

Smallholders and rural growth in Solomon Islands

Bob Warner

The quasi-subsistence livelihood strategies adopted by smallholders in Solomon Islands have proved to be remarkably resilient. But population and other pressures suggest that these strategies will not provide a basis for maintaining, let alone increasing living standards in the longer term. Greater specialisation, which will require investment and resource reallocation at the household level, is required to increase productivity. The binding constraint to increased productivity is not access to agricultural technology. Rather it is the policy and institutional factors that increase the uncertainty and costs of interacting with domestic and international markets.

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Over 80 per cent of the people of Solomon Islands live in rural areas, and subsistence agriculture, accompanied by small scale production of cash food and tree crops has been the mainstay, and safety net, for these people for many years.

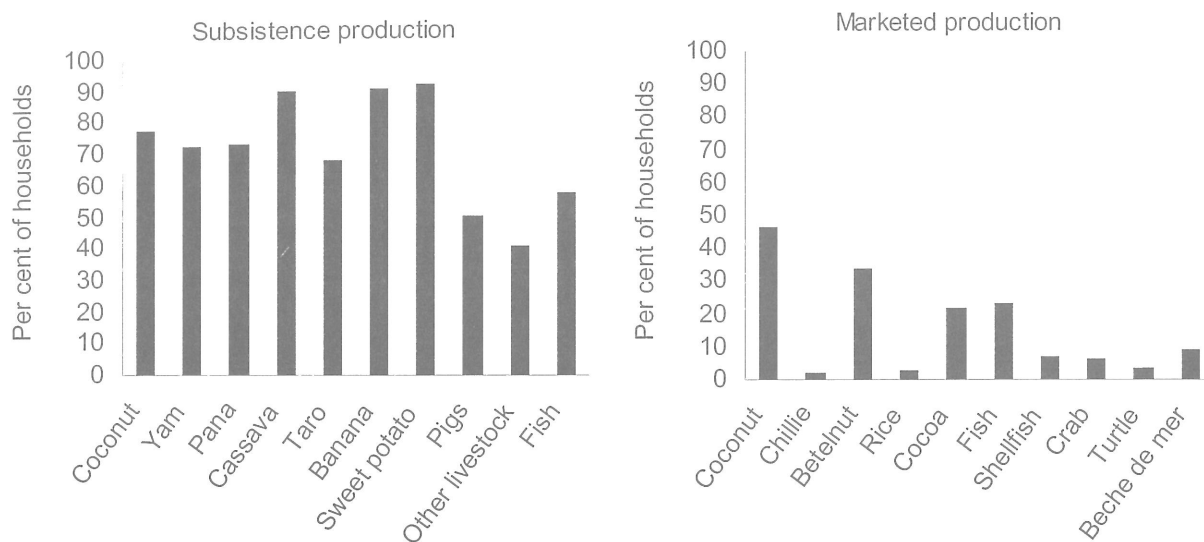
Ninety per cent or more of rural households engage in subsistence production of sweet potato, banana and cassava (implying that at least 70 per cent must produce all three crops) (Figure 1). Over 70 per cent of households produce coconut, yam and pana. Sweet potato is the dominant food crop in terms of volume of production: it has been estimated that in 2004 it accounted for 65 per cent by

weight of food crops produced (AusAID 2006:23).¹

Coconut, betel nut and cocoa are the main cash crops, with 45 per cent of households producing coconut for sale (presumably as fresh coconut or copra). As Figure 1 shows, marine resources are an important source of income (as well as food) for many households. (The census data from which Figure 1 is drawn does not capture the full extent of production of food crops for sale. The 1993 *Household Income and Expenditure Survey* suggested that households then sold around 10 per cent of the food they produced (Solomon Islands, Ministry of Finance 1995).



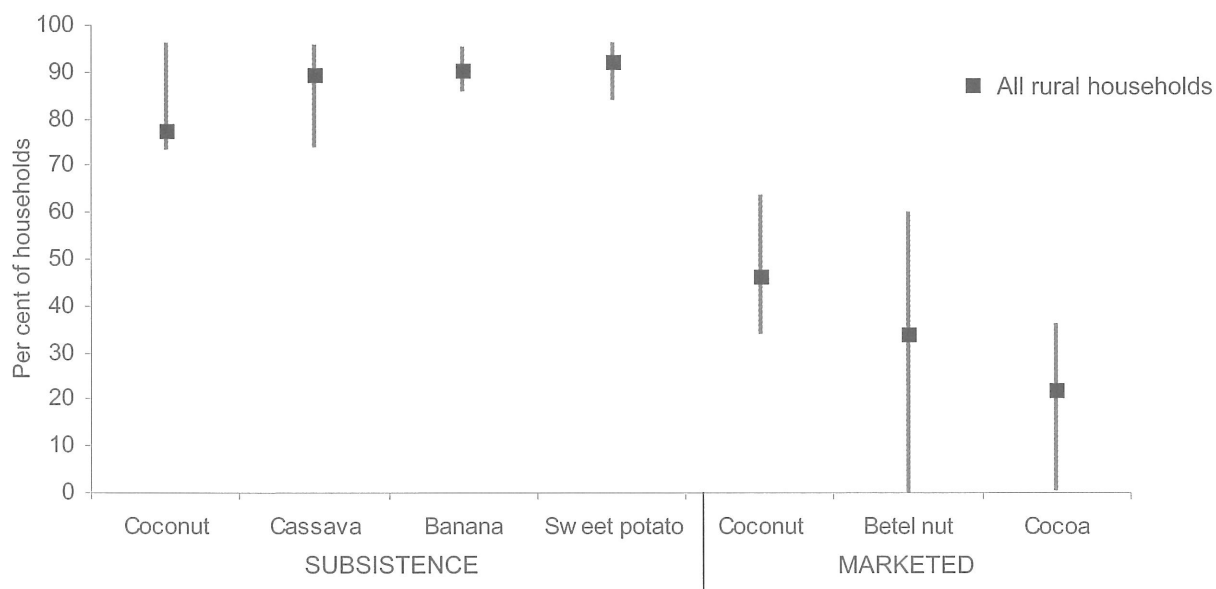
Figure 1 Subsistence and marketed production in rural Solomon Islands^a



^a Here rural Solomon Islands taken to be the whole country excluding Honiara.

Source: Solomon Islands, Ministry of Finance, 2000. Report of 1999 Population and Housing Census, Basic Tables and census description, Statistics Office, Honiara.

Figure 2 Variation across provinces in prevalence of production of key food and cash crops^a



^a The chart shows, for each crop, the highest and lowest provincial level proportions of households producing the crop, and the average for all rural households.

Source: Solomon Islands, Ministry of Finance, 2000. Report of 1999 Population and Housing Census, Basic Tables and census description, Statistics Office, Honiara.



While there is not much variation across provinces in the prevalence of subsistence production of the main food crops, the same is not true for marketed production (Figure 2). For example, the highest proportion of households harvesting coconuts for subsistence production is 96 per cent (in Rennell-Bellona province) while the lowest is 74 per cent (in Isabel province). For market production of cocoa, however, the proportion ranges from 36 per cent (Guadalcanal) to 1 per cent (Rennell-Bellona).

(There is, of course, likely to be much more variation within provinces, most of which encompass a mix of larger and smaller islands, bush and coastal communities, and variations in land forms, soil types and climate. A clear example of this is Guadalcanal Province, which includes the fertile Guadalcanal Plains—and which also has a distinct dry season—and the Weather Coast, which has excessive rainfall and challenging topology as well as limited transport links with the rest of the main island.)

An important characteristic of the diversified production systems adopted by most rural households is that the cash crops are suited to intermittent engagement with the cash economy and significant variation in harvesting effort. They involve low-input technologies and varieties that are fairly robust to periods of neglect, and their cultivation permits households to allocate labour across a mix of food growing and gathering activities without serious loss of production capacity.

AusAID's 2005 smallholder agriculture study pointed out that

...subsistence production provides security for rural producers to increase or decrease their involvement in the cash economy as opportunities arise or decline. This is a significant pattern across the country, with

families seizing temporary economic opportunities for a short period of time and then disengaging for a period of time. The reasons for disengagement are complex, but often concern an immediate need for cash (a common example is paying annual school fees) or because the risks of returning to labour are too high. This flexibility acts as a food and social security net in times of stress (AusAID 2006:8).

Robust livelihoods

Diversified quasi-subsistence livelihood strategies have proved fairly robust for rural households in Solomon Islands. When much of the cash economy collapsed during the ethnic tensions and social unrest that erupted between 1999 and 2000, households were able to sustain themselves with subsistence production. Non-monetary food production accounted for a third of the growth in GDP that occurred in the period after the conflict erupted in Solomon Islands (Table 1).²

Perhaps more importantly, it has been the smallholder sector that has underpinned the resurgence in monetary agriculture (Table 1). It is smallholder production that has driven the recovery of production in monetary agriculture: plantation production has so far shown little sign of recovery (Figure 3).

The large drop in plantation production is driven largely by the closure in 2000 of the Solomon Islands Plantations Limited oil palm plantation on Guadalcanal. The plantation has since been purchased by New Britain Palm Oil Limited, which has been undertaking a major program of rehabilitation and reconstruction, and milling of oil palm from rehabilitated blocks began in June 2006. Another factor has been



Table 1 Contributions to growth, before and after the conflict, 1990–2005 (per cent)

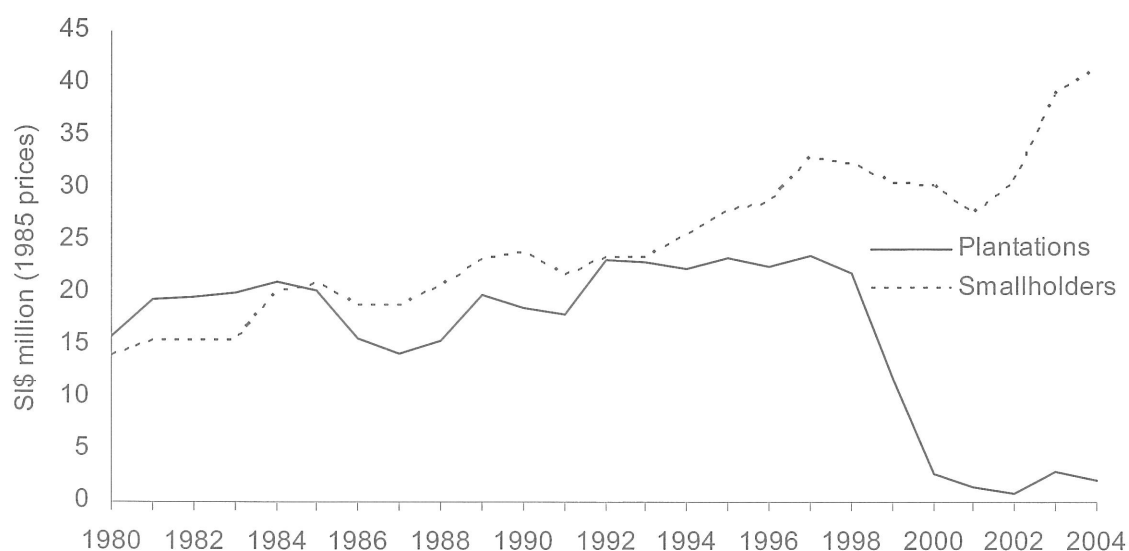
	1990–1998		2000–2005		1990–2005	
	Share ^a	Trend ^b	Share ^a	Trend ^b	Share ^a	Trend ^b
Agriculture	21.8	3.3	101.1	5.6	34.7	0.9
Monetary	11.9	4.0	64.7	10.3	5.8	-1.4
Non-monetary food	9.9	2.7	36.3	2.8	28.9	2.7
Fishing	12.1	4.3	15.0	7.9	4.0	-1.9
Forestry	3.4	7.4	99.4	18.9	35.4	3.7
Industry	19.8	10.8	-49.2	-5.5	4.1	0.1
Services	43.0	5.0	-66.1	-2.9	21.9	0.2
GDP	100.0	5.0	100.0	-1.6	100.0	0.6

^a Share of total change in real GDP over the period.

^b Trend rate of growth over the period.

Source: International Monetary Fund, 2005. Solomon Islands: Selected Issues and Statistical Appendix, IMF Country Report No. 05/364, International Monetary Fund, Washington, DC; Central Bank of Solomon Islands, 2006. *Annual Report 2005*, Central Bank of Solomon Islands, Honiara; United Nations Development Program 2002. *Solomon Islands Human Development Report 2002*, Government of Solomon Islands, Honiara.

Figure 3 Smallholder and plantation production in the monetary sector, 1980–2004 (SI\$ million)

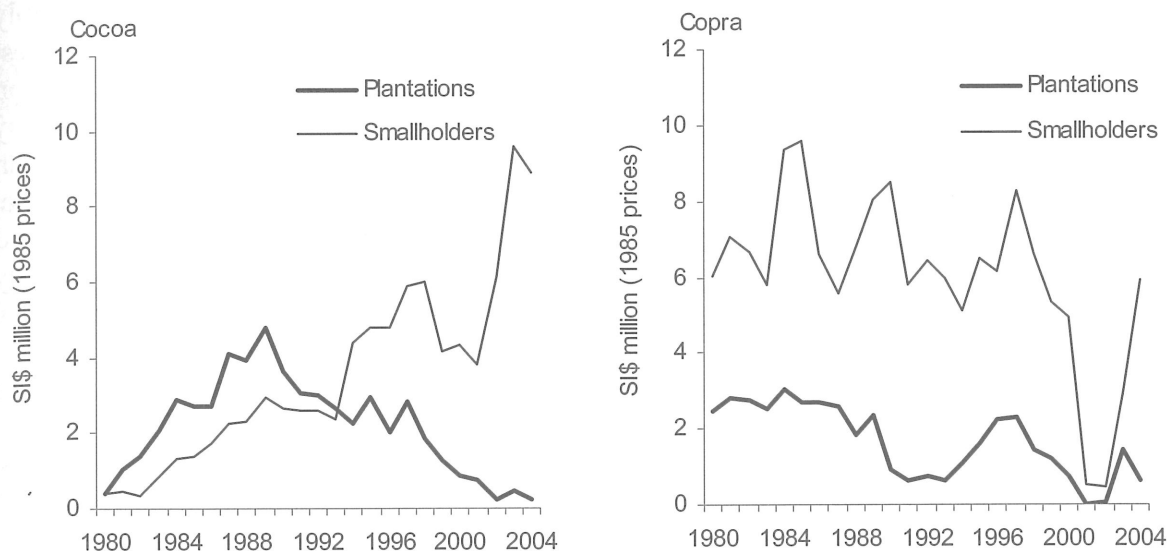


Note: Includes palm oil and palm kernel, cocoa, copra, rice smallholder livestock and other smallholder activities.

Source: Wore, I. (pers comm.).



Figure 4 Smallholder and plantation production of cocoa and copra, 1980–2004 (SI\$ million)



Source: Wore, I. (pers comm.).

the cessation of operations since mid 2004 of the Russell Islands Plantation Estate Limited coconut and cocoa plantation, as a result of an industrial dispute. These developments have overlaid a longer term process in which other smaller commercial plantations have been reverting to control by local landowners.

An important element of the smallholder performance is the response of smallholder cocoa and copra to the restoration of normality (this despite the collapse of the Commodities Export Marketing Authority that previously had dominated collection and export of these commodities). Smallholder cocoa production has grown rapidly since 2001, and there has been a strong rebound in smallholder copra production (Figure 4). This reflects in part the impact of the entry of private traders into copra and cocoa purchase and export, as well as the partial recovery of inter-island shipping. It also reflects the great need that

smallholders had to earn some cash, and just how well suited coconut and cocoa are to smallholder strategies. Harvesting and processing can respond very quickly when outlets become available and cash needs to be earned, and the trees forgive a fair degree of neglect (Box 1).

What is not so clear is whether smallholders are willing to invest in new production capacity (new plantings) or higher productivity techniques. They may be willing to incur variable costs associated with harvesting from existing trees, or even rehabilitating existing blocks. Additional or replacement investment requires some confidence about conditions that will prevail some years in the future: it may be very risky to draw resources (cash and labour) away from subsistence production, or forgo current cash flow possibilities by replacing old trees in the hope of greater productivity some years down the track.



Sustaining livelihoods for improved standards of living

Are these household strategies likely to provide a sustainable basis for long-term improvements in the wellbeing of rural people? While current livelihoods will continue to be viable in the short term, in the longer term the answer is almost certainly no.

Rapid population growth suggests that limits will be reached in the ability of these activities to meet the needs and expectations of the population in the longer term. Lack of productive employment is already a major problem, especially among younger males. In 1999, according to the census, nearly 42 per cent of all males between the ages of 15 and 29 living outside of Honiara were neither in paid work nor undertaking unpaid work.

In 2004, less than 10 per cent of the working age population (those aged from 15 to 54 years old) was estimated to be in formal employment (World Bank 2006). Reasonably conservative population projections suggest that the working-age population of Solomon Islands could increase to just over 312,000 by 2015—around 73,000 or 30 per cent more than in 2004 (Table 2). On current trends, formal employment would only absorb around 10 per cent of these people, leaving nearly 280,000 looking to earn income from informal activities or subsistence rural activities.

As it is, there are already significant areas in Solomon Islands where population pressures are leading to considerable stress. While provincial-level data may suggest that population densities are not very high (Figure 5), this data hides some significant

Box 1

Coconuts in Solomon Islands

Coconuts play a central role in the livelihoods and production practices of smallholders in Solomon Islands. The area planted to coconut amounts to some 60 per cent of the estimated arable and permanent cropland, and as Figure 4 shows, over 45 per cent of rural households produce coconuts for sale and over 90 per cent produce coconuts for subsistence purposes. A large proportion of coconut trees were planted as part of commercial plantation investments: most have reverted to smallholder management under customary land tenure.

Coconuts provide many resources to Solomon Islanders, including food and construction materials, but the main economic values lie in the following.

- The palms are very long lived, and continue production with very little input and management (albeit at lower than technically achievable potential).
- Harvesting is a matter of deciding to pick up fallen fruit, so harvesting rates can be very responsive to changes in returns.
- Copra processing is a low technology activity, with limited returns to scale, so is suited to household or village level production.
- Copra is relatively non-perishable, and is thus less affected by infrequent and unreliable transport services than other cash crops.
- Shade from coconut stands enables low input production of other cash and food crops: as in Papua New Guinea, a large proportion of cocoa trees are planted under coconut.



Table 2 Projections of population and workforce

	Total population	Working age population	Not in formal employment
2004 ('000 persons)	460.0	239.4	209.3
2015 ('000 persons)	588.8	312.1	279.7
Increase ('000 persons)	128.7	72.7	70.4
Percentage increase	28.0	30.4	33.6
Memo item			
Population in 2029 ('000 persons)	806.5		
Increase over 2004 (per cent)	75.3		

Source: World Bank, 2006. *At Home and Away: expanding job opportunities for Pacific islanders through job mobility*, World Bank, Washington, DC.

within-province variation. Densities are very high, for example, on Taro island in Choiseul, on Savo Island in Central Province, on the atoll islands of Malaita, and Santa Catalina Island in Makira/Ulawa, and the islands of Tikopia and Anuta and the Reef Islands of Temotu (AusAID 2006). AusAID's smallholder agriculture study identified widespread shortening of fallows and extension of cropping periods as a response to land and population pressures (AusAID 2006).

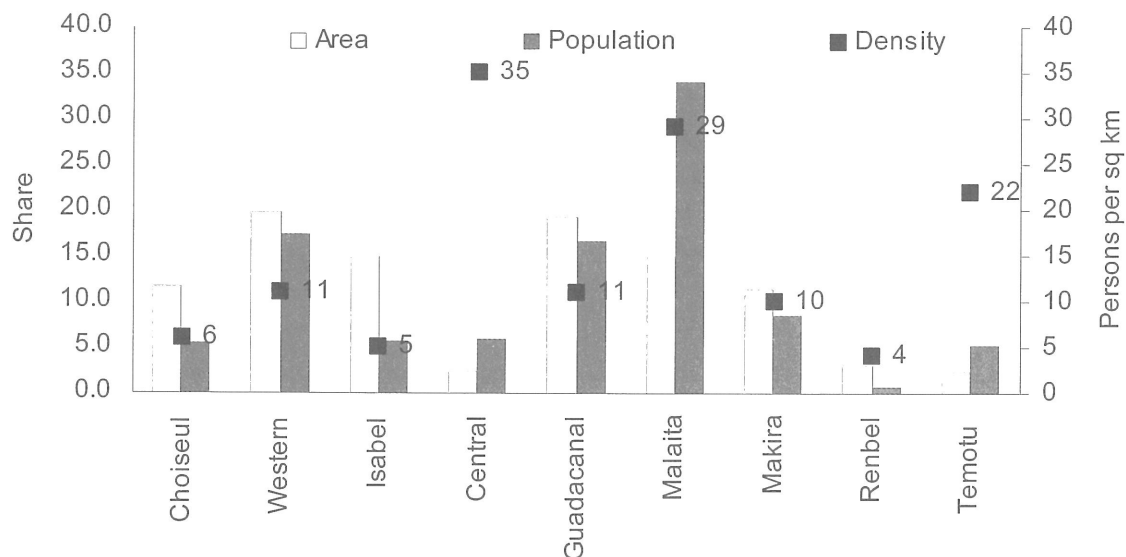
There is no clear picture of the underlying potential of land and marine resources to sustain expansion or intensification of activity in Solomon Islands. The World Resources Institute estimates that around 40 per cent of the land area of Solomon Islands is covered by forests, where topography and rainfall may to some degree limit scope for agriculture, and 14 per cent is wet lands or water bodies (WRI 2006). AusAID's Forestry Management Project has estimated that around 20 per cent of the land area is covered by commercially viable forest area, or which some 30 per cent has already been logged (URS 2003). The only comprehensive attempt to assess the agricultural potential of the country was undertaken in the early 1970s

(Hansell and Wall 1976), which identified areas considered to be suitable for large-scale plantation agriculture with low population densities. These accounted for around 3,500 hectares, or 12 per cent of the total land area of the country (AusAID 2006).

Figure 6 summarises information on the land potential in the provinces of Solomon Islands. The bulk of the agricultural opportunity area identified by Hansell and Wall is in Western Province (1,400 square kilometres), accounting for 26 per cent of land area. Most of this area has been logged and needs fertiliser, and may make it unsuitable for current smallholder production systems (AusAID 2006). Land-use intensity is generally quite low in this province. The opportunity area on Guadalcanal is around 750 square kilometres and not all is yet in use. Guadalcanal still has areas of relatively light intensive use. Most of the opportunity area on Malaita (540 square kilometres) is now highly populated and subject to quite intensive use: this is true of most parts of the province. Most of the agricultural area of Central Province is unoccupied and unused, but land use intensity on some islands is quite high.³



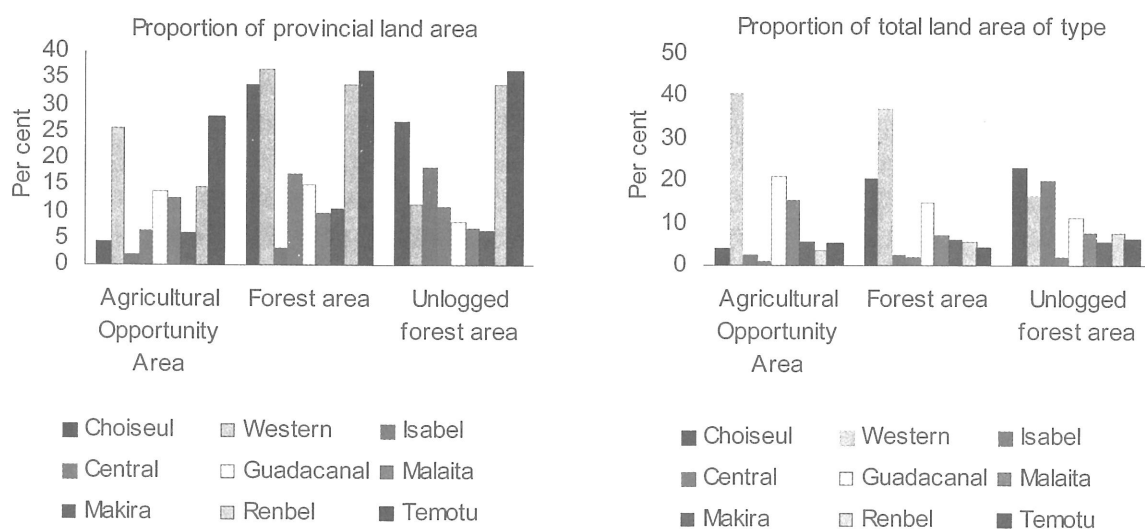
Figure 5 Rural population, area and population density by province



Note: Guadalcanal province does not include Honiara.

Source: AusAID, 2006. Solomon Islands Smallholder Agriculture Study, Canberra; URS, 2003. Solomon Islands Forestry Management Project, Phase 6: National Forest Resource Assessment, Canberra.

Figure 6 Indicators of provincial land potential



Source: AusAID, 2006. Solomon Islands Smallholder Agriculture Study, Canberra; URS, 2003. Solomon Islands Forestry Management Project, Phase 6: National Forest Resource Assessment, Canberra.



Figure 7 compares provincial shares of agricultural opportunity land area with provincial shares of population: it illustrates the pressure in Malaita and the apparent potential in Western Province, suggesting that some form of safety valve could be provided by internal migration, and this has been an option exercised by Solomon Islanders in the past. The 1999 census showed that one in six Solomon Islanders were living outside their province of birth, with the main movements being from Malaita to Honiara, Western Province and the Guadalcanal Plains (AusAID 2006, 1:15). However, Solomon Islands is ethnically as well as geographically fragmented, and the conflicts that emerged in the late 1990s suggest that levels of social cohesion across the nation may not be robust enough to support major movements of people.

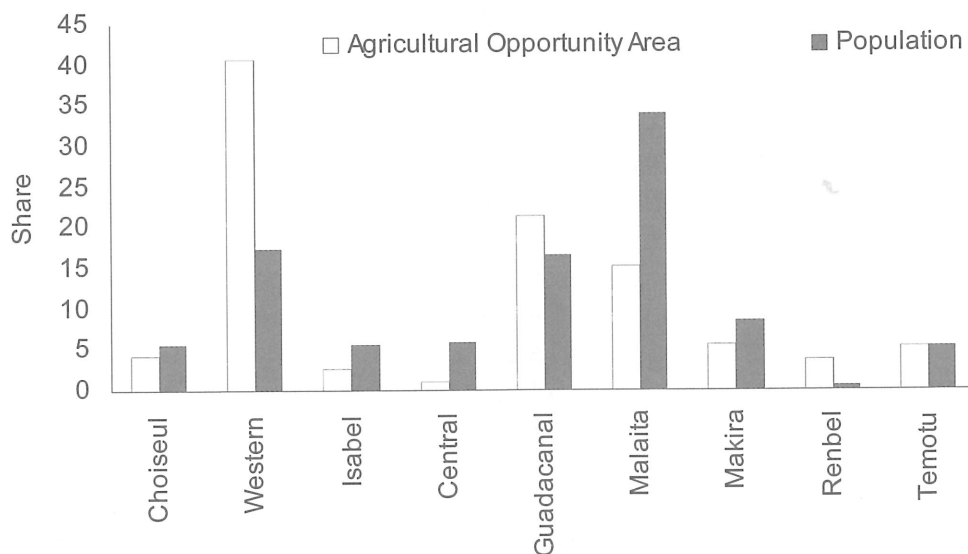
Increasing rural productivity

It seems reasonably clear that current rural livelihood strategies will struggle in the

face of the population growth currently occurring in Solomon Islands. Improving incomes and well-being of the population will have to be associated with shifts to alternative products or adoption of more intensive production systems. There is little scope for growth in income or well-being if most people remain predominantly involved in diversified subsistence activities, even though these strategies have served rural Solomon Islanders very well in the past.

This is not primarily an issue of agricultural technology. It is relatively easy to look at the production technologies and product choices of Solomon Island smallholders and observe that greater productivity could be achieved with adoption of available technologies or varieties. Considerable international research has been devoted for example, to developing higher yielding varieties of the traditional food and tree crops produced in the country. But producers have limited incentive to adopt the results of this research

Figure 7 Provincial shares of population and agricultural opportunity area land



Source: AusAID, 2006. Solomon Islands Smallholder Agriculture Study, Canberra; URS 2003, Solomon Islands Forestry Management Project, Phase 6: National Forest Resource Assessment, Canberra.



(Box 2). This is because the incentives for specialisation and the investment it entails are quite weak.

This is partly a consequence of Solomon Islands being a small, relatively isolated and geographically fragmented country. Intrinsically high internal and external transport costs mean that it is difficult to

achieve the scale needed to provide returns to expanded economic activity: they also raise the costs of further processing to add value to existing primary products. People are isolated from markets, and transactions costs are extremely high. This limits incentives for producing goods for exchange in two ways: returns from offering

Box 2

Coconut research and smallholders

Throughout significant parts of the Asia Pacific region, coconuts play a key role in the livelihoods of smallholders. While the main commercial product made from coconut, coconut oil, has long maintained a price premium over other edible oils, production is stagnant in part because oil yields are low relative to competitors. Moreover, in most coconut-producing countries many palms are senile or in the latter stages of their productive life (this is not so true of Solomon Islands, where only 20 per cent of palms are estimated to be senile). Over the years, considerable research effort has been devoted to developing higher yielding varieties and improved management techniques. But almost invariably, there has been no uptake of the results of this research. It seems that the agencies undertaking this research failed to take proper account of how coconuts fit into the production and risk management strategies of smallholders, and the costs of adopting new technologies.

A paper delivered at a recent International Coconut Forum observed that [f]armers are reluctant to plant high-yielding hybrids that have been developed, because of lack of confidence and knowledge, and because the seedlings are too expensive or not easily available: so most growers continue with a zero or low input management practice, with palms performing well below potential (Samosir, Foale and Adkins 2006).

The production of copra is a very labour-intensive activity: within the Pacific, only in Solomon Islands does it seem that the return to labour from producing copra is not significantly less than the rural wage. There is very little incentive to specialise in coconut production to produce copra, since with very small blocks specialisation is simply not possible, nor is mechanisation viable. Low intensity copra production alongside or integrated with subsistence food production has proved to be an effective way for smallholders to manage risk. Coconut blocks act as a form of insurance that can be called on in times of shortage: of food or cash. A key part of the economic value of coconut palms for many smallholders lies in the prospects for low-input shaded production of other crops. Adopting higher yielding varieties does not add to this value, and since replanting involves loss of both coconut and intercrop production for some years, there is no incentive to adopt more productive varieties as long as the old palms stand.

Source: Warner B., Quirke D., and Longmore C. 2007, The coconut industry: review of prospects and strategies for future ACIAR investment, Draft report prepared for ACIAR, Canberra.



products for sale in non-local markets are low, and costs of goods purchased from these markets are high. There are strong economic reasons why the local economy of parts of the country is characterised by low specialisation semi autarchy. The local terms of trade are dauntingly unfavourable.

Policy and institutional constraints. These objective constraints are severe, but they are compounded by a set of policy and institutional factors. These add to costs of market access, but also serve to make it even more uncertain.

Poor transport infrastructure. Transport infrastructure is poor, and has been terribly neglected. Most of the road network has fallen into complete disrepair, and wharves, jetties and navigation aids have been the subject of studied neglect over a long period of time, adding considerably to the costs

of shipping. Often, such infrastructure as exists was constructed around colonial or wartime imperatives, and does little to link communities within the same land area. The transport links in Malaita, for example, effectively split the main island into two regions, with stronger links to Honiara than with each other. This works against the development of a functional market for locally produced goods and services (AusAID 2004).

Limited entry into inter-island shipping. Formal and informal regulation and taxation have constrained entry into inter-island shipping. The vital role that inter-island shipping plays in the nation's economy has consistently triggered interventionism. In the past, provincial governments, with support from donors and central government, have approached the provision of shipping as

Box 3

Inter-island shipping

The decline in shipping, exacerbated by the effects of the ethnic tensions, has left many rural people without cost-effective, regular and/or predictable links to markets and services. Recovery of inter-island shipping is, however, subject to a range of constraints. As the Government's draft Transport Plan says

At present there are too many disincentives to both local and foreign operators wishing to invest in the shipping industry. There have been inappropriate government interventions, such as loans, grants and tax exemptions, that have made it difficult for investors to determine how to operate and how to make a profit.

Domestic investment in shipping is constrained by anti-competitive inter-island licensing and regulations. Provincial governments, and their provincial development authorities that run many of the shipping companies, use restrictive licences and fees to deter other operators. These restrictions are a powerful deterrent to shipping services and are constraining inter-island trade and development.

There has been a significant response to the collapse of some shipping companies from households and communities operating small motor boats. But these are very expensive and cannot manage cargo transport in any volume.

Source: Warner, B., McGregor, A., Wore, I. and Pelomo, M., 2006. *Rural growth in Solomon Islands*, report prepared for the Agricultural and Rural Development Strategy, Solomon Islands Government, Ministry of Planning and Aid Coordination, Honiara.



a public service and a source of revenue. Implicit and explicit subsidisation (through gifting of ships or allowing companies to run indefinitely at a loss) and restrictive licensing have crowded out provision of competitive private services (Box 3).

High costs of telecommunications. Telecommunications services have limited coverage, and international communications are extremely expensive (in 2004, the cost of a call to the United States from Solomon Islands was nearly four times that of a call from Tonga, and 18 times that of a call from Australia). These high costs increase the isolation of many rural communities, make coordination of value chains costly and slow, and make it difficult for people to gain access to market and technical information. It is inherently difficult to deliver telecommunication services on a widespread basis in Solomon Islands at the same prices that are achieved in less fragmented countries with larger populations. However, the high costs of international communication services are driven to a fair degree by the structure of the industry and the regulatory and contractual arrangements that shape its behaviour and performance.

Contracting is difficult. The general legal, institutional and policy environment for commerce is not conducive to investment in services to agriculture: trading, finance, information provision and input supply. The problems range from poor legal and judicial support for enforcement of contracts and pledging collateral, to costly, time-consuming and frustrating processes for company registration.

The limited reach and impact of legal and judicial underpinnings of a market economy make it difficult to enter into and enforce contractual arrangements. This in particular works against the widespread development of contract growing, an important way for entrepreneurs to act as the interface between smallholders and domestic and international

markets. Traditional institutions may make contracting feasible within closely knit communities. However, Solomon Islands is linguistically heterogeneous, and trust between communities is typically and historically low. People find ways of dealing with the limitations of these institutions, but the absence of widely 'accepted' norms about contractual behaviour add to the risk, uncertainty and costs of doing business.⁴ And, of course, recurrent breakdowns in law and order, with associated destruction of property, do not assist in building trust.

The near-absence of legal and judicial support for contracting, combined with the dominance of customary land tenure (and chronic problems with the management of alienated land) works against extension of the reach of the financial sector in the country. If traders cannot pledge security to receive credit, then they will not be able to enter into credit-related arrangements with farmers: and yet the credit offered by traders and input suppliers is often the main interface between farmers and the formal financial system.

While constrained access to credit is one consequence, an equally important problem is the limited provision of other financial services, particularly savings and cash management. Traders purchasing rural produce, or supplying trade goods into rural areas are hamstrung by the lack of mechanisms to make and receive payments, and must often carry significant amounts of cash. Some rural entrepreneurs have quite large cash balances, and wish to be able to find a secure way of saving these balances. Rural people also lack the risk management potential that financial savings can offer.

It seems that the environment in Solomon Islands has been unattractive to investment by larger scale agricultural service enterprises, even though commercial enterprises can operate in difficult contexts (Box 4). One noticeable feature of the



commercial sector in Solomon Islands, for example, has been the absence of specialist farm supply businesses, which elsewhere are at the forefront of the introduction of new seed and planting material, and supply of technical and extension information (Warner et al. 2006).

Implications for expanded smallholder production and income

Solomon Islands presents an environment in which smallholders face very muted incentives to invest time and money in

greater specialisation, and in adopting technologies that might improve yields or quality of the crops they produce.

The current structure of cash cropping in Solomon Islands has evolved for good reasons. Smallholders and other industry stakeholders in respective value chains have adapted to the difficult economic and policy environment in which they operate. The movement of price signals up and down the value chain, already attenuated by geographic fragmentation, is seriously affected by the policy environment. Within

Box 4

Cocoa rehabilitation in Bougainville

The key role that commercial input supply and trading companies can make in facilitating rural growth is illustrated by the successful cocoa rehabilitation process in Bougainville. Since the Bougainville uprising, the province has been alienated from the rest of Papua New Guinea. The collapse in economic activity and social structures resulted in the majority of the population retreating to pure subsistence. This was despite the potential of extensive coconut and cocoa plantation areas from Buka south along the east coast.

The recent recovery in the cocoa industry has been remarkable. What were the key elements of the rehabilitation?

- Smallholders were desperate for income and had been short of store goods and fuel for a long time. Media reports showed children collecting copra to pay for school fees.
- A program sponsored by AusAID and UNDP that involved rehabilitation of cocoa blocks, distribution of cocoa seedlings and provision of extension services.
- A driving force behind this recovery was Agmark—a commercial trading company that was responsible for purchase and export all of the production from Bougainville. There were no apparent quality issues with production with 95 per cent being fair-to-average quality—the equivalent of the bulk grade.
- Virtually no involvement by the PNG government and the Cocoa and Coconut Institute (CCI). Levies are not collected and no regulations or export inspections enforced. In addition, the legislative requirement for CCI approval of fermentaries did not apply, so mini-boxes developed by ACIAR in 1995, but not approved by CCI, were introduced to Bougainville with significant success.

Source: Quirke, D., Harding, M. and Warner, B., 2006. *Papua New Guinea coffee and cocoa policy linkages*, draft report prepared for the Australian Centre for International Agricultural Research, Canberra.



this context, households are making complex decisions about the role of cash crops within a quasi-subsistence setting.

The constraints discussed above affect entrepreneurs involved in all stages of the value chains for cash crops, and impact on the willingness of all growers, traders, processors and exporters to expand activity and adopt new technologies, regardless of the type of enterprise and organisational structure. The combined impact of the various policy and institutional challenges is to deter investments and production systems that are vulnerable to the high levels of uncertainty that result. The cost of inputs, both labour and imported goods, and the reach and dependability of the transport network within the country restrict the scope for their use. Production systems that require tight control over extensive areas of land, or in which quality is dependent on capital-intensive processing, timely delivery and careful post harvest handling are hard to operate successfully in the environment that prevails in Solomon Islands.

These factors explain some of the decline in plantation production and the reversion of plantations to customary landowners. However, smallholders are afflicted by many of the same constraints as plantation managers, and utilise lower yielding but more robust technologies and manage risk and uncertainty by also engaging in subsistence food production.

The one exception to the decline in commercial plantations is the Guadalcanal oil palm operation, where the new owners are applying the nucleus estate/out-grower model that has proved so successful in Papua New Guinea. In this industry, a combination of technological characteristics and adaptive strategies may well allow many of the impediments to be overcome, albeit in the context of the purchase of an existing plantation on previously alienated land (Box 5). It remains to be seen if the

model will work outside of the specific circumstances of this operation.

Impact on choices. One way of thinking about the implications of policy and institutional constraints on the willingness to expand production is to examine how they affect the choices that households make about ways of generating the means of meeting needs and aspirations. The constraints influence household consumption, savings, and investment generally, and in turn impact on decisions about how to allocate resources across alternative production and income-generation options.

Figure 8 summarises the key cultural, institutional and policy constraints on rural development and growth in Solomon Islands. The constraints influence household decisions about how much effort and resources to put into cash generation and subsistence activities, and the sort of production technologies to use. They also affect the flow and timeliness of market information, and the benefits of greater specialisation. Ultimately these constraints shape the price and other incentives that face households and other players in the value chain, and thus how they value the costs and benefits of specialisation and intensification.

Virtually all of the choices made by smallholders in Solomon Islands are driven by the requirement to manage risk and uncertainty. This is because financial instruments that can be used to manage risk, such as financial savings, are not readily available or are prohibitively expensive. In the absence of such instruments, rural people continue to 'invest' in the clan and community as the only available way to manage risk.

These cultural factors play important role in incentives and choices, with the community obligations placing particular pressure on the distribution of the proceeds from cash cropping. A lack of banking



Box 5

Guadalcanal Plains Palm Oil Limited

Until its closure in 2000, Solomon Islands Plantation Limited's oil palm plantation in Guadalcanal was a major foreign exchange earner for the country. Problems with landowners and frictions with plantation workers who had come from other islands were important contributors to the closure.

In 2004, New Britain Palm Oil Limited purchased the operation, since when it undertook the process of rebuilding processing facilities and rehabilitating blocks. The first exports of oil from the rebuilt refinery occurred in mid 2006.

The company plans to adopt the same approach that it has used in Papua New Guinea to introducing oil palm cultivation. The model for Solomon Islands involves a central processing facility in a nucleus estate and out-growers with four hectare blocks, in which one hectare is reserved for gardens. The company will provide a guaranteed market outlet for out-growers, as well as technical extension services and credit in the form of production inputs. It can provide credit because it can deduct repayments from growers' returns: and because there are significant economies of scale in processing, it will not face the problem that other tree crop processors/input providers have when growers sell output to competing entities.

Source: Warner, B., McGregor, A., Wore, I. and Pelomo, M., 2006. *Rural growth in Solomon Islands*, report prepared for the Agricultural and Rural Development Strategy, Solomon Islands Government, Ministry of Planning and Aid Coordination, Honiara.

facilities increases this pressure, as it removes a viable option for saving cash to pay for ongoing expenses and future labour requirements.

These factors conspire to reduce the probability that smallholder households can capture many of the benefits of increasing effort. Contrary to conventional wisdom, smallholders value their labour highly and allocate time across crops and social activities. With significant risks associated with securing the returns from increasing productivity or quality, it is logical for smallholders to be reluctant to increase effort.

Conclusion

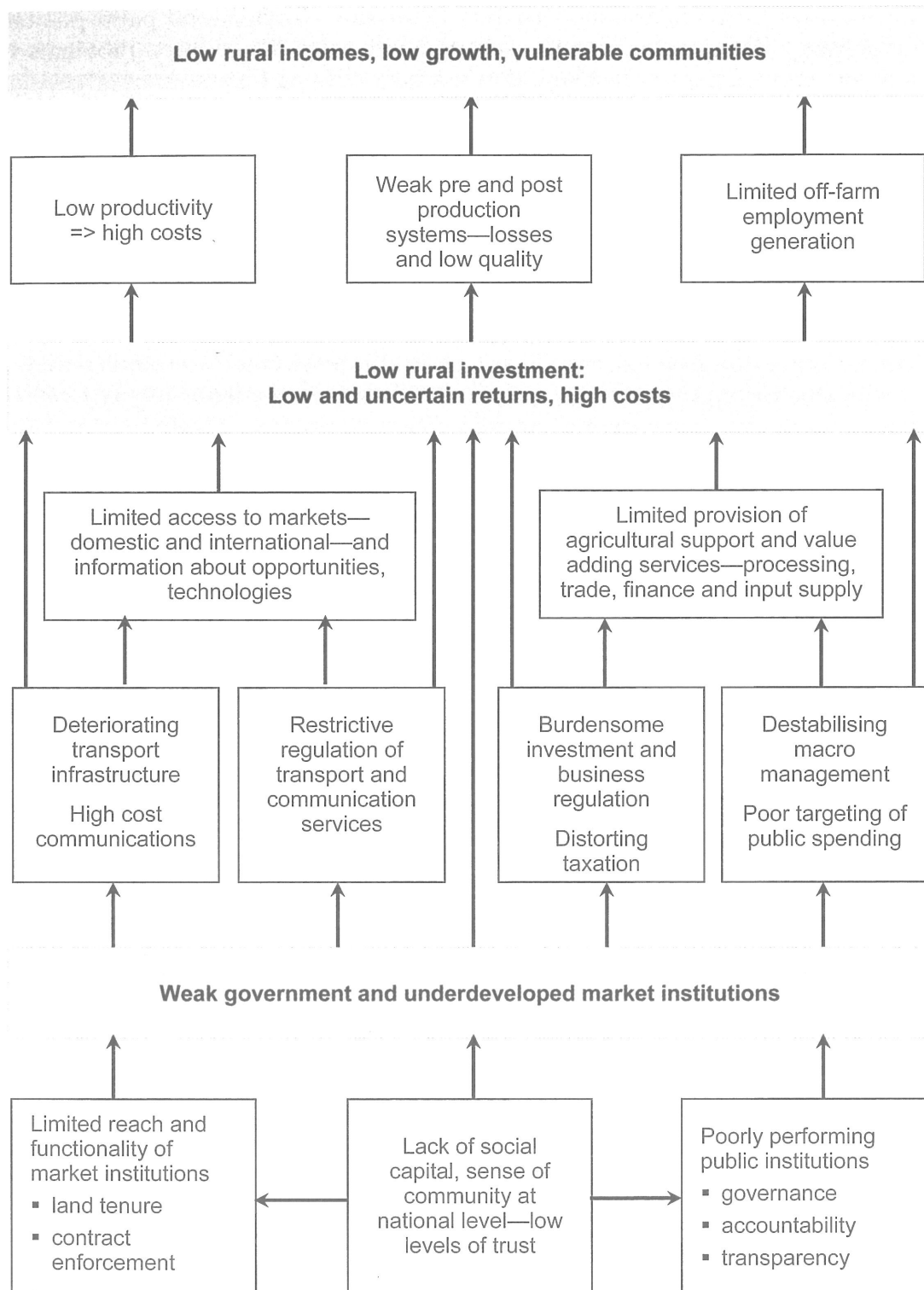
The strategies that rural smallholders have used to manage risk and uncertainty in Solomon Islands have served them very well in the past. But demographic pressures on

land and other resources, and the prospects of further growth in the pool of under-employed young people suggest that these strategies may not be sufficient for much longer. Greater productivity will be needed to maintain and increase living standards, and this will require specialisation.

There is a range of intrinsic barriers to specialisation in the country, resulting largely from geography: many small islands with limited populations, and a long distance from dynamic, growing markets of the Asia Pacific region. But these barriers are seriously exacerbated by institutional and policy distortions that have made even simple market interactions problematic. Smallholders will, sensibly, not adopt more specialised and intensive production methods as long as these distortions add to the uncertainty and costs of engagement with markets.



Figure 8 Policy and institutional constraints





Notes

- ¹ Of the 432,000 tonnes of estimated food crop production, sweet potato accounted for 65 per cent, while cassava, banana, taro and coconut accounted for 12, 8, 7 and 6 per cent respectively.
- ² It should be noted that this component of GDP is not directly measured: it is typically assumed by the authorities to grow at or around the rate of growth of the population. GDP estimates for Solomon Islands have not been based on robust data for some time. Some qualifications are given in Warner et al. (2006).
- ³ Climatic factors also influence the agricultural potential of many parts of Solomon Islands. A mean agricultural rainfall of around 1,800–2,500 mm per year is optimal for agricultural production in the southwest Pacific (AusAID 2006): rainfall over 4,000 mm is excessive. Many parts of Solomon Islands are at or over this limit. Many parts of the country are also affected by the absence of a distinct drier season. And some provinces (Rennell-Bellona and Temotu) are subject to cyclones.
- ⁴ Warner et al. (2006) report on the role of church affiliations in underpinning contractual arrangements between exporters and grower/processor households in the virgin coconut oil industry: this is one way that relationships of trust have been built that transcend clan and village boundaries.

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