market access and market recognition[25.] The main constraint to wider development of these opportunities is the significant costs involved in securing and maintaining certification in relation to possible lower price differential given to farmers. Support needs to be given to the adoption and acceptance of a more appropriate and cost effective standards that have been developed by the Secretariat of Pacific Community (SPC) under its Pacific Organic and Ethical Community (POETCom) initiative. In addition, support through the formulation and effective implementation of Intellectual Property Rights (IPR) legislation and processes (e.g. patenting) would create the enabling environment for business to innovate and develop niche products.

Access to Capital

This is a common constraint across the agribusiness sector. There is potential to establish new enterprises, expand facilities and improve processing methodologies and equipment that could offer greater efficiency, consistency of quality, as well as reductions in cost of production, but for which significant investment is required. In the coconut sub-sector there are processing inefficiencies due to the lack of fresh capital investment in upgrading outdated equipment to improve processing efficiency. This requires significant investment for which appropriate financial support mechanisms are required.

Consideration should be given to the establishment of a revolving credit fund to provide working capital to the industry operated through a commercial bank, to promoting awareness amongst farmers of existing microfinance schemes such as the Vanwods microfinance scheme and to

[23] VCMB levy US$8 per tonne of copra, 5% of FOB price for kava and 6% FOB price for cocoa

[24] If this is the case, either Vanuatu may need to negotiate a trade agreement with Japan or seek alternative markets to sustain the beef industry on Santo.

[25] McGregor and Bianchessi, personal communication

establishing a "matching grant fund" to assist the development of the valued added industry through the support of approved investment projects.

The Use of Coconut Oil for Energy Production

Coconut oil is not generally competitive as a bio-fuel on a straight per liter price comparison. However, if the wider socio-economic (and environmental) value is taken into consideration, namely: the use of a renewable 'green' fuel, the employment that coconut production would create (and associated spending power in local markets), the foreign exchange saved, the reduced trade balance vulnerability through the security of domestic energy supply against surges in world oil prices, and the higher degree of price stability to farmers than the traditional fluctuating international copra and oil prices, the benefit-cost balance swings towards coconut oil. In addition when high freight and fuel costs of diesel fuel to remote locations is taken into account, use of coconut oil for bio-fuel becomes even more attractive. There are already several small plants using coconut oil to generate energy (e.g. UNELCOO and a large beef estate on Epi Island for its own power consumption and for power at the Vila Abattoir). However a constraining factor at present is the impact of the excise duty exemption accorded on imported diesel for power generation. The policy response is that government should address the future of coconut oil as a bio-fuel taking into account the wider socio-economic and environmental benefits and provide supportive policies accordingly.

Investment in New Value Adding and Market Opportunities

Some examples of new market opportunities that would add value and benefit smallholder rural producers are given below.

There are plans to establish further value adding of cocoa with the local production and export of cocoa liquor[26]. While this is technically feasible given the availability of appropriate equipment, implementation of such processing will require a high level of technical expertise and management as well as the existence of a viable market. Thus an area of concern is the acceptability and quality of the liquor product to the buyer/importer, which is yet to be determined. Careful control of the roasting and grinding to liquor are crucial stages in relation to final product quality as are the preliminary processing stage in dried bean production.

In root crops, whilst exports of primary produce have ceased as Vanuatu faced export market access difficulties, mainly from Australia's strict taro import protocols (as well as problems with low volumes, high grower prices and high transportation costs), there is scope for further development of processed root crops including taro chips, manioc flour, ready-to-cook roots as a convenience food, pasta and noodles for the domestic market that both adds value and replaces equivalent imported products. Currently, there is one notable small scale entrepreneur[27] already producing well packaged taro and banana chips, manioc flour and various cookies for the domestic market, which adds value to root crops grown by smallholder farmers. The main constraint is ensuring regular supplies of the primary product for which extension support to improve production and the supply chain coordination from farmers would be the main policy response.

[26] This option is being actively pursued by an external company (African Pacific Pty Ltd (AP) with the stated objective to establish a modern plant in Santo to achieve by 2015 the processing of some 1000mt of cocoa, with half its supplies from Vanuatu and half from Solomon Islands, to be exported as Vanuatu Premium Export Cocoa.

[27] Lapita Café with a processing plant and shop in Port Vila and a shop in Santo (with possible expansion to establish a second plant in Santo that is closer to the raw materials); the domestic market is the main focus (urban consumers, schools, catering, supermarkets, airlines and tourist outlets) but exports are gradually being developed, especially as the enterprise has established a reputation in the Pacific region.

Processed/value added niche products include nagae nuts, noni juice and tamanu oil which are grown mainly by smallholders have been developed in relatively small quantities (3-400kg) mainly for domestic retail outlets, but export demand is said to be strong for some products. To significantly raise production will require investment in improved/modern processing equipment and facilities, as well as measures to increase supplies of raw materials, facilitate quality certification and reduce the cost of organic certification.

The policy response would be to facilitate technical support for market and cost benefit analysis prior to advocating development of new value added products.

Some Key Government Policy Areas: Processing and Value Adding

- Focus on traditional smallholder based products for both domestic and export markets
- Support to increasing raw material supplies to increase plant utilisation and market throughput
- Rationalise export levies and taxes
- Facilitate access to capital for investment in upgrading or new equipment
- Support to socio-economic analysis of bio-fuel development
- Support to reduce transportation costs
- Support to village level processing and value adding
- Facilitate technical and economic appraisal of new market opportunities
- Support to organic, fair trade and Vanuatu origin certification

Quality (and Safety) Assurance and Certification of Processed and Value Added Products

Quality assurance and certification in terms of food safety regulatory requirements of importing countries represents part of the adding value process for exported processed foods. It is becoming essential for accessing markets high value markets. Some industries (e.g. beef) have managed to develop robust quality assurance systems to meet export market requirements; other products such as kava have not been so effective, whilst in some commodities progress has been minimal. At present monitoring of quality is problematic due to the absence of any operational food testing laboratory in Vanuatu and testing in overseas laboratories incurs an added cost to exporters. Meeting these standards is therefore placing an increasing financial burden on the private sector and is undermining competitiveness. Finding ways to ameliorate these costs, defining appropriate SPS and Food Safety architecture and clarifying roles and responsibilities are policy priorities.

If the productive sector development is to be driven by high value exports, the development, promotion, monitoring and certification of a range of agricultural produce standards will be required. Support will be needed to improve the capacity of producers to access niche market opportunities through improved quality control, product traceability and management skills. While the development of specific commodity standards should be industry-driven based on market demands, there is nevertheless an important role for government agencies to play in strengthening the legal and regulatory framework, providing support for upgrading technical capacity in industry, and promotion of standards. Compliance with CODEX and IPPC, SPS (and TBT) standards will become increasingly important with WTO accession.

The Food Technology Development Centre laboratory at Tagabe is unable to service present needs[28]. While it has three professional staff trained in various aspects of food technology, there is a total lack of analytical capability due to (i) lack of operating budget, (ii) lack of key analytical equipment, (iii) existing equipment is unserviceable, and (iv) an inadequate laboratory design and scope. The alternative of testing in overseas laboratories incurs an added cost to exporters and is also very inefficient.

Policy response is to support the establishment of an effective food safety laboratory to monitor quality of food and export products. However, detailed needs and feasibility analysis should be conducted before considering investment in a multi-million Vatu food safety laboratory. This would look into what is actually needed in terms of product analysis and the estimated throughput, what is available already in terms of facilities and human resources consider cost recovery / sustainability issues, provide options, and address financing issues, etc. This will be important as there may be only a relatively small number of processed foods and export products to be tested. Other Accredited Laboratories in the Pacific tend to have a larger throughput in connection with fishing and associated access to export fish markets.

The Food Technology Laboratory is presently under the Ministry of Trade but its theoretical function is multi-sectoral. The study may consider other sector needs and link them into a possible National Food Safety Laboratory covering all sectors' (e.g. with Trade, Agriculture (livestock and fisheries) and Health) to provide a more sustainable institution and establish it as a separate Statutory Authority.

There are various systems available for quality assurance and adoption of Hazard Analysis Critical Control Point (HACCP) is one that is readily achievable and should be considered for any exported (or domestic) processed products. Also important are International Organisation for Standards (ISO) standards, especially ISO 9001[29] (quality management systems) and ISO 22000 (Food safety management – Requirements for any organisation in the food chain). Recognition of the importance of food safety and supporting the private sector to obtain HACCP and ISO certification are policy responses needed.

The legal and regulatory environment for food is fragmented: i.e. meat, fish and food are handled under separate legislation and enforcement structures, which have evolved driven by the needs and requirements of each industry. The current food legislative environment in Vanuatu includes: the Food Control Act no. 21 of 1993, which is the principal food safety legislation in country; the Food Control regulation no. 37 of 2007, which provides specific standards of mostly hygiene, food handler requirements and some labelling requirements; and, the Food Penalty Notices No. 54 of 2010, which provides the authority under which fines may be issued for non conformance to the Act/Regulations. Implementation of the regulations is difficult given the limited number of inspectors to enforce, the dispersed nature of the country, and the lack equipment and budget.

[28] Report on 'The Current Status of The Analytical and Food Processing Laboratory'. Ruth Amos, February 2012

[29] The vast majority of ISO standards are highly specific to a particular product, material, or process. However, ISO 9001 (quality) and ISO 14001 (environment) are "generic management system standards". "Generic" means that the same standard can be applied to any organisation, large or small, whatever its product or service, in any sector of activity, and whether it is a business enterprise, a public administration, or a government department. ISO 9001 contains a generic set of requirements for implementing a quality management system and ISO 14001 for an environmental management system. Generic standards can be applied to any organisation.

There is a need to review the legal and regulatory framework for food, harmonise the legislation and create a clear policy framework and identify the principal enforcement agency. Strengthening the capacity to monitor the Food Control Act and Food Regulations will then be required (e.g. provide appropriate human resources and equipment to monitor implementation of regulations).

Some Key Government Policy Areas: Product Quality and Safety

- Support to Quality Assurance and Certification and improve the capacity of producers to access niche market opportunities through improved quality control, product traceability and management skills.
- Define an appropriate SPS/Food Safety architecture which clarifies roles and responsibilities
- Review legal and regulatory framework for food. Legislation and responsibilities should be harmonised and adequate resources provided to inspection agencies
- Recognise the importance of food safety and support the private sector to obtain HACCP and ISO certification.
- Undertake a needs and feasibility study for a possible central accredited food testing laboratory to allow monitoring of the quality of food and export products

Food Security and Livelihoods

It is now widely accepted that four key dimensions of food security are: (I) *availability* - sufficient quantities of appropriate quality, through domestic production or imports; (ii) *access*- of individuals to adequate resources for acquiring appropriate foods for a nutritious diet;(iii) *utilsation* - through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being; and (iv) *stability* - *t*he foregoing not lost as a consequence of sudden shocks or cyclical events.

The key areas of focus in the productive sector policy to strengthen food security would thus be on:

- availability
  - production and productivity of food crops, livestock and fisheries(including aquaculture)
  - marketing of local products
  - export earnings to fund food imports as required
- access
  - capacity for household food production for subsistence
  - household cash earning from agriculture to purchase food as required
- utilisation
  - production of nutritious varieties foods (crops, livestock and fish)
  - freshness and quality/safety of food products
- stability
  - national biosecurity
  - resilience of farming and fishing systems
  - adaptation to climatic change

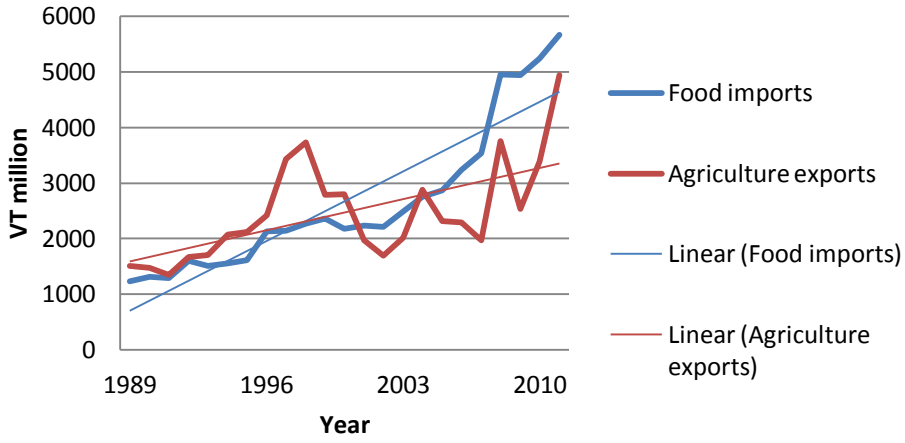
A major challenge in analysing trends in food production, imports, exports and domestic marketed volumes in Vanuatu is accessing reliable data. Data is either absent or very weak and frequently there are conflicting data sets recorded by different sources. A particularly chronic problem is the general unavailability of subsistence production data which means that an important

part of a country's food supply is poorly accounted for. To strengthen policy analysis and formulation improving agriculture data collection and sytematisation is therefore a high priority need and should be recognised as such in the policy. Without appropriate quality data making a definitive status on food security in Vanuatu is problematic.

The 2010 Millennium Development Report (page 16) notes that since the early 1980s food crop production has not significantly increased while the population has almost doubled and suggests that per capita production and consumption of food was approximately 0.9 kg in 1993 and had dropped to 0.5 kg in 2007. The food crop production data to support this is; total production in 1983 of 38, 410 tonnes and 40, 330 tonnes in 2007, the source of data quoted was the Department of Agriculture. This aggregate approach to assessing national food security is clearly an over simplification of the situation, but does signal a worrying trend. Demographics and migration, land capability and land access, balance between cash crops and food crops all have major implications on food production capacity and food security both at national and household level.

Food security in the isolated and fragmented Vanuatu islands has largely been ensured over the centuries from food locally grown, gathered and fished from the near shore ocean. Today these sources of food continue to provide a main pillar for food security, but this should not lead to complacency. There are issues related to increasing food imports (particularly rice), household access to food and nutritional quality of food, particularly for the urban populations which generally rely more heavily on imported food. This situation in large measure reflects inadequacies in the local produce marketing systems, inadequate regulation of imported food quality, and insufficient cash income and changing tastes in food rather than overall food availability.

Fig 20: Food Imports and Agriculture Exports



Source: VNSO

Over the last decade imported food has been increasing and exceeds the value of agricultural exports30 though the gap has recently narrowed due to the marked rise in the value of exports (Fig 14). The main food products imported are those not readily suited to Vanuatu conditions or scale, namely milled rice, tinned fish, wheat flour, sugar, barley for brewing, onions and dairy products. The shift to imported food probably reflects a combination of factors including; access to local foods, price, convenience, storability and other social factors. Therefore a direct comparison of the potential for substitution by local produce for imported food is not so straight forward. A further

[30] Total exports minus others and alcohol. Others are non agricultural products and alcohol is imported, bottled here and re exported.

critical factor impacting on rice consumption is transport costs. Calorie for calorie, the transportation weight of root crops such as taro is about three times that of rice. This implies moving three truck (or boat) loads of root crops compared to one of rice. Furthermore, rice is much more easily stored and requires less time and fuel energy to cook. One way to address the issue of inferior nutritional quality of rice is to restrict imports to nutritionally fortified rice. Greater efforts should also be placed on processing local staples into more durable and transportable products (e.g. flour), and improving domestic market houses where local produce is sold.

What is clear, however, is that unless local foods can be produced in sufficient quantities and efficiently marketed at competitive prices there will undoubtedly be an increasing dependence on imported food particularly under the growing environment of more liberalised trading. The approach to address this issue is not simply to raise the price of imported food through border taxation as this will hit the poorest members of society who are the most vulnerable to high food prices. A more appropriate and equitable way to use border taxes would be to tax luxury imports to raise revenue. This revenue could then be used to support local food production and marketing by subsidising transport and production costs. However, government must also be vigilant to ensure that appropriate measures are in place to combat dumping of cheap (and often inferior quality) imported food products on the domestic market. Amongst other countervailing measures, appropriate food standards and regulations should be put in place.

Food security is frequently discussed in parallel with national 'self-sufficiency' – i.e. the extent to which a country can meet its own food needs from home-grown production. But food security and food self-sufficiency are not synonymous – a country could be a substantial importer of food and enjoy a high level of food security provided it had more than sufficient foreign exchange earnings to cover those imports. The future food security in Vanuatu depends on both the country's capacity to grow its own food and to export goods and services to import food[31]. Therefore improved agricultural productivity and freer trade in agriculture will both be necessary to ensure Vanuatu's security of food supply in an integrating world.

However, as dependency on imported food commodities, e.g. rice, wheat flour and processed fish, increases in Vanuatu, vulnerability to escalation in world food prices also increases. Moreover changes in consumption patterns in the country through increased dependency on imported food in substitution of the traditional diet raises the particularly worrisome issue of diet related illness. The recent spike in food prices has brought a renewed emphasis on the need to raise domestic food production. Revitalisation of the agriculture sector (including a strengthened local food production and marketing systems) therefore remains the best medium-term policy option for Vanuatu. In this period of global economic uncertainty the country should anticipate and prepare for a world where food and oil imports will cost far more then they have in the past; investing now in food production will pay future dividends. Sustainable food production strategies should focus on three major issues[32]:

- ✓ enhance the preservation and use of local genetic resources
- ✓ improve production systems
- ✓ process and improve the quality of local products

The structure and values that dominate society shape and constrain how people behave. These factors can have a profound influence on how easy or hard it is to build and maintain the social capital necessary to ensure that social needs are sustainably met. In Vanuatu, the traditional *kastom* systems still continue to provide the most important safety net for ensuring welfare and food security. But economic analysis often lacks an appropriate appreciation of the importance of social

[31] McGregor et al.,2008

[32] Vincent Lebot's (VARTC) PowerPoint presentation on Food Security and Climate Change is acknowledged.

capital in providing individual social security through trusted personal relationships. The challenge is to identify means through which social capital can be deliberately created, or at least not damaged by development policies and interventions.

In Vanuatu food is also a key item in interdependency of households and communities. Developing sustainable agro-food systems, which are not isolated, will require greater focus on strengthening local networks which are embedded in communities, and on linking these with domestic and international market opportunities.

Sustainable Resource Management

Sustainable development has traditionally been focused on an environmental framework that gives priority to the issue of ecological degradation. In Vanuatu one could safely argue that environmental concerns are the cornerstone of sustainable development. The pristine environment is a priceless asset. The natural resource base underpins both the social and economic wellbeing of all of Vanuatu's population. Tourism, a now more than VT 3 billion a year industry in Vanuatu, is highly dependent on the quality of the environment.

Whilst traditional polyculture agriculture in Vanuatu can be lauded for its low environmental impact and sustainability attributes there are also examples of expansion into commercial plantation agriculture which have had a more profound impact on the natural environment. UNESCAP in 2002 cited modern commercial agriculture as the most pervasive and environmentally destructive human activity in the Pacific region, listing its primary impacts as (i) the direct removal of existing ecosystems; (ii) the reduction of biodiversity; (iii) destruction of soils; (iv) pollution of the surface and ground waters with agricultural chemicals; (v) pollution of wetlands and the marine environment with silt and agricultural chemicals; (vi) a major contributor to global warming through the loss of trees and generation of methane; and (vii) a contributor to landlessness.

A critical issue in environmentally destructive agriculture is that producers generally lack the incentives to take into account the full cost of environmental degradation or the full benefits of the provision of environmental services when making their production decisions. If the real national (and global) external environmental and social costs were internalised in a cost benefit analysis the viability of many production systems would be highly questionable. What is needed above all is a policy and institutional framework that provides the right incentives for environmentally sound agriculture development.

The overriding context for most countries sustainable development plans has been economic development, with economic growth seen as the primary driver of development as indicated by GDP growth. But the global financial crisis, coupled with an increasing recognition of the potential negative impacts of economic growth on cultural integrity, social equity, the natural resource base and global climate, mean that there are many questions being asked and an increasing uncertainty about our models of economic growth.

Barry Weightman, in his well known historical review of agriculture, pointed out that; '*agriculture in Vanuatu can be viewed as more than simply an economic activity - it also provides satisfaction, the means by which what survives of tradition is largely expressed and maintained, and the channel for individual creativity and enterprise within the traditionally close confines of the extended family and community*'[33]. It is difficult to assign an economic value to welfare building, cultural and spiritual attributes. Vanuatu traditional agriculture systems are based on biotic diversity

[33] Barry Weightman (1989) Agriculture in Vanuatu, a Historical Review.

and the practice of polyculture rather than monoculture and have sustainably provided for subsistence livelihoods, community obligations and food security over generations. Traditional food production systems have provided the resilience to withstand natural disasters and external economic shocks. Building on these traditional systems and developing value added marketable products from them would help to ensure that subsistence food security is not sacrificed in the drive for greater productivity and economic growth.

Diversification of land use to include more extensive tree planting (including fruit and nut trees) in farming systems should promote rural economic development, and provide an important source of employment and income. It would also assist with restoration of critical water catchment areas and act as a buffer to prevent encroachment into protected forest areas thus strengthening biodiversity conservation.

The appropriate and well-managed use of trees in agricultural systems should continue to serve as an effective component of sustainable economic development and environmental protection in Vanuatu. Agroforestry practices can diversify farm outputs, improve productivity and reduce inputs, while mitigating some of the environmental damage caused by the past processes of deforestation and the removal of trees from the landscape. It is also a land management practice that has much to offer in terms of nutrient cycling and ecosystem services required in organic farming. With climate change high on the government's agenda agroforestry warrants a high policy profile in Vanuatu. Areas that need to be addressed through government support are:

- facilitating credit and mitigating the risks faced by smallholder farmers planting trees
- improved information flow, including on potential markets for wood products
- making suitable germplasm available
- better coordination among agriculture, forestry, water, lands and environment departments

Forests have important environmental, cultural and economic significance for people in Vanuatu. But what also increasingly is being recognised is the value of environmental services that forests provide. As the demand for food, fiber and fuel has increased, so has the demand for clean air and water, unspoilt landscapes and other environmental services provided by forests. Where forests are converted to other land uses, the services they supply are diminished. Maintaining such services poses challenges, especially where trade-offs between the production of goods and the provision of services must be addressed; thus the need for incentives for the provision of environmental services has become evident.

Two main approaches are important in sustaining environmental services from forests, regulatory approaches and market approaches. The principal regulatory approach is through Protected Areas (PA) where the main objective is to restrict or prohibit activities that undermine the supply of environmental services. Currently there are only a few areas officially designated as protected areas under appropriate legislation, however, there is a very strong system of traditional taboos and customary closures for resource management and there are many areas which are protected by their custom-owners under these systems.

Custom-owners and communities must therefore be consulted and agree to any suggested changes in land-use and designation of Protected Areas. Furthermore, because agriculture and natural resource extraction is a crucial part of local livelihoods, communities need incentives to agree to restrictions on their activities in PAs and to change their forest, land and marine management practices to ones that enhance biodiversity protection and are generally more resilient and sustainable. Progress in this respect also requires training and capacity building within communities and broader programs of awareness raising and environmental education.

Vanuatu (with support from GEF funds) is working to establish Protected Areas of forest conservation. The main areas to be addressed are improved policy and legal frameworks to underpin PA networks; strengthened capacity for community-based conservation management; establishment of new protected areas; and mechanisms developed for sustainable financing for the PAs.

Market-based approaches to protect and enhance forest ecosystem services are built on consumer demand for forest products emanating from sustainably managed resources (green/eco-certification required) or for tangible non-extractive services such as: carbon sequestration, clean water, congenial environment for recreation or eco-tourism etc. Ecotourism facilitates the development of markets for scenic and nature values of forests, especially through access fees and permits. As tourism is a rapidly growing industry in Vanuatu policy emphasis should be focused on increasing economic opportunities around ecotourism and forests.

Vanuatu's new Forest Policy has moved towards a broadening of the dimensions of forests and forestry far beyond timber harvesting. The Policy also makes provisions to ensure that forest legislation and regulations that encompass forestry are in place. It will now be essential to strengthen the capacity for enforcement of these regulatory frameworks. If not, institutional weaknesses may continue to frustrate the policy goal of sustainable forest management.

Inshore fisheries, whilst important for food security in rural areas, have limited potential for increased production, with some export commodities already overfished (but up to date resource assessments need to be kept in place). Therefore, increasing fish supplies, to urban areas (particularly Port Vila), is likely to rely on increased landings of tuna and the development of aquaculture. The main focus of reef fisheries should be on consolidation and protection of current benefits. Attempt to get additional benefits should focus on tourism and other non-extractive uses. This implies that there will be a growing gap between coastal fisheries production and the demand for fish from coastal fisheries. With the amount of fishery products originating from coastal fisheries that are accessible to both urban and rural residents declining there will be an increased need for alternative fish sources including from aquaculture.

Government emphasis should be on identifying and building comparative advantages and promoting favourable business and policy environment for aquaculture. Additional attention will also need to be paid to biosecurity issues, especially formulating and implementing procedures to reduce risks and safeguard biodiversity. Aquaculture industries in Vanuatu must be founded on appropriately located sustainable business ventures and be carried out in accordance with high standards of environmental and ecological protection. The Fisheries Department (with assistance from SPC) has in place a well structured Aquaculture Development Plan 2008-2013 and implementation of this should be supported by the Overarching Productive Sector Policy.

Pelagic migratory tuna species in the Vanuatu EEZ are targeted by an increasing number of licensed foreign fishing vessels. But there is also a growing number of fishing boats that are unlicensed, unregulated and thus operating illegally. The Forum Fisheries Agency estimated sustainable tuna catch is between 8 – 9,000 tonnes, but the Vanuatu authorities continue to have difficulties to monitor volumes caught as some licensed vessels fail to submit catch logs and illegal fishing continues. Illegal, Unreported and Unregulated (IUU) fishing is a serious global problem and one of the main impediments to the achievement of sustainable world fisheries. It thrives where governance is weak and where countries fail to meet their international responsibilities. It puts unsustainable pressure on fish stocks, marine wildlife and habitats, subverts labour standards and distorts markets. The root cause of IUU fishing is a lack of effective flag State control.

IUU fishing undermines national and regional efforts to conserve and manage fish stocks and, as a consequence, inhibits progress towards achieving the goals of long-term sustainability and responsibility as set forth in, inter alia, Chapter 17 of Agenda 21 and the 1995 FAO Code of Conduct for Responsible Fisheries. Moreover, IUU fishing greatly disadvantages and discriminates against those fishers that act responsibly, honestly and in accordance with the terms of their fishing authorisations. This is a compelling reason why IUU fishing must be dealt with expeditiously and in a transparent manner. If IUU fishing is not curbed, and if IUU fishers target vulnerable stocks that are subject to strict management controls or moratoria, efforts to rebuild those stocks to healthy levels will not be achieved. Currently the national regulations in place do not include provisions specifically designed to prevent, deter and eliminate IUU fishing activities. A general revision of this legal framework is ongoing and should be achieved before the end of the year. This review needs to ensure that strengthened provisions specifically designed to prevent, deter and eliminate IUU fishing activities are put in place.

The Environment Management and Conservation Act 2002 mandates compulsory Environmental Impact Assessment (EIA) for new development projects likely to impact on the natural resources; effective enforcement of this Act must be rigorously pursued.

Climate Change and Natural Disasters

Vanuatu is ranked the world's most vulnerable country to natural disasters. Volcanic activity, earthquakes, cyclones, flooding and drought all mean that the nation's reliance on agriculture is precarious (MDG Report, 2010 page 8). A cornerstone of Vanuatu's Disaster Risk Reduction and Disaster Management (DRR&DM) strategy is its reliance on traditional knowledge and implementation through traditional governance systems (PAA Review).

Climate change is undoubtedly the greatest environmental challenge facing the world today. In Vanuatu, overall ecosystem degradation will be exacerbated by changing climates. Sustainable management of natural resources is going to be the key to both mitigation of emissions and adaptation in the agricultural sector. There are a number of significant uncertainties that are connected to climate change. These include the potential rate of change and regional impacts, for example, effects of precipitation and weather patterns, as well as the exact nature of the impacts on the environment, economy, resource availability and society. Perhaps the greatest uncertainties, however, are around the policy response to climate change and whether effective action will be taken in the industrialised nations to reduce greenhouse gas emissions.

The potential impacts of climate change on the productive sectors are diverse, including coral bleaching affecting the availability of fish and crustaceans, inundation of agricultural land in low-lying areas, increased incidence of pests and disease, prolonged periods of drought and flood conditions, increased frequency and intensity of extreme weather events, salination of agricultural land close to the coasts and the penetration of saltwater into the subterranean fresh water resources, adversely affecting the availability and quality of potable water. Changing temperature and precipitation regimes may influence the productivity of agricultural land and require the adaptation of or introduction of new crops and agricultural production systems[34].

The competing demands on the environment and differentiated impacts of climate change must be assessed and taken into consideration when formulating strategies to address the development challenges the productive sector faces. The vulnerability of food and farming systems to the new fundamentals of climate change and scarcer, costlier oil must be well considered in sector policy[35]. A

[34] Vanuatu National Forest Policy
[35] The recently completed national Forest Policy does fully integrate climate change

National Climate Change Policy has been drafted in 2010, but it is not yet adopted. In policy, there will need to be sufficient consideration placed on resilience within food and farming systems especially in terms of biodiversity, sufficient skilled labor and supporting infrastructure that a low-carbon, more resource constrained future' necessitates. Potential for renewable energy, including biofuel and biomass, must also be fully evaluated and promoted where appropriate.

International agencies such as FAO are promoting "climate-smart" agriculture[36]. In Vanuatu effective climate-smart practices already exist. These include the many forms of agroforestry, no-till farming and mulching with inclusion of high levels of cultivar biodiversity (which must be preserved and enhanced). Many of the traditional farming practices already provide a basis to address potential climate change impacts. Environmentally sound agriculture (and forestry) could play a role in mitigating greenhouse gas emissions. However, this will be critically dependent on the development of incentive systems that provide benefits directly to smallholder farmers and resource owners for adopting and maintaining practices that are conducive to emission reductions.

Resilience will be the ultimate measure by which Vanuatu farming and food security will be judged. Not just resilience to short-term shocks, but a more enduring resilience in the face of the new fundamentals associated with globalised trade, high energy costs, labour migration and climate change

What is needed above all is a policy and institutional framework that provides the right incentives for environmentally sound agriculture development.

Some Key Government Policy Areas: Sustainable Resource Management

- Build traditional systems and develop value added marketable products from them.
- Diversify land use to include more extensive tree planting (including fruit and nut trees) in farming systems.
- Increase economic opportunities around ecotourism and forests.
- Support community based management of inshore marine resources, both empowering and assisting communities to develop and enforce appropriate conservation measures.
- Utilise further the already established options to recognise land and marine Protected Areas (PAs).
- Support implementation of the Aquaculture Development Plan 2008-2013.
- Strengthen provisions specifically designed to prevent, deter and eliminate IUU fishing.
- Climate change must be assessed and taken into consideration when formulating strategies to address the development challenges the productive sector faces

[36] This is defined as agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes GHGs (mitigation), and enhances achievement of national food security and development goals

Conclusion

People's welfare and wellbeing should be the central focus of any Government's national sustainable development policy. However, whilst it is clear that significant sources of Vanuatu well-being, creativity and lasting prosperity lie outside the realm of the market, international development agents are constantly talking about the need to transform traditional smallholder agriculture to make it more commercial as a driver of economic growth. But what might be a more important agenda is to identify what signals (and incentives) are needed to ensure that small farmers continue to maintain the complex agricultural systems which sustain livelihoods, ensure social cohesion and protect the environment. What is required is a vision of how farming communities can flourish within ecological limits. Without a truly shared vision of an alternative to the tested and often failed 'modern' agriculture development model, livelihoods and food security in rural communities are likely to decline.

Family farming still forms the core of smallholder agriculture systems in Vanuatu. Therefore greater policy attention needs to be given to sustain the benefits provided through small farms for employment creation, poverty reduction, food security, respecting the environment and restoring life to rural areas.

The global market presents new opportunities. Demand exists at home and abroad for the kind of things that can be produced in Vanuatu –organic virgin coconut oil, organic and fair trade cocoa and coffee, dried tropical fruits, tropical nuts, premium grade beef and sashimi-grade fish. The challenge is to identify and promote these niche high value products that are in demand in the export markets. A further challenge is to produce them in enough quantity and quality and consistency of supply to satisfy foreign consumers. To achieve this and to retain domestic food security significant investment needs to be directed to increasing productivity of smallholder agriculture.

Over the last decade there has been a plethora of studies, assessments, consultations and reports relating to the development of the productive sector – it is now time to act in a priority focused and coordinated way!

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ACRONYMS and Abbreviations

ACIAR	Australian Centre for International Agricultural Research
ADR	Annual Development Report
BDS	Business Development Services
CGA	Cocoa Growers Alliance
CIRAD	International Centre for Agronomic Research and Development
CRP	Comprehensive Reform Programme
DARD	Department of Agriculture and Rural Development
DCNVB	Department of Cooperatives and ni-Vanuatu Business
DEPC	Department of Environmental Protection and Conservation
DI	Department of Industry
DRR&DM	Disaster Risk Reduction and Disaster Management
DP	Development Partners
DSPPCA	Department of Strategic Policy Planning and Aid Coordination
EEZ	Exclusive Economic Zone
EPA	Economic Partnership Agreement
EU	European Union
FAO	Food and Agriculture Organisation
FSA	Farmer Support Association
GDP	Gross Domestic Product
GEC	Global Economic Crisis
GEF	Global Environmental Facility
HACCP	Hazard Analysis Critical Control Point
IPDM	Integrated Pest and Disease Management
HIES	Household Income and Expenditure Survey
IPPC	International Plant Protection Convention
IPR	Intellectual Property Rights
ISO	International Organization for Standardization
IUU	Illegal, Unreported and Unregulated
M & E	Monitoring & Evaluation
MAQFF	Ministry of Agriculture, Fisheries and Forestry
MDG	Millennium Development Goal
MFEM	Ministry of Finance and Economic Management
MIPU	Ministry of Infrastructure and Utilities
MLNR	Ministry of Land and Natural Resources
MNVBD	Ministry of ni-Vanuatu Business Development
MOU	Memorandum of Understanding
MSG	Melanesian Spearhead Group
MSME	Micro, Small and Medium Enterprises
MTEF	Medium Term Expenditure Framework
MTTC	Ministry of Trade Commerce and Industry
NARI	National Agricultural Research Institute in Papua New Guinea
NCW	National Council of Women
NGO	Non-Governmental Organizations
NZAid	New Zealand Aid
ODA	Official Development Assistance
OPSP	Overarching Productive Sector Policy
PA	Protected Area

PAA	Priorities and Action Agenda
PACER	Pacific Agreement on Closer Economic Relations
PACP	Pacific group of ACP countries (Africa Caribbean, Pacific)
PICTA	Pacific Island Countries Trade Agreement
PLAS	Planning Long, Acting Short
PMO	Prime Minister's Office
POET	Pacific Organic and Ethical Trade
POPACA	Project of Agricultural Producers for Associative Commercialisation Organisation
PSP	Productive Sector Policy
PSSC	Productive Sector Steering Committee
PPP	Purchasing Power Parities
QS	Quarantine Services
RSE	Recognised Seasonal Employer (scheme)
SAPV	Syndicat Agricole Et Pastoral De Vanuatu
SMDA	Small Business Development Agency
SPC	Secretariat of Pacific Community
SPS	Sanitary and Phyto-sanitary System
TBT	Technical Barriers to Trade
VANGO	Vanuatu Association of NGOs
VANWODS	Vanuatu Women in Development Scheme
VARTC	Vanuatu Agricultural Research and Training Centre
VCA	Vanuatu Chamber of Agriculture
VCCI	Vanuatu Chamber of Commerce and Industry
VCMB	Vanuatu Commodities Marketing Board
VNSO	Vanuatu National Statistics Office
VOCGA	Vanuatu Cocoa Grower's Association
VQIS	Vanuatu Quarantine and Inspection Service
VRB	Vanuatu Reserve Bank
WTO	World Trade Organisation