

Solomon Islands

Kastom Gaden Association

Training Tools for

Pacific Island Communities

BLUE SEAS AND BUSH GARDENS

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Russ Grayson

Blue Seas and Bush Gardens

**the story of an innovative NGO
in the Solomon Islands**

Russ Grayson
amended March 2006

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About the author

Russ Grayson joined APACE, the NGO that started the Kastom Garden Programme, in 1996 and continues to work with the people involved in the programme through the international development organisation, TerraCircle. His background is in journalism.

Preface

Towards the end of the third year of the Kastom Garden Program, Tony Jansen (then project manager) and I (then Projects and Development Education Officer with the non-government international development organisation APACE—Appropriate Technology for Community and Environment) came up with the idea of documenting the experience of the program and exploring what had been learned about a small organisation implementing a development assistance program in the South Pacific.

We were aware that, in the world of non-government organisations (NGOs) and in community enterprise in general, so many valuable lessons had been forgotten because they were never documented or because their records remained locked away, gathering dust in the filing cabinets of aid agencies. We did not want this to happen to the Kastom Garden Program (KGP) or to its successor, the Kastom Garden Association (KGA) (The word 'gaden' is Solomon Islands Pijin for 'garden').

We came up with the idea of documenting what had been learned. Tony was then into his fourth year of development work in the Solomon Islands, work that had started with the KGP in 1994 when he spent several months with the Lalano High Altitude Farming Project on Malaita island. The year before that he had worked on a rural development project in Ecuador. I joined APACE soon after the KGP started in 1995.

Learning from experience

Blue Seas and Bush Gardens—the story of an innovative NGO in the Solomon Islands—is the story of how a small overseas development program attempted to make best use of scarce resources to introduce new ideas in small scale agriculture.

Our hope is that other non-government organisations (NGOs) can learn from the experience of the KGP. Motivating us has been the belief that organisational learning is critical to the effective delivery of development assistance and to the future of small NGOs in a globalised world.

Russ Grayson

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Mail from Arawa

IT was surreal—a town that was once a thriving Pacific island hub had been transformed into a post-industrial subsistence settlement. The tools of the early twenty-first century had been put to use to produce food. Once-landscaped street verges had been converted into sweet potato fields. Amid this tropical island turned upside down, Tony Jansen sat typing into his computer...

I am sitting in Arawa township with my solar panel that powers my laptop strung out the window.

Me and Bruno came down from the bush yesterday to the weird vibes of Arawa—a suburban city returned to tribal living.

It's a crazy kind of place where people live in cleaned up Aussie style suburban houses built for the mine workers in a surreal suburban atmosphere filled with rasta-looking ex-BRA's (Bougainville Revolutionary Army guerrillas), people cooking over wood fires in ripped-out electric stoves in smoke blackened car ports that have become bush kitchens... the ingenious use of local materials like satellite dishes for soaking clothes... washing machine parts for tables and chairs for selling betel nut... and the remains of the curb and guttered, landscaped corner parks converted into slash and burn sweet potato gardens.

Amidst this landscape stood the secured compounds of the UN, the Red Cross and the non-government aid organisations, while all around moved UN vehicles and, overhead, the military helicopters of the peace monitoring group.

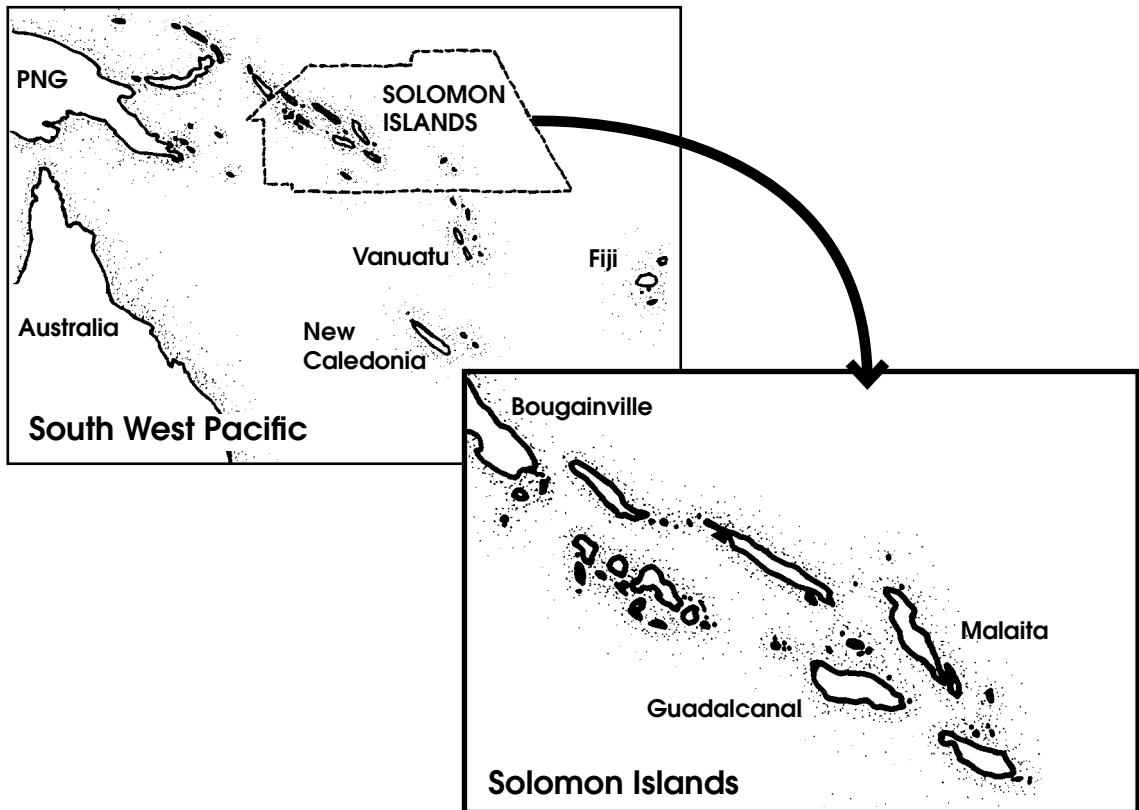
There is also quite a high level of violence and tension in the place—it has a bad energy that I and many other people find hard to describe—I think some bad things must have happened here during the war and it is also just generally an outlet valve for a traumatised population after ten years of war.

It's a far cry from Bruno's beautiful village nestled in the cool mountains surrounded by fast flowing rivers and forest, where there are people with vision and commitment to village self reliance and to finding a new way of development.

For Tony and his co-workers in the Kastom Gaden Association, village self-reliance and finding new approaches to development were key concepts that they had been developing for the past six or more years. That experience, Tony knew, contained valuable lessons... lessons that would be lost if they were not written down...



Tony Jansen



The Solomon Islands is an archipelago of continental (mountainous) islands and coral atolls spanning approximately 1650km in a south-easterly direction from Bougainville. The continental islands have a volcanic origin around 25 million years ago and form a part of the 'Pacific rim of fire'.

The first settlers may have arrived in the Solomons prior to 10 000 years before the present era. A more recent immigration may have taken place around 4000 years ago.

The Spanish explorer Mendana reached the Solomons in 1568 and Phillip Cartaret, an Englishman, arrived in 1767 to be followed by whalers, missionaries and other explorers.

Independence was gained from Britain on 7 July 1978. The Solomons remained a member of British Commonwealth.

Population:

approximately 400 000 as of 1996 census; 95% Melanesian; 3.8% Polynesian; some Asians and Europeans

Literacy: no more than 62%

Weather:

tropical monsoonal wet/dry seasonal regime

Rainfall: 3500mm average

Highest point: 2447m—Mt Makarakombu

Vegetative cover:

tropical rainforest (c80%); grassland

Government:

elected parliament; coup in 2000 followed by elections

Economy:

subsistence food production is important to approximately 85% of population; fishing, mining and logging are the main income earners; tourism is important but declined steeply following the coup and instability in 2000; manufacturing and retail are less developed; the public service was a major employer but contracted after the coup in 2000

Land ownership:

more than 85% of land customarily owned.



Global context

This section provides background reading to situate the work of the Kastom Garden Project and its successor in the global context of aid and funding, the growing insecurity of aid work in some areas, Australia's relationship with the South West Pacific region, changing agricultural conditions in the Solomon Islands and the organisational context of the project.

To most Australians, the South West Pacific is a place for lazy holidays. Destinations like Fiji, Vanuatu and New Caledonia are promoted by their governments and the tourism industry as easy going, friendly and safe.

The first glitch in this image came in the 1980s with the confrontation following the demand for autonomy by the indigenous Kanaks on New Caledonia. The status quo in the South West Pacific continued until the late 1990s when, suddenly, Fiji made the headlines with its first coup. Brought to a head by the election of a prime minister descended from the Indians brought into Fiji to work the cane fields, the coup crystallised indigenous Fijian fears about the loss of dominance in their own land.

Almost overnight, it seemed, the South West Pacific had ceased to be the peaceful holiday destination it once was. The political situation in Fiji has stabilised but unrest following the Solomon Islands coup in the year 2000 and continuing unrest in PNG have maintained an element of instability in the region which had not settled down by the time *Blue Seas and Bush Gardens* was published.

1. Neutral no more

The episodes of instability that swept through the South West Pacific's island states during the late 1990s have been part of a global pattern of realignment that followed the ending of the Cold War. Fortunately for aid workers in the region there has been little long term hindrance to their work.

That is not the story elsewhere and some respected aid organisations, writers and international bodies have issued warnings about the perils faced by humanitarian and development workers in some regions. Their warnings have come at a time when governments question the neutrality of aid organisations, particularly the smaller NGOs.

Ten years ago, to raise questions about the security of aid workers in the field would have been viewed as alarmist. Now, however, even the World Health Organisation (WHO) is issuing such warnings.

The first signs of the changing aid environment came in 1999 when CARE Australia's Steve Pratt and Peter Wallace, and Serb CARE worker Branko Jelen were arrested by Serbian authorities, tried and, after much lobbying, released after some months had passed. That occurred in Kosovo during the conflict over the breakup of Yugoslavia. The three were said to have been assisting CARE Canada which was under contract to the Canadian government to recruit peace-keeping monitors to work with the Organisation for Security and Cooperation in Europe, work that involved the collection of information of intelligence value. Although there was ambiguity around the role of the three CARE staff, CARE Australia vigorously denied any involvement in intelligence gathering and there was widespread public support for the CARE trio in Australia, including from the

government and ex-Prime Minister Malcolm Fraser, CARE Australia chairman.

For CARE, that incident was the second time in a decade that it had been involved in intelligence allegations. The first incident occurred during the UN humanitarian intervention in Somalia in 1992 when CARE was alleged to have assisted US operatives, supposedly from the US State Department but who, according to an American involved in the Somalia operation, were really from the CIA and Defence Intelligence. It was claimed that they made use of CARE facilities and had placed fluorescent markers on the roof of the CARE building to guide incoming forces.

Australian aid workers again ran into trouble when in August 2001 two Australians were among other Western NGO personnel arrested by Afghanistan's Taliban authorities, allegedly for promoting Christianity in the staunchly Moslem country. They were released as the regime disintegrated under US bombing.

Around the same time the Indonesian government stepped up criticism of NGOs by alleging that NGO personnel were behind unrest in its province of Papua, previously known as Irian Jaya. The Indonesians failed to provide any evidence to support the allegation and their claims were dismissed by governments, NGOs and analysts in the region.

Then, in 2000, came the vote for the independence of East Timor and the revelations of Indonesian military sponsorship of the terror perpetrated by militia gangs. After the intervention of the Australian-led multinational force, militia thugs killed three UN aid workers in a West Timor refugee camp.

The message for NGOs was that their work, once tolerated by governments in regions of conflict, was now subject to greater interference, scrutiny and intervention.

Risk increases

In July 1998 the World Health Organisation (WHO) released a statement in which it said that aid workers received too little preparation for working in developing countries where there were risks of disease and conflict. The WHO specifically addressed the preparedness of aid workers to deal with safety (physical and psychological health) and security in the field (risk due to crime and ethnic, political or civil conflict and war, kidnapping and

terrorism). There is plenty of evidence to back-up the WHO's warning:

- aid workers continue to operate in areas of unrest or conflict such as Indonesia and East Timor; in places such as Cambodia and the Balkans land mines remain a danger to movement, farming and reconstruction
- in 2000, civil conflict and a coup in the Solomon Islands forced the Planting Material Network to relocate to a more secure island
- the staff of development agencies in Papua New Guinea are protected by security services and high fences due to the country's chronic crime problem; Port Moresby, the national capital, has been listed as the fourth most dangerous city in the world outside of a war zone and the spread of the drug trade and firearms has increased insecurity in the PNG Highlands
- the war on terrorism following the September 2001 attacks in the US and the increase in terrorist attacks at the time of the October 12 2002 Bali bombings may place limits on the places where aid workers, especially Westerners, can operate safely.

A call for training

The WHO's attitude has been reiterated by RedR, an international organisation that places engineering staff in humanitarian aid and development projects.

RedR is one of a growing number of aid organisations now preparing staff through intensive courses in field security, a practice adopted some years ago by large media organisations such as the BBC who send camera crews and journalists to conflict zones.

RedR advises aid workers to develop a methodical approach to safety and security. They talk of the vital role of gathering information from other agencies and aid workers, good analysis of that information to identify patterns and trends, effective communications, the reappraisal of arrangements and "...preparing for the worse, just in case..." .

The agency proposes that aid workers adopt the 'security triangle':

- acceptance by the local community
- protection against threat
- deterrence of malevolent action.

RedR stress the importance of good information on which to base the assessment of risk.

Declining security

In an article in 2001 exploring the declining safety of aid workers in the field, UK *Guardian* journalists Robin Imray and David Brindle highlighted the dangers:

Last September, three UN refugee workers were killed in West Timor by a machete-wielding mob... at Christmas... a teacher with VSO was murdered in Burundi... in April three Red Cross staff were slaughtered in the Congo.

Disturbingly, there appears to be a trend of rising violence against aid workers. A report by UNICEF... lists 46 deaths among aid workers last year (2000). There is an abundance of anecdotal evidence that aid workers are increasingly victims of hostage-taking, assassination, mines and robbery”.

The worsening situation became apparent to Sydney APACE staff in 1998 (APACE—Appropriate Technology for Community and Environment—was the Australian NGO that supported the Kastom Garden Program in the Solomon Islands), when they learned that Tom Jumeraii, the manager of a metals recycling project in Lae, PNG, that the agency was supporting had been attacked by rascals (a PNG term for gangs of armed thugs), beaten with bottles, his vehicle stolen and burned. That explained why APACE staff had difficulty getting in contact with Tom. He had managed to talk his way out of a previous encounter with a rascal gang.

The state of internal security in PNG became apparent to me when I accompanied Tom on the road journey from Lae to the crime-prone highlands town of Mt Hagen. We were stopped by assault rifle-toting and shotgun-carrying police at three checkpoints along the Hilans Highway and the vehicle searched for smuggled guns, alcohol and drugs.

That the security of aid volunteers in the field is of growing concern to Australian agencies was confirmed when the director of a small, community-based NGO that prepares volunteers for overseas placement expressed reservations about their preparedness to me. But it is not only Australian NGOs that are concerned. Oxfam New Zealand, part of the global Oxfam NGO network, acknowledges the security situation in its employment advertisements:

Some areas supported by Oxfam New Zealand are subject to civil conflict and/or natural disasters which could be hazardous... during

field visits staff are not permitted to enter clearly hazardous or dangerous areas... (they) are required to heed the advice of local Oxfam staff and local authorities in relation to security issues.

Staff must be prepared to make their own assessments of potential hazards or danger during field visits in the knowledge that Oxfam New Zealand will always respect and support a decision to continue or withdraw from any part of a field visit for reasons related to personal security.

Anne McCaig, senior manager corporate and community relations for Australia’s major volunteer placement agency, Australian Volunteers International (AVI)—which has extensive experience in managing volunteer programs in 68 countries and has placed close to 6000 people in the field—explained in relation to health and safety that:

AVI takes volunteer security and health seriously throughout Asia, the Pacific and Africa. AVI does not place volunteers in high risk security areas although the organisation works in post-conflict situations.

The extensive preparation offered to volunteers through formal pre-departure briefings, written information including a volunteer guidebook and advice from returned volunteers and AVI staff is aimed at providing enough information in the proper context to enable informed decision making by the volunteer.

Volunteers are encouraged to be aware of issues related to moving into a new and unfamiliar environment which includes advice on personal security, health and nutrition, dealing with stress and loneliness and understanding different mores and laws. Volunteers are encouraged to consider their own skills and prior experience in handling their personal security in Australia. Building relationships and gaining local knowledge during the assignment is actively encouraged in-country as central to the volunteer experience but also as part of managing personal security. The relationship with the volunteer’s employer is key as the employer has a responsibility to look after the volunteer, local knowledge and networks and is a contact point for information and support. All volunteers are advised to have a security management plan which covers practical matters such as informing key individuals

of their movements, contact details and emergency information.

AVI believes that volunteers are in a unique position to provide realistic feedback about their environment and are an invaluable source of up to date and reliable information. The agency unequivocally supports volunteers in any reasonable decision they make regarding their own security.

Evacuations do occur but in many cases volunteers choose to return to the original placement once it is safe to do so.

The fact that small NGOs operate outside the ambit of ACFOA, the Australian Council for Overseas Aid, means that they are isolated from any training that body may in future provide to its member organisations and to information on field security and personal safety that may be distributed to members. At present, ACFOA does not provide training in field security to member organisations although a short course was offered in the late 1990s. A spokesman explained that ACFOA does not have a policy on the security of aid workers in the field but would be responsive to member organisation demand for the provision of training.

The potential for volunteers from small NGOs running into trouble and presenting the Australian government and aid industry with a major problem remains largely unexplored.

Monitoring brings complications

Monitoring political, social, economic and environmental change is part of the work of NGOs because it allows them to do their job effectively.

NGOs need to know:

- how safe it is to deploy staff in the field
- whether their program is likely to be affected by civil unrest, military conflict or other change
- the attitude that the Australian public and government will take to their work with communities in conflict or change.

To make judgements about the safety of personnel it is necessary to collect information. This information might include information about military deployments in a country and other sensitive information.

Yet, the kind of information that aid agencies might gather is the same as that collected by journalists and intelligence analysts in countries in conflict. The similarities were noted by veteran journalist Phillip Knightly:

...the dividing line between information gathered by a correspondent and that gathered by a spy is often very finely drawn.

(*The First Casualty*; 1975; Andre Deutsch, London).

Perhaps one reason why media workers get away with collecting information and the CARE workers did not is that both sides in a conflict use news as a source of intelligence.

Confirming suspicions

An incident of an aid worker gathering information of value to intelligence analysts came to public attention in Australia in 1999 with the publication of Lansell Tauvedin's book *East Timor - Too Little Too Late* (Duffy & Snellgrove, Sydney).

Tauvedin, working for a private company contracted to carry out development work funded by AusAID, set up an East Timor NGO, Bia Hula (representatives of which visited the APACE office in 1988 to sound out the agency on cooperation).

In his book, Tauvedin outlined his dilemma:

I was sent to East Timor to run an aid project and had a contract which obliged me not to become involved in politics.

At the same time, before I even arrived in East Timor I was asked by the political branch of the Department of Foreign Affairs and Trade in Canberra and Jakarta to provide reports on what I saw in East Timor.

...I had been asked to provide information and commentary by AusAID and embassy officials in Canberra and Jakarta.

Tauvedin's revelations gained the attention of Australia's national media but were denied by the Australian government, which attempted to discredit him. Yet his experience might not be unique. Writing in *Australian Studies in Journalism 9:2000*, Australian television journalist Nigel McCarthy, then based in Jakarta, wrote that:

Several other reports covering aid agencies gathering, or being approached to gather, intelligence information. *The Australian* on February 4, 2000 followed SBS *World News* in reporting... the chief executive of the Fred Hollows Foundation, Mike Lynskey, that the aid agency had been approached to gather information for unidentified government agencies...He said the approach had been rejected...

The whole area of information collection by aid and intelligence agencies has become muddled with the growing use by intelligence agencies of publicly-accessible sources of information. Known as 'open source intelligence' (to differentiate it from intelligence obtained through clandestine sources), it consists of the interpretation of media reports, the work of researchers and academics and that of other experts to produce analyses of a place or situation. While media reports have long been used for this purpose, the publicly available reports of aid workers are increasingly likely to find their way into the mix.

Another reason why developing country governments might take a hostile view of aid workers is that they may be seen to be 'close' to particular social, political or ethnic groups or running their own political agenda. This can annoy not only governments but economically, religiously and politically powerful people, as the burning of a car containing Christian missionaries, including Australians, in India a few years ago showed. The view is fed by the human rights campaigning of some NGOs and their outspokenness on issues.

This was also the theme of an article by *Sydney Morning Herald* columnist, Miranda Divine (SMH 24.10.02), who quoted comments from the influential Melbourne-based conservative thinktank, the Institute of Public Affairs:

Much well-meaning meddling in Indonesia's affairs is conducted by non-government organisations (NGOs) funded by the Australian taxpayer...Australia's relations with Indonesia "are being severely undermined by [Australian] government-funded NGOs acting as supporters of independence movements", IPA research fellow Don D'Cruz wrote last month in the IPA magazine, *Review*. D'Cruz writes at length about one NGO, Union Aid Abroad –also known as APHEDA (Australian People for Health Education and Development Abroad)–which cites in its 2001 annual report "campaigns in support of independence in West Papua, Palestine and Western Sahara".

The IPA also applies the blowtorch to another taxpayer-funded NGO, Australian Volunteers International (AVI), the activities of at least one of whose members were revealed this year on ABC-TV's *The Australian Story*, in an interview with Kirsty Sword, the wife of East Timor president Xanana Gusmao. Sword told of how, as an aid worker for AVI, she spied,

smuggled documents and laundered money for Gusmao's rebels during Indonesian rule of East Timor.

NGOs such as Oxfam Community Aid Abroad (\$5.3 million from AusAid in 2001) have been campaigning against Australian mining firms in Indonesia as well as the footwear firm Nike for running "sweatshops".

Australian Volunteers International chief executive officer, Dimitry Fifer, responded to the *Herald* accusing Divine of making " ...false accusations... staff and volunteers commit to a code of conduct obliging them to act ethically and comply with the laws of the country in which they work". AusAID director-general, Bruce Davis, also responded, accusing Divine of showing "... a lack of understanding about how aid is delivered".

NGO staff might be familiar with such accusations but the Australian public is not. Divine's article reminds those in the aid industry that their work comes with a potentially-controversial political aspect of interest to influential lobbyists which, if it furthers their agendas, could bring considerable pressure both through the media and behind the scenes to effect a change in the relationship of the Australian government to aid NGOs.

2. The future of funding

Just as the changing political and geomilitary situation is affecting aid work, so are inflows of private capital affecting the structure of the aid industry.

The increased global flows of capital are part of what English organisational analyst and author, Charles Handy, sees as a 'discontinuity'—a marked break with the past. Handy says that the present discontinuity is the most profound since the Industrial Revolution. And, like that earlier discontinuity, the world that will emerge from it will be substantially different.

The discontinuity described by Handy includes economic change, and there can be no better indicator of that change than the increasing value of aid projects flowing through the coffers of private business.

The money flows of private, transnational corporations now dwarf those of official aid. At present, estimates put the value of international development investment by corporations at around six times that of the official aid programs.

According to the US-based World Watch Institute:

North-South transfers of private money have increased more than fivefold over the last several years, rising from US\$44 billion in 1990 to US\$234 billion in 1996, according to preliminary estimates by the World Bank.

Yet while private money has been flowing into the developing world at a record rate, public money has been drying up as developed countries attempt to trim budget deficits by paring down their foreign aid programs. Overall levels of development aid declined by nearly a quarter between 1995 and 1996 alone. As a result of these two trends, private finance now dominates the development ledger.

At the same time, the official aid budgets of OECD countries have followed a declining trend over the past decade. (*World Watch, Vol 10, no 3, 1997*).

This process is well established in Australia, where, according to a report by Matt Wade in the *Sydney Morning Herald* (March 19, 2002):

Billionaire Kerry Packer has become a significant player in the Commonwealth's \$1.76 billion overseas aid program through a company called GRM International.... owned by Consolidated Pastoral Company... (which) had contracts to implement Australian aid projects worth more than \$142 million in 2000-2001.

AusAID conducts most of its international development assistance through specialised businesses... it dishes out more than 1000 aid contracts to Australian firms each year and at any one time has about 1800 contracts worth about \$2.5 million in operation.

...AusAID figures... showed a Melbourne-based company called ACIL Australia was the largest government contractor, with 27 projects totalling \$354 million.

The article went on to describe how AusAID has become the third largest government purchaser of external services, a development which has spawned a "unique aid management business". Wade quoted Aidwatch (an NGO that monitors Australian aid) as claiming an estimated 71% of aid projects go through the private sector, with 20% going through international institutions such as the Asian Development Bank and the World Bank, while:

...in contrast, about 100 voluntary organisations like World Vision and Oxfam/ Community Aid Abroad will compete for less than \$100 million of official aid project money this year.

In the same article, Aidwatch was quoted as saying that more funds should be channelled through Australian NGOs because they have:

... a genuine link with the public and, as a group, received almost \$300 million in donations last year, up about 6.5 percent.

Graham Tucker, executive director of the Australian Council for Overseas Aid (the aid industry representative body), promoted the role of NGOs when he was quoted as saying that NGOs have "great credibility" in the Australian community and that they have the ability to reach the poor in developing countries.

Only a few years before this, the Australian government had signalled the possibility of decreasing federal funding for the work of NGOs by raising the idea that the community and welfare sector—and by implication NGOs— should seek corporate sponsorship for their programs.

NGOs accepted that there might be some advantages in this, but working against it would be the mindset and frame of reference of corporations which is a world apart from that of small NGOs working with marginalised people at the grassroots level.

It is the insecurity of corporate funding and the fear of influence and pressure by business that is feared by some of the NGO leadership. They know that corporate sponsorship can suddenly dry up and threaten programs.

New aid agendas

The collapse of unitary, multicultural states such as the Soviet Union and Yugoslavia, incidences of natural disaster leading to drought, food shortage and population displacement and the increase in refugee flows both within countries and across borders has created the situation in which aid funding is increasingly directed to short-term humanitarian response than to long-term development.

This became a trend during the 1990s. It started to build with the Eritrean drought and humanitarian crisis in the 1980s and, after the collapse of the Soviet bloc, led to fears that aid funds would be shifted from developing countries to Eastern Europe.

Although the worst of the fears have not been realised, and with the aid budgets of Western nations growing little or not at all, the changing world situation has seen a more or less fixed aid budget spread thinner.

Development assistance NGOs support the provision of emergency aid and agree that it helps solve the problems of the present, but they say that it does little to prevent the recurrence of those same problems in future.

Politicisation

The linking of development aid and geopolitical agendas is nothing new. Aid has always been more than the altruistic transfer of funds and resources from the more to the less affluent countries. It has been used as a means of applying political pressure to nation states and to spread Western political and economic agendas.

During the Cold War overseas development assistance (ODA) fulfilled a further purpose—that of improving the living standards of developing country populations to persuade them to forego the path of revolutionary communism with its promise of national sovereignty and enough to eat.

Aid is now being used to further the agenda of governments of nation states:

- in 2001, Japan unashamedly admitted to the politicisation of aid by using it to buy the votes of International Whaling Commission small island nation members to bolster its position at Commission deliberations
- in the same year, the US tied aid funds to changes to Afghanistani policy and threatened the continuance of funds to developing country organisations providing the option of abortion in their family planning packages.

A role for microcredit?

A more commercial approach to aid provision would see loans made to developing world communities to enable them to purchase inputs for the aid process, including overseas advisers.

Such a move could be promoted by government as an empowerment of communities and an enhancement of local management and decision making. The idea was raised informally as a means of APACE supplying micro-hydroelectric turbines to Solomon Island villages but was argued against by the organisation's executive director who pointed out the difficulty of acting on delinquent loans.

A model for this approach was the 1990s attempt by a transnational seed company in arranging with microcredit agencies in developing countries the supply of loans for the purchase by farmers of the genetically modified seedstock owned by the transnationals. When Bangladesh's Grameen Bank joined the Monsanto corporation in the scheme, controversy followed, especially from Grameen supporters in the West. The move met with international controversy, but the microcredit model as a means of purchasing aid services might not be so vigorously resisted in future if aid funds from the modern economies fail to match a growing need in developing countries.

New limits on aid spending?

Government responsibility for the provision of aid is widely accepted in the OECD countries (Organisation for Economic Cooperation and Development—an association of wealthier nations).

The size of a nation's aid spending is influenced by factors such as the state of the national economy, comparative aid spending by other OECD countries, the mood of the public, income levels and government priorities. The size of the aid contribution of OECD countries has grown little over the past decade.

A potential factor that could in future limit the size of national aid budgets may be the trends in wealth distribution within OECD countries. There has been a tendency among aid agencies to downplay this possibility and kill it off before it gains currency with the public. NGO concern is based partly on the fact that, although it is still realistic to divide the world into 'affluent' and non-affluent' nations, the division has started to blur with the emergence of increased poverty in the affluent nations and the development of pockets of wealth and a growing middle class in developing countries.

In OECD countries, a sizeable population known as the 'working poor' has emerged—employed people remunerated at too low a rate to enable them to lift their quality of life. Unlike the unemployed, they do not necessarily qualify for assistance from government welfare programs. A sizeable portion of the more than 25% of Australia's working population employed on a casual basis could be classified in this way.

If the trend towards greater polarisation of wealth and increasing poverty continues in the developed nations, there is a possibility that

pressure for a diversion of part of the overseas aid budget to the relief of national poverty may become a political issue. There is already a low level of public sentiment in support of this but it has failed to attract substantial political support. And although there is no sign of it surfacing in public discourse at present, whether it eventually does so will depend on perceptions of the extent of poverty among the general public and on the capacity of minority political parties to leverage poverty as a vote winner.

So-called 'donor fatigue' is another potential limiting factor on the size of aid budgets. The notion emerges in public discussion from time to time and is based on the belief that people will grow tired of voluntarily donating to NGO programs because they see little return on their donation and because the growing number of people in need creates the impression that aid is a hopeless task. Donor fatigue is also said to be a factor in charity collections in Australia.

There is no doubt that there is growing competition for the public donation—the 'goodwill dollar'—as aid and domestic welfare charities use slick public relations techniques to promote their work and attract funds. The concern among aid professionals is that the pool of potential donations is limited and that fundraising from the public will produce diminishing returns.

In Australia, it has been the big organisations such as World Vision and Care, with their professional fundraising capacity and their sometimes tear-jerker television and print media advertising that dominate appeals for funds. Community Aid Abroad/ Oxfam enjoys some success in public fundraising, but smaller agencies such as APACE have merely looked on as the big agencies have siphoned off the goodwill dollar.

During the ascendancy of the then One Nation Party leader Pauline Hanson in the 1990s, ACFOA and AusAID commissioned a national survey on public attitudes to aid, presumably as a means of blunting aid spending as an instrument of use to Hanson. The survey disclosed that support was more or less stable. Then, in 2001, a Newspoll survey found continuing support for aid with the *Sydney Morning Herald* quoting a figure of 85% in support.

Assuming that these figures are correct, there is little support at present for donor fatigue to threaten a diversion of aid funds to needy people within Australia.

3. A region in change

Australia remained a Eurocentric culture until national security was highlighted as a big issue with the onset of the Second World War. That brought home to Australians their geographic and cultural isolation from Europe and their proximity to Asia and the Pacific.

The fear of earlier generations of Australians had been that Asia, with its huge population, would overwhelm Australia. This led to the White Australia Policy which officially ended with the ascendancy of the Whitlam Labour government in the 1970s. That fear played a role in public and government attitudes to the postwar decolonisation process. This included concern about the spread of communist states—the 'Domino Theory' popularised during the Cold War— and about the non-aligned block of developing countries which came into existence after the Bandung conference in Indonesia as an alternative to Cold War polarisation. A result was the involvement in the 1960s of Australian military personnel in low intensity warfare against Indonesian forces in Malayan territory.

The ending of the war in Vietnam can be seen as marking the end of a period characterised by the fear of Asia. With the final pull-out of Australian troops in 1972, the path was cleared for a reappraisal of Australia's role in the region. Throughout the 1990s, Australia's trade and the aid budget have reflected the increasing awareness of South East Asia and the Pacific by successive governments and the public.

After the October 12, 2002, bombings in Bali in which over 80 Australians died, interest in the region has taken a different tack with concern that Indonesia and Pacific island states could host terrorist organisations that might target Australia.

The country's role as aid provider to the Asia-Pacific region has seen funding for the reconstruction of:

- Bougainville, where civil war with PNG and a crippling PNG-imposed blockade led to widespread deprivation and, in some cases, to a revival of traditional practices and knowledge
- East Timor, after the destruction by the Indonesian military trained-and-led militias following the vote for independence.

4. The changing situation of Australian NGOs

The years leading to the turn of the century were a time of uncertainty for Australian NGO's.

Until the 1970s it was the churches and government which delivered most overseas aid. Then, along came the small, secular, non-government organisations like APACE. They flourished through the 1980s and 1990s by focusing on particular areas of specialist, technical expertise and by working at the community level.

In the mid-1990s, Australia saw the transition from the Labour government of Paul Keating to the Coalition government of John Howard. Alexander Downer was appointed Foreign Minister. The leadership of Australian NGO's reacted with apprehension and a wait-and-see attitude that seemed appropriate in the atmosphere of uncertainty that accompanied the rise to political power of the Coalition.

That uncertainty would soon bring changes in the relationship of government to NGOs, but pressures were already being felt. APACE President, Dr Paul Bryce, commented on them in the organisation's 1995-1996 annual report:

It is a source of some amazement to me that the current ubiquitous drive in Australia towards efficiency and accountability can continue to add layers of bureaucratic burdens upon our 'industry' of community development assistance in ways that are simply not comprehended nor perhaps appreciated by rational decision-makers from afar.

This year saw immense amounts of time spent in response to government reviews and audits of one sort or another.

APACE 'enjoyed' more attention than most overseas aid organisations in this respect perhaps because it is relatively small, unusual in its approach as an implementing agency rather than as a donor agency and 'interesting' for its technology transfer character.

In recent times these burdens have included responding to government policies that will effectively restrict APACE's ability to function effectively. The NGO Environment Initiative, which has partially funded three of our more effective projects, has been abolished apparently for bureaucratic efficiency reasons

and the sector of NGO activities that may be recognised by government is to be specifically restricted.

Although there was a 'victim of government' mentality among the APACE leadership, it is fair to say that apprehension over possible government moves likely to affect NGOs was held by most, if not all, of the country's smaller agencies at the time.

Fear, uncertainty and the SNSN

The basis of NGO fears, especially those of the smaller NGOs, was the perceived ambivalence of Foreign Minister Alexander Downer to the their sector.

During the Howard government's first term there was a belief among NGO leadership that the foreign minister wanted to reduce the number of NGOs receiving AusAID funding on the grounds that servicing so many NGOs was inefficient. Far better, the reasoning went, to service fewer NGOs, perhaps less than half the number existing at the time.

Such fears were prevalent in APACE as they were among other small NGOs and were voiced at meetings of the informal Sydney group, the Sydney NGO Support Network (SNSN). Made up of the smaller secular and church agencies based in the city, the network met variously at the APACE office at the University of Technology, the Australian Council of Churches building or the World Wildlife Fund. Its purpose was to offer informal support to members. No minutes or records of meetings were kept so participants would feel free to discuss issues and difficulties. A particular focus was discussion about jumping the hurdle of the AusAID accreditation program.

Previously named the Small NGO Support Network. The SNSN—the idea for which had existed for some time among the APACE leadership—was brought into existence thanks to the initiative of APACE and a small NGO based on Sydney's northern beaches, OzGreen.

SNSN participants were aware that ACFOA (the Australian Council for Overseas Aid, the country's peak NGO representative body) would be concerned at the emergence of the new group and would be likely to see it as a competitor. Efforts were made to reassure ACFOA that rivalry was not on the agenda and that the smaller NGOs would benefit by talking informally. This belief was correct. Unfortunately, the well-attended meetings became

less frequent and the fate of the SNSN is unknown following the closure of APACE in 2002.

Accrediting NGOs or getting rid of them?

The accreditation of NGOs with AusAID, previously optional before the election of the Howard government, became compulsory after the election when all NGOs applying for AusAID funds were to be assessed.

Tests carried out by AusAID staff and its consultants determined the capacity of NGOs to reliably manage aid funds and maintain accountability. For those passing the assessment there was a substantially reduced reporting regime and more discretion in the use of funds.

Among the smaller NGOs there were fears that accreditation was a back-door attempt to reduce their number. This appeared to be borne out as several fell by the wayside, electing to forego accreditation because they did not have the resources to achieve the standards demanded or to prepare for the assessment.

For a number determined to make the grade, however, frenzied activity to improve the administrative and financial practices saw a surprising number jump the government hoop to full or partial accreditation status. For one or two at least, this had more than a little to do with a 'smoke and mirrors' effort by staff and management.

Successful response

APACE had been planning to take up the pre-election option of applying for AusAID accreditation and decided to proceed after the election. Now, a period of intense preparation started. A thick volume of documentation was prepared to get the agency through the process.

Following a full-day visit by the assessors and an audit of the agency's financial system, APACE received the good news that it was the first agency to pass under the new rules. The agency's future, at least until accreditation had to be reassessed in 2003, was secure.

Small agency disadvantage

Accreditation was a priority suddenly thrust onto the agendas of NGOs, but longer running was the belief of an imbalance of influence between the small NGOs and the large, Melbourne-based agencies. This, the smaller agencies believed, put them at a disadvantage.

The belief was certainly prevalent among the small Sydney NGOs, most of which were church-based or provided specialist technical assistance. They saw the larger agencies, which received AusAID funds many times the value of what they received, enjoying better access to government and having more influence in ACFOA.

The small agencies also felt at a disadvantage in their ability to raise funds from the public. They could not compete with the slick advertising of the large agencies such as World Vision and Care Australia. The small agencies lacked the funds needed to raise money from the public and did not have access to the professional public relations services used by the large agencies. With the talk at the time of increased self-funding, they were understandably concerned. This perception explains, in part, the setting up of the SNSN.

Responding to change—aid as business?

In the half century of its existence, overseas development aid has been the main avenue for wealth redistribution from the richer to poorer countries.

This changed with the greater involvement of business at the same time that NGOs began to express concerns that government might expect them to become increasingly self-funding. APACE had always had to raise funds for its Australian operations because AusAID funding was tied to particular projects and only a small portion was devoted to project costs in Australia. Fortunately, the organisation had access to discretionary funding although, by the late 1990s, expenses had started to draw down the account.

It was then that NGO staff began to discuss the viability of their agencies becoming private development organisations and selling themselves as consultancies. This was discussed informally at APACE but agency staff knew that the organisation's structure was inappropriate for such a role. Like most other smaller agencies, there was little expertise in APACE to support the necessary business model although a number of consultancies

had been undertaken by APACE president, Dr Paul Bryce, then a lecturer in a University of Technology school of engineering.

Becoming commercially-based consultancies would have been a daring leap for small NGOs and would have involved the adoption of a commercial model of operation largely alien to their working style. Such a move had the potential to force profound organisational change. Gone would be the sometimes haphazard management practices of small NGOs, to be replaced by a more businesslike approach as the need for profit became perhaps as important a consideration as service delivery.

Fear over possible federal government changes to aid funding stimulated thinking among small agency staff in the late-1990s. At meetings of the SNSN the idea of joint ventures between small NGOs was raised but failed to eventuate. But joint ventures would have made sense. They would have utilised the complementary skills of the different agencies and, potentially, could have produced better project outcomes.

When the idea was current in the late-1990s, APACE and OzGreen appointed a member to each other's management committee as a prelude to joint ventures. This move was made possible because the leadership of both NGOs had enjoyed personal friendships for some years. Only one joint project in India, where OzGreen was already working, was discussed as a joint venture. Nothing further came of the idea.

5. APACE—origin and capacity

Limited organisational capacity has presented the KGP with a continual challenge in working with rural communities facing changing soil fertility, land access and garden productivity.

'Capacity' is a sometimes elusive quality made up of the synergistic effects of financial and organisational backing, staff skills and motivation, partner confidence and support. When agency management ask themselves whether the organisation has the capacity to carry out its planned activities and achieve its objectives, and when the answer is 'no', then both project objectives and activities may have to be modified so that they become achievable within the organisation's limitations. Alternatively, the agency's capacity may be increased.

The building of NGO capacity in developing countries has been a major focus of the development process over the past decade with many projects now focused solely on building capacity. The hope is that with capacity improved, the organisation can be more successful in its fieldwork.

Writing in *The Development of Capacity* (1999; Development Dossiers, UN Non-Government Liaison Service), Allan Kaplan identifies a number of elements which:

...must be present and coherent for an organisation to be said to have capacity or to be effective:

conceptual framework—which reflects the organisation's understanding of the world

organisational attitude—which brings confidence to act in and on the world in a way the organisation believes to be effective and likely to have an impact and an acceptance of external physical and social conditions

vision and strategy—a sense of purpose and will

structures and practices—within the organisation to support its vision and strategy

individual skills, abilities, competencies, material resources—sufficient to support its work.

Kaplan goes on to say that:

...it is the less tangible, more invisible aspects of organisational life which largely determine organisational functioning, yet it is on the more tangible, material aspects that most organisations focus... redesigning structures, building skills or securing resources are secondary to conceptual clarity, focused vision, coherent strategy and enabling culture.

A 1999 analysis of the strengths, weaknesses, opportunities and threats (SWOT analysis) of the Kastom Garden Program disclosed that organisational capacity—Kaplan's 'structures and practices' and 'material resources'—were the main limiting factors.

Also affecting capacity was the relationship between the Solomon Island-based KGP and Sydney-based APACE, explored later in this book. Suffice to say that there were problems in communication between the offices and, in Sydney, in understanding the priorities of the Solomon Island staff.

Alternative development strategies

APACE, like the successful UK-based NGO the Intermediate Technology Development Group, was a product of an alternative development paradigm that emerged in the 1970s. The ideology behind that paradigm explains much about APACE's values, mindset and approach to development.

This new way of thinking about development came from an English economist, EF Schumacher, who articulated it in his now-classic book *Small is Beautiful—A Study of Economics as if People Mattered* (1974; Abacus Books, London; reprinted several times).

Schumacher's book gave birth to the idea of 'intermediate' or 'appropriate' technology. This stipulated that the best technology was that which was appropriate to the people who would use it. Characteristically, it would be small scale (not necessarily always), manageable through the use of locally available skills and resources and affordable to its users in terms of introduction and maintenance.

This notion of technology did not discard the new in favour of the old or traditional. Instead, it postulated that a technology intermediate between modern hi-tech and traditional would frequently be the most appropriate. Such a technology would be, perhaps, an improvement to a traditional technology—a better, more effective, more efficient way of doing things.

For a generation raised in the economic boom times following World War Two and which was open to social and political change following the intellectual and social turmoil of the late 1960s and early 1970s, the idea of intermediate technology was one whose time had come. The paradigm challenged the image of the large scale,

industrial-based model of development which emerged in the years following the war.

Initially, intermediate technology was thought of as an approach to human-scale development in the affluent world. Proponents started to experiment with the technologies of the preindustrial past and to integrate them with new ideas. Fuelled by the criticism of conventional, large-scale aid that was then starting to emerge among development professionals, the focus shifted to developing countries as the technologies in use there, particularly the traditional technologies.

The small NGOs formed to foster intermediate technology adopted an outlook of making do with few resources—always a positive thing in development work—and, characteristically, were secular, a marked change from the larger, church-based organisations.

APACE saw micro-hydroelectric turbines as an appropriate technology with the potential to bring a degree of modernisation to developing country rural communities in a form that would make possible small, village-based industries and reduce the drift of population to the city. The agency's program of village micro-hydro electrification started in the 1980s.

The KGP, which started after APACE had passed its fifteenth birthday as an aid organisation, continued the tradition of intermediate technology. The projects of the KGP have been the most heavily monitored of any APACE work and have been said by APACE staff not working directly on the agriculture program as the most successful of the agency's activities.

As one of the NGOs strongly influenced by intermediate technology, the experience of APACE was summed up in the book *Replanting the Banana Tree* by APACE founder, Dr Robert Waddell.



The interior of the main islands in the Solomons archipelago consist of ridged, rugged country covered in tropical rainforest. Once, when intertribal warfare was common, most villages were built in the interior. Now, the majority of the population occupies the sometimes narrow coastal plain. Coastal villagers use the slopes adjacent to the villages for bush gardening.

An influential concept

The intermediate technology concept continued to evolve over the years as NGOs using it established a successful track record.

Directly or indirectly, the philosophy of intermediate technology has influenced development thinkers and the ideas which constitute it—small scale, local solutions to local problems, development of local economies and livelihoods, the use of local resources and knowledge—have today entered the development orthodoxy. Although criticised by some development professionals, they have been shown to offer workable solutions, especially where small NGOs work at the community level with few financial resources.

The necessity of change

In meeting the challenges of population growth and reduced land and resource availability, societies are faced with a situation analogous to meeting a fork in the road. For some Solomon Island communities, the fork in the road is now clearly visible.

The road represents the ways in which things have been done before... the stock answers, the existing technologies. The fork represents the point at which the society confronts the future... the decision point emerging from the accumulated pressures of new challenges. It is here, at this point, the society must make a decision as to which direction it takes.

From the fork, one road follows the business-as-usual track. This road is dominated by the forces of tradition and established ways which are persisted with although today's challenges are new. For societies challenged by rising population numbers and falling food supply, this road leads to lower farm productivity, land degradation, food shortage, greater reliance on aid and social dislocation.

The other road leads to food security, increasing local self-reliance, improvement of agricultural soils and the ability to support a larger number of people on the same area of land. The key discoveries on this road are new approaches, new technologies and techniques capable of meeting the new challenges.

The role of the KGP has been to point down this alternative road and to provide rural communities with the agricultural knowledge to move confidently along it. Soil conservation and

improvement, the control of insect pests through integrated pest management and other approaches form the techniques of this approach to ecological and social sustainability and food security.

Further reading:

The Development of Capacity; 1999, Kaplan A; UN Non-Government Liaison Service, Switzerland.

The Empty Raincoat; 1995, Handy C; Arrow Books, UK.

Two Ears of Corn—A Guide to People-Centred Agricultural Improvement Bunch, Roland; 1982; World Neighbours, USA.

Small is Beautiful—A Study of Economics as if People Mattered; Schumacher F, 1974: Abacus Books, London.

6. The Solomon Islands...

The challenge of coping with demographic change

Subsistence food gardening remains an important activity for non-urbanised populations throughout the Pacific. An estimated 80% to 85% of Solomon Islanders rely on the subsistence economy for their sustenance.

The country's 3.6% per annum population growth rate, added to recent cutbacks in public service employment and the impact of the internal refugee crisis of 1999-2000, means that a larger number of people will have to resolve the dilemma of attraction to the formal, largely urban economy with the necessity of living as part of the rural subsistence sector.

The year-2000 refugee flow to Malaita, people escaping the conflict on Guadalcanal, reversed the drift to the city, at last temporarily. The population of rural villages on Malaita, in some cases, were reported to have doubled. In a subsistence economy, more land will have to be cleared to produce the food these refugees need.

In comparison to the large number of rural residents, the urban sector is comparatively small.

Prior to the coup of 2000 and the consequent financial disintegration of the Solomon Islands,

the economy was primarily agricultural. The small manufacturing sector was based on the processing of primary commodities such as copra (which brought income to village copra producers), palm oil (produced on plantations for the most part owned by foreign companies) and fish (the fish canning and export industry—Solomon Taiyo—closed during the civil unrest).

The small tertiary sector—retailing, finance and civil administration—is focused largely in Honiara.

Tourism is centred mainly in Honiara, Munda and the island of Gizo in the Western Province, a scuba diving venue. Like the rest of the economy, however, earnings from tourism nose dived following the coup.

Inter-island transport in the Solomons is comparatively expensive with the many islands being linked by a mixed passenger/ cargo shipping service and daily Solomons Airlines services using small, short take-off and landing aircraft. Many of these aircraft were reported to be out of service by mid-2002 due to the lack of funds to maintain them.

Air transport to more remote airstrips is provided by a small carrier with links to the Seventh Day Adventist church. One traveller described how he experienced a sense of insecurity when a pilot insisted on offering prayers immediately before take off.

Food from the forest— the swidden system

First, the forest was cleared. It was mainly men's work to fell the trees and fire the vegetation that

produced a layer of nutritious, mineral rich ash to fertilise the food crops sown by the women.

In the tropics, nutrients are stored primarily in plant material—the biomass of the forest—rather than in the soil as in temperate climates. It has been estimated that in the tropics up to 80% of all nutrients are stored in this way. The burning of cleared vegetation is a way by which subsistence farmers make these nutrients available to their crops.

The nutrient store in the soil is consumed after a few years of cropping and crop productivity starts to decline. Weeds—including pioneer plants—move into the bush garden to colonise the clearings. This is how the forest returns. The combination of declining productivity and competition from tough weeds makes farming the bush garden increasingly difficult. After a few years—the actual period varies according to local conditions—the gardeners move on to clear another area of forest, abandoning their bush garden to the encroaching vegetation.

This cycle of swidden, or slash and burn farming—clearing, burning, farming and abandonment—is repeated over the years. Eventually, the farmers return to clear the original area and cultivate it again.

During the period of abandonment—the fallow period—the forest recolonises the garden, secondary growth flourishes and, if left long enough, a mature forest develops. The traditional fallow period in the Solomons is believed to be between 15 and 20 years.

According to a definition in the *Collins Dictionary of Environmental Science* (1990; Harper- Collins Publishers, UK):



Cassava, a staple crop of the root Solomon Islands, growing in a bush garden in North Malaita Province. Other root crops such as sweet potato (known locally as kumera), taro and yam are cultivated in the bush gardens. Annual and perennial vegetables such as the native slippery cabbage (*Hibiscus manihot*) are also grown.

...true shifting cultivation, otherwise known as the classical long fallow or forest fallow system, is ecologically well adapted to forested areas of low population density... A site or swidden is cleared of natural vegetation by felling and the use of fire (hence the reference to shifting cultivation as slash-and-burn agriculture). Soil disturbance is normally slight, with crops sown or planted into the warm ash. After a season or two of cropping, the site is then abandoned to regain its fertility under secondary forest regrowth...

As well as clearing the forest for swidden gardens in which to grow food, the forest has other economic values. It is a source of fuelwood, traditional medicines, foraged foods, timber and fibre used to make rope.

Food and population— a critical balance

The food supply and the ecosystem from which it is produced exist in a critical relationship in subsistence cultures. A large enough change can send repercussions through the whole system.

While population numbers were in balance with the availability of land in the traditional bush fallow rotation, and with protein derived by fishing the lagoons or hunting, the food supply, ecology and the human population remained in balance. Now, Solomon Island farmers are shortening the fallow period and in areas such as northern Malaita the pressure on the land resource is increasing as is the potential for over-exploitation of the soil.

The consequence is soil degradation — the loss of soil fertility and of the productivity of subsistence farms. Soils erode as the torrential

tropical downpours of the wet season wash them away. Soil organic matter is lost and, with only a limited tradition of restoring soil organic matter through mulching, the moisture holding capacity of the soil is reduced and the soil structure retains little of the fibrous materials which help to bind it against the erosive force of runoff.

Commercial pressures

A complicating factor in the availability of land for subsistence gardening has been the increasing competition from other landuses around villages.

Commercial logging and plantation agriculture for coconut and oil palm now occupy land which would once have been used for swidden agriculture. Frequently, this is the most productive land close to the village. For villagers, it means relocation of their subsistence agriculture to marginal land.

Spiralling downwards

Swidden agriculture continues to be ecologically viable in many parts of the Solomons.

In the more populous regions such as northern Malaita, population growth and the limited availability of land for swidden agriculture are embraced in a downward spiral with fallow periods shortened and steeper land coming under cultivation. These trends are reducing garden productivity and increasing soil degradation.

This was the agricultural situation in which the Kastom Garden Project intervened in 1995 and which the KGA is patiently working with partner village communities to address.

The bush garden has been mulched and is ready for planting. KGP trainers developed a row planting method for mulched gardening called 'tuku'.



Changing diets

The traditional Solomon Island diet is based on staple, carbohydrate-rich root crops such as taro, yam, sweet potato and cassava. It is these crops which dominate the bush gardens.

Today, the traditional staples are being challenged by imported white rice, most of which comes from farmers in Australia's Riverina region and which is marketed through trade stores under the 'Solrais' label. A smaller quantity is imported from Thailand.

Buying rice requires cash. Now that imported rice has become a staple food it is one of the ways by which even isolated rural communities interact with the cash economy.

As a consequence, the earning of income to buy rice has become a food security strategy. This is problematic, given the volatility of commodity prices and currency fluctuations.

Vegetables important for family nutrition

Annual vegetables play a valuable role in family nutrition. Indigenous leafy greens such as slippery cabbage (*Hibiscus manihot*) are supplemented by a range of exotic vegetables which have naturalised—that is, they are capable of growing and reproducing in the climatic and soil conditions of the Solomon Islands.

Many of these exotic vegetables have been present in the Solomons for some time and were introduced by traders, missionaries, development agencies, travellers and government. It is these annual vegetables that supply the bulk of the vitamins and minerals to the family diet.

To include vegetables in family meals on a regular basis requires access to a bush garden. These gardens, farmed mainly by village women, are sometimes conveniently located close to the village. Sometimes, however, they can be up to a couple of hours walk away. Distance from the village influences the use of vegetables in the family meal.

Although women may spend time walking to and from their sometimes distant bush gardens they may collect bush food and medicines and carry on discussion on the way.

Protein from fish

The main source of protein in coastal Solomon Island diets is fish caught in the lagoons and the open sea. Fishing is traditionally men's work and is frequently done from small canoes carved from logs.

Traditionally, fish is traded for barter or cash at village markets. In Honiara, there is a beachside community which specialises in fishing and which sells its produce directly to the public. In villages, fish is caught and consumed by the family.

Before the year 2000 coup and civil conflict, tuna was caught in Solomon Island waters by the joint venture Japanese-Solomon Island government company Solomon Taiyo (taiyo is the Japanese word for tuna). Canned tuna became an important part of the diet in the towns, to some extent replacing the consumption of fresh fish.

The Japanese pulled out during the conflict and by late-2001 had not returned. By that time, a small amount of canned tuna had started to appear in Honiara as local people attempted to revive the canning operation in a limited way.



Village markets are a feature of rural life. The vegetables, staple root crops and fish sold there supplements that grown in bush gardens.

Figs—which also have important cultural values for feasts and the payment of compensation—as well as chickens are a source of protein but they are eaten less frequently than fish.

Bush gardens and local markets

Subsistence bush gardens are critical to the nutritional health of Solomon Islanders. In comparison, the commercial agricultural sector is small.

Research carried out during the planning of the Kastom Garden Project disclosed that subsistence gardening constituted an estimated 16.5% of Solomon Island gross domestic product (Hibberd and Schenk 1991).

Not all food produced in the bush gardens is consumed by the families that grow it. Some of it may be traded at the village markets for cash or barter.

In Takwa village market in northern Malaita the 1997 exchange rate for a cooked reef fish wrapped in banana leaf was ten sweet potato. Trading at Takwa village market took place between villagers occupying the coastal zone—the ‘sea people’—and the ‘bush people’ from the steep hinterland. The trade was a means by which the bush people gained access to fish protein in their diets and the sea people to produce from the highlands.

Local economies important to social security

Village markets are the core venues for the exchange of goods among communities in the Solomon Islands. They provide access to the cash needed to meet expenses for cash-poor

communities and supply some of the food needed for a nutritionally balanced diet.

The focus of the KGP has been on making improvements to subsistence gardening, however some gardeners participating in the training program sell the foods they produce at village markets.

Informal sharing through the wantok system (‘wantok’ is a Solomon Islands Pijin word inferring a related person—the word means ‘one talk’ or ‘one language’) is a further means of securing food. The system is effective in distributing food and is a de-facto social security system, ensuring that all in the extended family have access to food. The wantok system is prevalent in other Melanesian countries.

New foods

Visitors to Honiara Central Market find a wide variety of vegetables and root crops on sale. Many of these, such as taro, are a traditional food of the Solomon Islands. Others are vegetables introduced since European contact. Today, new crops and imported foods are bringing change to Solomon Island diets.

The sweet potato (*Ipomoea batatas*), known locally as kumera, has a centre of diversity in South America. Just as in the PNG highlands, kumera has become a staple food of Solomon Island communities, to some extent displacing yam and taro. The cultivation of taro has also been discouraged by the taro beetle, an insect that damages the tuber, and by taro leaf blight.

Other relatively new crops include corn (*Zea* spp), tomatoes, peppers and chilli (*Solanum*



For the predominately rural populace, markets are the most accessible opportunity to earn cash.

spp)—for all of which Central and South America is the centre of diversity.

In recent years, Chinese cabbage has become a popular annual vegetable crop but is reported to be nutritionally inferior to local greens such as slippery cabbage. The Solomon Islands Planting Material Network, an NGO which works closely with the KGA and formed part of the KGP, receives frequent requests for Chinese cabbage seeds.

Changing diets—new crops

While commercial rice cultivation would have import replacement potential in the Solomons, attempts to grow it commercially have been largely unsuccessful.

On Guadalcanal, the Republic of China set up a paddy rice cultivation project but it is not known whether the farm continues in use following the conflict of 2001.

Dryland or upland rice is now being experimented with in village gardens and, in Honiara, by organic urban market gardener, Joini Tutua.

This rice does not require the paddy systems of wet rice cultivation and may prove a more suitable variety for village farmers. The small scale rice processing technologies used by Asian rice cultivators have yet to enter the Solomon Islands.



Time running out

After thousands of years during which shifting cultivation has sustained Solomon Island communities, in some areas time may be running out.

Kastom Garden Program manager, Tony Jansen, summed up the challenges facing Solomon Island subsistence communities:

Shifting cultivation is increasingly unsustainable. Land is under increasing pressure with the need to accommodate a rapidly growing population estimated to be growing at 3.6% a year (AIDAB 1991).

Comparison of aerial photographs prior to 1972 and recent satellite images shows a doubling of land under shifting cultivation during that period (Hibberd and Shenk, 1991).

Population increase is putting pressure on village lands. The result in some areas of high population is falling productivity of bush gardens, land degradation and an increasing incidence of disputes over land.

To illustrate the point, Tony quotes Lees (1991):

...it is likely that land disputes will become more common as land for garden expansion becomes increasingly in short supply, with population growth exacerbated by cash cropping and logging decreasing the amount of land suitable or available for gardening, as is already happening in north-east Guadalcanal.

Since the arrival of European influence, land settlement patterns have changed. The dispersed distribution of village communities occupying mainly hinterland areas changed with the arrival of the mission, plantation agriculture for export commodities and other economic activity in coastal areas.

Plantation cultivation of agricultural export commodities such as coconut, oil palm and cocoa has reduced the land available for subsistence food gardening.

The outcome of this process, according to information researched by Tony, is:

...a decline in food self-reliance, with many villagers now spending much of their cash income from plantations on food that was previously produced in their gardens. (Nesbit, 1984).

Bush gardens may be cleared on steeply sloping land, risking soil erosion during heavy rain.

HARBINGERS OF CHANGE IN THE SOUTH PACIFIC

The late-1990s brought political instability to parts of Melanesia and to that part of South-East Asia making up Australia's geographic neighbourhood.

Because of their suddenness, dramatic nature and unexpectedness, the events associated with political, military, ethnic and other changes have dominated news of the region for the past few years and have, to a substantial extent, pushed other critical but longer-term issues such as environmental management, the spread of AIDS, community health and food security to the margins.

Australian aid continues to address these lower-profile issues but the coincidence of events in the region with the attack around the world by militant Islamist terror teams has given a greater emphasis to changes in the region of a strategic nature. At the time of writing, Australia's security and that of its public at home and travelling or living elsewhere the region remains the primary concern of government and its advisers.

How these events and trends will affect Australia's aid program and the activities of NGOs and private development agencies working in the region is at present unclear. In Melanesia, the surge in militant, anti-Western activity evident in the Middle East, among some Islamic emigre communities in Europe and in Indonesia is absent because Melanesia is primarily Christian. Any danger to NGO, visitors and expats in Melanesia would appear to come

from the region's worsening crime and ethnic conflicts.

Following are some of the main political events that have occurred in the region in recent times and which are forcing, among the Australian public and government, a rethink of our place and role in the Asia-Pacific region.

The region

- in the 1980s and into the early 1990s, French nuclear weapons testing at Mururoa Atoll in Polynesia raised regional awareness of geopolitical issues before the testing came to an end
- in 2001, Pacific island states fearing inundation if global warming results in sea level rise criticised Australia over its failure to support the Kyoto Protocol on global warming.

East Timor

- in 1999, Australia's leading role in the multinational military force that moved into East Timor following that country's vote for independence from Indonesia led to a reassessment and refocusing of Australia's role in the region
- the intervention heightened tensions with some elements of the Indonesian leadership and continue to influence relations
- Al Qaeda leader, Osama bin Laden, cited the intervention as a factor in the anti-Western stance of militant Islam following the Bali bombings of October 2002.



The Solomon Islands Field Force—a mobile paramilitary armed with light infantry weapons—at target practice on the island of Choiseul after the Bougainville civil war spilled into the northern Solomons.

HARBINGERS OF CHANGE (continued)...

Fiji

- the late 1980s Fiji coup led by Sitivini Rabuka set the precedent for the May 2000 civilian coup and hostage crisis that was led by George Speight; this was followed by a military assumption of power, then elections and the trial of the coup leaders; in an interesting twist of fate, George Speight was elected to the Fijian parliament in the 2001 elections while defending a charge of treason for his role in the year coup attempt
- the coup stemmed from a perception of indigenous Fijians that Fiji could become dominated by Indians who had been brought into the country around the turn of the twentieth century by the British to provide labour for Fiji's sugar industry.

Bougainville

- the decade-long civil war for independence from PNG led by self-styled Supreme President of the Independent Republic of Bougainville, Francis Ona, succeeded in closing the huge Panguna mine, owned jointly by the PNG government and Conzinc Riotinto Australia

- a tentative peace agreement was reached in 2001 and a multinational peacekeeping force, including Australian troops, was put in place
- Australia came in for criticism over its supply to PNG of a number of ageing, ex-Australian Army Iriquois helicopters used against the independence forces during the war
- the conflict spilled into the northern Solomon Islands, creating fear on Choiseul island of PNG incursions.

Papua New Guinea

- in 1997 elements of the PNG army led by Brigadier Jerri Singirok revolted following the PNG government's contracting of freelance military services to South African outfit Executive Outcomes and the London-based company, Sandline International, in an attempt to break the debacle of the war in Bougainville; the incident led to political turmoil and instability in PNG
- political instability continued to rock the PNG government during the opening months of 2000, amid allegations of corruption and political misdoing



Coming soon after the coup in Fiji, the coup in the Solomon Islands was reported widely in the Australian media, and came as a surprise to students of South Pacific affairs.

HARBINGERS OF CHANGE (continued)...

- violence occurred during the 2002 national elections, particularly in the Southern Highlands, and contributed to the growing crime problem associated with the illegal drugs and weapons trade; some commentators believe that country's chronic crime problem could destabilise the government
- a mutiny by a section of the PNG army early in 2002 over the planned reduction in the size of the force was resolved more or less peacefully
- due to rampant crime, the nation's capital of Port Moresby was listed as one of the most dangerous cities in the world outside a war zone.

Papua

- the independence struggle in Papua, led by the guerilla army of the Free West Papua Movement, the OPM, continues against the Indonesians who annexed the territory almost 30 years ago
- a June 2000 conference calling for independence from Indonesia was met with a promise from the Indonesian government that independence would not be permitted
- the murder in 2001 of popular independence leader Eluay was followed by reports that thousands of members of the militant Islamic fundamentalist organisation Alaksa Jihad, implicated in violence elsewhere in Indonesia, had moved into the territory where they had the support of the Indonesian army
- the OPM's struggle gained support from Pacific island nations participating in the South Pacific Forum
- 2002 brought the ambush and killing of an Indonesian and two US teachers near the Freeport mine, an incident in which Indonesia's special forces troops, Korpussus, have been implicated
- Australia's Howard government reiterated its support for Indonesia's claim on Papua and for Indonesian policy under President Sukarnoputri, who was elected in 2001 following the turmoil around the collapse of

the Suharto dictatorship and the defeat of the president elected as a consequence of that.

Solomon Islands

- in mid-1999, civil unrest on Guadalcanal resulted in an internal refugee crisis as Malaitan settlers were forced from the island; the unrest started in 1998 and in 2000 a peace agreement was negotiated in Townsville
- the unrest surfaced again in 2000, with conflict on the streets of Honiara and the killing of around 60 people
- the unrest culminated in the May coup and the formation of a government regarded by many as corrupt; tensions remain but the internal security situation was quiet by mid-2002 although periodic killings have been reported and crime has emerged as a major problem
- in November 2002, a proposal to set up a Truth and Reconciliation Commission to deal with the aftermath of four years of ethnic violence in the Solomon Islands raised concerns that the Townsville Peace Agreement did not focus sufficiently on the impact of violence on the victims; the issue was explored in an interview by ABC Radio National's Jemima Garrett with the Solomon Islands' Christian Association's Mathew Wale.

Indonesia

- armed conflict and civil unrest on Ambon and Sulawesi was in part attributed to the involvement of Islamist fundamentalist militia Alaksa Jihad, which called for a holy war; observers alleged army support for Alaksa Jihad and that the campaign was due to forces within Indonesia seeking to destabilise the government
- the campaign for an independent Islamic state in Aceh continued
- as the US and UK prepared to take the offensive in their international war on terrorism in Afghanistan during September and October 2001, following the Al Qaeda

HARBINGERS OF CHANGE (continued)...

suicide attacks on the New York World Trade Centre and the Pentagon, the presence of pro-Tabilan Moslem demonstrations outside the US embassy in Jakarta raised fears that fundamental Islam could gain support in Indonesia; this would have the potential to destabilise the South East Asia region and have flow-on effects among the Moslem population of Malaysia and the Philippines; investigations following the Bali bombing of 2002 disclosed the existence of such support primarily in the form of the militant Jeemah Islamiah, which has been shown to have links to Al Qaeda

- the October 12 bombing of entertainment premises at Kuta Beach, Bali, resulted in the deaths of in excess of 90 (the number accounted for to date) Australians plus Indonesians, UK, European and US citizens; the incident, perpetrated by Islamists from Jeemah Islamah, which has been implicated in disturbances and violence elsewhere in the archipelago, is reshaping the attitudes of Australians to the immediate region and gave rise to proposals by the Australian Strategic Policy Institute for a reorientation of Australian policy in the region in its 2002 strategic assessment
- in December 2002, the Indonesian government and Aceh separatists agreed to a peace accord which could bring fighting in the province to an end and deliver economic benefits.

Vanuatu

- a police mutiny trial continued in Port Vila in which eight former senior police officers faced charges including incitement to mutiny, kidnapping and false imprisonment
- the case follows police arrests in August 2002 of Vanuatu's newly-appointed police commissioner, Mael Apisai, and 13 other senior public servants.

POSTSCRIPT: NOVEMBER 2002

By November 2002, the Australian government and people were well aware that they had entered a new phase in their relationship with Asia-Pacific.

The dominating theme was a declining security situation—both personal and national security—however there were lower-level concerns entertained by analysts. These include international crime, food security, public health, the quality of regional government, transnational and internal crime and economic prospects. Whether these factors will result in changes in aid delivery is uncertain as the situation is still emerging at the time of writing and its final shape is indistinct.

A number of factors highlight current Australian concerns.

A new focus on security

In late November 2002, the Australian Security Policy Institute (ASPI), an independent and highly-regarded think-tank which advises the government on policy, issued a report entitled *Beyond Bali - ASPI's Strategic Assessment 2002*.

The assessment acknowledged the potential for US-China rivalries, a crisis in the Taiwan Strait and North Korea to impact on the region. It also painted a gloomy picture of the immediate region with the Solomon Islands furthest down the road to state failure:

The continued viability of PNG, the Solomons and Vanuatu as nation states is now uncertain. Their governments are weak, transient and hard to deal with. Corruption is rife and control over territory is uncertain. Economies are stagnant and law and order is poor. Their ability to resist penetration by outsiders—whether states or non-states—is almost nil. This poses an urgent problem for Australia.

As for the Solomons:

... the collapse of effective government means that there may be no point in trying to work with the national authorities to try to address the problems on Guadalcanal.

East Timor, said the assessment, is in a “more promising position” thanks to the inflow of aid but the new state faces “daunting challenges to its viability”

ASPI believes that the ‘hands-off’ approach employed by successive Australian governments in the post-colonial period has now run its course and that a closer role is needed:

Australia can no longer avoid being drawn too closely into the management of their internal affairs. We need to look at a more active role in helping the countries get back on their feet

The 2002 Defence White Paper identified the role of the Australian Defence Forces in the region as maintaining strategic security.

Beyond Bali: ASPI's Strategic Assessment 2002;
Australian Security Policy Institute, Canberra
ACT Australia.

Aid as counter-terrorism

Following the October 12 Bali bombings in which the Islamist militant organisation Jeemah Islamiyah, reportedly an associate of Al Qaeda, has been implicated and which killed 190 people (around 90 Australian, the rest Indonesian, US, British [almost 30] and European), Foreign Minister Downer announced that Australian aid would be enlisted in the fight against terrorism and the social inequity which fuels it. This gives aid a political role analogous to what it had during the Cold War—as a bulwark against political enemies.

What the minister seemed to have in mind was targeting aid to infrastructure such as education. His thinking probably has to do with countering the influence of fundamentalist Islamic religious schools which, in the case of Pakistan, Afghanistan and Indonesia, have been shown to produce an inordinate number of students willing to engage in militant and, sometimes, terror activities.

As yet there has been no official follow-up to the minister's announcement and it remains to be seen how extensively AusAID will implement the idea.

The growing impact of HIV/AIDS

Complicating matters of drift to the cities, economic stagnation, the provision of education and health services and access to nutritious food is the growing menace that HIV/ AIDS presents to the region.

With HIV/ AIDS affecting an estimated 7.2 million people in the Asia-Pacific region (UN AIDS figure 2002), and while little is known about the incidence and rate of spread of the disease in the Solomons and other Melanesian islands, more is known about the situation in PNG. The prognosis is not good.

PNG is seen as the regional trouble spot for the spread of HIV/ AIDS in part because the country already has the highest rate of infection for sexually transmitted diseases in the region, indicating that high-risk sexual behaviour is common while public awareness and official education on HIV/ AIDS is lacking.

The US Central Intelligence Agency puts the documented number of HIV/ AIDS cases in PNG at 5400 (1999 figures) but a report by the Centre for International Economics produced for AusAID puts the number of cases as high as 15 000 out of a total population of 5 173 033. The known incidence is made up of roughly even numbers of males and females (mainly heterosexual), one-in-six PNG sex workers infected, one-in-four of the infected being described as 'housewives'—indicating that the infection is acquired outside the family then transmitted through it—an assumption supported by the fact that 8% of cases involve passage of the disease from mother to child, and the most infected age group being 15 to 34. According to a BBC report by Sydney-based correspondent Phil Mercer, HIV/ AIDS notifications in PNG are rising at the rate of 30% a year.

The age demographic is particularly alarming because this is the most productive segment of the workforce. US-based cable television news organisation, CNN, might not have been exaggerating when it reported:

PNG is on the brink of an HIV/ AIDS epidemic that could reduce the workforce by nearly 40% over the next 18 years.

That is an upper-range figure, but even if the lowest estimate of 13% infected eventuates, the impact would still be severe. In 2002, Foreign Minister Downer announced that Australia, which already underwrites PNG with \$190 million in assistance a year (one-fifth of Australia's aid budget), would set up a five-year HIV/ AIDS Support Project to provide public education, counselling, clinical services and treatment.

In a worse-case situation, the impact of an infection level at the high end of the estimate could include reduced food production and food shortages due to a reduced agricultural labour force. Much of the population outside centres like Port Moresby, Lae, Goroko, Mt Hagen and a handful of other urban locales rely on subsistence agriculture for their nourishment.

Add possible contributory influences such as another severe El Nino drought, political instability or the spread of conflict and crime in the highlands and the potential for malnutrition becomes even greater.

Combine some of these potential factors with reduced food production, the disruption of village life due to an HIV/ AIDS-influenced labour shortage and difficulties in delivering emergency food aid due to civil disturbance of warlordism and its not hard to imagine an internal refugee problem and a situation not unlike that of the 1990s in Somalia which saw armed UN and US intervention in the delivery of emergency food and a worsening of the conflict.

While this may be to imagine a worse-case scenario, this is the sort of possibility starting to exercise the minds of government advisers.

A positive sign

News from the region has not been all doom and gloom and turmoil. A positive initiative in 2002 was the signing by ten regional NGO and civil society organisations of an agreement to coordinate their activities to boost capacity building and advocacy.

Another hope is that the ASPI strategic assessment will further highlight the importance of the region to Australia and result in a more targeted form of aid that further addresses fundamental needs such as food security and community health.



Time for learning

It was the winter of 1998 and Tony was visiting Sydney when we started to think seriously about the research that would become *Blue Seas and Bush Gardens*.

We wanted it to be more than a detailed evaluation of the projects that made up the Kastom Garden Programme. What we wanted to do was to produce a publication that would interest others involved in overseas development aid in the South Pacific—and perhaps further afield—whether they were working in the field or in the offices of agencies in Sydney and Melbourne.

There were few books describing a grassroots approach to rural development in the Pacific, we knew, despite the substantial body of experience that had been accumulated by Australian NGO's in the region. What was needed was a modest research project to identify what had been learned and to put the findings in print.

To broaden its appeal, we would document our research in a more accessible format than a conventional research paper. We thought that it should read more like a conventional piece of journalism than an academic document.

Our aim was to address a number of audiences:

- the interested public
- NGO leadership and staff in Australia, the Pacific Islands and elsewhere
- researchers
- donors to development projects.

In Australia, there is an politically articulate group supportive of overseas aid in general and of the Australian government's aid program in particular. We saw *Blue Seas and Bush Gardens* as a way of reporting back to this group and of describing the limitations of small agencies operating in the field and of the benefits of working directly with local communities.

Unlike other development agencies, the KGP was not an agency funding an overseas NGO. It

worked directly with local people with the aim of, later, starting a local NGO to carry on the work. We achieved success in that aim when the new NGO, the Kastom Gaden Association, came into existence in the second half of 2001.

New direction

In 1995, agricultural development in Melanesia was new territory for the Australian NGO APACE. The agency's work over the previous 15 years had been in the design and implementation of micro-hydroelectricity projects in the Solomon Islands and, in one case, in Papua New Guinea (PNG).

APACE staff had no experience of agricultural development until Tony joined the agency. It was this lack of experience and of agricultural knowledge in general that enabled the KGP to operate in a semi-independent manner within the organisation.

From Sapa to the KGP

Tony Jansen's involvement with APACE started well before the KGP was thought of.

A young Sydney man, Tony made contact with APACE shortly before he left Australia to spend a year with a rural permaculture project in Ecuador.

Before leaving, Tony began the job of editing and illustrating the book *Sapa*, a manual on organic agriculture in the wet tropics. The book had been written by a Solomon Islands supporter of APACE, Joini Tutua, an organic market gardener in Honiara. Joini, a man with influence in the community, had assisted APACE with its micro-hydroelectric work.

Tony finished the book after he returned to Australia and the first printing went on sale in 1994. By the end of the decade it was to run to

three printings and was widely distributed in the region.

Soon, another opportunity to extend his experience in overseas development presented itself and before long Tony was on his way to the Solomons for a short term assignment — the Lalano High Altitude Farming Project. That was the start of an involvement with the Solomon Islands that was to occupy the next seven years and more of his life.

New projects

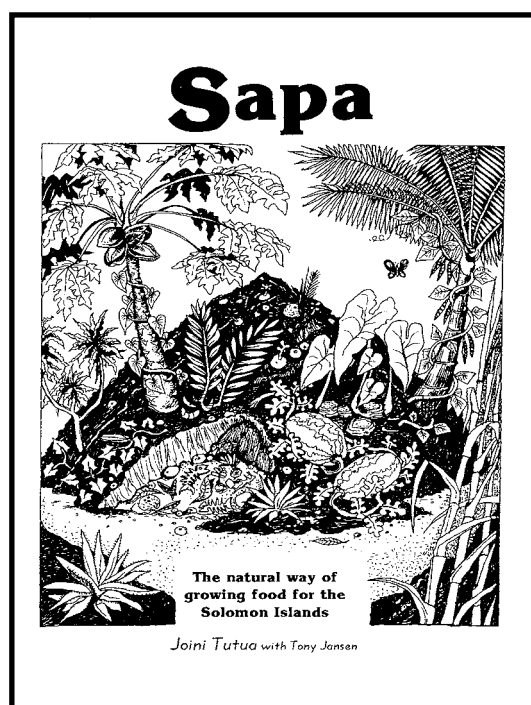
By the time we made the decision to document the history of the KGP the project had been joined by two others—the Luru Kastom Garden Project (LKGP) and the Luru (Babatana) Ethnobotanical Manual Project (LBEMP).

These projects shared many similarities and their implementation was integrated to conserve resources and use time efficiently.

By early 1999 all three projects had run for their planned period and AusAID funding had ended. The only remaining work was the job of producing the ethnobotanical manual and finding a publisher. That was to take far longer than envisioned.

The shortfall in funding following the ending of the projects presented the program with a challenge.

At the Honiara project centre frugality became the order of the day, but by that time APACE had become a full program agency with AusAID.



The new status brought a more flexible funding arrangement and soon funds were again flowing into the Kastom Garden Program.

For APACE, success in becoming a programme agency was no small achievement. It entailed a lot of preparation and a rigorous assessment by AusAID. A number of other small agencies failed in their attempt to obtain accreditation.

Finding funds

When we came together to plan our research we decided to produce the documentation in two forms:

- an assessment of the organisational learnings of the program
- a set of training manuals for use by Solomon and other Pacific island agricultural extension workers.

The training manuals, we thought, would be a useful legacy for the Kastom Garden Programme as they would make our experience available to others engaged in the training of communities to enhance their food security.

So it was that late in 1998 we nipped out the outline of the project and produced a project funding application. This was submitted to APACE's Research and Development committee, a body formalised under an agreement with Australia's national scientific research organisation, the CSIRO.

The project was given the name *Agricultural Training—a participatory toolkit for grassroots agricultural training in the Solomon Islands*. It listed four objectives:

- identification and documentation of approaches to agricultural assistance that have proven successful
- assessment of the approaches identified
- presentation of information in a form useable to other NGOs, government and agricultural extensions services and community associations in the Pacific islands
- use of the research findings to enhance the development of the Kastom Garden Programme.

The Research and Development Committee agreed to fund the project and in 1999 the research was started.

Sapa, a manual for organic food production in the Pacific wet tropics, was produced by Tony and Joini and published by APACE in 1994.

Achieving objectives informally

The first three objectives set for the project were achieved. By the time the documentation was finalised, however, the KGP had finished, APACE had made the decision to get out of agricultural development and a new Solomon Islands-based NGO, Kastom Gaden Association, had come into existence.

For programme staff, the process of identifying and assessing the information provided a rare opportunity for introspection, for taking a look at their work, their difficulties and successes.

This created an awareness of their experience which informed the planning and implementation of project activities. In that sense, the last of the objectives—the use of the research findings to enhance the performance of the KGP—was achieved in an informal sense.

That experience is now flowing into the work the Kastom Gaden Association, an organisation that is continuing the work started by the KGP in 1995.

Work starts

The collection of information in the Solomons began in 1998 when APACE executive committee member, Fiona Campbell, and I spent a month in the Solomons collecting information, monitoring the projects and training staff.

The writing up of findings started in 1999. It was not to be a speedy process due to:

- the inevitable delays in posting drafts back and forth between the Solomons and Australia

- prioritisation of the daily work of the agriculture program demanded Tony's absence from Honiara for extended periods of time
- in mid-2000, the coup in the Solomons and the associated conflict between ethnic groups on the island of Guadalcanal created more immediate priorities for staff and disrupted communications
- health problems in the family of the Sydney-based team.

By the time the documentation was in final draft form, Tony had finished his work with APACE and the organisation had withdrawn from agricultural development. Tony went on to continue his work with the new NGO, the KGA. I had left APACE and Fiona had resigned from the APACE executive committee. Both of us remained active members of the KGP support team, completing the work through our partnership, Pacific Edge Media.

The KGA inherited the momentum of the KGP and has extended its work in the Solomon Islands and, through Tony's involvement and support from Australian NGOs APHEDA (the aid arm of the Australian Council of Trade Unions) and Australian Volunteers International, into Bougainville. Staff have also participated in the South Pacific Commission's TaroGen project. In late 2001, the KGA's work was guaranteed for a further two years with a grant of funds from the European Community.



Kastom Garden Program garden with office in the background.

BLUE SEAS AND BUSH GARDENS—THE PROJECT

Purpose of project

- to enhance the capacity of the Kastom Garden Program to design and implement agricultural training programs in Melanesia
- to make the experience of the Kastom Garden team available to other NGOs, government agricultural extension agencies and community associations to enhance their work
- to present information as a number of instructional manuals in the form suitable for use by other NGOs and Pacific island government organisations.

Objectives

- identification and documentation of approaches to agricultural assistance that have proven successful
Indicator—the approaches documented in a report draft
- assessment of the approaches identified
Indicator—approaches assessed in report draft
- presentation of information in a form useable to other NGOs, government and agricultural extension services and community associations in the Pacific islands
Indicator—
phase 1 - draft report approved by KGP project team in the Solomon Islands and Australia
phase 2 - report published as instructional manuals and as a documentation of the program
- use of the research findings to enhance the development of the Kastom Garden Program as a learning organisation
Indicator—changes in organisational practice within the Kastom Garden Program.

Methodology

The project will utilise 'action learning' or 'Participatory Learning and Action' approach*.

Information gathering:

- informal interviews
- formal interviews
- participant observation
- review of relevant documentation.

Interpretation of information:

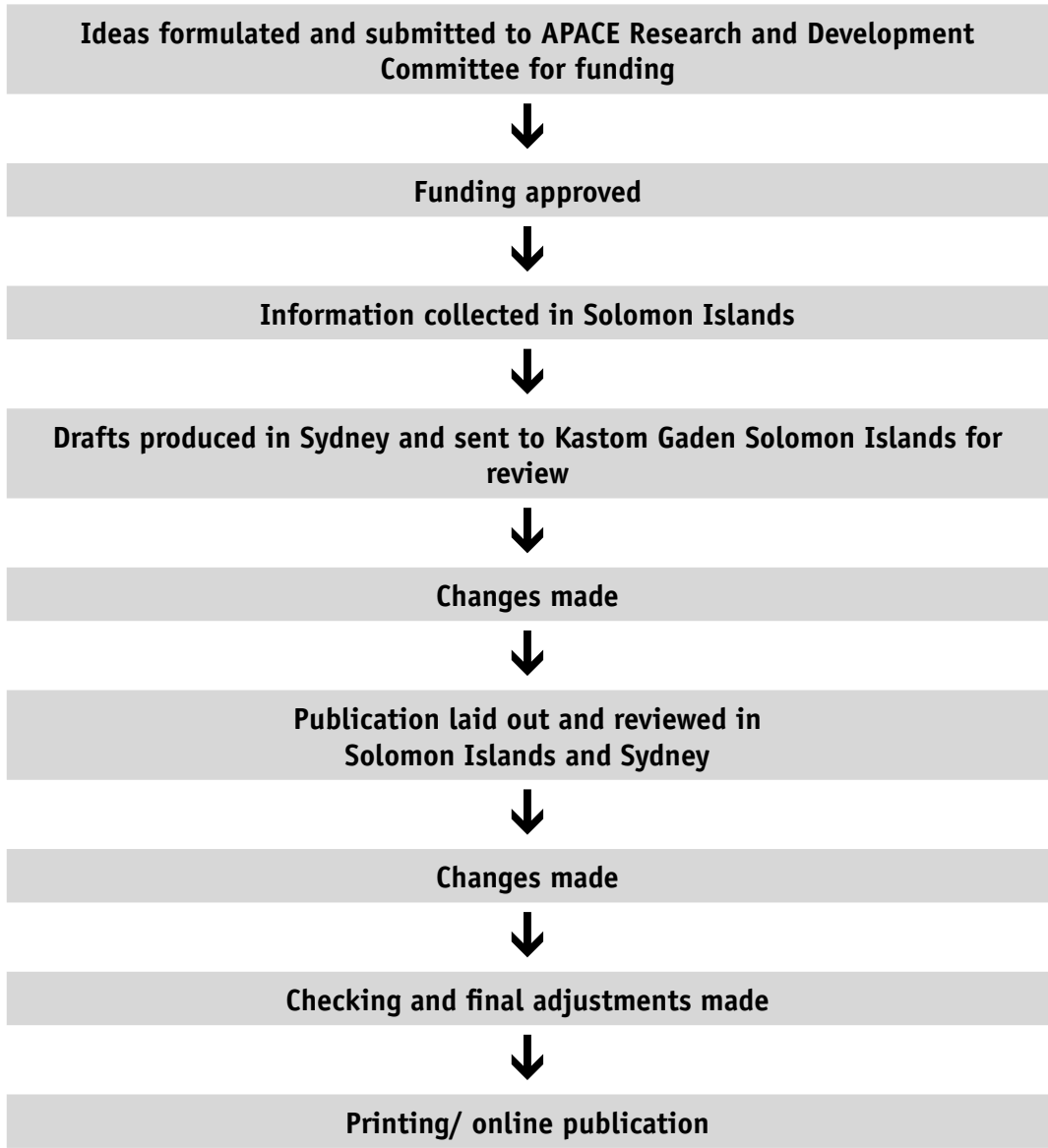
- using the indicators, review the information gathered
- formulate follow-up activities
- research existing organisational knowledge.

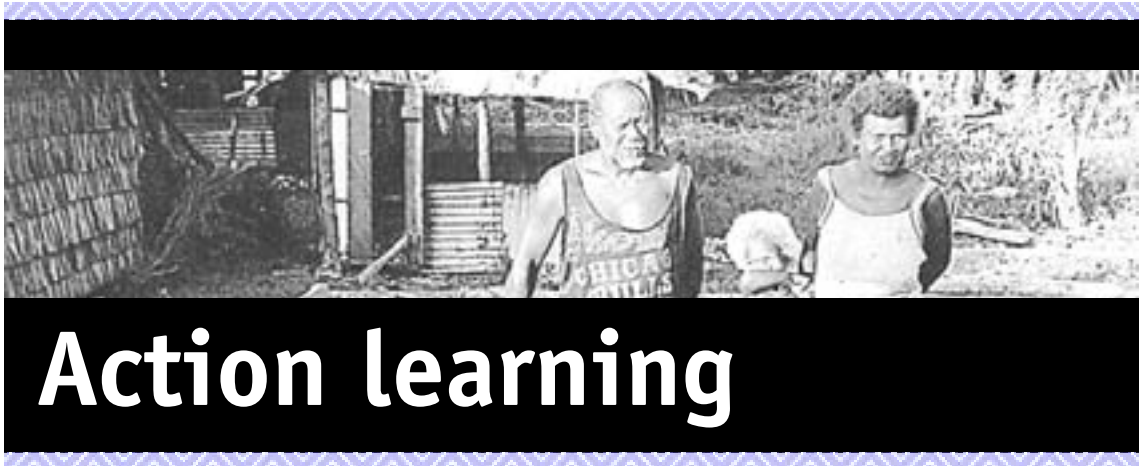
Funding sought

AU\$5130.00.

* Participatory Learning and Action — PLA — is also known as PRA — Participatory Rural Appraisal. It is closely related to the 'action learning' or 'action research' methodology. PLA grew from the earlier Rapid Rural Appraisal — RRA — a methodology that continues in use in appropriate situations.

BLUE SEAS AND BUSH GARDENS— PROJECT WORK FLOW





It has been said that the best knowledge is that which changes the behaviour of the person acquiring it.

This has been true for the staff of the Kastom Garden Program. Thanks to a process of review and monitoring, knowledge gained from our work has modified the ways by which the organisation has carried out its projects.

Much of this review and monitoring process has been informal and it has been the small size of the KGP that has made it possible. Small organisations have shorter paths between monitoring and adaptation based on what has been learned.

The relative autonomy of the KGP also contributed to its adaptability. This autonomy arose because there was a lack of agricultural training experience among APACE Sydney staff.

Organisational learning

Reflection is a rare occurrence in the life of small NGOs because of the constant pressure to get on with the job. But it is necessary if the organisation is to learn from its experience and improve its performance.

In his book on NGO management, *Striking a Balance*, Alan Fowler laments the lack of reflective learning in NGOs:

An almost universal weakness of NGOs (non-government development organisations) is found within their often limited capacity to learn, adapt and continuously improve on the quality of what they do.

This is a serious concern because... the future usefulness of NGOs for the world's poor will depend on their ability to overcome their learning disabilities.

Crudely put, if NGOs do not learn from experience, they are destined for insignificance and will atrophy as agents of social change.

NGDO's urgently need to put into place systems which will ensure that they learn from what they are achieving—as opposed to what they are doing—and then apply what they learn...

Critical reflection is insufficiently done because it is not prioritised and it is not prioritised because it is not adequately valued within a culture of commitment to action.

(Fowler A, 1997; *Striking a Balance*; Earthscan Books, UK. Chapter 3, page 64).

For the KGP, the documentation of our research into the program represents a tentative move towards the use of critical reflection as a means of organisational learning.

Limitations

When we started to take a look at the KGP, we discovered two things working against organisational learning:

- a lack of time due to the work's demands on staff
- a lack of financial resources necessary to bring people together to explore their work.

As Fowler states, these are problems common to small NGOs worldwide. Despite this, we decided that the limitations should not stand in our way and resolved to find a means to learn from experience.

Finding a research model

Our first task was to find a model to use in our research. Given the informal nature of the organisation and its limited capacity, the 'action research' or 'action learning' process appeared the most promising.

As we learned more about the process, we found that it consisted of three phases:

- looking—the information gathering phase
- thinking—the analysis of collected data
- acting—using the information to change organisational behaviour and to improve program efficiency and effectiveness.

The first phase—looking—was carried out in the Solomon Islands.

Thinking—the second phase—was done at the KGP project centre in Honiara and in Sydney.

The third phase—acting on what was learned—took place over time.

Collecting information

Financial restraints prevented the hiring of an external consultant to carry out research and documentation.

Although those who were to evaluate the program and collect information were involved in implementing the program, we attempted to be as objective as possible in our assessment.

All KGP staff were involved in the initial information collection phase. Those working on the islands of Choiseul and Malaita were in Honiara at the time that information collection was done.

Techniques

We made use of a variety of information gathering techniques:

- formal and informal interview
- group discussion and analysis
- informal discussion
- observation of project activities
- research of project documentation
- participation in project activities
- tools from the Participatory Rural Appraisal methodology.

Continual improvement

Some of the motivation for documenting the program came from our desire to continually improve, an approach that stands in contrast to that of 'muddling through' and 'if it's not broken don't fix it' attitudes common to many organisations, especially the smaller aid agencies

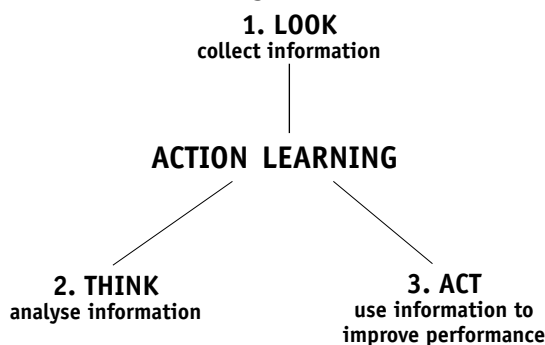
lacking the funds and staff time to put into the review of procedure and practice.

Continual improvement, we thought, would help the program:

- make progress towards achieving its objectives
- improve the quality of our work
- lift organisational effectiveness
- maintain relevance in the face of changing social, environmental, political and food security trends in the Oceania region.

We believe that at a time when NGOs compete for funds, continual improvement is a means of lifting the standard of our work. It helps us stay up to date with new thinking and work practices.

The action learning model



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Designing the project

The office was a dingy, windowless basement under the tower block of the University of Technology, Sydney.

Every week day, after his return from the Lalano High Altitude Farming Project, Tony would turn up to work on his plan for the Kastom Garden Project. The experience he had gained during his year with a rural permaculture project in Ecuador and on the Lalano project were to prove valuable.

Of greatest value was the knowledge of village agriculture and nutrition he gained in the Solomons.

Before he left for Ecuador, Tony had completed a Permaculture Design Certificate course run by Jude and Michel Fanton of the Seed Savers Network and Bill Mollison, the biologist who had devised the permaculture design system with landscape designer, David Holmgren.

With this background, it was not surprising that Tony planned to incorporate a number of innovative approaches to agricultural field work in the design of the Kastom Garden Project.

These included:

- organic agriculture
 - permaculture design
 - biodynamic agriculture
 - seed saving and crop biodiversity conservation.
- Tony planned to assess traditional methods of Solomon Island agriculture and incorporate these into the project where they were found to be useful.

Identifying contributors

Tony identified a number of organisations which he thought may be able to contribute to the implementation of the project.

These included:

- NASAA (National Association of Sustainable Agriculture Australia)
- Seed Savers Network
- Permaculture Institute
- Solomon Islands Rural Training centres
- Solomon Islands Department of Agriculture



Planning has been a shared process in the Kastom Garden Program. Project staff from Choiseul at a planning session with others from the project's central link in Honiara.

- Western Province Adult Education Unit.

Of the Australia-based organisations it was to be the Seed Savers Network, based at Byron Bay on the subtropical north coast of NSW, that made the greatest Australian contribution.

In the Solomons, a number of rural training centres participated in project delivery in different ways. These included Mana'abu and St Dominics training centres.

Informal links were established with the Solomon Islands Department of Agriculture during the early phase of project implementation. Formal links were later facilitated when funding from the European Union was obtained in 1999. This was to prove to be of only limited success, especially after the department's agricultural research station at Dodo Creek, Guadalcanal, was ransacked and burned during the conflict.

Who would benefit?

AusAID—the Australian Agency for International Development that funds Australia's overseas aid program—requires that project applicants clearly identify the groups and organisations which stand to benefit from the aid and development projects they support.

Identifying beneficiaries was simplified because Tony had done the groundwork during the Lalano High Altitude Farming Project.

They would be:

- rural people engaged in subsistence agriculture and living on the fringe of the cash economy

- mainly women, as women are responsible for the bulk of subsistence food gardening and family nutrition in the Solomon Islands; worldwide, women do an estimated 50% to 70% of agricultural work.

The fact that most beneficiaries would be women was fortuitous because, at the time, the people who approved project funding in AusAID (including the Committee for Development Cooperation, a group of NGO representatives) had a focus on gender equity. Later, AusAID would shift formal focus off gender, believing that gender had, like environment, become 'mainstreamed'.

Assessing environmental impact

A further requirement of AusAID is that project funding applicants provide some assessment of the likely impact of their proposed work on the biophysical environment.

With an approach including organic agriculture and improved cropping practices, it was not surprising that the environmental impact of the proposed Kastom Garden Project was predicted to be beneficial. The thinking was that training village farmers in soil improvement and in ways to improve yields would over time reduce the rate of clearance of bushland for swidden cropping around villages participating in the training program. This would result in less soil erosion and land degradation.

Focus on village communities

The vast majority of Solomon Islanders live in villages and, when Tony completed the project planning process in 1994, his focus was firmly on



Roads on Malaita island become muddy and slippery during the wet season.

Travellers resort to 'manpower' to get vehicles up the hill. Transport difficulties present project staff with uncertainties and are a constant constraint on any training program.

working with rural communities to improve their food security.

Food security we defined as:

...year-round access to a supply of high quality, nutritious food sufficient to support an active life.

Food security and family nutrition are critical to community health. Health is a prerequisite to any future development communities may choose to become involved in.

Addressing subsistence agriculture

Tony knew that the fast-increasing population on the Solomons was, in some regions, reducing the productivity of swidden agriculture. Were this trend to continue it could impact on community health some time in the not-too-distant future. There had already been reports of nutritional disorders.

It was clear that a focus on subsistence gardening was the key to increasing and diversifying food security because an estimated 85% of Solomon Islanders rely on subsistence food gardens for their nutrition.

Initially, Tony thought that the Kastom Garden Project could promote cash cropping as well as subsistence gardening. An objective to investigate this was written into the project planning document. Time would prove this to be unachievable.

The circumstances of Solomon Island subsistence gardeners made industrialised, high-input farming inappropriate:

- 'Green Revolution' agricultural technology demands access to cash or credit, the use of synthetic pesticides and herbicides, hybrid or genetically modified seeds, mechanisation, larger-scale farms, private ownership of land, commercial approach and ready access to markets
- villages likely to participate in the KGP interacted only marginally with the cash economy; families held little, if anything, by way of savings
- although there is some use of fertiliser and pesticides, agricultural biocides are expensive purchases for village gardeners and are a drain on family budgets; in other developing countries, health problems are common because of the misuse of pesticides and poisoning is commonplace; illiterate or semi-literate

farmers have difficulty understanding printed instructions on labels

- subsistence gardening is primarily for the daily nutrition of the family; only comparatively small amounts of food crops are sold at local markets
- subsistence gardens are characteristically small and unsuited to larger scale commercial cropping and mechanisation
- the introduction of commercial cropping could lead to disputes over land
- around 90% of Solomon Island land is custom owned; access rights come with membership of clans or family groups
- with communities scattered over hundreds of islands, large population centres are few and access to them for perishable foodstuffs is limited; local markets present the opportunity for limited cash sales of crops but are probably insufficient to support a large number of commercial farmers full time.

LEISA the best approach

To work with these limitations, Tony decided to adopt a set of agricultural techniques known by the acronym LEISA—Low External Input Sustainable Agriculture.

LEISA is an established toolkit of approaches and techniques developed for working with farmers in developing countries. Appropriate approaches are selected and adapted to local circumstances.

The idea behind 'low external input' farming is to:

- produce as many farming inputs locally as is practical to reduce imports and save money
- encourage local innovation in the development of agricultural solutions such as tools, crop breeding, planting patterns and irrigation
- use local markets as a source of inputs which cannot be produced on site
- make use of traditional species and encourage diversity
- use non-hybrid crops so seed can be collected, stored and used for planting the next crop
- make use of integrated pest management and produce pesticides, such as biological sprays, from local, plant-based sources
- use technologies appropriate to the scale of farming and to the skills available to maintain them
- save money by making best use of local resources and increasing farmer and regional self-reliance.

Submitting the proposal

The proposal to fund the KGP was submitted to AusAID in 1994 under the Non-Government Organisation Environment Initiative (NGOEI).

The NGOEI was a funding window set up to support projects that had environmental improvement as a focus. The window was closed when the Liberal-National coalition government came to power in 1995. Announcing the closure, the government said that, like gender issues, environment had been mainstreamed into development thinking. There was an element of truth in this as environmental planning had become part of the project planning process of many NGOs. It was still far from a universal practice, however. A number of NGOs, including APACE, were critical of the government's closure of the NGOEI, describing it as premature and indicative of the government's antipathy to the environment movement generally.

Later APACE agricultural projects—the Luru Kastom Garden Project and the Luru (Babatana) Ethnobotanical Manual Project — received funding through the AusAID-NGO Cooperation Program (ANCP). Then, after APACE achieved program status with AusAID, funding was supplied on a program basis, negating the need to apply for funding on a project-by-project basis. This was a more flexible arrangement.

The application to fund the KGP was successful. APACE's first substantial foray into agricultural development made its start in 1995.

Assessing progress

Projects require a means of tracking progress so that timely adjustments can be made. This is the role of monitoring.

Monitoring feeds information back into project implementation so that changes can be made to:

- project inputs—the materials, equipment and ideas which are the raw material of a project; changes can be made to the quality, timeliness, quantity and type of input; parts of the project showing lower than expected results may be changed while those performing well can be reinforced
- project processes—the techniques and practices used to implement a project; where information returned through monitoring indicates that processes are inappropriate or ineffective, they can be modified or replaced.

As in most development aid projects, monitoring of the KGP consisted of two types:

- informal— the type of monitoring carried on continuously through observation in the field and by talking to participants; informal monitoring is valuable and unobtrusive and is used to supplement formal methods
- formal—this takes the form of intensive, focused periods of information gathering using any of a range of techniques such as questionnaire, group discussion, structured and unstructured interviews, site visits and workshops; in comparison with informal monitoring, formal monitoring is more intrusive and costly, frequently requiring the organisation of meetings and travel.



The Kastom Garden Project team during its early days... (from left) Roselyn Kabu, Danny Besa'a, Tony Jansen, Jean Eroa at the project's Central Link, Burns Creek, Honiara.

Formal monitoring of the KGP took the form of:

- quarterly reports from Tony to APACE project management in Australia; in the Sydney office they were used to produce the regular project reports required by AusAID, the quarterly reports consisted of a brief financial statement outlining the use of project funds and a narrative report on project implementation, achievements and plans
- an annual report produced by Tony to sum up the year's activity and to make projections for the coming year
- monthly reports to Tony from the regional coordinators on Choiseul and Malaita to keep him informed about the state of project implementation in those regions
- periodic visits to the project by Australian staff for more detailed monitoring and evaluation.

Sometimes, in the changing environment in which aid projects operate, monitoring indicates that an objective set during the planning stage of a project is no longer realistic.

This happened only once in the KGP when it was realised that the objective of investigating options for commercial organic food production was unachievable. The objective was changed.

In principle, AusAID had no objection to changing project objectives. They made it known, however, that they wanted to be kept informed about any changes. As one AusAID staffer explained it, they 'did not like surprises' when large scale changes suddenly became necessary and they had not been forewarned.

Evaluating the projects

Monitoring provided information on the status of a project at a given time. Evaluation took a broader view of the program, assessing its progress from the start and making educated guesses about its future direction.

Like monitoring, the idea behind an evaluation made during the life of the project was to feed the information gained back into the project so adjustments could be made.

The first evaluation of the KGP took place in late 1997. Accompanied by Fiona, I spent about a month in the Solomons travelling with project staff to the different provinces and participating in training and field work while collecting information.

The aim was to produce a working picture of the program, to identify what was working and what was not and to gain some idea of future direction and needs. Writing up the evaluation report was completed by early 1998.

With the end of the AusAID funding in sight for the three projects making up the Kastom Garden Program (Kastom Garden Project, Luru Kastom Garden Project, Luru [Babatana] Ethnobotanical Manual Project) a second visit to the Solomons was made in late 1998 and a detailed monitoring report produced.

Harvesting beans.
The KGP focused on improving the subsistence agriculture of rural people. Aid projects often work with commercial farmers.



PROJECT DESCRIPTION

Kastom Garden Project

Location	Solomon Islands: Malaita, Western, Temotu, Guadalcanal and Choiseul provinces
Duration	April 1995 to April 1997
Project aim	Improvement to the food security of rural settlements in the Solomon Islands
Project objectives	<ol style="list-style-type: none"> 1. To increase awareness of: <ul style="list-style-type: none"> - the ecological consequences of present landuse patterns and trends - ecologically sustainable land management - soil conservation practices. 2. To train people from diverse backgrounds in modern, tropical, ecologically sustainable agriculture and to integrate these with traditional systems. 3. To provide models of community gardens using the integration of indigenous knowledge and appropriate modern practices in a more intensive, sustainable landuse system. 4. To conserve biodiversity by providing agricultural alternatives to the present scenario of the increasing application of shifting cultivation. 5. To create an effective organic growers network to: <ul style="list-style-type: none"> - preserve crop genetic resources - encourage the indigenous management of those resources - encourage more sustainable landuse practices - research the potential for the export of agricultural produce.
Beneficiaries	Rural residents of the Solomon Islands dependent on subsistence agriculture; mainly women
Main activities	Training; seed production and processing; farming
Expected outcomes	<ul style="list-style-type: none"> - improved food security through introduced approaches to subsistence gardening - improved soil fertility and productivity in subsistence gardens - improved agricultural soil management - improved farmer skills.
Funding agency + funding window	AusAID—NGO Environment Initiative
Funding AU\$	\$67 160

Lauru Kastom Garden Project

Location	Choiseul Province, Solomon Islands
Duration	July 1997 to July 1999
Project aim	To strengthen food security in rural areas of Choiseul Province utilising nutritious, locally grown crops.
	<p>The project will address:</p> <ul style="list-style-type: none"> - declining standards of nutrition linked to local food production - the ecological sustainability of current food production practices due to population increase and the resulting pressure on land - specific and varied problems affecting food security. <p>Objectives:</p> <ol style="list-style-type: none"> 1. Establishment of the project in five villages on Choiseul in cooperation with Sasamunga Hospital Primary Health Care Unit. 2. Introduce training to strengthen the capacity of Sasamunga Hospital, through its Primary Health Care Unit, to implement the project in participation with local organisations. 3. Identify the human health and food production situation in target villages through the compilation of qualitative and quantitative baseline data. 4. Form ongoing relationships with village-based organisations to promote innovation, adaptation and farmer experimentation in intensive landuse and the maintenance of relevant, existing food production practices. 5. Improve nutrition in target villages through the provision of information and the promotion of practical means of providing a balanced diet based largely on local foods. 6. Through the supply of information and education, increase knowledge of the link between environmental and human health and food production. 7. Provide practical, replicable models for Oanurai, Vaghena and Patubelo villages.
Beneficiaries	Residents, mainly women gardeners, in the Babatana language area of Choiseul Province.
Main activities	Training
Expected outcomes	<p>By the end of the project:</p> <ul style="list-style-type: none"> - trainers from five villages operating in their own communities - a group of trainers from five additional villages undergoing training - a project coordinator working with Sasamunga Hospital Primary Health Care Unit and outreach program - farmers from eight villages regularly involved in the training program - more than 50% of project participants women - more than 50% of villagers who have participated in the project reporting successful implementation of the methods taught - identification of food needs and the development of a plan of action in each contact community - participating families reporting improved nutrition or knowledge of human nutrition - evidence of the spread of innovation to communities not directly participating in training.
Funding agency + funding window	AusAID; ANCP
Funding AU\$	\$54 410 over two years.



Community Ethnobotanical Manual Project

Location	Babatana language area, Choiseul Province.
Duration	July 1997 to July 1998
Project aim	To strengthen local food security, nutrition and knowledge of the local forest food resource among rural people.
Project objectives	<ol style="list-style-type: none">1. Collection of information about the forest food resource in the Babatana language area of South Choiseul through the recording of traditional knowledge and field work.2. Production of an ethnobotanical manual describing the forest food resource on South Choiseul.3. Training and support of two village-based ethnobotanists to implement research into the forest food resource among communities in the Babatana language area.4. Development of a program of community education and training focusing on the importance of the forest food resource and the need for the ecologically sustainable management of the resource.5. The utilisation of the forest food resource by communities for purposes of improved health and nutrition.6. Design of the project so that it provides a replicable model for the production of similar forest food manuals in other Solomon Island communities.7. The utilisation of fresh forest foods by patients of Sasamunga Community Hospital.
Beneficiaries	Residents of the Babatana language area of Choiseul, particularly those engaged in food production.
Main activities	<ul style="list-style-type: none">- ethnobotanical assessment of the forest food resource- documentation of useful species, preparation and cooking methods- writing, design and layout of an ethnobotanical manual.
Expected outcomes	<ul style="list-style-type: none">- a printed manual documenting the forest food resource of the Babatana language area- utilisation and management of the forest food resource by village communities.
Funding agency + funding window	AusAID; ANCP
Funding AU\$	\$12 970

CHOOSING APPROACHES TO TRAINING

Organic agriculture

Organic agriculture was seen as an effective approach to food production for village-based farmers because it avoided the necessity to spend money on synthetic agricultural inputs such as fertiliser, pesticide and herbicide.

Because organic farming is based on the maintenance of a healthy soil expenditure on fertiliser could be avoided through the use of mulches. Soil degradation problems, such as soil structure decline and biological activity decline, would potentially be avoided as well.

Permaculture design

Tony thought that permaculture would provide an overall design approach to his work. Permaculture, as defined by Mollison and Holmgren (*Permaculture One*, 1978, *Permaculture Two*, 1979; *Permaculture — A Designer's Manual*, 1988; Tagari Publishers, Tyalgum NSW), is a system of integrated design dealing with the components of sustainable human settlement. It does not stipulate any particular type of agricultural practice although the preference is for organic farming.

In retrospect, it seems that the main influence of permaculture on the project's work has been as a way of thinking about the project. This



led to the preference for a small scale, staged process of agricultural training backed up with a seed saving and seed multiplication service that was to become the Solomon Islands Planting Material Network.

According to Tony, the use of permaculture led to an "integrated, holistic approach".

Biodynamic farming

Biodynamics, an approach to organic farming developed early in the twentieth century by the Austrian philosopher, Rudolf Steiner, has attracted a sizeable following in Europe, the USA, Australia and New Zealand.

The farming system was found to be inappropriate to Solomon Island gardeners and was dropped from the training program.

Seed saving, seed banks and seed distribution

It was Jude and Michel Fanton, directors of the Seed Savers Network, Australia, who supported Tony including a seed saving, multiplication and distribution component in the Kastom Garden Project.

The value of non-hybrid seed to cash-poor farmers was that they could collect, dry, store and replant some of the seed in the expectation that plants with the same characteristics would grow. Surplus seed could be contributed to the Planting Material Network where it would be multiplied and distributed to other village-based farmers.

Seed saving as a component of food security and agricultural development projects in the Pacific was later validated in a report to UNESCO Pacific by New Zealand consultant, Peggy Fairbairn-Dunlop.

Tony Jansen leading a workshop session exploring changes to agricultural conditions on North Malaita. Tony reduced his training load as local staff gained skills and knowledge.

ADOPTING INNOVATIONS

Over the six years of the Kastom Garden Program, trainers adopted a range of innovative approaches to field work.

Most of the approaches have been used by development aid organisations in other countries and have been found successful.

Before they become part of the KGP's methodology, the techniques were assessed, trialed and their use monitored.

PTD—Participatory technology development

PTD is an approach used to encourage farmers to try out new techniques in their fields and to monitor results themselves.

The idea is that farmers set aside a small area of their fields to trial a new gardening technique. Doing this familiarises them with the management of the technique and provides the information necessary to making a decision about whether to adopt it on a wider scale.

PTD minimises risk to farmers by providing the opportunity to trial a new technique rather than to adopt it in the whole of their garden and run the risk of crop loss if it proves ineffective, unmanageable or unsuitable.

The methodology involves the trialing and dissemination of technologies developed by local farmers.

Phased development

The idea behind phased development is that only a limited number of new ideas are taught at once. When they have been applied and understood, a further limited number of new ideas are introduced.

The methodology is one of starting small, consolidating knowledge, then moving on from what is known.

Training local people

To ensure that the KGP is sustainable, local staff were trained to fill leadership and field roles.

This is important where, as in the KGP, it is an expatriate who starts the program and assumes overall management initially. Training local staff ensures that the project can be maintained by local people after the expatriate returns home.

Staff developed multiple skills and were encouraged and expected to practice what they teach.

Evidence that the approach was working in the KGP came as Roselyn Kabu, who joined the program as a volunteer soon after it started, took on management roles and when Mary Timothy, who started with the Planting Material Network as a seed curator, assumed a role in project management.

PLA — Participatory Learning and Action/PRA—Participatory Rural Appraisal

PRA yields baseline information for the planning of project activities. It can also be used for participatory monitoring and evaluation and is an awareness raising and reflective learning process for participants.

It consists of a range of participatory techniques in which the field worker takes on the role of facilitator while participants work together to identify the information.

Community food security assessment

Community food security assessment produces baseline information on the reliability, quality and prospects for a community's food supply.

It is a participatory technique introduced to the KGP by Brazilian community worker, Liliana Peres.

The process leads to community understanding of the potential and limitations of the local food production system.



Honiara is not a beautiful city. Stretched along the Guadalcanal coastal plain between ridge and sea, in one direction the city centre fades into a long strip of trade stores which crowd the road as far as Chinatown. In the opposite direction the business district blends into a collection of government buildings before it gives way to residential areas.

On the waterfront opposite the commercial centre is the Yacht Club, frequented mainly by expats and visitors. A little further on the main road passes the Mendana Hotel, the classiest accommodation in the Solomons. Then it passes government buildings, the post office and, a little further, the Solomon Islands Broadcasting Commission, the country's national radio service.

The town centre itself is a collection of modern buildings juxtaposed with temporary-looking galvanised iron and timber structures. Here are the businesses, the offices and the retail stores and the only building in the Solomons tall enough to house a lift.

Changing address

It was to this chaotic South Pacific city that Tony Jansen moved after AusAID said 'yes' to the KGP project funding submission.

Arriving in Honiara on one of the three weekly flights from Brisbane, Tony's first task was to find somewhere to live. Then he had to find office space.

Lodgings were found in a dormitory-style guesthouse. In search of office space, he ventured down to Chinatown—an ad hoc collection of iron roofed trade stores occupying both sides of a street and backing on to a wide, muddy, polluted river.

The Development Services Exchange (DSE), whose mission is to support development NGOs working in the Solomons, is situated on the edge

of Chinatown. It was here that Tony hoped to find office space.

Unfortunately, space was in demand at the DSE. But then that Greenpeace came to the rescue. At the time the organisation was enjoying a high profile in the Pacific thanks to its opposition to French nuclear weapons testing at Mururoa Atoll and an anti-logging campaign in the Solomon Islands. Greenpeace offered to share its office space with the Kastom Garden Project until Tony found permanent accommodation.

Making a tentative start

With help from Joini Tutua, a longtime friend to the Kastom Garden Project, one-time Deputy Premier of Choiseul Province, former minister of education and agriculture and active member of Honiara's sizeable Seventh Day Adventist congregation, the project made its tentative start.

Joini had worked with APACE since its first micro-hydroelectric project in the village of Iri on the island of Kolombangara. Now, with the agency's venture into agricultural development, Joini's assistance would prove valuable.

New projects, new people

The KGP grew from a single person in 1995 to a fluctuating total of around seven staff by the end of the decade.

Not long after the project started, a young Malaitan woman by the name of Roselyn Kabu started work as a volunteer. Later, Daniel Besa'a joined the KGP as a trainer and technical adviser.

Roselyn would take the project into northern Malaita, her home territory where her ability to speak the local language—Lau—would open doors into the villages.

New projects, new territory

Within two years the Kastom Garden Project would be joined by two new projects—the Luru Kastom Garden Project (LKGP) and the Luru (Babatana) Ethnobotanical Manual Project (LBEMP):

- the LKGP was devised to obtain the AusAID funding needed to take the Kastom Garden Project into the island of Choiseul (the traditional name for which is Luru).
- the LBEMP was established to identify, document and revive the use of the traditional bush food resource of the Babatana language area of Choiseul.

The ethnobotanical manual stemmed from Tony's broadening appreciation of food security at the village level. Knowledge of the bush food resource was starting to disappear as young people left the village for the city and as foreign foods made inroads into village diets. In those circumstances, the project was timely. Tony knew that recording this knowledge could contribute to its continued use while enhancing the diversity of foods in the local diet.

Then, in 1997 drought hit the South Pacific as the warming of the ocean surface in the central Pacific affected the weather of the Solomons and PNG. It was the time of El Nino. Soon Tony would have another reason to document the bush food resource of Choiseul.

As the El Nino effect reached its peak, villagers in the Solomons were perplexed as to the cause of the drying. And although there was little risk of acute food shortages, the productivity of

subsistence gardens fell as the fields dried out. Some provinces pressed the government in Honiara for emergency shipments of rice.

It was another story in the PNG highlands. There, subsistence gardens went into decline but the people had their root crops, predominately sweet potato, to fall back on.

Then the unexpected happened. Insects found the sweet potato in their mounds and began to eat. Now, deprived of their reserve of root crops, hunger set into parts of the PNG highlands.

But there remained another food reserve—the bush foods in the forests. The highlanders resorted to this just as the Australian and New Zealand defence forces began emergency air drops to feed the people.

News of the PNG experience provided evidence that the recording of the bush food resource through the ethnobotanical manual project was timely. The manual would be available for future use in case of climatic or other emergency.

Three projects, one program

For Tony, the two new projects would extend the work of the KGP, bringing greater depth to what was becoming a broad program of agricultural training.

Due to the need to be cost effective, the implementation of the different projects was combined when on Choiseul because the projects were part of an integrated program.



Roselyn Kabu joined the KGP soon after it started. Roselyn later took on the challenging task of program coordinator for North Malaita.

Tony's role

Tony's idea of program management involved more than sitting in an office organising field staff. That would not have been realistic in a program of this size nor would it have been desirable.

Tony maintained an active field role throughout the program that included:

- project planning and monitoring
 - training of village trainers and field staff
 - field work—leading community food security assessments, baseline information gathering and training
 - liaison with government agencies, other NGOs and village leadership
 - production of funding applications
 - reporting to APACE Australia and other donors.
- Each project followed its own reporting schedule to APACE management in Sydney.

More time in administration

By 1999, when AusAID funding for both the KGP and the LKGP had ended, gone were the days when Tony was free to spend much of his time in the field. Instead, he found himself spending increasing periods on the administrative work of monitoring, reporting, coordinating and planning.

By this time, cooperation with rural partner communities had taken a more strategic form to include the training of village trainers, the introduction of new techniques such as community food security assessment and support for the program's team of coordinators and trainers. It was felt that this approach would lead the program towards sustainability. The program was coming to be seen more as a continuum of agricultural training than as a bunch of separate projects.

Bookkeeping was never one of Tony's favourite activities. Yet it was critical to the effective management of the project and to maintaining the 'transparency' so beloved of AusAID bureaucrats. It was also necessary to maintain accountability to APACE Australia members who sometimes contributed funds. It was a relief when Tony found help with bookkeeping in the form of Florence Nodoro, a young business studies student at the College of Higher Education in Honiara.

Regional coordinators

Two regional coordinators started work in 1997. Their role was to implement project work in their respective provinces by taking the responsibility

for field work and the day to day operation of the program in their areas.

Based in her home village of Mana'abu on the northern tip of Malaita, Roselyn Kabu became the regional coordinator for the program, a role she has continued with the new NGO, Kastom Gaden Association.

After being trained by Roselyn, Nairy Pitakaka, a joyful and capable woman from the island of Choiseul served as coordinator for that island. Nairy's passing in 1999 due to illness was a blow to the program and to those attracted to her happy personality.

The role of the regional coordinators included:

- training activities with communities
- follow-up visits to village farmers participating in the program
- making contact with villages interested in participating in the program
- liaising with local groups and building organisational capacity
- planning activities in association with Tony.

So that he was kept up to date with their activities, the regional coordinators reported to Tony on a monthly basis.

Voluntary trainers

Villages people who showed potential were encouraged to take on a voluntary training role within their own communities. For a few, training activity extended to nearby villages.

Overall, village-based trainers were successful and produced a 'presence' for the KGP in village communities when field staff were absent.

Problems with this arrangement came when the trainees took time away from their village—internal migration is part of Solomon Island culture. There were also occasional failures by trainers to practice what they taught in their home gardens.

Mature women made the most successful trainers.

The Planting Materials Network

The Solomon Islands Planting Material Network (PMN) was established as a way to implement the agricultural biodiversity objectives of the Kastom Garden Project.

The PMN was funded through the KGP until AusAID funding stopped with the ending of the project. That was supposed to have happened in April 1997, as the KGP had been funded for a

period of two years. But with a frugal approach to funds, the project's two years of funding was spun out to December 1998 and provided a valuable extra year to work towards making the PMN sustainable.

During the funding shortfall, after AusAID project funds ceased to flow and before the AusAID program funding started, bridging funds were obtained from APACE Australia. To further reduce the drawdown of funds, Tony worked in a voluntary capacity for several months.

To raise those bridging funds, APACE Sydney staff and supporters ran a fundraising campaign among APACE members who once again showed their generosity by donating. The APACE Student Supporters Club at the University of Technology raised further funds by organising a bush walkathon in Royal National Park. Critical to this fundraising was the work of engineering student and supporter's team organiser, Lora Collussi, then an APACE volunteer who later spent some time on the micro-hydroelectric projects in the Solomons.

Staffing the network

Roselyn Kabu was the first coordinator of the PMN, its first employee. She trained the two young women who became seed curators — Wendy Betsy and Mary Timothy.

These two women had a great deal of responsibility, managing the entire process of seed production from cultivation, through harvest and drying, storage, germination testing, packaging, distribution and maintaining the database of species passing through the PMN. Wendy left the program in the year 2000, but Mary continued in

her role, taking on extra responsibility when the PMN became an NGO in its own right in that year.

Finding impetus

By 1997, after almost two years of operation, it had become clear that the PMN needed some additional impetus if it was to continue to work effectively. Seed saving activities needed upgrading and systematising and there was a clear need to strengthen the seed production process.

Coincidentally at that time, Tony and Russ were approached by Jude Fanton from the Seed Savers Network. Jude was interested in placing a young trainee with the KGP for a short period so she could extend her training through fieldwork.

Jude lobbied for the placement to take place and, after some discussion, APACE management in Sydney agreed that the placement of Emma Stone would benefit both Emma and the program.

There had been some reticence about taking on volunteers because their training would consume the time and energy of program staff, already stretched in the day-to-day running of the program.

APACE Sydney staff also wondered whether Emma's youth implied a lack of experience. By that time, staff were used to young people knocking on its door seeking placement in the Solomons or advice on working in overseas development. While most of these people had enthusiasm in abundance, they lacked relevant experience or training.

When Emma visited the APACE office, a few minutes discussion between her, APACE Program Manager Donnella Bryce and I dispelled any doubt. Emma was a young woman mature for her age.



The PMN Central Link garden, Honiara

She was so enthusiastic about working with the PMN that she offered to pay her own way to the Solomons. Fortunately, a line item was found within the project accounting system to pay her travel costs. By early 1997 Emma had left her home at Possum Creek, a tiny hamlet in the hills behind Byron Bay, and was on her way to Honiara.

Three months later she had completed her first assignment of improving the skills of Wendy and Mary and upgrading the overall performance of the PMN.

Emma returned to the PMN for a further five month period as an Australian Youth Ambassador in 1999. The Youth Ambassador Program was a federal government initiative to place young Australians in developing countries for six month periods so they could extend their experience.

A change of roles

The role of program manager has become more demanding as the program has grown.

Even before APACE achieved program agency status with AusAID in 1998, administration of the two new projects—the LKGP and the LBCEM—was complicating Tony’s job.

Roselyn Kabu’s role, too, was to change over the life of the program. From coordinator of the PMN, Roselyn took on the important role of coordinator of program activities on Malaita and acted as program manager in Tony’s absence.

Evolution

In its development from a single project to a group of projects making up an integrated program, staff roles changed, more complex administrative measures were introduced and staff numbers grew.

All the time there was the temptation to expand activities quickly, to take advantage of opportunities as they appeared. This temptation was tempered by the need to remain within the boundaries of the organisation’s capacity.

With the loss of Daniel Besa’a, who had joined the project on 1995, and with Tony and Roselyn committed to their work on Choiseul and Malaita, the program was stretched just to maintain existing commitments. Reluctantly, the decision was made to discontinue activities in Bouna village, Guadalcanal, Daniel’s home village.

Needed—more management knowledge

Management knowledge was an area in which the program had limited capacity.

Where financial management was concerned, support from APACE Sydney accountant, Peter Vail, proved invaluable. Visiting Australian staff introduced ideas to improve management and Tony sought out local sources of assistance.

In retrospect, some knowledge of small business management would have proven useful. So too would have training in decision making, problem solving and conflict resolution.



The early PMN team: Roselyn Kabu, Danny Besa’a, Tony Jansen, Jean Eroa



Farming the lalano

The long, narrow island of Malaita is separated from Guadalcanal by Indispensable Strait, a body of water less than 30 kilometres wide at its narrowest point.

Malaita is a mountainous island. The ridges of the interior are clad in tropical rainforest and are drained by short streams that plunge to the coastline. Most of the villages are located on the coast, as most villages in the Solomon Islands have been since the coming of the missions brought safety from raiding parties. For the most part they consist of the traditional 'leaf' houses. At the same time there remains a sizeable population—more than in other provinces—living in the bush on Malaita.

Auki is the island's largest town. It is the main access to the island with ferry terminal and air strip connecting the 150 000 Malaitans to Honiara, a six hour sea journey.

A distinguishing feature of North Malaita is that it has the highest population density in the Solomons. To feed this population, bush gardens have been cleared on exceptionally steep land almost to the ridgetops in some locations. This

has made them vulnerable to soil erosion during heavy tropical downpours. Bush garden fallow periods have been shortened to critical levels with reduced long fallow cultivation.

One of the villages on North Malaita is named Anokwasi. It is here that Tony gained his first experience in the Solomons.

Meetings in Honiara

In 1993, a number of meetings took place between APACE's Program Officer, Donnella Bryce, and an elderly farmer from the North Malaita village of Anokwasi, Mr Clement.

Mr Clement presented his idea for a small agricultural development project. Eventually, APACE agreed to take it on.

The Anokwasi project—which was to become known as the Lalano High Altitude Farming Project—was to be APACE's first foray into agricultural development since its support for the Community farm at Irii village on the island of Kolombanagra, Western Province, in the 1980s.



Mr Clement from North Malaita with a winged bean. Seeds of the bean are now shared through the Planting Material Network.

Mr Clement's persistence was critical to starting the Lalano High Altitude Farming Project.

A small experimental farm

Mr Clement's idea was to establish a small experimental community farm between 400 to 600 metres altitude in the hills above the narrow coastal plain.

The farm would be developed on a high altitude terrace known as a 'lalano'. Here, well above the humid coast, varieties of European vegetables could be grown and sold in the Malaitan provincial capital of Auki or taken over to Honiara Central Markets.

APACE's role would be to fund the inputs needed to bring the farm to operational condition—materials, equipment and seed. The local community would provide labour and develop the farm as an ongoing enterprise.

An enthusiastic person

Mr Clement was an enterprising person. He had already established what he called a 'farm'—in reality a 'bush' garden or shifting cultivation field typical of those in the area.

He had planted vegetables with some success, including Chinese and ball cabbage. Sales of vegetables had been made at Auki markets and, occasionally, in Honiara. Now Mr Clement was enthusiastic to expand and try new methods. He wanted to work with people from the Anokwasi community and to share his experience.

He was probably also aware that to qualify for assistance from APACE, working with the local community was a prerequisite.

Successful start

Work on the project started after APACE obtained funding. Seeds were sown and successful harvests made.

Tony obtained seeds from companies specialising in open pollinated varieties in Australia. These included Eden Seeds in Queensland and the Seed Savers Network at Byron Bay. He sought out open pollinated varieties so that the seed of successive crops could be collected, dried and used for later plantings. This brought a degree of self-reliance in planting material and reduced the need to outlay cash for the purchase of fresh hybrid seedstock. Vegetable varieties trialed included broccoli, ball cabbage, tomatoes, pepper, basil, chives, carrots, beans and gourds.

First hint of trouble

The first sign that things were going wrong came with tensions over the use of the chainsaw.

The saw had been purchased with APACE funds to clear the land and expand the garden. Now, however, Mr Clement had started to contract out the use of the chainsaw and its operator to people not directly connected with the gardening project. Inevitably, the chainsaw became a business in itself. Complicating the situation were ongoing problems with chainsaw maintenance.

Originally seen as a technology for local development, the chainsaw now presented a dilemma. Certainly, as a small business enterprise, the chainsaw was a success, but chainsaw-as-business was not in the project design and its use was creating difficulties with local landowners.

Exacerbating the tension was Mr Clement's background. He was not a local landowner and had moved to Anokwasi as a minister of the Jehovahs Witness Church, a controversial sect among established religions in the area. This was a source of community uneasiness.

Troubles worsen

Divisions and tensions within a rural community involved in a development program can be a serious enough danger to the future of any project work, but add the inappropriate use of funds and those tensions are worsened.

That is what happened in Anokwasi when project funds were used to pay for the labour of members of the community farm project group instead of for the purchase of tools, as had been planned. Having become used to receiving payment for their work, their motivation to continue and their interest in the project waned as the money ran out. This effectively destroyed the community spirit engendered by the project and threatened its sustainability.

In the end, Mr Clement and his family were left working by themselves on a farm a full two hours walk from Anokwasi.

Prospects for the future of the community farm project faded as did much of the farm's produce and seed supply. This was pillaged by people from bush communities who had no involvement in the project.

Tony negotiates a solution

As the community farm group started to show signs of fracture, APACE asked Tony to go to Malaita and negotiate with the community. APACE hoped that the project, in some form, could be salvaged.

Tony went in a voluntary capacity as an APACE project officer in what was to be an involvement with the Anokwasi community spanning several months. As the weeks went by Tony talked with the project's stakeholders. He encouraged the formation of a group of interested farmers from nearby villages in the Anokwasi area. The group included people from Texas, Kwaiana, Rara and Dada'ame villages, some of whom were involved in the original farm.

Setting a new direction

The idea which came out of Tony's discussions was that the farmers would work their own gardens but would share their experiences. Two workshops were organised. Individual gardens were visited regularly by Mr Clement and Tony. The farmer's group became known as the 'Iito'ona sup sup garden group' which translates to something like 'give it a try with sup sup gardens' in the Toambaita language.

Sup sup gardens are a Solomon Island term for small vegetable gardens close to the house. The meaning is one of growing vegetables which can be mixed together in a meal.

Seed banking—an idea fails

For awhile, a community seed bank was tried but as the project evolved the farmers reverted to keeping their own seed on a family basis. The experience would be repeated in a different form when the Kastom Garden Project later established a community farm in a village on Guadalcanal. That too failed although it showed promise at the start. The tradition among village farmers is for family-based work rather than community-based.

Most of the Iito'ona group established their own sup sup gardens and successfully trialed new methods of farming their bush gardens, such as not burning and increasing plant diversity, with which they persisted.

Although it almost faltered at times, the farmers group maintained cohesion. Many years later they applied to join the Kastom Garden training program at the Mana'abu Rural Training Centre, raising the

affiliation fee to join the centre. Today, they are an organised and active farmer group

Continuity

In 1997, the Iito'ona group planted a communal block of upland rice (a variety of rice that is sown into soil rather than into a paddy as is wet rice). This was grown successfully, harvested and shared.

The members continued to work their own gardens, including a number of sup sup gardens, making use of the mulching techniques introduced. Seed saving remained an important activity for all members.

By 1999, the group was still in existence although the Lalano project had finished four years earlier. Leadership was now largely in the hands of two active farmers, John Kiri and Emily Gaote, both innovators of new agricultural methods.

As for the open pollinated crop varieties introduced during the project's early stage, a few are still being grown and shared through the Planting Material Network but the majority did not persist. Those which remain in use have been shared widely. They include pigeon pea, green wing bean, PNG gourd and Lombok Chinese cabbage.

And Mr Clement? Eventually, he and his family moved to Honiara where he set up a market garden at Aruligo. He continued to maintain contact with the KGP as a member of the Planting Material Network.

Then, during the ethnic conflict of the year 2000, Mr Clement returned to Malaita along with thousands of Malaitans internal refugees who had been living in Honiara and elsewhere on Guadalcanal.

Mr Clement continues to farm and to teach others in his ancestral home close to Auki.

LEARNINGS

... from the Lalano High Altitude Farming Project

Working with communities

A number of lessons were learned about working with rural communities in the Solomon Islands. In some cases these were verified by experience in later projects.

- community farms rarely succeed for longer than a short period; most agricultural work in the Solomon Islands is family based and the extended family is the logical working group
- villages where more than one church divides a tribe are likely to face difficulties in cooperative projects; this is especially the case in the presence of the more evangelical churches that discourage cooperation with other church groups
- projects tied to a single community may experience inflexibility; a program should allow field workers to change focus and participants if needed
- land ownership needs to be considered in the project assessment stage, especially if the project involves any single major garden site.

Tools

Tools and technology are not 'neutral' elements in project design. The introduction of a tool can have implications in communities once its potential is understood.

The Lalano project showed that careful thought needs to be given to the introduction of tools and technologies not presently part of community life.

The impact of the technology on relationships within the community, on the economy (both cash and non-cash) and of its ownership and control by social groups within communities needs careful assessment.

- providing high cost inputs such as chainsaws for a farming project can lead to disputes; the equipment may often be inappropriate to the intended purpose
- wherever possible, use local tools and materials.

Working with farmer groups

The Lalano project showed that working with farmer groups was a successful strategy for agricultural improvement if certain facts were kept in mind:

- groups work together better if they are formed out of a single, strong, existing local unit such as a single church congregation or a tribe
- groups need time to grow strong and to develop their plans and ideas at their own pace; this can conflict with the rigid timeframes of development projects with their focus on the rapid achievement of objectives
- groups may be formed but the actual work is carried out by families.



Progress—stop and go

If there's a lesson to be drawn from overseas development work, it's to expect the unexpected.

Some projects do not progress in a smooth, linear unfolding. Progress is more like periods of equilibrium punctuated by abrupt change.

For the KGP, each year brought new highlights and challenges...

1995

This was the inaugural year for the Kastom Garden Project.

After Tony arrived in the Solomons, it was a time of setting up and setting direction, of looking for opportunities. For Tony, it was a time of compressed learning and of finding the way forward.

First workshops a success

The project made a start in mid-1995 with the first seed saving workshops in the provinces.

Led by Jude and Michel Fanton from the Seed Savers Network in Australia, the workshops stimulated enough interest to launch the Solomon Islands Planting Material Network.

The Network is now the highest profile community-based organisation dealing in agricultural biodiversity in the Pacific. It is the most successful initiative undertaken by the KGP and, arguably, by APACE.

Finding staff

Roselyn Kabu started work as a volunteer in October and was to stay with the program to the present day. She has brought continuity and manages the program in Tonys absence.

Daniel Besa'a, a past-principal of St Dominics Training Centre in Western Province, joined the project in November.



Attendees at the first community seed saving workshop. Michel Fanton, from the Australian Seed Savers Network, can be seen centre, rear line, and Jude Fanton lower centre. Tony Jansen is at the right hand end of the second row.

The workshops marked the start of a long and fruitful involvement in the KGP by the Network.

The training provided by both Roselyn and Danny was kept as practical as possible because many of the villagers lacked formal schooling and literacy. From the start, the use of theoretical concepts in training was curtailed and the focus was firmly on practical work.

Tony's first visit to Daniel's home village of Bouna, Guadalcanal, was used to plan workshops and a community farm that became the main training venue.

The arrangement between Daniel and the KGP was that the project would support his work in Bouna and neighbouring villages in return for his involvement in other provinces.

It was hoped that being locally known would provide access into the village community and bring credibility to the project. This strategy was successful and was later replicated when Roselyn Kabu started working from her home village in North Malaita.

At first, the Bouna community farm was successful. Villagers, a group of youths in particular, participated in its development and attended workshops. But as time went on participation in the farm fell and Daniel and Tony realised that a community farm as something more than a training venue was unviable.

Training was refocused on ways by which families could be organised into groups but still work in their own home gardens.

Project centre built

Negotiations for the construction of the KGP project centre on Joini Tutua's land at Burns Creek, Honiara, were successful and building work was started.

A traditional leaf building was put up by local labour. Fronds of sago palm formed the roofing and woven pandanus leaf the walls. A large verandah providing a space for working and dining at times when mosquitoes were few.

Thanks to security of tenure given by Joini in return for a modest rent, the construction of accommodation for staff and office proved a wise decision. Weatherproof but not mosquito proof, the building served as home to Tony and at various times to other staff as well as office space for the KGP. The office was extended in 2000.

The surrounding land—about one hectare—was used for a kitchen garden to feed Tony, staff and visitors and to multiply seeds for the Planting Material Network. The garden demonstrated the ideas taught by the program and was to attract a stream of visitors over the years.

Other highlights of the year include:

- networking with NGOs and government
- first workshop in sup sup gardening held at Sasamunga, Choiseul Province
- a Kastom Garden committee associated with Sasamunga Hospital formed in November to liaise with the KGP and facilitate hospital input into the training and project work.



Late 1995 saw the start of construction of the KGP Central Link building at Burns Creek, Honiara. The building, made in the traditional 'leaf house' style, was both home and office.

1996

With her home village in North Malaita and her fluency in Lau, the local language, Roselyn Kabu was an asset to the program.

Project activity on Malaita made a slow start but eventually the island became a successful venue for the program.

The Malaita-based Mana'abu Rural Training Centre, which offers an adult education program to affiliated partner village groups, joined in partnership with the KGP, effectively extending the project's reach.

Making a start at Sasasmunga

In the small, short take-off and landing aircraft used by Solomon Airlines, Choiseul is about three and a half hours flying time from Honiara. A few hours canoe journey to the north lies Bougainville, part of PNG but ethnically similar to the Solomons.

The program's activities on Choiseul centred on the village of Sasamunga on the south west coast, itself a variable three hours voyage (depending on weather and sea conditions) by motor canoe from the airstrip at Taro on the island's northern tip.

Sasamunga is a continuous string of small villages occupying a narrow coastal strip behind the beach. Immediately behind the village the ridges rise steeply to the jungle-covered folds of the mountainous interior.

The high cost of transport

Motor canoe is the only practical transport between the villages which dot the coast of

Choiseul. The long, narrow fibreglass canoes powered by outboard motors make sometimes perilous journeys in poor weather and big seas.

Both air travel to Choiseul and motor canoe travel around its coast are expensive, adding considerably to the cost of any development aid project that works directly with villagers.

The availability of UNICEF funds through the Sasamunga Hospital Medical Committee initially underwrote the cost of transport for KGP personnel until AusAID funding was obtained for the Lauru Kastom Garden Project.

During the initial phase of the program's work, Tony would make the long motor canoe journey to the community of Wagina on an island off the southern tip of Choiseul. Here, the residents were recent arrivals, having been moved from the Gilbert Islands because—so the story goes—of overpopulation. Wagina was to become a successful project venue. It was targeted because of the high rate of underweight infants.

Working holidays

Tony made the arrangement with APACE project management in Sydney to take off a month a year as a holiday break. The return airfare to Australia was part of his salary package, a modest package by Australian standards.

In 1996 Tony took his break in September, but like all of Tony's so-called holidays, much time was spent on program work in Australia. Planning, promotional activities and the sourcing of materials and equipment monopolised his time.

Tony made his escape to Byron Bay, well away from Honiara and the Sydney office.



The ethnobotanical team at Sasamunga. Myknee Sirikolo, from the National Herbarium, is seen at top right.



The Luru Kastom Garden Project shared office space with the Sasamunga Primary Health Care Unit of which it formed a part. The office backed onto a small grove of pawpaw trees and the lagoon. The project contributed to the construction of this facility that housed infant growth monitoring, mother's clinic and family planning and that provided advice on sup sup gardening.



The LKGP team at Sasamunga—William, Gwendolyn, Tony and Sore. William and Gwendolyn were trainees at the hospital garden. Gwendolyn went on to coordinate the project. Sore was the farm manager.



The Luru Kastom Garden Project may never have happened without the support of Peter Zabel (centre), the doctor on placement at Sasamunga hospital, and his wife, Maria (second from left), who provided training in nutritional health. From left: Tony Jansen, Maria Zabel, Peter Zabel, the Zabel's daughter, Roselyn Kabu, Fiona Campbell (APACE executive committee, trainer).

Other highlights of the year include:

- the second workshop at Sasamunga in January, first workshop at Bouna, Guadalcanal in March and first workshop held in Faufanea in April
- garden, building and first chicken coop built at project's Central Link base at Burns Creek, Honiara
- teachers workshop at Sasamunga
- Jean Eroa joins the KGP as a volunteer and later offered full time position
- awareness raising workshop with Mana'abu Rural Training Centre in June
- KGP represented at Honiara trade show
- in August, workshops at Wagina, Patubelo, with a swamp garden workshop in Panarui in November
- KGP has display at Honiara Sup Sup Garden Association tenth anniversary celebrations
- ethnobotanical workshop on Guadalcanal with Jean Eroa and Tony
- in December, the Solomon Islands Christian Association requests training and a cyclone damages the Burns Creek garden.

1997

By February, small scale farmer experimentation—a means of farmers assessing and trialing new ideas—had started. The experimentation was to become the main means of transferring new technologies.

The bush food/ethnobotanical manual project went into full swing this year in collaboration with the National Herbarium of the Solomon Islands. Botanist Myknee Sirikolo, himself from Choiseul, became an enthusiastic leader of the project and provided botanical classification for the plants collected.

The first ethnobotanical workshop was held at Sasamunga in August.

The issue of intellectual property rights over the ownership of the plants and processing methods documented by the project was a controversial issue but was resolved. The decision was made to assign copyright to the ethnobotanical manual to the traditional landholder's association, the Lauru Land Conference.



The KGP took the opportunity to promote itself at the July 1996 National Trade and Cultural Show in Honiara. Sharing the stall was produce from Joini Tutua's Zai and Tina Organic Farm.



Specimens collected in the forest have been brought back to the village for identification. Information about processing and cooking the specimens was documented for the ethnobotanical manual.

Roselyn and Sarah visit Australia

Towards the end of the year, Roselyn Kabu and Honiara Sup Sup Garden Centre director, Sarah Osiabu, visited Australia.

After a brief period at the APACE project centre in Sydney, Roselyn drove with Fiona and I to the Australasian Permaculture Convergence in Nimbin. There, she made presentations on the KGP and assisted Sarah in a workshop on Solomon Islands food and cooking.

Following the convergence, Roselyn spent two weeks training at the Seed Savers Network in nearby Byron Bay where she led sessions in a course for people planning to do seed saving work in overseas development aid projects and gave a workshop at the Seed Savers Network annual conference.

Monitoring visit a first

During November, Fiona and I spent five weeks in the Solomons, engaging in training activities and the gathering of information for an evaluation of the KGP.

Tony and Fiona flew out to Australia in early December—Tony for his annual holidays—while, on the same day, I took the Air New Guinea flight to Port Moresby, then on to Lae and the Central Highlands town of Mt Hagen to monitor Can Care Lae. CanCare was a non-ferrous metals waste conversion project in which APACE had become a partner with a local organisation, the South Pacific Appropriate Technology Foundation.

With PNG then at the worst stage of the El Nino drought, the road journey into the highlands revealed its devastating impact. The fact that the

PNG highland people, who by then were starting to run out of food, had fallen back on their traditional bush foods reinforced the value of the ethnobotanical project on Choiseul.

The Solomons dry out

PNG was much harder hit by the El Nino drought than the Solomons. Even so, villagers in the Solomons wondered what was going on—why was there this drought?

The drought affected project activities so the workshop focus shifted to investigating and documenting the ways by which farmers were coping with the dry conditions.

The lack of local knowledge about El Nino came as a surprise to the visiting Australians. Ignorance of the facts around and the causes of the drought was common among rural communities. It was a stark reminder that information easily available in Australia was simply not available in the isolated villages of the Solomons that were far from the global communications network.

Roselyn and Fiona, working with the village trainers in Takwa, devised a way to educate villagers about El Nino and its impact. Flip chart pages were drawn up and the message refined. The material proved useful during the following visit to Choiseul.

Other highlights of the year include:

- workshops with farmers at Bouna village, Guadalcanal and with the Kolombangara Rural Training Centre in January
- in February, Danny Besa'a took his last workshop before leaving for the UK



Bush food specimens were collected in the forest and pressed in newspaper for the ethnobotanical manual project.

- Maupa joins the KGP as a trial coordinator on Choiseul but was not successful in the position
- workshops in April at Bouna and Papara in May
- in June, Tony gets malaria, a major debilitating disease of the tropics and a threat to both local people and aid workers
- in the same month, Sandra Heilpers arrives from Australia to lead train the trainers workshop and Vanga
- Tony and Joini Tutua visit Japan and tour farms
- in August, a workshop for the ethnobotanical manual project on Choiseul
- the AusAID review team arrive from Australia to inspect the projects as part of APACE's accreditation process
- in September, Roselyn flies to Australia for seed saving training with the Seed Savers Network and a workshop is held at Takwa
- Patteson starts training with the PMN.



Lissie Amon from Wagina, Choiseul Province, with 'zuku' (*Diplazium* species), an edible fern collected from the forest.

Although the knowledge of bush foods is in decline among younger people, it is retained by older generations. The Luru (Babatana) Ethnobotanical Manual Project documented the bush foods of the Babatana language area on Choiseul so that the knowledge would remain available to future generations.

1998

The year saw program work continue as the ethnobotanical manual and Luru Kastom Garden Project moved into their later phases.

When Fiona and I spent a month in the Solomons in October and November of this year, the tensions which would later escalate into the civil conflict two years later were visible in Honiara. The town was tense and there were fears that the small Chinese population might become a target as had happened in Indonesia.

The initial few days of the visit was spent in the hills behind Honiara attending an APACE staff meeting. There, APACE workers from Australia, from the KGP and the Solomon Island village electrification program gathered to discuss the future of the organisation.

The year also brought heightened tension between the Solomon Islands and PNG as the civil war on Bougainville spread into the northern Solomons. Fast motor canoes of the PNG Defence Force made incursions into Choiseul waters, raising fears that an attack was imminent.

Funding applications—the new priority

Much time was then spent at the project centre at Burns Creek, Honiara, working with Tony and Roselyn to produce project funding applications and in gathering material for the project that would culminate in the publication of *Blue Seas and Bush Gardens*.

A funding application prepared for the UNDP's South Pacific office in Fiji, which Tony felt optimistic about, was completed and posted. The news that it had been unsuccessful was a disappointment. An application to the European Union's Stabex Fund, however, was to bring better news in the new year.

A highlight of the year was the placement of Australian seed curator, Emma Stone, with the project for a three month period.

Emma's placement was a win-win because it:

- added to Emma's portfolio of skills she was developing as a livelihood
- boosted the skills of the women working with the PMN
- improved the performance of the PMN.

December brought to an end AusAID funding for the KGP and LKGP. The program was now on its own financially.

Other highlights of the year included:

- Roselyn trains Nairi Pitakaka as regional coordinator for Choiseul
- Sore appointed as manager of Sasamunga Hospital garden, part of the Luru Kastom Garden Project
- second bushfood workshop—part of the ethnobotanical manual project— held in February at Panarui village, Choiseul, by Myknee Sirokolo from the National Herbarium
- in February, Mary Timothy starts employment as a PMN seed curator at Central Link, Honiara
- workshop on integrated pest management held at Takwa village
- workshop at Wagina
- Gwendolyn and William start work as garden trainees at Sasamunga Hospital garden, Choiseul
- Wendy Betsy joins the PMN in March and starts work at Central Link
- Nairy leads workshops on Choiseul
- in May, Roselyn and Emma Stone hold seed workshops at Mana’abu village, North Malaita, after Emma arrives in the Solomons to start her tour with the PMN
- Myknee Sirokolo holds the third bush food workshop—this time on cooking— for the ethnobotanical manual project on Choiseul
- Australian poultry expert Russell Parker holds workshop at Central Link in June; through his Armidale (NSW)-based consultancy PermaPoultry, Russell provides consultancy services in the Pacific region
- Emma returns to Australia in June
- cancellation of workshop on Takwa
- in September, Fiona Campbell and Russ Grayson arrive from Australia for an evaluation and training visit
- staff seminar and establishment of staff committee to represent staff and build organisational capacity in September
- Doreen Iga from World Wildlife Fund, PNG, visits KGP; Tony visits project on Choiseul with Doreen
- Linda from Women’s Agricultural Extension Service Program starts as trainee attachment to the PMN
- Luru Land Conference endorses ethnobotanical manual project; Tony, Myknee and Nairy attend conference
- Tony, Nairy, Roselyn and visiting Brazilian community worker, Liliana Peres, carry out food security assessment at Sasamunga in November
- in December, Tony falls ill and takes his holidays
- funding for KGP secured from AusAID.



Emma Stone completed her first tour with the PMN in 1998.

1999

This was a time of frugality due to the lack of funds following the ending of the ethnobotanical and Luru projects. To conserve finances, Tony worked in a voluntary capacity for some months.

The funding crisis meant that project activities had to be kept at a maintenance level.

Good news

The good news was received before mid-year — the funding application to the European Union's Stabex fund for the rural seed training project had been successful. The project crew now knew that their work would continue.

The integrated pest management project with village farmers in North Malaita made a start under the management of the program's Malaita region coordinator, Roselyn Kabu, thanks to the program funding that had started to flow from AusAID after APACE achieved accreditation as a program agency.

Mid-year trouble

In the middle of the year, long-standing grievances between the Guales—the inhabitants of the island of Guadalcanal—and the Malaitans exploded in civil conflict.

Malaitans living on Guadalcanal were forced from the land and into Honiara. Thousands crowded the

inter-island ferries to return to the comparative security of Malaita, creating an internal refugee crisis.

The Gualé militia—the Guadalcanal Revolutionary Army—later renamed the Isatabu Freedom Movement (Isatabu is a traditional name for Guadalcanal) were in control of the countryside, their customary land. Honiara was surrounded, only the sea remained open as an escape route.

The response of the KGP was to clear and plant an area adjacent to the project centre to produce extra seed for the refugees flooding into Honiara. Another project, supported by the Commonwealth Youth Program, saw the KGP set up training for disabled youth in seed production.

Malaitan staff with the KGP stayed on as long as they could before they, too, were forced to return to their home island until the security situation improved.

Roselyn relocates

By 1999, Roselyn was permanently based in her home village in the role of program coordinator for Malaita.

This enabled her to more closely follow-up project work and to introduce the new integrated pest management project. The project was based on the Participatory Technology Development (PTD) process.

Collecting insects for the integrated pest management project on North Malaita. Insect pests account for a high losses to field crops. The project aims to train village farmers to control insect pests by organic means.



Other major events of the year included:

- Nairy Pitakaka, regional coordinator for Choiseul, passes away
- training with College of Higher Education students
- Roselyn visits Choiseul for project monitoring
- Gwendolyn appointed coordinator of work by Sasamunga Hospital committee and two hospital garden workers hired; Roselyn completes Gwendolyn's training in August



Choiseul woman from Narioni village with bushfood prepared as part of the ethnobotanical manual project.

- Emma Stone conducts seed training
- first training for Solomon Islands Christian Association and Village Education Program completed in May
- in June, a workshop about using bush foods is held for primary school students on Choiseul
- Parapara teachers workshop
- Roselyn attends PIANGO conference in Vanuatu
- familiarisation training for US Peace Corps workers about the PMN in August
- Inia takes over as PMN coordinator and completed training with Emma Stone and PMN seed curators
- some slowing of the project in August attributable to public criticism of the ethnobotanical project by public servant, Ruth Liogula, to the Luru Land Conference; the criticism was over unfounded assumptions about the ownership of traditional rights to the bush foods identified by the project; the Hon Leslie later mediated the dispute; the Luru Land Conference reendorsed the ethnobotanical manual project in October but rumours affected the workshop program in November
- workshop in advanced seed production
- Wendy and Emma teach at Women's Agricultural Extension Service Program workshop on Isabel
- completion of the Honiara Central Link chicken house
- seed production for displaced people with Red Cross
- Thecla starts work with the program
- Roselyn attends West Samoa workshop
- Mary and Inia visit PMN seed hubs in provinces
- Wendy Betsy goes on maternity leave
- Inia makes monitoring visit to Isabel.



Garden manager Salathiel Sore, Fiona Campbell and Roselyn Kabu identify plants in the Sasamunga hospital garden. An alley of Gliricidia trees on the upper slope is one of several that are regularly slashed for mulch that is placed on the garden beds between the alleys.

2000

The year 2000 started optimistically enough but the security situation was always in people's minds. The Malaitan staff had by now returned to Honiara and project work went on. The pest management project on North Malaita continued.

More trouble

Then, in mid-year came the coup in which the Malaitan Eagle Force evicted the prime minister from office.

This presented a new crisis for the program. Fighting between the militias intensified. A gun battle took place at Henderson Airfield, the international airport only a few kilometres from the project's Central Link. Once again most of the staff went home and the project centre was evacuated. Only a skeletal presence was left for security of the buildings and gardens.

Tony was on Choiseul when unrest escalated. APACE program manager, Donnella Bryce, who was visiting the Solomons, made the decision, in consultation with staff, to evacuate the centre. Mary Timothy, Wendy Betsy and Thecla moved to Munda.

Maintenance of the seed production garden was beyond the capabilities of the single person remaining. Returning to Honiara in June, Tony reported that the garden was overgrown with weeds.

When the coup occurred, all of the KGP staff were in Honiara for a planning meeting.

Tony temporarily evacuated to Gizo in the Western Province. Arriving there, he emailed people in Australia expressing relief at arriving in 'peaceful Gizo'. A day or so later, three motor canoes full of Bougainville Revolutionary Army guerillas landed in Gizo and killed a Malaitan.

The large island of Munda, situated north of Guadalcanal and south of Gizo, was investigated as a possible new centre for the PMN. But even here there was concern for the safety of the Malaitans.

A grass house and office were built at Munda the following year as part of the decentralisation of the PMN. The Munda base became the new Central Link for the network under the leadership of Mary Timothy, previously seed curator at the Burns Creek seed production garden.

Other highlights of the year:

- workshops for the Integrated Pest Management project at Takwa village, North Malaita, in February and June
- workshop at Munda
- the PMN conference at Hakama which set the future priorities for the network
- completion of the Lauru Kastom Garden Project
- Roselyn attends the conference of the Development Services Exchange in Honiara
- the handover of the Sasamunga Hospital garden and kitchen to the hospital
- Tony and Joini Tutua made a visit to the Paruparu project on Bougainville to assess the potential for future cooperation
- Tony attends food security conference in PNG
- Roselyn attends a conference on sifting agriculture in the Philippines
- workshop for displaced people
- Sore and Gwendolyn continue the work started with the LKGP on a voluntary basis now that the project has ended
- staff training seminar at the Mana'abu field office
- Baetolua farmer's network formed.



The PMN house on Munda island was ready for occupancy by 2001.

2001

Some semblance of political stability returned to the Solomons in 2001, with an armed international peacekeeping force, including the Australian Defence Forces, patrolling the Honiara area and combatants supposedly handing in their weapons. By early 2002, an estimated 50% had been collected.

For the Kastom Garden Program, the year was equally momentous. Before the first quarter had ended, APACE announced its intention to opt out of agricultural work. Although the component of the KGP funded by AusAID under the ANCP funding window had ended in 1999, APACE had continued to fund the work from its AusAID program funding. Now, the staff in the Solomons suddenly found themselves alone. Just why APACE ended what was regarded by staff and many members as the most successful area of its development work was a mystery.

As the end of the Australian financial year approached, Tony sent off to the APACE office in Sydney a balance sheet of funds owing with a letter to the executive committee proposing a timeline for the closing of the accounts.

Included in the letter was the proposal that copyright of the agriculture training manual—*Sapa*—be handed over to its creators, himself and Joini Tutua. Tony's and I feared that, with APACE continuing to hold copyright and with the organisation talking about closing, the opportunity to reprint future editions of the manual would be lost. That was successful.

Like the Solomon Islands team, the program's Australian supporters—ex-APACE micro-hydroelectric program manager Lisa McMurray (who found a position with the Sydney-based Fred Hollows Foundation as Pacific Region Coordinator after leaving APACE), filmmaker Russell Parker, ex-APACE executive committee member, Fiona Campbell, myself and Jude and Michel Fanton from the Seed Savers Network resolved to continue their support for the Solomon team's work.

With APACE support gone, it was time to enact Tony's long-held intention to set up a local agricultural development NGO to continue the work of the KGP. That was how Kastom Gaden Association, the new organisation, came into existence.

Other projects continue

The year saw the continuation of Roselyn Kabu's work with the North Malaita integrated pest management project and the start of work with a scientific research project in regional taro genetic resources collection—the TaroGen Project.

The year 2001 also brought a new project. As part of the Australian government's contribution to reconstruction following the coup and fighting of 2000, Tony's team received funding for a national seed production and distribution project as part of the AusAID Community Peace Restoration Fund.

Building on the expanded food production project at Honiara Central Link that saw food distributed to emergency aid agencies, the new project saw seeds go to village communities to increase local self-reliance in food and to maintain community nutritional health.

A regional team

For years, Tony had dreamed of building organisational capacity to the extent that Solomon Island staff could engage in 'south-to-south' aid in Melanesia*.

The idea was that, rather than relying solely on development aid flowing from the wealthier nations to developing countries, the developing countries could support each other by agency staff advising communities, NGOs and government agencies in other developing countries.

Funding, other resources and availability of people to do this were the main obstacles to south-to-south aid and remain so today.

* This was realised a couple years later with the creation of the Melanesian Farmer First Network (MFFN — www.terraacircle.org.au/mffn).

Creation of the MFFN occurred around the same time that Tony, Lisa McMurray, Fiona Campbell and the author set up TerraCircle Inc, a consultancy to provide services to the region (www.terraacircle.org.au).



A planning workshop at the Kastom Gaden Centre works on the collection of taro in Guadalcanal Province.



A taro collection and awareness training workshop, part of the Taro-gen collection project in which the program participated. A total of 22 different cultivars were found in one garden.



The PMN provided seeds for the production of vegetables such as the snake bean (the gourd seen on the right). It would have to await the starting of the decentralised seed hubs before it became possible to exchange plants such as the pana (a yam seen at the centre of the picture). A coconut, the multipurpose plant of the Pacific, is seen at left.

MAKING PROGRESS—photo essay

In project work, progress can be hard to identify and difficult to measure. It is not always as quantifiable as some project donors imagine.

While progress in community food security programs such as the Kastom Garden Program and Kastom Gaden can be measured in terms of the number of gardeners using the techniques introduced by the program, in the reduction of crop loss to insect pest attack and in terms of qualities of food produced, much progress takes place at a more subtle level in the form of improved living standards and improved nutrition. This can be difficult, is not

impossible, to quantify. The measurement of progress then falls to subjective observation, anecdotal evidence and, sometimes, hearsay.

Rural communities are generally disinclined to collect data that could be used to indicate progress being made in a project. Seeing improvements is more than enough evidence of progress for them.

These photographs show aspects of the program in action and the initiatives of village farmers recorded by Kastom Gaden field staff.



Mapping village resources in the sand. The use of graphical images proved useful in working with communities where literacy was poor. A permanent record of the image was made on paper.

Planting Material Network coordinator, later Munda PMN Central Link manager, Mary Timothy, is on the left. Mary joined the KGP in 1998 and developed her skills over succeeding years. Like other staff who remained with the KGP, Mary continues to make a valuable contribution to her people.



KGP workshop participants visit farmer field trials.

Encouraging farmers to try out new ideas was at the core of the approach known as PTD—Participatory Technology Development with farmers.



The KGP promoted the idea of growing small vegetable gardens—sup sup gardens—close to the house where the vegetables would be readily accessible for cooking.

Eggplant, taro and pawpaw are a few of the crops produced in this sup sup garden.



KGP trainers Jean Eroa (left) and Roselyn Kabu (right) in transit between villages by motor canoe.

THE IMPORTANCE OF NATURAL RESOURCES

The continued availability of natural resources is critical to the wellbeing of rural communities.

Many communities retain access to plentiful natural resources. In some areas, however, logging carried out in an unsustainable manner has reduced access to natural resources and has failed to deliver sustained benefit to the communities that allowed it to go ahead.

A further limit on resource availability has been the development of coconut plantations on prime arable land near villages. Where farm land is in limited supply, the plantations displaced

village subsistence farmers onto more distant and sometimes marginal land.

While coconuts can produce much-needed cash income through the processing and sale of copra, and sustainable forestry could produce income and develop village economies, they would need to be carried out in such a way that they do not spoil the natural resource base rural communities depend upon. The knowledge and technologies to do this already exist. The political will to enforce their use does not.



Gilanoba Sore carries a load of fuelwood back to Sasamunga village.

The forest and the sea provides the resource base for residents of coastal villages like Sasamunga. The sea yields fish, while the forest provides fuelwood, food, medicines and materials. During the tensions with PNG in 1998, the forests covering the steep ridges behind Sasamunga provided refuge when a Solomon Islands patrol boat, seeking anchorage for the night, was mistaken for a PNG vessel.



Assessing the program

Monitoring visits by APACVE's Projects and Development Education Officer in 1997 and 1998 provided the opportunity for Solomon Island staff to get together and take a look at their work.

The aim of the monitoring visits was to develop a picture of the program for APACE management, however the information was also useful to program staff in the Solomon Islands. It was intended that monitoring should be as useful to the country office as it was to the Australian organisation.

In addition to monitoring against the objectives, six criteria were used to monitor the program:

- relevance
- effectiveness
- efficiency
- progress
- impact
- sustainability.

The October/ November 1998 monitoring visit found a program making headway despite limitations imposed by too few financial, material and staff resources.

Relevance

The criteria of relevance assessed the program against the conditions existing in the country, particularly the agricultural and food needs of the program partner communities.

The relevance of the KGP's work was boosted by a number of factors:

- participatory assessment and training techniques
- a phased approach to training, starting with the introduction of a limited set of new ideas, developing that knowledge through farmer experimentation, then moving on to new techniques; this was essentially the Participatory Technology Development process

- increasing the availability of food crops through the farmer's network—the Planting Material Network.

Effectiveness

Evidence for the effectiveness of the agriculture program's approach to training and development was visible in the form of:

- an increased number of sup sup gardens in villages; although no overall count of gardens was available, observation suggested that the number was increasing
- the trialing of new ideas in bush gardens, such as mulching and cross-slope planting
- cooperation with the Sasamunga Hospital Primary Health Care Unit resulted in the agriculture program gaining access to more villages than would otherwise have been the case; agriculture and family health were successfully linked through nutritional education carried out by the unit
- the growth in membership of the Solomon Islands Planting Material Network provided an indicator of increased effectiveness; current membership is around 350, including village farmers, NGOs, government agricultural extension workers and school teachers; around 140 species are cultivated by the PMN.

The evaluation found that to boost its effectiveness, the KGP has:

- built on core strengths—agricultural training and the exchange of planting material are the core activities of the program
- anticipated partner needs—the compilation of baseline information has permitted the planning of training activities; the 1998 community food security assessment on Choiseul, led by Brazilian community worker Lilita Peres, provided a new



- tool for assessing nutrition needs by communities themselves
- encouragement of self-reliance and innovation and the acceptance of reasonable risk in the trialing of new ideas generated an innovative approach by staff; the PMN has laid the basis for greater farmer self-reliance in the supply of seed
 - boosting organisational competency—productivity gains have been sought through staff training to the limited extent available; a participatory management style has contributed and a staff performance agreement has been tried
 - a hands-on, value-driven approach—the approach adopted by the program is based on values of participation, local control and shared decision making
 - maintenance of a flexible organisational structure—informal and less-frequent formal monitoring and evaluation of program work, regular meetings of staff and shared planning of activities have maintained an openness to new influences while protecting core values
 - fostering the development of local organisations.

Efficiency

The fact that the KGP stretched the AusAID funding a year beyond the planned two year period without contraction of program activities provides evidence for the frugal and efficient use of funds.

Progress

Monitoring and evaluation disclosed considerable progress towards the program’s objectives.

Although progress has sometimes faltered, the overall trend has been towards the achievement of objectives. Some objectives, however, have been changed in light of experience.

Probably the greatest setback to the program’s work has been the coup and conflict of mid-2000 which saw the return of some program staff to their home islands for their own protection and the temporary run-down of activity at the project centre at Burns Creek.

Impact

The impact of the program is evident from the uptake of ideas passed on through training activities.

Sustainability

Sustainability refers to the capability of program managers to continue to operate the program over time.

Financial sustainability

An need to find new funding became urgent with the ending of AusAID support in late 1998.

The six month period without funds that followed the cessation of AusAID funding was caused by a lack of early planning to find new sources. This was largely due to constraints on staff time. In retrospect, an earlier start to the writing of funding applications would have been desirable because of the considerable delay experienced between the submission of funding applications and learning whether they had been accepted.

The new funds that flowed into the program in 1999 opened the opportunity for new initiatives such as the integrated pest management project on North Malaita, a project for which there had been a clear need for some time but that a lack of funds and staff time had prevented going ahead. The funds were the result of APACE achieving program agency status with AusAID.

Establishing a local NGO

Tony had nurtured the intention to start a local NGO for some time. He saw this as critical to the sustainability of the program, especially after he moved on.

- The local organisation would:
- access funding not available to APACE Australia
 - be under the guidance of Solomon Islanders.

The local NGO would shift ‘ownership’ of the agriculture program from Australia to the Solomon Islands. Were this to happen, it would be seen by KGP staff as a sign of success, a sign that the program’s focus on the development of local organisational capacity had paid off, a sign that Solomon Islanders could manage their own development.

As a local organisation, the KGP would then have greater in-country lobbying power than an Australian-based organisation and could access funding sources unavailable to NGOs in developed countries.

The idea of starting a Solomon Islands Sustainable Agriculture Institute, as the proposed local NGO was originally known, was discussed during the late 1990s, but nothing was done due to continued AusAID and other funding, the need



to prioritise field work and the upheavals of the year 2000 and 2001.

Then, in mid-2001, APACE unilaterally announced that it was to drop out of agricultural work and close. Suddenly, the KGP found itself alone. The need for a local NGO was now urgent. By September 2001, moves to set up Kastom Gaden Trust, a new organisation, had been well developed.

Organisational sustainability

Staff training was increased through the late-1990s. It is critical to developing the skills needed to meet the needs of rural communities and the changing social, economic and security circumstances of the Solomon Islands.

It had been thought that at some time in the future the program may have to seek alternative accommodation were the lease arrangement with Joini Tutua discontinued. Now it appears that Joini is happy to allow the Burns Creek project centre to continue to occupy a part of his land. This is important to the KGA as it requires security of tenure for some years so it can focus on obtaining funding and develop new projects.

The decentralisation of the program has also added to its security with the establishment of the Planting Material Network project centre and seed production garden on the island of Munda. Initially a response to the worsening security situation in Honiara, the Munda base and the ongoing relationship with the Man'abu Rural Training Centre on north Malaita effectively established the program in the provinces.

The Honiara project centre

By 1999, the limited number of major assets held by the Kastom Garden Program were sufficient to sustain operations in Honiara. Unfortunately, that would soon change:

- the photovoltaic power panels were stolen during the civil disturbances of mid-2000
- one of the Mac laptops was stolen the following year.

The years 2000 and 2001 brought improvements to the Honiara project centre:

- the cultivated area was expanded after a grant was obtained to produce seed for distribution during the security crisis of the year 2000
- extensions made to the Burns Creek project centre building created a larger office and outdoor work space
- a used, replacement laptop computer was obtained during Tony's visit to Australia in mid-2001
- in the same year, the AusAID office at the Australian High Commission in Honiara funded the installation of grid power to the project centre; after a year of working by the dim light of kerosene lamps and rushing from place to place to recharge his laptop batteries and use email, Tony was greatly relieved to be able to flick a switch and have light pour from the fluorescent tube.

ANALYSIS OF PROGRAM ACTIVITIES

The analysis was made at the staff training and strategic planning seminar, Mana'abu Rural Training Centre, North Malaita, 27 September—12 October 2000.

Integrated Pest Management for North Malaita Project

Strengths	Weaknesses
<ul style="list-style-type: none"> Work with village farmers Field office at village level Farmer field trials for training Regular visits and monitoring Team work Easy communications Participation by farmers Coordinator and assistance from local language area 	<ul style="list-style-type: none"> Not a lot of different people doing trials Not enough detailed information in trials recorded Slow transfer of finance delays activities Demonstration sites do not do what we teach
Opportunities	Threats
<ul style="list-style-type: none"> Work with other NGO farmers through Baetolau network Skills transfer to farmers Work with displaced people Use of PTD approaches in other areas 	<ul style="list-style-type: none"> No interested farmer participation No networking No experiments being done No funding Wantok business

Lauru (Babatana) Ethnobotanical Manual Project

Strengths	Weaknesses
<ul style="list-style-type: none"> Collaboration between APACE, Sasamunga Hospital, MFEC Revival of local knowledge Importance of project to food security Relationship to forest management and management of garden fallow Links old and young residents Involves teachers and primary schools Drought, disease and disaster resistant plants Involves youth Revives local botanical language High nutritional value of bush foods 	<ul style="list-style-type: none"> Memorandum of understanding never signed with Lauru Land Conference Project took a long time Lot of resources needed to produce the manual No funds for planning Relies on key resource people for 1-2 years Lack of baseline data on use of bush foods to monitor impact A perception that some of these foods should be forgotten—that they are second rate
Opportunities	Threats
<ul style="list-style-type: none"> Teaching the cooking of bush foods Cultivation trials of bush foods—replanting traditional 'Quana' fields Further development of forest food products processing Revival of skills in pruning of canarium nut Investigation of cash cropping opportunity for bush food Potential for similar projects elsewhere using local facilitator Use of ethnobotanical approach to medicine 	<ul style="list-style-type: none"> Funding blocked and project obstructed by public servant Intellectual property rights became an issue although the project sought to protect those rights

Sup sup garden training

Strengths

Simple technology to improve nutrition and household food security
 Improves soil
 Uses local resources
 Low cost, simple, proven technology
 Practical training based on experience
 Experienced trainers in Malaita, Guadalcanal, Choiseul, Munda
 Working with health and medical services brings best results—eg the Sasamunga Hospital child growth monitoring program
 Starting point to look at wider issues with farmers—eg PTB, IPM, bush foods
 Linking gardening with nutrition
 KGP staff and field offices have sup sup gardens
 Regular followup important
 Ability to teach in local language and adapt to local situation

Weaknesses

Not everyone interested
 Animals spoil gardens if no fence made
 Staff must practice what we teach
 Often insufficient monitoring and follow-up
 Sup sup gardening means growing only Chinese cabbage to many people
 Nutrition education could improve

Opportunities

To teach other organisations about the KGP approach to sup sup gardening
 Work with medical services in growth monitoring programs
 Linking gardening and nutrition at all levels
 Munda seed garden as demonstration
 Linking of PMN to sup sup garden training for seeds
 Linking of cooking and sup sup gardening and new plants
 Sup sup garden trainers could go to other provinces/organisations to teach the approach
 Volunteers become trainers
 Use of sup sup garden training manual

Threats

No resources to follow up means poorer results
 Transport difficult and expensive
 Funding
 Some people do not replant their garden and give up

Planting Material Network

Strengths

Responsible person
 Good communication
 Coordinating office
 Based on farmer needs
 Training
 Technical expertise
 Demonstration garden accessible
 Networking with government, NGOs, farmers
 Funds available
 Focus on sustainable agriculture
 Decentralised

Weaknesses

Slow to respond
 No new varieties of plants
 Insufficient staff numbers
 No update report
 No training for other skills of facilitator
 No proper servicing

Opportunities	Threats
<p>Working at village level; clan based seed bank</p> <p>Work with overseas and local partners</p> <p>Members promote PMN</p> <p>Farmers cross-visit</p> <p>Form a network</p> <p>Planning for future</p>	<p>Tension</p> <p>Introduced seeds</p> <p>Natural disaster</p> <p>Poor management</p> <p>Lack of cooperation</p> <p>Lack of farmer interest in crop diversity</p>
Grassroot training material for participatory extension	
Strengths	Weaknesses
<p>Help people to see what PMN is and does even if they are not taught directly</p> <p>Sharing of the experience of other farmers in other places</p> <p>Helping trainers during workshops how to do training on their own</p> <p>Experience documented for the future</p>	<p>Lack of training on how to produce a training manual—could have short course on subject</p> <p>Takes a long time to produce a book</p> <p>Information is sometimes not detailed enough—need more research</p> <p>PMN manual should have involved seed curators more through the whole process</p>
Opportunities	Threats
<p>Village farmers and extension workers can use the manual</p> <p>Help staff understand how to produce more manuals and training materials</p> <p>People will share what they learn from the manuals</p> <p>Staff experience can reach out to others through the manuals</p> <p>Opportunity to train people in desktop publishing</p>	<p>Unknown how many people will use the manuals</p> <p>People do not understand the manual</p> <p>Funding for completion of manuals might not be found</p> <p>Local ownership of the manuals—issues of intellectual property rights</p> <p>Opposition from other NGOs which can criticise what has been done</p> <p>Lack of person on team to do desktop publishing from beginning to end</p>
Capacity building and development of local organisations	
Strengths	Weaknesses
<p>PMN to become a local NGO</p> <p>Baetolau network now well established in North Malaita</p> <p>Farmers resource centre for local people to have training in villages</p> <p>Decisions made by members about the role and use of indigenous knowledge rather than the decisions being made by outsiders</p> <p>All decision making by local people</p>	<p>Organisation not established (at time of writing)</p> <p>No meeting of PMN board to follow up on conference</p> <p>Members live in different areas making it difficult to meet</p> <p>No time to follow up on activities so they are always delayed</p> <p>Potential for poor accountability and misuse of funds</p> <p>Potential for poor participation</p>
Opportunities	Threats
<p>Local ownership of organisation</p> <p>Funding could go directly to organisation</p> <p>Interested farmers can join network</p> <p>Work with extension services, NGOs and farmers</p> <p>Increased awareness of food security and issues affecting sustainable agriculture</p> <p>Use of local resource people</p>	<p>Members fail to work together</p> <p>Inability to find funding or do fundraising</p> <p>Members just wait for assistance from outside and fail to take action</p> <p>Ethnic tensions affect the performance of organisation</p>

ASSESSMENT OF THE KASTOM GARDEN PROGRAM

Kastom Garden Project—assessment against objectives

Objective	Assessment
1. To increase awareness of the ecological consequences of present landuse patterns and trends; ecologically sustainable land management; soil conservation practices.	Awareness raising has taken place formally and informally through workshops, train-the-trainer courses and the use of model gardens.
2. To train people from diverse backgrounds in modern, tropical, ecologically sustainable agriculture and to integrate these with traditional systems.	Training has been provided through workshops in a number of provinces with a wide range of participants including village food producers, government agricultural extension officers, staff of NGOs. Traditional methods have been incorporated into training where useful.
3. To provide models of community gardens using the integration of indigenous knowledge and appropriate modern practices in a more intensive, sustainable landuse system.	Model gardens were established at Bouna village, Guadalcanal, Sasamunga Hospital and at the project's Burns Creek premises. Although successful in introducing ideas, the Bouna garden proved less effective as a training venue over the longer term as participation declined and participants transferred what they learned to their home gardens.
4. To conserve biodiversity by providing agricultural alternatives to the present scenario of the increasing application of shifting cultivation.	There has been an increase in the number of household sup sup gardens of the type promoted by the project. The impact on ecosystems is difficult to assess and quantify.
5. To create an effective organic growers network to: <ul style="list-style-type: none"> - preserve crop genetic resources - encourage the indigenous management of those resources - encourage more sustainable landuse practices - research the potential for the export of agricultural produce. 	The idea of an organic growers network has been superseded by the establishment of the Solomon Islands Planting Material Network. The network has proven to be a more effective means of conserving genetic resources through use and of encouraging indigenous participation in the management of the resource through membership of the network. The small scale of the commercial organic farming sector in the Solomons makes the search for potential export markets unrealistic at this time.

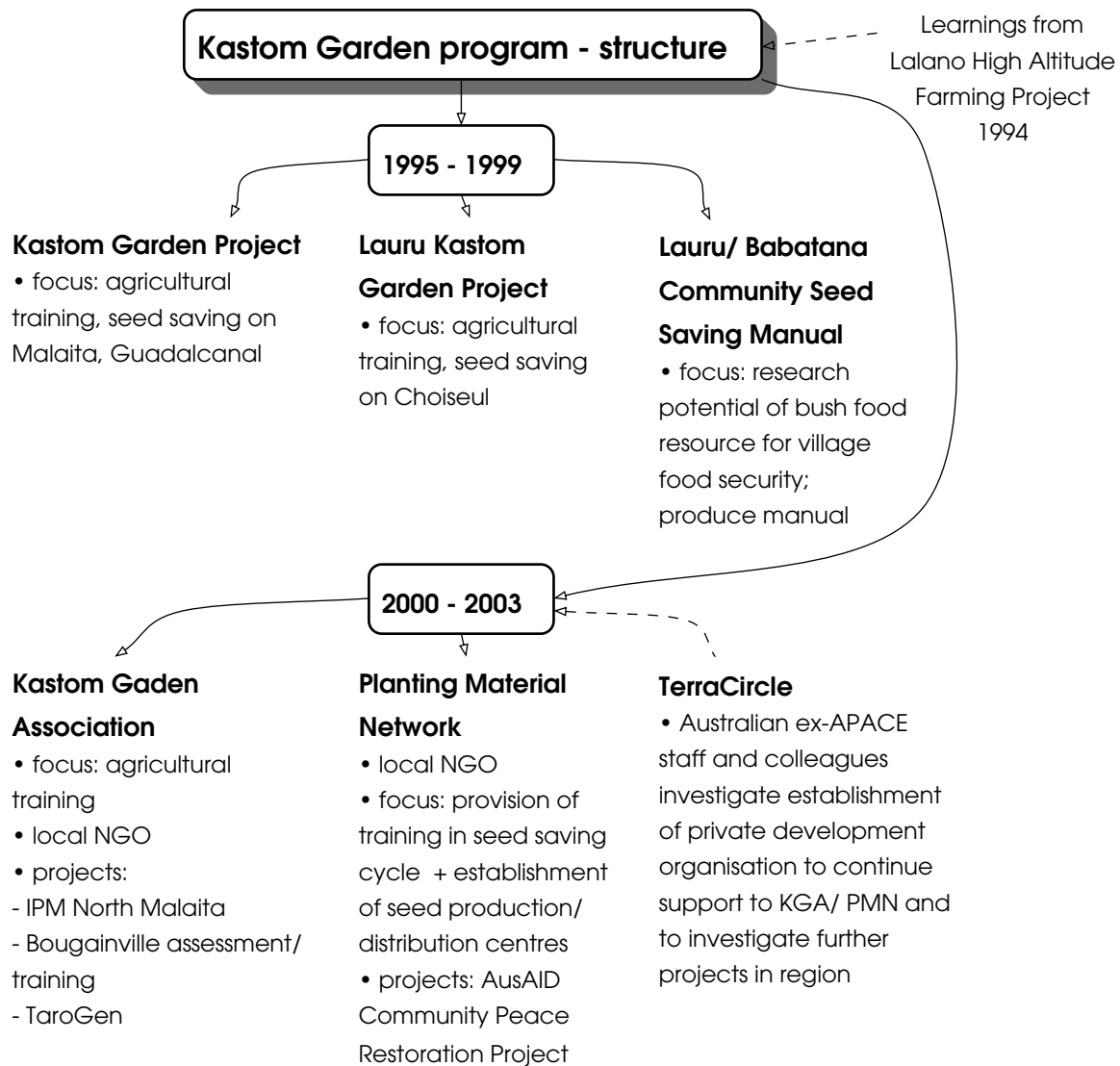
Lauru Kastom Garden Project—assessment against objectives

Objective	Assessment
1. Establishment of the project in five villages on Choiseul in cooperation with Sasamunga Hospital Primary Health Care Unit.	The project was established in five villages in cooperation with Sasamunga Hospital Primary Health Care Unit.
2. Introduce training to strengthen the capacity of Sasamunga Hospital, through its Primary Health Care Unit, to implement the project in participation with local organisations.	A Sasamunga woman was employed as regional trainer to work with the Primary Health Care Unit and took the project into participating villages.
3. Identify the human health and food production situation in target villages through the compilation of qualitative and quantitative baseline data.	Information was gathered through a range of processes including the assistance of a Brazilian community worker, Liliana Peres, who introduced a community food security assessment process.

4. Form ongoing relationships with village-based organisations to promote innovation, adaptation and farmer experimentation in intensive landuse and the maintenance of relevant, existing food production practices.	Farmer innovation and small scale experimentation was used as a means of assessing new agricultural methods.
5. Improve nutrition in target villages through the provision of information and the promotion of practical means of providing a balanced diet based largely on local foods.	Nutritional training and the validation of the use of relevant traditional methods as well as the use of local foods was integrated into training.
6. Through the supply of information and education, increase knowledge of the link between environmental and human health and food production.	This was integrated into the training program.
7. Provide practical, applicable models for Oanurai, Vaghena and Patubelo villages.	Models in the form of household sup sup gardens were established.

Community Ethnobotanical Manual Project—assess against objectives

Objective	Assessment
1. Collection of information about the forest food resource in the Babatana language area of South Choiseul through the recording of traditional knowledge and field work.	Information successfully collected through participatory means.
2. Production of an ethnobotanical manual describing the forest food resource on South Choiseul.	Layout of the manual is nearing completion after being delayed by illness in the family of the layout people and the conflict in the Solomon.
3. Training and support of two village-based ethnobotanists to implement research into the forest food resource among communities in the Babatana language area.	More than two people received training over the life of the project.
4. Development of a program of community education and training focusing on the importance of the forest food resource and the need for the ecologically sustainable management of the resource.	The objective was accomplished through workshops and field work and through implementation in local primary schools.
5. The utilisation of the forest food resource by communities for purposes of improved health and nutrition.	Qualitative evidence, based on observation, indicated the increased use of forest foods by project participants.
6. Design of the project so that it provides a replicable model for the production of similar forest food manuals in other Solomon Island communities.	The project would be replicable by any project team with funding to support the collection and verification of information. Costing has to cover printing; transport of the printed volumes; the cost of a layout person; writing, editing, design, layout and image scanning for a book is an involved task and consumes a great deal of time—it is not a task for an underresourced agency with minimal desktop publishing skills and equipment; liaison with the printer is a critical task requiring knowledge of pre-press and printing processes.
7. The utilisation of fresh forest foods by patients of Sasamunga Community Hospital.	No quantitative data was kept on this objective, so the extent to which it was accomplished is largely unknown.



A two-phase program

The agriculture program can be seen as consisting of two phases—the AusAID-funded, APACE-supported initial period from 1995 to 1999 and the subsequent phase during which the organisation was restructured and sought independent funding.

The cessation of APACE support for the agriculture program forced Tony Jansen to act on his long-term plan of setting up a local NGO to carry on the work. It was originally thought that the new NGO would become a partner to APACE and that APACE would continue with some level of funding. The cessation also brought to an end the idea of setting up a quasi-independent APACE Solomon Islands operation, an idea that gained support during the staff meeting in Honiara in late 1998.

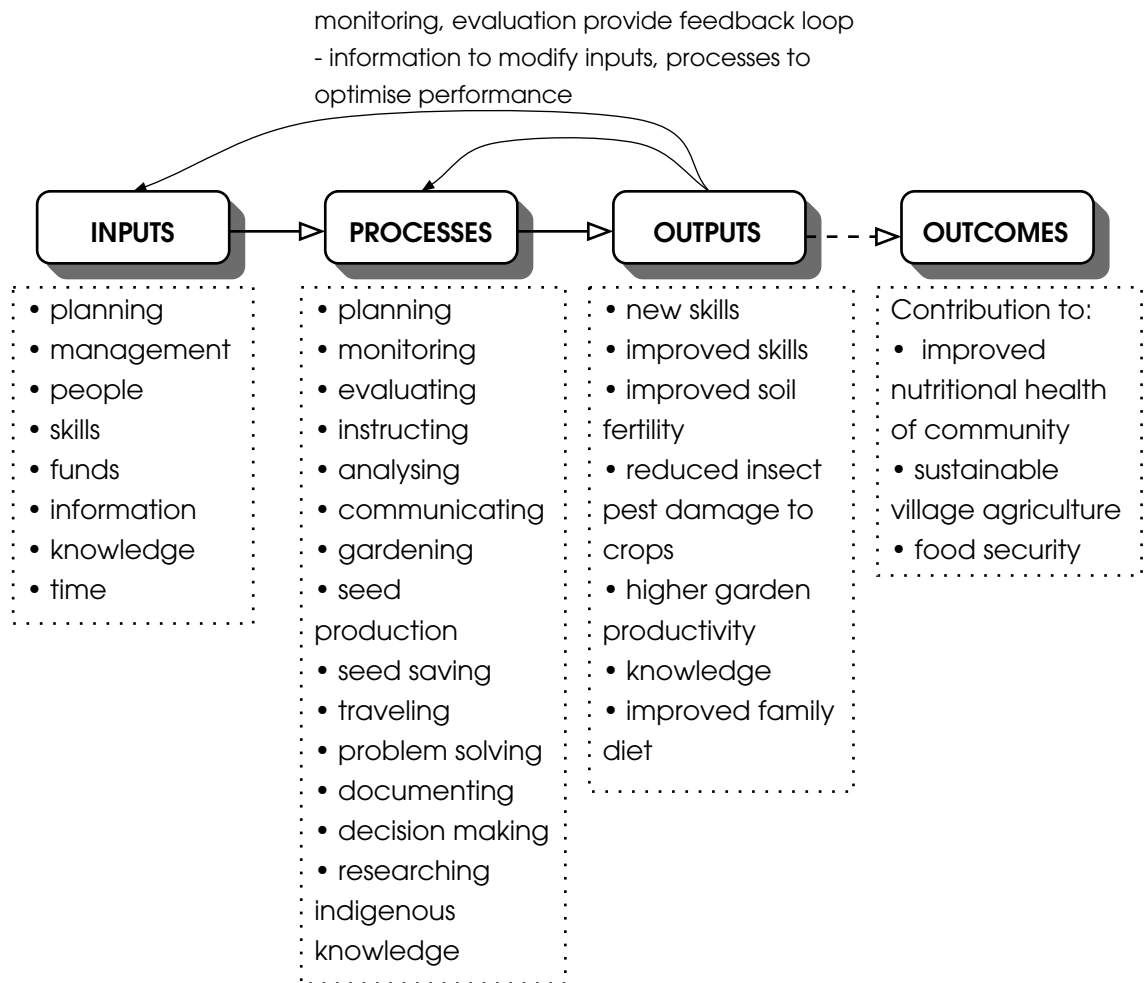
Since gaining its independence, the program has diversified to become involved in training on

Bougainville and in participating in the TaroGen project. At the same time, the Planting Material Network has become an NGO and has decentralised its operations to the provinces.

TerraCircle

Although Lisa McMurray, project manager for the village electrification scheme, and myself, Russ Grayson, project manager for the agriculture program and development education officer had left APACE, and with the withdrawal of APACE from agriculture, the two of us decided that we wanted to continue to support Tony and the Solomon Island crew. Consequently, a private development organisation, TerraCircle, is being set up as a way to continue working with the agriculture program and to seek similar work as a consultancy in the region.

The KGP/ KGA/ PMN as a system of agricultural training



The agriculture program can be viewed as a system of interrelated components through which material, nonmaterial, financial and intellectual energies flowed.

The starting point for the program was the knowledge and information gained by Tony Jansen and APACE staff during and prior to the Lalano project on Malaita. This helped define the inputs, material and nonmaterial, that would be needed before the program could start its work and which were defined initially during the project planning stage in Sydney.

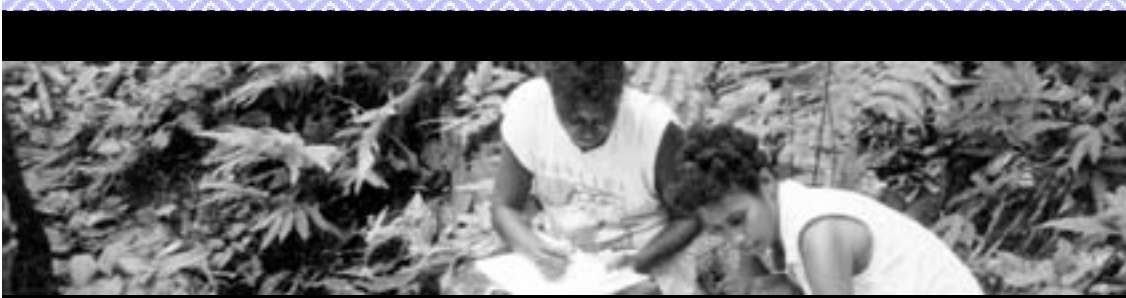
The processes were the activities carried out on the ground in the Solomons and included those that made up the methodologies adopted by the program—Participatory Rural Appraisal (PRA), Participatory Technology Development (PTD), Participatory Action and Learning and Community Food Security Assessment.

The inputs provided the wherewithal to implement the processes which, in turn, influenced the outputs, the things the program

produced (including nonmaterial outputs such as skills development) and contributed to the outcomes, the big picture issues.

Regular monitoring and less-frequent evaluation were the means of assessing how the program was going and whether the individual projects were moving towards their goals. Assessing the outputs and impacts of the projects provided feedback loops consisting of the information necessary to the making of timely changes and adjustments to the quality, quantity and timeliness of inputs and to the processes making up the program's activities.

The system boundary of the program was village agriculture and nutritional health. Defining the boundary provided a cut-off point so that scarce resources were not spread too thinly by addressing other issues although they may have been in some way related to food production and nutrition. A systems diagram presents a generalised view of the program and its work.



What's worked?

IF project managers really want to introduce a philosophy of continual improvement, then knowing what has worked is as important as knowing what has not worked. The small size of the Kastom Garden Program has made the discovery of this information an informal process.

Village sup sup gardens

With Solomon Island subsistence agriculture reliant on shifting cultivation, and with bush gardens sometimes distant from the village, KGP trainers wanted to establish small vegetable gardens close to the dwelling.

The trainers thought that, with fresh vegetables close at hand they would be used more often in family meals. Were the gardens successful, families would make use of the annual vegetables on a daily basis and nutritional health might be improved.

The small gardens would not replace the more distant bush gardens—they would simply supplement them—the bush gardens would still be used to produce the root crops which are the traditional staple of the family meal.

The construction of small 'nutrition gardens' or sup sup gardens within the village was demonstrated and their value explained. Within a short time the idea caught on and the number increased. The gardens were a success.

Table gardens

An adaptation of the sup sup garden are the 'table gardens' found in some villages. These are gardens raised off the ground to a convenient working height.

Table gardens consist of a soil-filled growing tray to perhaps 30 centimetres in depth (the depth varies) raised to around waist height and supported on timber legs.

While the quantity of vegetables which can be grown in table gardens is limited, enough can be produced to supplement produce from the bush garden.

Crops grown in table gardens are out of reach of the semi-feral chickens which roam the villages. Raising the garden also puts it out of reach of dogs.



A sup sup garden under construction by Lawrence and his wife close to their house in Takwa village, North Malaita. The garden area has been mulched with layers of rotted coconut husk and organic matter.

Making gardens in the village to provide easy access to vegetables for the family meal proved successful.

The idea of table gardens did not come from KGP trainers—it appears to be the work of innovative farmers. The trainers saw the popularity and usefulness of the gardens and incorporated the idea in their work.

Nutritional education

Supporting the development of village nutrition gardens was the agriculture program's nutritional education work, the main focus of which was the role of the nutritionally balanced meal in maintaining family health.

Material used in nutritional education was drawn from the UN Food and Agriculture Organisation and from a useful book published in the UK by Intermediate Technology Publications — *Nutrition for Developing Countries* (1972; IT Publications, London).

Educational material developed by nutritional educator Maria Zabel, who was based at Sasamunga Hospital, was also used. Maria, from Finland, accompanied her German husband Peter on a three year placement as the Sasamunga Hospital doctor. Maria pioneered an innovative infant growth monitoring program that included nutritional education.

In the program's agricultural training, the link between health, food crop diversity, the mixed family meal and the productivity of village sup sup and bush gardens was emphasised.

Farmer experimentation

Encouraging gardeners to experiment with the new ideas introduced by KGP trainers was successful.

By trialing new ideas on a small area farmers would become familiar with their management and would be in a position to make an informed decision as to whether it was worth the effort of using the ideas in the rest of their garden.

Farmer experimentation proved a useful means for gardeners to try out new techniques before committing themselves. Making a complete, garden-wide change in growing technique presents unacceptable risks to people reliant on their gardens for sustenance.

Farmer experimentation started slowly and needed a great deal of talking with farmers before they were willing to give it a try. Informal experimentation, which occurs in the gardens all the time, strengthened the process.

Limiting the number of new techniques

Too many new ideas at once produces confusion, discourages motivation and limits the uptake of new ideas.

Introducing only a few associated ideas at a time helped gardeners comprehend them and boosted the chance that the ideas would be adopted.

Ideas are best introduced slowly, each building on the other, together making up a coherent package of techniques adapted to local environmental, social and cultural conditions.



Table-top gardens in the village eventually proved popular. Raised to a convenient working height and out of the way of chickens, the gardens are used to grow shallow-rooted vegetables.

As Tony explained it:

Ideally, a start would be made with an innovation that produces a quick result.

We then move on to a more long term issue.

Integrated pest management was a good starting point. Then we would continue to improved fallow and soil issues.

Informal examples in communities

The demonstration effect was employed when participants in the KGP tried out new ideas in their own gardens. When other villagers saw the results it became a type of informal 'education by looking'.

Village-based voluntary trainers were expected to demonstrate the techniques passed on by the program in their own gardens. This was usually done but sometimes, though, it was not the trainers who provided the example, it was people who excelled at practical work and put into use what they picked up at workshops. Patience was necessary in identifying such people because there was often a considerable period of time before they adopted what they learned and made a garden.

When voluntary trainers failed to make use of the demonstration effect to put into practice what they taught, the opportunity to reinforce formal training with a living demonstration was lost.

Building on indigenous knowledge

From the start, KGP staff assessed traditional methods of agriculture and incorporated them into the program where they proved effective. It was thought that this would reinforce and strengthen training.

Throughout the history of development, traditional technologies, approaches and methodologies have been discarded in favour of new tools and techniques. While some of the new approaches have benefited commercial farmers they often proved impractical, unmanageable or too expensive for small farmers and subsistence gardeners.

Making use of traditional methods validated traditional knowledge in the eyes of the farmers.

Appropriate technology

When the English economist EF Schumacher promulgated his philosophy of 'appropriate technology' in the 1960s, people started to take a new look at traditional technologies and to realise that, in many, cases, they were more appropriate to the task at hand than new tools.

Schumacher said that modern technology was often inappropriate to circumstances existing in developing countries and he knew that the efficiency of many traditional technologies could be improved upon. His notion of appropriate or 'intermediate' technology—technology less reliant upon access to finance and scarce maintenance skills and which was often of small scale—gained support among development professionals.

Gardener innovation—locally available bamboo has been used to make a container for a yam plant by Choiseul gardener, Nanao.

The container is filled with waste organic matter which breaks down to form compost and protects the plant from chickens.



In essence, the KGP is all about appropriate technology. The use of farmer experimentation, the assessment of traditional knowledge, food plants—including the bush foods documented in the ethnobotanical manual project—and agricultural technologies reflect the project's attempt to retain what is useful from the past and to introduce what is affordable, manageable and beneficial from the modern world.

An example has been the use of local methods of using mulch to maintain soil quality. Frequently, such methods were in decline and were sometimes close to disappearing.

Incorporating methods familiar to many of the gardeners gave them confidence and validated the new methods brought by the training program. Gardeners felt confident that they would work in the long term.

Tony explained:

An example was the digging stick.

This is a traditional tool—it's cut from a strong timber such as mangrove—and it is useful for the planting of root crops without disturbing the soil. This makes it more 'appropriate' than the alternative — the introduced metal digging hoe. The digging stick works in all but the hardest, most compacted soils.

By promoting the digging stick we validated a known technology. As a technology suited to sustainable agriculture in the Solomons it worked well, it was within the farmer's capacity to produce and maintain and no expense was involved. The digging stick was an appropriate tool for the farmer's needs.

Follow-up

Central to success in all the KGP's training activities have been follow-up visits to participating communities.

The visits create a 'presence' for the program in a region. The effect is to raise the program's profile and convince participants that project staff are interested in their welfare and experiences and have a high level of motivation for their work.

Workshops provided an entry point to communities but without follow-up visits would have been insufficient.

Generally, follow-up involves:

- group meetings
- capacity building of local groups
- individual garden visits
- follow-up workshops

- farmer visits to other gardens.

Repeat visits make it possible to monitor project work over time, providing an additional source of information on how well particular techniques work.

The program attempted to provide follow-up for at least 12 months after the initial training workshops.

Garden visits

Doing the rounds of participant's gardens during regular visits to communities proved a useful means of monitoring and encouraged the sharing of information.

Sometimes, field staff noticed a lack of willingness to share information among villagers. Some farmers held on to knowledge that they felt provided them with an advantage. The effect, however, was to retard the spread of techniques introduced by the program.

During KGP workshops, participants would visit gardens as a group. KGP trainers used questioning and discussion to guide the group in assessing what was being done in the gardens.

By encouraging the sharing of experience, most farmers came to realise the benefits of the open exchange of information.

Voluntary village trainers

Choosing voluntary trainers proved to be a challenge, but those selected generally worked out well.

The use of such trainers was successful overall, however there were a few disappointments, as must be expected. Perhaps 30% were successful over the long term.

The trainers were responsible for working with their own communities and, sometimes, in nearby communities. They attended KGP training workshops and were expected to demonstrate what they learned in their own gardens. On occasion, village trainers attended regional train-the-trainer workshops to improve their teaching skills and knowledge.

The process of selecting voluntary trainers was put into the hands of members of the village gardening group rather than leaving selection to KGP staff.

Some limitations in the use of voluntary village trainers became apparent:

- without good leadership, local groups soon lost direction and focus despite the fact that most of the young trainers put into practice what they had learned in their own gardens
- the contrast of younger women with more experienced leaders was clear; despite their other commitments, these women were able to transfer what they learned to their village groups and received respect and credibility.
- personal problems
- sickness
- migration to the city
- uncertainty among young people about what they wanted to do in life
- sometimes, difficulty experienced by young people in being seen as credible in the village
- the failure of some trainers to substantially implement what they taught.

Internal migration

The population of the Solomon Islands enjoys a high degree of mobility although the major islands are separated from each other by substantial bodies of water. The cargo and passenger ships which connect the islands and, to a lesser extent, the daily air services, are used by islanders to move about the archipelago.

Internal migration occurs despite the focus of family life in the village. People spend considerable time away from the village living with wantoks (people speaking the same language and usually related in some way).

Spending time in Honiara (Guadalcanal Province) or some other centre such as Auki (Malaita Province) or Gizo (Western Province) with wantoks or in search of paid employment is common. People also spend time with wantoks in other rural villages.

Problems occurred when the internal migrants were also KGP voluntary trainers. With the trainers absent, project activities were disrupted and sometimes their absence wasted visits by Tony and regional coordinators. This was costly because travel in the Solomons is expensive.

Training the trainers

Visitors taking the Solomon Airlines flight into Gizo, capital of Western Province, first notice Kolombangara as a grey-green, jungle-clad volcanic cone protruding from the sea off their wingtip.

It was on Kolombangara, at St Dominics Training Centre, that the first train the village trainer course was held. St Dominics was selected as a venue because the centre demonstrates a range of sustainable agricultural models.

Two trainers from each community were selected to attend the training program. The intention of the course was to educate participants in the elements of effective training and to introduce different teaching methods.

In 1997, I was scheduled to provide some of the training, however the necessity to remain in Sydney to complete the work of preparing for AusAID accreditation meant that a replacement trainer had to be found. Sandra Heilpern was recommended by the Seed Savers Network's Jude Fanton. Sandra proved a more than capable trainer, bringing her wealth of organisational experience and teaching ability.

Focus on practical training

Emphasis on practical rather than theoretical training encouraged the 'learning by doing' approach so necessary in the Solomons.

Training took into account the literacy levels and educational standard of participants. Only about 50% of participants in KGP training were literate or semiliterate. KGP trainers consequently limited lecturing and made use of participatory techniques—hear it, see it, do it.

Demonstrating, then encouraging people to try new ideas for themselves proved successful.

Success with local languages

Although Solomon Pijin is widely understood, there are many local languages in everyday use. It was found that teaching in those languages greatly facilitated training.

The KGP was fortunate to have people like Roselyn Kabu as a regional coordinator. Roselyn was fluent in Lau, the local language of her home area of North Malaita.

Workshops were often translated from Pijin to local language.

On the island of Choiseul, KGP staff used the local language—Babatana—in their work. The ethnobotanical manual produced for use in that region was published in both English and Babatana.

Farmer field school

A successful mode of agricultural extension in other countries has been the 'farmer field school'.

The school is a way of introducing a new method or technology to farmers. The farmers then try out the new idea in their own gardens.

Farmers come together on a regular basis as an informal group to share their experience with the new idea and to receive further training from the resource person.

Field school—North Malaita

The field school approach to training was tried only in the village of Takwa, North Malaita, where it seemed to work well. The village women's group would work in their own gardens and meet every couple of weeks to share information about how their field experiments were progressing.

The approach worked reasonable well with mulching being introduced and some botanical pest control sprays promoted.

Perhaps the main difficulty was the inability of the KGP resource person to get to the village for the fortnightly meetings. A further limitation occurred on occasions when community commitments led to poor attendance at the field school.

The farmer field school served as an alternative to the less successful demonstration or community farm.

The schools proved to be a good group building exercise. With more intensive support, they could be very successful in the Solomons.

As an alternative to the field school, people in Wagina formed small groups of four to five to work on rotation in each other's gardens.

Integrated pest management

There appears to be little knowledge about the control of some insect pests among Solomon Island subsistence farmers.

Traditionally in long fallow gardening there is little pest buildup during the cropping period. Plant diversity is the main traditional strategy to manage pests and plant diseases.

Damage to plants from insect pest attack worsened during the drought of 1997 when plants already weakened by the dry conditions were attacked. This presented program planners with both the need and the opportunity to introduce integrated pest management (IPM) into the program.

IPM is a multi-technique approach to the control of insect pests. It can include the limited use of synthetic pesticides or it may be completely organic. Because the KGP had taken the low external input road to agriculture, organic methods were the choice. Organics encouraged greater farmer self-reliance and innovation and avoided the environmental and health problems of pesticide misuse which have occurred in other developing countries.

Until the integrated pest management program started in Malaita in 1999, training that had been provided had been opportunistic and sporadic.

There remains a need to further integrate training in IPM into the program's field activities.

Quick results

The opportunity to achieve quick results was built into the training program because there is nothing quite as motivating as early success.

Quick results did not replace the need for long term change. Rather, it encouraged farmers to set out on that longer road by building in motivators.

Mulching, green manuring and erosion control works failed to produce the quick yields needed to convince farmers to change current practices. Serving as better entry points to longer term agricultural improvement have been:

- the building of sup sup gardens in villages
- natural pest control
- the establishment of nurseries.

Nursery inputs

To minimise costs, inputs into the farming cycle were found locally rather than purchased.

Organic material scraped from rotting coconut husks and mixed with soil provided an effective growing medium for seeds.

Another use of scraped coconut husk was as a stable, homogenous growing medium for the germination testing of seeds held in storage by the Planting Material Network. Seed was sown directly into the finely scraped husk in seedling boxes and the germinated seed counted to determine its viability (the percentage of seeds likely to germinate from a particular batch).

A simple and reliable nursery and seedling production system was developed that greatly assisted vegetable production, especially of the popular Chinese cabbage.

Association with an institution

The linking of the training program to a local institution was a reason behind the success of the Luru Kastom Garden Project. The institution was the Sasamunga Hospital Primary Health Care Unit for which the project provided agricultural training in support of the unit's nutritional work.

Another benefit of association was access to the Unit's motor canoe to transport the training team to participating villages and the provision of office space in the Unit's small building in Sasamunga.

The support of the hospital's doctor was critical to the sharing of resources and to gaining support from the community at the start of the project.

Employment of a local trainer

The benefit of employing a local person as regional coordinator, a person with standing in the community, speaking the local language and possessing initiative was demonstrated in the Luru Kastom Garden Project.

Nairy Pitakaka lived in Sasamunga village and travelled to other communities participating in the project. Roselyn Kabu filled a similar role on North Malaita.

Transfer of training

The transfer of useful information from trainer to participant and the participant's use of that information is at the core of all KGP agricultural training activities.

Although it was of concern at first, it became apparent that non-attendance at workshops did not necessarily mean that new techniques would

not be adopted. Somehow, people who did not attend workshops picked up what was taught there.

Some of the most successful implementers of sup sup gardens and improved bush gardening techniques were people who tried out for themselves what they learned from others who attended the training. Word of mouth is evidently critical in the transfer of information in a village community.

High frequency radio link

In the Solomon Islands, larger villages are linked by a national network using high frequency radio. After the initial purchase of equipment and after obtaining a government licence there are no recurring costs as there are with the telephone.

The telephone service provided by Solomons Telekom links mainly towns and seldom connects villages, many of which are geographically isolated.

In 2000, the Kastom Garden Program installed high frequency radios in the Honiara, Munda and Mana'abu offices. This has proven valuable, enabling direct contact between regional staff.

Tony said that whereas written reports might come in from regional field staff once a month, the radio link enabled frequent contact. Had he been aware of the usefulness of the radio link he would have installed it earlier.



Workshop attendees make seedling trays from bamboo at Patubelo village, Northern Choiseul.

Slash and mulch

The critical role of organic matter in building and maintaining soil fertility has been a central focus of the KGP's training program.

In the long bush fallow tradition practiced in the Solomons, clearing and burning does not appear to be harmful to the soil. The ash provides a soil nutrient boost.

As fallow periods have shortened, however, burning has intensified. Gardens burned of all organic matter are now common and soil fertility is declining because the short fallow allows insufficient time to recover the lost organic matter.

As an alternative to burning, KGP trainers promote mulching to maintain a high level of soil organic matter and to protect the soil from erosion.

Success with slash and mulch

In almost all cases where farmers have tried slash and mulch as an alternative to slash and burn, they report that yields have been the same or higher. Some farmers reported significantly improved yields.

A negative consequence reported by some farmers has been the growth of weeds, probably because burning killed the seed and mulching does not. Burning, however, sets up a vicious cycle and repeated burning encourages more and more problem weeds that are fire resistant and fire tolerant.

The use of mulch is an appropriate agricultural technology for sustainable village agriculture. In the Solomons there are a number of traditional methods of mulching and these have been used by

KGP trainers as precedents and as a way to validate the practice. Patience and a clear explanation of benefits have been necessary to encourage adoption and the KGP has achieved a reasonable degree of success in encouraging the use of mulch.

Composting has limited potential for widespread use because it is a labour intensive practice requiring maintenance during the composting process.

The use of mulching complies with the principle of keeping things simple and appropriate.

During the 1997 drought, farmers participating in the KGP reported that crops planted into soils covered by mulch generally continued to live, whereas bare soil gardens died.

The use of legumes

Farmers were encouraged to grow legumes to improve garden productivity.

Legumes are plants which produce nitrogenous compounds that support plant growth. Nitrogen is one of the main plant nutrients and is absorbed into growing plants through their root system.

The fibrous material resulting from the breakdown of plant material improves soil aeration and water retention, encourages soil life and an open soil structure conducive to healthy plant growth.

Promoting the planting of legumes has been reasonable successful, particularly in small gardens close to the house. In bush gardens, however, more experimentation over a longer period is needed.

The PMN has a collection of promising varieties of legume.



Mulching proved to be a successful idea and was taken up by village gardeners. KGP trainer Roselyn Kabu (left) places mulch on the garden. Patson (right), was a KGP trainer with Mana'abu rural Training Centre, Malaita.

Alley cropping

Alley cropping has been a mixed success.

The practice was introduced in the Sasamunga Hospital garden on Choiseul and at the project centre's Burns Creek garden. It continues in use at both locations.

In the Sasamunga garden, the tree species *Gliricidia* was used as a leguminous interplant established in alleys. Between the alleys, which were about four metres apart, vegetable crops were planted. The *Gliricidia* was slashed and its foliage used as a nitrogen-rich mulch on the vegetable gardens between the alleys.

It quickly regrew its foliage and the process was later repeated.

Although *Gliricidia* grows into a tree, in the alley cropping system slashing maintains it as a bushy shrub.

Despite the evident success of alley cropping, the idea has not caught on in bush gardens. The reason is believed to be because gardeners see the plant as unproductive because it yields no food and occupies valuable space. The same attitude has been encountered by agricultural trainers in other countries although alley cropping has been more readily accepted there.

Alley cropping on Malaita

When the KGP was asked to hold a workshop with Faufanea Women's Group, Roselyn Kabu looked for local farmers using innovations that might be of instructional value. She found Joseph Kiriau, a retired agricultural worker.

Joseph had established a large alley cropping plot close to his house in Suava Bay. He had come across the system during his time with the

Ministry of Agriculture and had decided to try it out for himself.

We were surprised to find his plot working very well. He had been cropping kang kong taro continuously for ten years.

Joseph planted alleys of *Gliricidia* eight metres apart. It was allowed to grow over the harvested cropping area for up to a year before slashing. After slashing, the foliage was laid as mulch and the taro replanted. Each of Joseph's four cropping alleys was planted sequentially in this way. His experience shows that alley cropping is possible and works successfully in the difficult soils around Sauva Bay. But again, there has been no transfer of his experience to other farmers.

Most of the women at the workshop reported that their visit was the first time they had seen or heard about the garden even though they came from an adjacent village. A PTD process was planned to disseminate Joseph's experience to other farmers.

Alley cropping at Sasamunga Hospital

The small, ten by ten metre alley cropping plot at the Sasamunga Hospital garden was planted during the first KGP workshop on Sasamunga in November 1995.

Gliricidia sepium cuttings were established in rows about four metres apart. The cuttings were planted at a spacing of one metre. Each cutting was 40 to 80 cm long and planted at an angle of 45 to 60 degrees. The trees were pruned at least every six months and the slashed foliage was laid as a mulch.

Crop rotation was practiced with crop residue also laid as mulch. No other sources of organic



Alley cropping brought mixed success in being adopted by village gardeners. Some considered the leguminous alley strip unproductive because it did not produce food and took up valuable space in the garden.

matter was used. Over a period of two years, the sandy soil improved markedly. The *Gliricidia* has clearly built up organic matter in the garden soil which is now of a black colour and is visibly richer than the depleted white sand when the garden was established.

The plot was still productive in the year 2000 although it has been under almost continual cropping since the end of 1995.

Despite KGP trainers and garden workers explaining the principle of how the *Gliricidia* works, no farmers have adopted the method. It seems that they are unconvinced of its benefits and fear that the trees could compete with their crops. This indicates that the mere presence of an innovation is not sufficient by itself to spread its use. That requires educational work plus clear evidence of the benefits of adopting the innovation.



Focused training

Too many innovations can lead to failure. Too few farmers will adopt any of the innovations.

In Sasamunga and elsewhere on Choiseul, the clearly focused training and follow-up program of sup sup garden development produced good results.

Too many innovations at once

The training provided on North Malaita and on Guadalcanal was more general, focusing on bush gardens, sup sup gardens, alley cropping, hillside gardens and more.

While some techniques were adopted, a group momentum through which farmers encourage one another did not develop.

After this experience, the KGP changed its training approach on Malaita.

Success on Choiseul

Experience on Choiseul indicated that when a new method or technology was adopted widely the program could then expand into other areas. This was commensurate with the principle of introducing only a limited number of new ideas at once.

On Choiseul, the initial focus was on sup sup gardens. This grew to include a revival of forest foods as part of the process of improving the food security of rural people.

The digging stick was found to be a traditional technology useful in the cultivation of root crops in non-compacted soil. Salathiel Sore makes use of the tool at the Central Link garden, Honiara.

PARTICIPATORY TECHNIQUES—photo essay

In its search for participatory approaches, it was perhaps inevitable that Kastom Garden staff would discover Participatory Rural Appraisal (PRA), more recently known as Participatory Learning and Action (PLA). Sometimes known simply as Participatory Appraisal, PRA consists of a multitude of techniques to involve participants in the discovery of information. PRA allows the participants to assume control over the information collection process after project trainers have explained how the process works.

PRA techniques must be adapted to suit the circumstances at hand.

The PRA approach has been integrated into the field work of Kastom Garden.



(right) A woman shows a drawing she has made identifying the spatial distribution of crops—food plants which grow inside the village, close to the village, in the bush gardens and those which grow wild in the bush.



At Takwa village on North Malaita, a woman uses locally found objects—coconut shells and clam shells—to fill in a matrix drawn in the sand to produce a planting and harvest calendar.

The matrix is a commonly used pattern for the classification of information in PRA. Planting calendars, historic timelines, wealth and rank distribution and importance ratings are just a few uses for the matrix.



Model making using local materials is another technique useful in communities where there is limited literacy or where a model would help people comprehend an idea.

Villagers can use models to plot the spatial distribution of resources. Here, a model has been made by residents of Ferusubua, Malaita, to locate resources and constraints.



A matrix drawn up on flip chart paper identifies local food plants, their use and value by various criteria.



Village trainers discover different ways of learning at a train-the-trainer workshop. The training of village educators was part of KGP activities that helped to maintain a presence for the program when field staff were not available. Australian educator, Sandra Heilpern, led the first train-the-trainer workshop in 1988.



Using string to record information on a matrix. The names of crops have been written on cards and placed across the top of the matrix. Planting and harvesting times are recorded below.



Training workshops work best when jointly planned and later debriefed by the training team.

KGP staff (from left): Florence Nodoro, Emma Stone, Wendy Betsy, Mary Timothy, Roselyn Kabu.



A visual aid used to get across the idea of using mulch. Pictures should be simple and easily read from a distance.

ASSESSMENT OF THE ACHIEVEMENTS OF THE KASTOM GARDEN PROGRAM

Assessment based on KGP objectives and valid as of December 1999

Task	Assessment
Decentralisation of the seed bank and seed distribution.	<ul style="list-style-type: none"> • number of species conserved in Planting Material Network - 140 • number of members of Planting Material Network - approximately 300 • number of packets of seed produced per month - approximately 200 • number of Planting Material Network employees - 3, full time <p>The availability of funding in 1999 has enabled the decentralisation of the Planting Material Network to four centres on different islands.</p>
Production of an integrated kastom agriculture manual for the Solomon Islands.	The book <i>Sapa</i> , now in its third printing, represents a partial completion of this task.
Provide training in ecologically sustainable agricultural methods.	<ul style="list-style-type: none"> • number of village training workshops - 47 in 19 villages in 3 provinces • approximate number of attendees - 645 • gender breakdown of trainees - 75% female, 25% male • number of community trainers trained - 16 • types of people trained - farmers, teachers, government agriculture extension service personnel, NGO agricultural trainers, community leaders.
Trial and introduce new crop varieties into rural villages.	<ul style="list-style-type: none"> • a small number of varieties new to village farmers have been introduced. • a better strategy has been the collection, multiplication and distribution of indigenous and naturalised crop species.

ADAPTING TO CIRCUMSTANCE

The circumstances of Solomon Island rural communities and the approaches taken by the Kastom Garden Program

Circumstance	KGP approach
<p>Access to cash</p> <p>Rural partner communities have limited access to cash resources with 40% to 80% of family cash expenditure used for the purchase of food, particularly imported white rice which is now a staple (Solomon Island government expenditure survey).</p>	<ul style="list-style-type: none"> the low external input approach to subsistence agriculture was adopted because it maximises the use of local resources and reduces the cost of farming.
<p>Reliance on subsistence gardening</p> <p>Approximately 85% of Solomon Islanders rely on subsistence gardening for their nutrition.</p>	<p>The program focuses on improving the cultivation of subsistence bush gardens and the construction of small 'nutrition' gardens (sup sup gardens) in villages as ways to boost community nutritional health.</p>
<p>Shifting cultivation</p> <p>There is a tradition of shifting cultivation in bush gardens.</p>	<p>Promotion of farming methods which improve soil fertility and conserve soils.</p>
<p>Traditional culture</p> <p>Traditional culture is largely intact in rural areas.</p>	<p>The utilisation of farming methods drawn from Solomon Island traditional agriculture validated traditional knowledge and facilitated the blending of new approaches.</p>
<p>High population growth</p> <ul style="list-style-type: none"> a high population growth rate estimated at 3.6% per year with a large percentage of the population under the age of 15 years declining productivity, soil fertility and soil retention in bush gardens in areas of high population density and reduced fallow periods in bush gardens evidence of lowered levels of nutritional health in children—up to 30% of children on the island of Choiseul affected. 	<ul style="list-style-type: none"> focus on the intensification of agriculture in bush gardens using methods which maintain soil fertility and productivity and reduce the erosive loss of soil participation in the Sasamunga Hospital Primary Health Care Unit as a means of educating villagers about nutrition and reinforcing this education with practical training in intensified farming techniques to meet nutritional needs.



Circumstance	KGP approach
<p>Burning and mulching at Mana’abu On the northern tip of Suava Bay, Malaita, the village of Mana’abu hosts the Mana’abu Rural Training Centre. The centre is the partner organisation to the KGP for its North Malaita program.</p> <p>In this area, slash and burn fallow periods—the time during which bush gardens are left to recover and regain fertility between uses—have shortened to between two years and six months. Soil is degrading rapidly and the vegetation which is grown during the fallow period is slowly becoming dominated by weedy grasses, ferns and trees that can regenerate rapidly after burning.</p>	<p>The KGP has assisted a number of farmers to carry out small experiments in slash and mulch versus slash and burn. The experiments also included trialing the use of minimum cultivation using the traditional digging stick rather than the metal hoe to make mounds.</p> <p>The results included:</p> <ul style="list-style-type: none">• the plots cultivated using mulch and with the digging stick grew better than the burned plots; one of the farmers found that taro grew very well with the use of mulch• when a legume crop was grown and slashed for mulch—a green manure crop—results were good. <p>Despite the evident success of the green manure crop, most farmers remain unconvinced. More than mulching is needed to rebuild the degraded soils of the Mana’abu area. The KGP made trials of leguminous trees on field boundaries for coppicing as mulch and for firewood production.</p> <p>A number of traditional practices have been used to demonstrate the validity of mulching to local farmers. Farmers are now setting up trials of leguminous trees on field boundaries to coppice for organic matter.</p>
<p>Working in companies As an alternative to a group garden at the local clinic, participants at Wagina, Choiseul, decided to form small ‘company’ groups. These were groups of three to four people, mainly women, who would help each other in their gardens and try out methods learned in workshops. This approach is a cultural tradition among the Gilbertese people and is used to perform many types of work. The company approach succeeded where a community garden had previously failed.</p>	<p>For the KGP, the lesson was a validation of its practice of being open to different ways of accomplishing its mission and that there was more than one way of doing fieldwork. It also validated the practice of listening to local advice, of trying to gain maximum participation in project work and of taking advantage of local cultural practices to get the job done.</p>

INNOVATIVE FARMERS

Asher Kula

Asher Kula is a 26 year old man from the village of Panarui, Choiseul, who has developed a very successful garden using integrated organic methods.

Asher did not attend the initial KGP workshops in the area. He said that he was not interested in courses but was more interested in doing things in his garden. One of the people who joined in the training to trainers, Sylvia Pitamama, gave advice to Asher who produced very good results. KGP resource people visited Asher regularly and provided support and encouragement.

Asher developed a model farm demonstrating mulching, crop rotation and many new varieties of beans and other plants that he sourced from the Planting Material Network.

Asher has since become a KGP trainer and assists with workshops in other villages. Many farmers visit his garden which has become an effective demonstration site.

Felix Laukasi

Takwa village, Malaita

Felix Laukasi is a North Malaita farmer who has developed many innovations in his attempt to manage pests in his garden. He has abandoned the use of chemicals—mainly because of their cost—and has adopted a botanical approach to the management of insect pests.

Felix uses a combination of strong-smelling sprays and other control methods applied at the onset of any insect problem and at certain times of the year when he has observed that insects are more likely to attack. A number of simple methods have been developed by Felix and he has found these successful.

Felix came to the attention of north Malaita coordinator, Roselyn Kabu, who invited him to workshops to share his experiences. Felix later became a resource person for the integrated pest management project on North Malaita. The project makes use of farmer field trials.

In this way, the KGP's role was to facilitate the sharing of the experiences of innovative

farmers. No outside experts were needed as the experience was already there in the community.

Through a combination of practical workshops, garden visits by local women's groups and farmer field trials, these methods are now being validated and spread among farmers.

Nanao

Panarui, Choiseul

Nanao heard about the sup garden workshops conducted by the KGP at Sasamunga Hospital. She saw some of the women making gardens around their houses.

Not a person to get involved in workshops or for talking, Nanao realised that the problem with sup gardens was fencing. Chickens, she knew, would soon be attracted to the organically-rich soil and mulch.

Nanao's solution was to raise her garden on a table. Her growing mix was rotting coconut husk mixed with black soil.

In her garden beds she planted Chinese cabbage, tomatoes, beans, shallots and pepper. These were grown for her family and for sale at the local market.

Nanao also developed compost baskets in which she grew yams.

Women cultivators in the area had been having trouble with chickens getting into their gardens. The living pineapple fences promoted through KGP workshops had not worked as well as it had been hoped. The solution came when KGP trainers shared Nanao's success with other women who were soon making their own table gardens in timber beds or in old wooden canoes. Nanao's innovations spread quickly.

Again, the role of the KGP trainer was to locate innovators and then facilitate the sharing of their experience.

Although table gardens were not an agricultural technology devised by the KGP they were incorporated in the workshop program and proved one of the most successful and popular methods of making a sup garden.



What's hasn't worked?

In drawing learnings from the experience of a development program, analysis of what did not work can be revealing.

Discovering what did not work or worked in only a limited way brought us to the realisation that cultural attitudes and practices can make a development approach or tool that has worked in other countries less acceptable in the Solomon Islands. We found that there was an inertia that accompanied existing practices that can take time to work around.

What follows are some of the things which proved less successful.

Demonstration gardens

Demonstration, shared or community gardens met with limited success. The experience of the KGP indicates that shared gardens:

- serve well as training venues during the early phase
- then fall into declining use and eventually—sometimes rapidly—become unviable.

It was only while they were acquiring new skills that people participated in the shared gardens. Once acquired, they then return to their home gardens where they make use of the new ideas. This was the experience at the Bouna community farm and the Sasamunga Hospital garden, where food was grown for the patients. The tradition in the Solomons is one of food production in the family bush garden rather than a community garden.

When the lesson of the short term viability of shared gardens was learned, trainers shifted their emphasis to the home or bush garden, working more through community-based village organisations and using home gardens as training venues.

Living fences around gardens

The idea of protecting a food garden by planting a living fence met with limited success.

Fences are necessary as a defence against the hardy, small chickens found in Solomon Island villages. These timid birds live a semi-feral life and can make short work of a vegetable garden.

The raised table garden was an effective innovation which avoided damage by chickens. But as these are practical for only small, shallow-rooted annual vegetable crops, larger gardens required other solutions. This led to trials of living fences.

A number of plant combinations were trialed by the KGP to identify the types most useful as a living fence:

- hibiscus interplanted with pineapple worked at first but was found to leave too many gaps through which chickens and dogs could enter the garden
- tea grass (the local name for lemon grass, so called because its leaves can be used to brew a lemon-flavoured tea) is a clumping grass but it was too wispy, lacking the stiffness needed for a living fence
- the most successful grass for use as a living fence has been vetiver grass, a stiff-leafed, clumping, upright growing grass which can be close-planted to form a dense, almost impenetrable barrier to nuisance animals.

Vetiver grass has found increasing use in other developing countries where it is close planted across the slope to form a barrier to organic matter and soil moving downslope. Over time, the soil and organic matter builds up against the vetiver grass, detaining rainwater runoff so it can soak into the soil.

Other limiting factors common to the construction of living fences include:

- too many gaps through which chickens can enter and damage vegetable crops
- gates left open or not maintained
- the time needed to establish a living fence and the problem of protecting vegetable crops while the fence grew.

A-frame level

An A-frame is a farmer-made device for marking out contour lines across sloping land.

Along the contours, plants such as vetiver grass, leguminous shrubs or trees are planted to reduce the downslope movement of soil during heavy rains or to establish an alley cropping system.

Despite the acceptance of the A-frame by agricultural communities in other countries, the tool has generated little interest in the Solomons. KGP trainers attempted to introduce the device over three workshops, however it was not adopted.

The A-frame has never been part of the Solomon Island agricultural toolkit and is not seen as necessary to successful cropping. Bush gardens on sloping land are established across the slope by eye.

Sharing of information

Solomon Islanders keep information to themselves rather than share it. The practice has been a limiting factor in spreading the techniques introduced by the program. Retaining information is believed to increase competitive advantage.

To counter the practice, facilitators try to create an environment in which farmers understand the benefits of sharing information.

Crop rotation

Widely used in some countries to reduce the likelihood of transmitting soil-borne plant diseases and to avoid overexploitation of particular plant nutrients in the soil by specific crops, crop rotation has proved to be of little interest to Solomon Island subsistence gardeners.

There has been only limited acceptance of the practice in the form of introducing a legume into the cropping cycle of annual vegetable gardens.

Complicating the acceptance of crop rotation is the fact that it is best suited to annual crops. All the staples in the Solomon Islands are root crops such as taro, cassava and yam.



The A-frame, used in other developing countries to assist with planting on slopes, was not adopted by Solomon Island farmers.

PNI ASSESSMENT OF AGRICULTURE PROGRAM

A summary assessment of the agriculture program. Items listed under 'Interesting' have undetermined possibilities and/or may fit under 'Positive' or 'Negative' columns, depending on interpretation.

Positive	Negative	Interesting
<ul style="list-style-type: none"> • KGP/KGA/ PMN training accepted by village communities • approaches adapted to circumstances • capacity for adaptation built into methodology of program through monitoring and evaluation • positive, determined attitude of staff • staff acquired skills readily and included them in their work • program proved durable—spanned period from 1995 • models of development replicable in other Pacific islands • adoption and modification to local circumstances of proven development methodologies—participatory technology development (PTD); participatory rural appraisal (PRA); community food security assessment • maintaining contact with partner communities through follow-up visits • Burns Creek seed production garden and, later, PMN regional seed production centres • visits by Australian volunteers and staff including Emma Stone and Brazilian community worker, Liliana Peres • ability of staff to learn quickly to make up for shortfall in administrative and seed production skills • networking • participation in field work for other organisations—TaroGen • inclusion of relevant traditional knowledge • APACE member donations 	<ul style="list-style-type: none"> • loss of skilled staff • limited organisational capacity due to level of funding, staff numbers, staff time • disruption caused by 2000-2001 internal security crisis and internal refugee situation • periodic uncertainty due to funding • cyclone damage to Burns Creek garden • high cost of transport • withdrawal of support for agriculture program by APACE • some administrative skills initially lacking • limited communication options early in program until arrival of email • difficulties and attitudes in APACE Australian office, alienation of potential volunteers • underestimating costs of ethnobotanical manual production • delays to production of KGA training manuals • limited capacity to increase support for program in Australia outside APACE membership due to lack of funds, prioritisation of work in Sydney office • lack of capacity to raise funds from general public in Australia • APACE membership supportive but most recruited before agriculture program started and more aligned to micro-hydroelectric village electrification program 	<ul style="list-style-type: none"> • time spent in producing applications for new funding • new opportunities stemming from internal security crisis—AusAID Community Peace Restoration Project, increase in land under cultivation for seed production at Burns Creek • time spent servicing donor and Australian office reporting requirements • development education activities of Australian project manager (never formally evaluated) • geographical distribution of agriculture program support; little opportunity to build Sydney-based supporters group as with village energy program



Relations with APACE

There are plenty of opportunities for the deterioration of the relationship between an agency's office in a developing country and its head office in a developed country.

These include:

- a lack of insight by head office staff into the working conditions in the Solomons
- competing claims on the time of head office staff, especially when they managed a number of projects and had other responsibilities in the organisation
- demands for information from field staff where head office staff have to maintain a rigid reporting schedule to donor organisations.

Difficulties in communication can be a further strain on relations. They can arise because:

- field staff are out of contact for extended periods because they are working in remote regions
- delays in reporting due to the day to day demands of project management and to unexpected events
- differences in priorities and perceptions of field realities
- poor postal/ telephone/ telecommunications links.

Finding room for improvement

APACE's agriculture program was structured so that the Sydney office maintained overall program management but gave a great deal of discretion in decision making to staff in the Solomons.

The main responsibilities of APACE Sydney were:

- reporting on the agriculture program to donors, principally AusAID, but also to the APACE membership
- provision of information to program management in the Solomon Islands
- procurement of materials and equipment

- sourcing of program funding in association with the Solomon Islands office
- advocacy and development education
- reporting to the APACE Executive Committee and the APACE Projects Committee (until that committee was disbanded in 1999)
- maintenance of program records in the Sydney office.

Successes

The more successful areas of cooperation between the Australian and Honiara offices were:

- project planning and the preparation of funding applications
- finding consultants and information
- assistance by the APACE accountant, Peter Vail, in financial planning and record keeping
- visits to the Solomon Islands for monitoring purposes by APACE staff from Australia.

Difficulties

Inevitably, there were difficulties:

- earlier visits by the Sydney-based project officer would have been useful but there was never an immediate justification for expenditure on visits earlier in the program
- tranches of project funds, usually made by telegraphic transfer from the Sydney office, had not been planned effectively; until remedied, this resulted in the project running out of funds in its Solomon Islands account
- earlier, a lack of follow-up of quarterly monitoring reports led to insufficient feedback to the Solomons office
- the urgency and importance status of items in communications was not always appreciated with the result that some things which should have been done urgently were not done on time; the Sydney-based project officer had other responsibilities at APACE and at times

these competed with the needs of the program; a means of identifying the urgency and importance status of requests was solved with the adoption of a method of classifying requests as 'important and urgent' and 'important but not urgent'.

Visits by Australian staff

The first visit to the Solomons by Australia-based project staff was delayed.

Tony had planned for me to provide training in the train-the-trainer workshop of July 1987. At that time, however, APACE Australia was preparing for an organisational review as part of its AusAID accreditation process. The achievement of full accreditation was important to the organisation. Caught between competing demands on my time, I stayed in Sydney to complete the work of preparing documentation for the APACE AusAID accreditation. Sandra Heilpern took my place in the workshop.

A benefit of subsequent visits by Australian staff and by Tony to Australia was the opportunity to discuss issues and to clarify misunderstandings between the two offices. Making time to discuss difficulties in an informal atmosphere and to gain greater understanding through discussion and shared planning proved successful.

Communicating non-essential information

In communication between the Honiara and Sydney offices, we realised that there were two types of information:

- important and urgent information that required priority treatment (or important but not urgent—things that had to be dealt with, but not necessarily immediately); the categorising of information as important and urgent/important but not urgent/ less important and not urgent improved the understanding each other's needs
- informal information that kept Tony and Solomon Island staff informed about activities in APACE's Sydney office and the Australian NGO scene in general.

Email, thanks to its speed and low cost, improved communications between the two offices and enabled the categorisation of information as described above. This was a turnaround from the early days of the KGP when communication was mainly via fax. Then, the message from APACE management was to keep faxes brief, to limit

information and cut out non-essential information to reduce the cost of fax transmission, yet faxes at the time were free to APACE thanks to the generosity of the University of Technology's engineering school.

Tony expressed concern that decisions made at APACE Executive and Management Committee meetings in Sydney were frequently not passed on. Although it might not always concern his project, at issue was Tony's participation as both a member and employee in the overall functioning of APACE. Furthermore, having a fuller understanding of the issues and dynamics of the Sydney office was of indirect benefit to Solomon Islands staff.

In retrospect, a process by which Tony and the rest of the Solomon Island staff could participate in organisational decision making would have been desirable and equitable. This could have been done by emailing a copy of the Executive and Management committee meeting agendas, allowing sufficient time for Tony and other staff to make proposals and participate in decision making. The reason this was not done is simple—it was not thought of.

Organisational culture

The operational independence of the KGP protected it from problems in the Sydney office—problems to do with decision making, problem solving, prioritisation, communication, misunderstanding and relationships between staff. This produced a sometimes dysfunctional organisational culture in Sydney and, all too often, an uncomfortable ambience in the office. Offsetting this were the times, all too few, when the APACE office was a happy, easy-going place.

Underlying and influencing the APACE culture was a real desire to do good in the region. On top of this was the other side of the organisational culture which, at its worst, could reasonably be described as a culture of fear and suspicion of government moves, suspicion of the motives of other NGOs and individuals and an all-round defensive attitude.



Designing biodiversity

Working in the tropical heat, Tony cut the long grass then planted vegetables and fruit seedlings in the clearing. Soon the entire space allocated to him was under cultivation, vegetables and young trees growing where tall grass once moved gently in the trade winds.

The year was 1995 and Tony was establishing what would become the major asset of the Kastom Garden Project, the seed production garden of the Planting Material Network.

Beyond Tony, it was Jude and Michel Fanton who provided the impetus behind the PMN. At the time the Seed Savers Network was seeking opportunities to expand their presence in the Pacific. But the organisations and individuals who expressed interest were like the seeds themselves—many turned out to be unviable, but a few showed initial promise. Over the years, the PMN proved the most viable of all.

The signs had been good from the start. When the Fantons and Tony worked together on the first workshop series in the Solomons they discovered an interest in seed saving. After that, the agenda became one of setting up the organisation that could sustain that interest and develop it through training and the supply of quality seeds.

The garden Tony made with the help of Roselyn Kabu—who had by then joined the program—Florence, Rachael and Danny Besa'a would feed himself and the people who came to work with him. In 2000, the garden underwent an expansion to occupy around a hectare of flat land with a black clay soil. The PMN crew were stepping up seed production to boost food productivity in rural villages as the forced repatriation of Malaitans to their home island got underway. In the Solomons, it was a year of uncertainty.



The Planting Materials Network seed production garden at Burns Creek, Honiara.

The seed centre

A perimeter of trees defines the boundary, dividing it from the open fields of Joini Tutua's organic market garden on one side and a grassland with scattered areas of remnant forest on the other.

The number of houses nearby—built, like the project centre, of the traditional sago palm and pandanus leaf—has grown since the project centre was established. What was vacant land when Tony moved in is now urban settlement. Urban expansion has come to Burns Creek, once a settlement on Honiara's urban fringe.

A gravel road passes the project centre after crossing the incised channel of Burns Creek on a narrow wooden bridge, running parallel to the creek for some distance, dry season the foot traffic and occasional vehicle throw up clouds of dust. At one end of the road is the highway into Honiara. At the other end stands a village occupied by Malaitan settlers.

A couple hundred metres down a foot track running off the road is a muddy river. For visiting Australian project staff trying to cope with Honiara's

The idea of generating income from farmgate sales was thought up by Emma Stone, the Australian seed processing trainer. It was put into practice at the urging of APACE promotions officer, Hannah Semler, when she was in Honiara in late 1998. Although income was raised from the sale of seed, seedlings, vegetables and eggs, the idea proved unmanageable because there was not the staff time to run it properly.



tropical humidity, the water is tempting. But it's Tony's story about a reported crocodile sighting that discourages would-be swimmers, though the sighting was some years ago.

A food forest

In the garden, tree crops, shrubs and vegetables, all grown in close proximity, create a sense of walking through a food forest. The plants have been established in an arrangement similar to that of the natural forest with a canopy of trees, an understorey of lower trees such as pawpaw and a ground layer of vegetables. It is similar to the traditional mixed cropping systems found on the Pacific islands or in Indonesia.

Until she left the project in 2000, Wendy Betsy worked in the garden with Mary Timothy. There, the two young women germinated seeds and harvested, processed and packaged them for distribution to members of the PMN. Before Mary joined the PMN, it was Roselyn Kabu who tended the garden and processed the seeds. Now, with Mary managing the new PMN seed production centres, new staff have taken over her work.

A few chickens

Not far from the house stands a substantial chicken shed, the latest of a number of similar structures that were tried in the late-1990s. They were makeshift in appearance, made of bamboo, old hardboard planking and wire—strong enough, it was hoped, to withstand attacks from the local pack of semi-wild dogs.

Different breeds of chicken, like the australorps and rhode island reds, have been tried as well as the small, hardy but flighty local breed. The chickens provide the household with eggs and in the past brought in a few dollars through the sale of eggs to passers-by. The real purpose, however, was to develop solutions to keeping poultry that could be transferred to villagers and that made use of the principles of low-external input farming.

For the KGP, the chicken experiment has been an interesting sideline. Interesting, because eggs and chicken meat could provide protein and could contribute to village food security more than at present.

Fulfilling objectives

The PMN provided a different approach to fulfilling the objective of the AusAID-funded Kastom Garden Program of creating an organic growers network in the Solomon Islands.

Originally envisioned when the KGP was planned in 1994, the growers network proved unviable because of the small size of the commercial organic agriculture sector in the Solomon Islands.

The idea was to research the export potential of organically produced farm products. There is probably some potential for exporting agricultural products to niche organic food markets in Australia and New Zealand, however the formal agricultural sector in the Solomons is too immature to develop a specialist organic producers group.

Promoting diversity

With the purpose of preserving, through use, agriculturally important crop species, the Planting Material Network aims to increase the self-reliance of Solomon Island farmers in the supply of seed and to raise awareness of the importance of maintaining crop diversity.

A network structure was chosen as the most effective means of achieving this purpose because it facilitated participation at both the grassroots and institutional level.

The activities of the Solomon Islands Planting Materials Network include:

- the multiplication of seeds deposited with and held by the network
- the distribution of non-hybrid seedstock to members

- the collection of crops in declining use and their conservation through education about their food value and by making seed available
- the assessment and production of the seed of new food plants with potential in Solomon Island village agriculture
- the provision of training in seed production, seed saving and agricultural techniques
- networking among members and with other organisations both within and external to the Solomon Islands to share information and learning.

Seed saving—the global context

The Solomon Island Planting Material Network's promotion of non-hybrid varieties of food plants is part of the wider global effort to preserve non-hybrid species of traditional crops.

The need for this stemmed from the widespread planting of newer, hybridised varieties of food crops, a practice which started in the 1960s and became known as the Green Revolution.

The Green Revolution brought benefits to some countries, however the adoption of the Green Revolution varieties, with their reliance on a package of agricultural inputs such as fertiliser, pesticide, herbicide and other synthetics has resulted in reduced plantings of non-hybrid crops and, in some cases, in the reduced availability of non-hybrid seedstock. Agricultural biodiversity has declined.

International development assistance agencies, the UN and governments are aware of the need to arrest the continued loss of traditional—non-



A women's group visits the Planting Material Network seed centre in Honiara. Visits to the centre were frequent. There, people could see the techniques taught by the project's trainers and obtain supplies of seed.

hybrid—varieties of food and other useful plants. The response of international organisations such as the international centres for agricultural research has been to preserve the seed by storing it in refrigerated seed banks. The focus of this ex-situ (off farm) conservation has been mainly on crops of economic importance, such as rice and wheat.

Because the number of refrigerated seeds capable of germination declines over time, stored seed is periodically grown out to produce a new supply. This is put into refrigerated storage and is made available to plant breeders to hybridise into the genetic combinations advantageous to modern, mechanised monocropping.

In contrast, preservation through the continual use of species for food or for other agricultural uses, known as in-situ (on farm) conservation, allows the species to continue its evolutionary development through adaptation to changing climatic, soil and other influences while it supports growers with food and, in the case of small scale cash cropping, an income.

In-situ conservation of seed and vegetatively reproduced cropping material is a farmer-led, do-it-yourself approach to the preservation of agricultural biodiversity.

It is also an approach practiced by a growing number of home gardeners in the developed world who have taken on the task of preserving through use the shrinking gene pool of vegetable and fruit species, thanks to organisations such as the Seed Savers Network and specialist seed companies in Australia and similar organisations in the USA.

The first workshop

In their role of consultants to the KGP, the Fanton's first workshop in the Solomon Islands took place during October 1995 at the village of Visale. The second was held on the island of Isobel.

Soon after, Roselyn Kabu started work with the PMN and Tony and Roselyn produced the first PMN newsletter in the December of 1996. It soon became clear that there was interest and support for the network at both the community and institution level.

It occurred to KGP management that the network may provide a replicable model for other Pacific islands but, so far, there has been only a limited amount of interest. Tony has reported that PEDC, a Bougainville NGO, could be the first to develop their own seed production and distribution network based on the PMN model.

The success of the PMN as an activity within the KGP's program of agricultural development and the limited success of the Seed Savers Network's other Pacific region workshops suggests that seed saving and exchange networks work best as part of an existing development assistance project or when they are attached in some way to an existing institution.

It came as a pleasant surprise when, just a few years after the PMN made its start, much the same idea appeared as a recommendation in the report of a New Zealand consultant to UNICEF Pacific. Peggy Fairbairn-Dunlop's report, produced after visiting the Solomon Islands, Fiji and other Pacific island states to investigate household nutrition and food production, was entitled *Pacific Women and Household Food Security*.

Staffing and membership

The staffing of the PMN has varied over its lifetime. It soon became apparent to Tony and Roselyn that they could not maintain the garden, process seeds and carry out their training duties without more help. At the time that information was being collected for this book, there were two seed curators employed full time in the Honiara garden. Both were young Malaita women—Mary Timothy and Wendy Betsy.

Membership of the Planting Material Network consists of individual Solomon Island farmers (including many women), schools, non-government development organisations, church development organisations and government agricultural extension services. The membership has grown steadily over time.

A successful seminar

In late 1997, around 30 people from the different provinces of the Solomon Islands gathered in a large room of the World Health Organisation's Honiara building. Farmers, a nun, government people and others from NGOs gathered in front of the flower-bedecked blackboard to plot the future direction of the PMN.

That was the first seminar held by the PMN. It was followed by another in early 2000 which eventually led to three decentralised seed production centres being started in three provinces. These centres will serve the needs of local farmers for seeds and, eventually, other planting material such as vegetatively propagated crops.

The second conference was attended by Michel Fanton as well as lecturers from the Solomon Islands College of Higher Education, leaders of women's groups, a regional taro conservation expert and local organic farmer and sometime politician, Joini Tutua, who gave a keynote presentation about health and crop diversity. A total of 70 people from eight provinces attended.

The seed cycle—production, processing, distribution

Since the start of the PMN, seed production, processing and distribution have been improved to the stage where high quality seed is now assured.

The system has changed as new information has become available and as new ideas have been introduced. Trial and error learning have played a significant role.

Because of the lack of literature on small scale, low external input seed production in the humid tropics, the PMN had to develop its own model. In 2002, the manual *Community Seed Saving* was published by the KGA. Written by Emma Stone and based on the seed processing system developed at the PMN's Burns Creek garden, the manual describes a method applicable by any community without access to refrigeration for seed storage in the wet tropics.

The seed production cycle

Garden preparation and sowing

The production cycle is designed to multiply the supply of reliable seed and to distribute this to members. After the seed taken by members has been grown out, they are encouraged to donate a small percentage of seed back to the PMN to maintain the supply.

The seed supply cycle follows a sequence:

- seed is propagated by direct planting or in seedling trays (depending on species) at the PMN garden
- the garden soil is prepared and mulch collected, principally cut grass and foliage from the leguminous *Gliricidia* trees, and is placed on the garden bed to decompose into plant nutrients; the nutrients replace those lost with the harvest of the previous crop
- the seedlings are then planted into the garden
- plants are labelled with their accession number and name so they can be easily identified.



PMN staff work in the seed production garden. The trellises support bean crops.

Harvested eggplant ready for seed extraction. The seeds will be fermented, dried and packaged for distribution through to PMN members.



Maintenance and harvest

- the garden is then maintained by weeding, irrigation and general maintenance tasks
- towards the end of their life cycles, the crops set seed
- when the seed is fully mature and has had time to dry on the plant, the better quality specimens are selected and their seed collected

Processing

- the seed is then cleaned, dried in the sun or in a wood-fired drier (drying usually takes one to three weeks), wrapped in newspaper each night then placed on a bed of wood ash desiccant in moisture proof plastic drums; the desiccant, which absorbs moisture, prevents seed spoilage
- the dried seed is then stored in airtight plastic bags with a small sachet of silica gel desiccant to absorb any remaining moisture; the bags are placed in a sealed plastic bucket
- a sample of stored seed is then taken and tested for germination.

Packaging

- following germination testing, the seed is packaged into small paper bags on which the PMN logo, date of packaging and germination rate are stamped
- the sealed bags are stored in moisture proof drums with packets of silica gel desiccant or wood ash in the base of the bucket until distribution to Planting Material Network members.

Germination testing

The purpose of testing the seeds for germination prior to being distributed is to assess their viability—the percentage which can be relied upon to germinate when planted.

Germination testing follows a strict procedure:

- a fixed number of seeds are planted in seedling boxes into a growing medium of scraped coconut husk; the husk provides a constant growing medium for comparison of the germination rate and is relatively weed free
- the germination test boxes are watered as needed
- the number of seeds germinating are counted weekly and recorded on a data sheet
- after four weeks, the germination test is usually complete
- the percentage of seeds having germinated is worked out and an A, B or C grading is made
- the rate of germination is noted on the seed packet when seeds are packaged as 'A' grade—indicating 90% + germination—'B' grade indicating 70% to 90% germination—and 'C' grade having 50% to 70% germination rate.

The importance of turnover

Seeds remain in storage for as little a time as possible. The PMN does not attempt to operate as a seed bank—the seed is 'stored' by being grown out in member's gardens.

A fast turnover of seeds is desirable to maintain the germination rate and prevent damage from moisture.



Seed packets being sorted for distribution at a village workshop

Nursery operations

In the Honiara garden, the Planting Material Network nursery occupies an area adjacent to the project office. Its placement is no accident. Tony believes that a nursery which people must pass through to go into the garden will be a well-watched nursery. Problems will be noticed sooner and can be attended to in time.

Seeds are germinated in raised seedling boxes of approximately half a metre square and about ten centimetres deep. The waist-height of the benches on which the boxes are kept makes working on them convenient.

Growing medium

Soft, rotting coconuts collected from plantations are scraped to produce a stable growing medium for seed production and germination testing. While the collection of coconuts is sometimes done by staff, Tony has found that paying collectors is a more efficient use of staff time.

The coconuts are easily broken open by hand and are scraped on a stiff wire mesh to finely shred them. It is this shredded coconut, mixed in a proportion of 1:2 with soil, which is used in the seedling boxes to provide a constant growing medium for the germination testing of seed and to propagate plants for the garden.

Planting out

The seedling production nursery is located in open sun to allow seedlings to adapt to full sunlight.

Seeds soaked overnight in water then planted into the seedling boxes containing a coconut and soil growing medium are labelled for easy identification.

The growing seedlings are watered as necessary until they are ready for transplanting into a second seedling box, usually about two to three weeks after the first planting. Here, they are placed about 25 to 50mm apart to allow space for growth and root development.

After suitable growth has been achieved, the seedlings are transplanted into the garden.

Continuous production

Planting, transplanting, garden preparation and growth monitoring is a continuous process.

A constant throughput of a diversity of species is maintained to ensure that demand from PMN members can be met.



In the dry season, seeds are sun-dried on a rack. They are brought under cover with the onset of evening to prevent moisture absorption during the night.

Challenges and solutions

Challenge	Solution
<p>Seasonal weather events such as cyclones and flooding during the wet season disrupt and set back work on seed production.</p> <p>Cyclonic winds damage trees and the accompanying heavy rains lead to the flooding of the low lying area of the PMN centre as Burns Creek overflows its banks.</p>	<p>Tony dug drainage trenches to carry away floodwater. These were successful to some extent, however flooding has recurred.</p> <p>As the program cannot control the weather, cyclone and flooding damage are accepted as objective risks. Most seed production, however, takes place during the dry season.</p>
<p>Maintaining a constant throughput of seeds.</p> <p>The seed production cycle was disrupted when Tony and Roselyn went away on field work during the project's early days.</p>	<p>The hiring and training of seed curators to operate the PMN proved critical to maintaining constancy in seed production.</p> <p>Jointly developing a weekly schedule of activity for the women has been another solution to seed production, processing, packaging and distribution.</p> <p>The visit to Australia of seed curator Mary Timothy in 1999 further developed her experience when she spent a period working with the Seed Savers Network and touring local organic farms.</p>
<p>Obtaining sufficient seed processing equipment from local sources.</p>	<p>Paper bags, used for packaging and distributing seed, sometimes ran out. This necessitated the use of a stencil to make paper bags at the project centre, a time consuming task not enjoyed by staff.</p> <p>Silica gel, the desiccant used for seed storage, was obtained from Australia, sometimes when Tony returned for holidays. A system for ordering and freighting it by ship is now in place.</p> <p>Finding watertight containers presented a challenge but a successful type was obtained. An early attempt at using old milk and Milo cans proved unsuccessful because the lids failed to make a moisture proof seal.</p> <p>Wood ash proved successful as a desiccant for the storage of seeds wrapped in newspaper while they awaited germination testing and packaging and was easily produced on site or collected from a nearby cocoa drier.</p> <p>A recommendation for aid workers preparing to process seed in developing countries would be to trial methods before leaving home and to source reliable storage containers and take a good supply if they are unavailable locally.</p>
<p>Maintaining a diversity of species availability through the PMN.</p> <p>The diversity of seeds available is related to the diversity of species grown in home gardens and to family health.</p>	<p>Initially, varieties new to the network were collected during fieldwork by APACE staff; now PMN members are providing new varieties in exchange for membership.</p> <p>A variety of species were grown out in the PMN garden at any one time. Few varieties new to the Solomons were imported because there were local equivalents which provided a superior source of nutrition.</p>

Challenges and solutions

Challenge	Solution
<p>Getting information to members. Informing members about news, seed availability and techniques in a country where communication links are poorly developed and with a functional literacy rate less than 50% needed the constant attention of project staff.</p>	<p>A simple PMN newsletter was produced but it was not possible to publish it at regular intervals. Initial editions were produced by PacificEdge Media in Sydney and local staff took over production later. The newsletter listed species currently available from the network by their local name. Botanical names were avoided because they were not used by village farmers. The newsletter was produced in folded A4 paper format to give an A5 size page.</p>
<p>Popularising the PMN. Seed banks and seed exchanges were new concepts to Solomon Island villagers.</p>	<p>The idea of bringing Jude and Michel Fanton to run workshops in community seed saving in Solomon Island villages, to get the PMN started, proved successful. Telling people about the network and encouraging participation was a core activity during KGP field training. Packets of seed were sometimes distributed to workshop participants as a means of encouraging membership. Eventually, a PMN membership including village agriculturists, NGOs and government agricultural agencies was built up.</p>
<p>Providing vegetatively-reproduced food plants through the PMN. The inclusion of these crops is important because Solomon Island staple foods are root crops such as taro, yam, sweet potato and cassava and are reproduced from pieces, tubers or suckers taken from the parent plant rather than by the planting of a seed. Banana and slippery cabbage are other examples. It is mainly annual vegetables, most of which have been introduced into the Solomon Islands over the past 30 to 100 years, which are grown from seed and which now form an important part of the Solomon Island diet.</p>	<p>The decentralisation of the PMN, started in 1999, is seen as a means of distributing vegetatively-reproduced food plants in their local areas. Issues to be addressed in the decentralisation include:</p> <ul style="list-style-type: none"> • avoiding the spread of plant diseases and pests when vegetatively-reproduced food plant material is exchanged between islands; although there is limited and informal exchange of root crops by Solomon Islands farmers—such as from Malaita to Honiara Central Markets—some type of quarantine guidelines may have to be investigated by the PMN • development of a rapid means of exchanging plant material as vegetatively-reproduced food plants have a limited life • the establishment of some form of family-based crop collections would be an important step in encouraging vegetatively-propagated crop diversity • community plant registers and diversity fairs are ideas from other developing countries that are likely to be tried by the PMN in future.

Techniques	
Successful	Room for improvement
<p>Seed storage Wood ash has proven successful as a desiccant for the storage of seeds in moisture proof plastic buckets.</p>	<p>Seed storage The use of Milo cans, which are locally available, have proven unsuitable as seed storage containers due to a poor seal that deteriorates with use.</p>
<p>Plant labelling In the wet tropical climate, metal tags or small, wooden, painted signs have proven most durable. The tags serve to identify plants in the garden for staff and visitors.</p>	
<p>Wood-fired seed drier The palm-thatched, bamboo drier was built in the garden to dry seed during the wet season. It proved successful after some design changes. The drier generates sufficient heat to thoroughly dry seed over a period of days.</p>	<p>Seed drier The fire container needed to be moved closer to the structure housing the wire drying racks. Instead, in 2000 the container was replaced by a fireplace below the racks. This is now working well and the model has been copied at two other PMN seed centres. Wind direction is a consideration in the locating of driers.</p>
<p>Seed packaging Paper envelopes sourced for the PMN by the Seed Savers Network in Australia have proven successful. The envelopes were donated to the Seed Savers Network and passed on to the PMN. They saved a lot of time.</p>	<p>Seed packets Using a stencil to cut out bags from paper and then glueing them together was time consuming and proved an unpopular activity for the seed curators. So far, it has been the best option as buying ready-made paper envelopes is expensive.</p>
<p>Seed fermentation The fermentation method of separating out tomato, eggplant and cucumber seeds has been successful.</p>	
<p>Bulk seed storage Silica gel, brought in from Australia, has proven a reliable and reusable desiccant for storing dried seeds. After absorbing moisture, the gel can be sun dried but this has yielded mixed results. We have found that the gel is best dried over a small fire, taking care not to burn it. Silica gel has made possible longer term seed storage.</p>	

Timeline

The timeline traces the chronological development of the Planting Material Network.

1995

Pilot phase

June

- Tony Jansen arrived in the Solomon Islands to start the Kastom Garden Program.

November

- the first Planting Material Network workshops, which marked the start of the organisation, was led by Jude and Michel Fanton from the Seed Savers Network; a following workshop was held on the island of Isobel
- Roselyn Kabu started with the Kastom Garden Project and worked at establishing the PMN after serving as a volunteer for some months.

Establishment phase

December

- first PMN newsletter published and distributed
- Planting Material Network garden started at the new APACE Project Centre, Burns Creek, Honiara; a seed production garden was initially prepared, consisting of two beds; Florence and Rachael were assisted by Danny Besa'a and Roselyn Kabu; the aim of the garden was to produce seed for the Planting Material Network
- members started sending seed to network
- Roselyn Kabu scheduled seed saving courses at Bouna village on Guadalcanal and at Sasamunga, Choiseul
- seeds collected for multiplication.

1996

January — February

- from December 1995 to February 1996, Wylie, a local man, built the KGP house and office at Burns Creek.

March

- Roselyn Kabu assumed the role of PMN coordinator, among other duties.

May

- the second PMN newsletter was published and widely distributed, resulting in a slow increase in membership; the newsletter offered seeds to members for the first time, with a focus on beans and cover crops as these were useful species and easy to save seed from; on offer were seven varieties of long bean, eight other beans and ten other vegetables
- a workable system of seed production was developed but was not fully implemented due to a lack of time and skilled people.

Expansion phase

June

- following recommendation by the School of Natural Resources agricultural college, Jean Eroa, a graduate, started work as the seed bank coordinator; previously, Jean had volunteered her services for a period of one month
- publicity obtained for PMN on Solomon Islands radio program
- seeds displayed and sold at cultural show
- membership increases slowly.

August

- seed saving workshop at Sasamunga.

Community seed training phase

September

- third PMN newsletter produced by Pacific Edge Media in Sydney due to time limitations at project centre in Honiara
- visit to PMN in Honiara by eighty teachers from rural training centres
- other visitors from rural areas and Honiara visit PMN at Honiara project centre
- a membership fee of SBD\$10 was introduced and one year free membership was offered to people contributing seed to the network
- training was advertised and information provided about using wood ash as a desiccant for storing seeds in cans
- germination testing of seeds stored in the PMN seedbank was started; the method consisted of using wet calico covered with plastic; germination was checked daily; although seed germination testing became part of the seed production process, this earlier method was later abandoned in favour of germination testing in a seedbox filled with scraped coconut husk.

October

- PMN display at tenth anniversary of the Honiara Sup Sup Garden (Honiara Sup Sup Garden was a project led by Sarah Osiabu to provide training in home gardening to urban residents of Honiara)
- network membership increases
- PMN workshop held on Malaita
- Florence, Rachael finish work as garden labourers with PMN
- seed saving component introduced into Kastom Garden Project agricultural training workshops in the villages
- workshop held on Ferusubua, an artificial island in Laua Lagoon, eastern Malaita. Tony was not involved in the workshop for the first time—other staff took responsibility.

1997

Techniques testing phase

February

- fourth PMN newsletter produced
- seed stocks fell to low level due to cyclone damage and flooding of the PMN garden
- literacy problems among workers result in seed being packaged in wrong bags
- Mary Timothy and Lucy Siale started work in PMN garden
- Jean Eroa leaves the project to become a school agricultural teacher
- seed contributions from members decline, then increase later
- trainer's workshop held at Vanga Point and led by Sandra Heilpern, a consultant from Possum Creek, northern NSW, Australia, who volunteered after recommendation by the Seed Savers Network
- Roselyn and Tony train John Tete, from Guadalcanal, who later joins project staff.

August

- Roselyn holds a workshop to train field workers from the Solomon Islands Christian Association, a local NGO active in training for rural development; this became an annual event.

September

- Roselyn travels to Australia for training with the Seed Savers Network in Byron Bay and to give presentations and workshops at the Australasian Permaculture Convergence.

Towards self-reliance

October

- John Tete joins PMN staff
- PMN garden at APACE Project Centre in best condition to date; infrastructure in place and a large number of seed varieties available
- Patson Teloga on training placement with PMN from Mana'abu Rural Training Centre, Malaita
- Salathiel Sore, KGP Sasamunga hospital garden manager, does one week training placement at PMN, Honiara
- seed processing benches under Central Link house built by Benjamin, an ex-student from Vanga Point.

November

- PMN seminar in Honiara attracts 25 participants from a range of organisations and provinces of the Solomon Islands
- PMN garden declines around end of year due to John, Mary and Lucy going on annual leave; John never came back to work
- seed availability has fluctuated over the life of the PMN due to the varying availability of trained staff, the availability of staff time and the state of organisation of the PMN
- flowering plants were isolated in time to prevent cross-pollination; according to Tony, isolation using mosquito netting is a useful method using locally available material
- evaluation of program by Russ Grayson, Sydney-based APACE project officer, and Fiona Campbell; training and compilation of baseline information carried out on Malaita and Choiseul
- weatherproof seed containers trialed in an attempt to reduce the loss of stored seed due to humidity.

1998

January

- Wendy Betsy joins the PMN staff
- daily instruction in seed production cycle operations was provided; Mary and, later, Wendy Betsy became reliable members of the KGP team
- seed distributed for the first time in Sasamunga
- garden recovers after end of year decline due to staff returning to home villages for end of year break.

April

- Wainimate workshop

May

- Australian volunteer Emma Stone starts three month internship with KGP to train local staff and reorganise seed production system; Emma had spent six months as an intern with the Seed Savers Network in Byron Bay; a goal of Emma's placement was the improvement of the performance of the network and the training of Solomon Island staff, mainly Wendy and Mary; improvements introduced by Emma included:
 - improved seed germination testing using shredded coconut as a biologically consistent growing medium; the results were used to grade seeds on the basis of germination reliability
 - introduction of forms for a monthly planting calendar, seed distribution, germination testing, network membership, marketing of produce
 - development of a six month plan of activities
 - trialing of seed storage in climate-proof containers.

July

- Linda from Solomon Islands Women's Agricultural Extension Service Program completed one-week attachment to PMN to introduce the program on Malaita
- Emma returned to Australia at the completion of her training tour.

August

Consolidation phase

- fifth PMN newsletter published
- coverage for PMN on Solomon Islands radio program
- Hannah Semler, APACE Marketing Coordinator attending APACE staff meeting in Honiara, discusses the marketing of produce with PMN staff; a limited amount of produce is sold from the APACE Project Centre and Hannah suggests a business plan be produced
- a new PMN member is the first to take up the offer of doing one day's voluntary work in return for annual membership
- Gwendolyn Pitavanini, KGP Sasamunga hospital garden trainee, does one week training placement at PMN where she is taught by seed curators Mary and Wendy
- Russ Grayson and Fiona Campbell spend one month with the program to carry out monitoring, evaluation and staff training
- bulk sale of PMN seeds to Solomon Island Christian Association's Village Education Program; the program became regular buyers of seed for use in their village workshops.

1999

January

- Tony Jansen takes extended leave in Australia for two and a half months to recover from malaria and for annual leave.

April

- Emma Stone returns to KGP to work with PMN for five months as an Australian Youth Ambassador Program placement; Emma continues the training of staff, improving the Planting Material Network and the training of village communities; her main focus is the training of Nia Bari as a PMN coordinator
- work started on documentation project for agriculture program; the work was facilitated by a grant from the APACE Research and Development Fund; another grant, made at the same time, provided an income for Mary and Wendy while they carried out research documenting subsistence garden species and seed production as part of their work with the PMN
- Tecla Vapusi joins the PMN as a seed curator while Wendy is on maternity leave.

June

- PMN staff return to home islands due to ethnic tensions in Honiara.

August

- Inia takes up position with PMN.

September

- Wendy and Emma take Women's Agricultural Extension Service Program workshop on Isabel
- production of seeds for people displaced during conflict underway at Burns Creek garden
- PMN newsletter published.

October

- the Solomon Island government research division supports the PMN in the establishment of four seed centres in the provinces
- PMN display at World Food day
- Mary and Inia visit seed hubs at Sakogaso and Nati; the centres are two of four set up earlier in the year to decentralise the PMN; the other two were established at Susubona, Isabel Province, and Hakama, Central Province.

2000

- the Burns Creel Central Link seed garden provides a flourishing example of tropical organic farming in the Pacific Islands
- lawlessness and unrest break out on Guadalacanal as a result of ethnic tensions
- decentralised seed centres are functioning at Nati, Malaita, Susubona, Isabel, Sokogabo, Western Province and at Hakama, Central Province.

March

- PMN newsletter published.

April

- the second PMN member's conference attended by participants from eight provinces of the Solomon Islands takes place at Hakama, Central Province; in attendance are Michel Fanton from the Seed Savers Network, Grahame Jackson from the regional taro conservation project, Marborot from the College of Higher Education and representatives from other NGOs and the government's agriculture division
- a board of management for the PMN is elected and member action plans drawn up for each province
- the Central Link in Honiara is evacuated due to civil unrest and increasing unlawfulness
- the Central Link's solar electric panels are stolen during the crisis, depriving the centre of a power supply.

June

- a coup by armed members of the Malaitan Eagle's Force—an ethnic militia— removes the elected government of the Solomon Islands; a period of destabilisation and violence follows with an estimated 60 killed in gun battles
- Tony completes a review of the PMN/KGP with the aim of restructuring the program due to the ethnic tensions
- decentralisation to the field offices is strengthened.

July

- the new Central Link of the PMN is set up at Sokoraso Learning Centre on the island of Munda; Wendy, Mary and Thecla leave Honiara for the new centre
- a new office, equipped with a radio due to the unreliability of communications during the civil unrest and a seed garden are established
- PMN staff divide work into different provinces based on ethnic affiliation.

August

- civil tension continues and the program maintains a security presence at Burns Creek as seed production ceases
- Wendy visits Susubona seed hub
- Mary visits Malaita.

September

- PMN and KGP staff gather for two weeks in Mana'abu, North Malaita, for planning and training.

October

- the Burns Creek seed centre reopens as ethnic tensions ease
- Tony Jansen and Inia Barry attend an APACE planning meeting in Sydney.

December

- funds are secured from the AusAID Community Peace Restoration Fund and PMN members produce 20 000 packets of seed for distribution through community-based organisations to displaced and needy families throughout the Solomon Islands; Mary Timothy coordinates the project
- Inia returns to the Solomons in November and Tony visits Bougainville to assess the prospects for a project
- APACE opts out of support for the agriculture program when the organisation makes the decision to close
- the PMN is forced to start urgent planning to function on its own, without funding from its Australian NGO partner that had supported it since 1995
- planting returns to normal at the Burns Creek seed centre and two new seed curators are hired to work with Mary on a new project for 12 months.

THE SEED SAVING CYCLE—photo essay

The seed saving cycle is a sequence of activities the Planting Material Network seed curators go through to grow, process and save seeds from the PMN seed gardens.

Each phase has been refined over time as the seed curators have gained experience. The 1998 training tour of Emma Stone gave the curators further skills and improved the quality of the process.

The seed saving cycle

1. Making your seed garden

Make and maintain a garden in which to grow plants for seed



2. Select the best seed

Choose seed from the healthiest, most productive, pest resistant and tastiest plants



3. Collect seed

Harvest the best of the seed in your garden



4. Clean seed

Cleaning husk and other material from your seed



5. Dry seed

Dry your seed ready for storage



6. Test seed germination

Work out the number of seeds likely to grow in the garden



7. Store seed

Store seed safely so it will not rot or be eaten by insects



8. Distribute seed

Share seed with other gardeners so all benefit from a reliable supply of food



Seeds are harvested from the Planting Material Network garden. They are then sun dried or, in the wet season, dried in the heat of a fire in the seed drying shed. To avoid absorbing moisture while being sundried, the seeds are brought under shelter at night.

Seeds are stored for as little time as possible after processing and packaging so they retain maximum viability (the number of seeds that will grow).



The wood-fired seed drying shed needed modification before it could be made to work effectively. Air heated in a fire chamber is passed into the shed through a pipe, then moved past stacked wire racks on which the seeds were spread.

The walls of the shed were made from pandanus leaf and the roof from the leaf of sago palm in the same style as traditional Solomon Island houses are built.



Lauru Kastom Garden Project trainee, Gwendolyn Pitavavini (left), and PMN seed curator Mary Timothy carry out seed germination testing to determine the percentage of seeds that are likely to germinate.



After packaging, information such as germination viability, seed variety and date of packing are marked onto the seed packets.



Mary Timothy removes seed packets from storage containers into storage prior to distribution.



Seed packets are packed into a moisture proof container with silica gel desiccant until they are distributed to PMN members.



Organic farmer, Joini Tutua, gets his hands dirty preparing seed raising mix in a seedling tray.



All except the large seeds, such as beans, are propagated in seedling boxes in the nursery then transplanted into the garden.

In the nursery, the seedling trays are raised to waist height to make working in them easier.



The decentralisation of the Planting Material Network will make possible the collection, multiplication and distribution of vegetatively-reproduced food crops such as this swamp taro, largest of all the taros in the Solomon Islands.



The leaf of the swamp taro grows to over two metres. Digging the edible tuber from the ground can be hard work. Swamp taro, such as this one photographed near Sasamunga village on Choiseul, are wild-harvested.

FROM THE PMN NEWSLETTER

Network News...

issue number 2 May-July 1996

Hautanbu Friary, Guadalcanal

Brother Hugo and Brother Stanley from Hautanbu Friary have sent in seeds of dwarf bean from New Zealand and an unidentified fruit tree to the central link (the PMN garden and project centre). They also exchanged a grape vine with Colish Tutua for purple eggplant seeds.

In their news, they report that they have planted corn and watermelon from New Zealand and, if it grows well, they will send some to the central link.

The brothers will prepare a list of the many fruit trees that they have planted and that are fruiting at Hautambu. It is a good example of a 'plant bank'.

Some of the seeds from the seed saving workshop they attended in November last year are growing well, including poor man's bean.

John Kiri, a member of the local farmer's group, Ilito'ona Sup Sup Garden, has begun an experimental garden in a swamp area using drains where water plants will be put in.

He provided seeds of rozella, a sweet fruit for jam making, when the Kastom Garden team visited.

John has a big garden area around his home where he has planted all kinds of plants.

Mr Clement recently visited the central link in Honiara. He and Jane Maeorea have offered to send in seeds of wax gourd and a non-hybrid Chinese cabbage called wombok, which you can save the seed from for the next planting.

Mr Clement plans to start a new farmer's group and seed bank in Kona village, east Kwaraii.

Issue number 4 1997

Report by Jean Eroa, central link seed bank coordinator

We would like to say a word of apology to all our good members that this time we are a little short of seeds to distribute due to the latest cyclone.

We are doing trials of a new soil improver called jack bean. Hopefully, it will produce plenty of large seeds and beans.

After the cyclone all our plants are starting to grow back. We are looking forward to bulking and packaging seeds again.

So, members, you are welcome to send in your requests.

Olketa pipol long network...

Ferasubua village

Ferasubua village in North Malaita is one of the villages we are working with.

We have distributed seeds of cow pea, velvet bean, winged bean—purple and green—to people and they have joined the Planting Material Network.

People in Ferasubua village have tried cooking velvet bean, winged bean and cow pea by boiling and roasting in the fire.

During the last workshop we tried small scale experimental garden blocks planted with velvet bean, cow pea and purple winged bean.

Tok tok blong editor... Tony Jansen

Hello readers and Planting Material Network members and happy new year to all.

This is our fourth newsletter. It has taken us a while to get this edition out!

We've been busy getting our seed production organised and putting together a plan for the growth of the network over 1997.

The list of plants in the network is slowly growing and there has been a lot of movement of seeds to different places over the past few months.

I remind you that members can request any seeds they like from the list in this newsletter and some other planting materials that are available at the Central Link. If you bring a new type of planting material into the network you are given a free membership!

SEEDS OFFERED IN 1997 NEWSLETTER

- long bean** - ground cover type—from Colish Tutua, Honiara
- long bean** - purple—from Martina Unui, Honiara
- long bean** - Visale—from Sr Margaret, Divit RTC, Guadalcanal
- long bean** - striped purple—from Sasamunga Hospital garden, Choiseul
- long bean** - long pink—from Buala, Isabel
- mung bean** - bush bean—from Danial Besa'a and Kolombangara
- velvet bean** - Nairi's—from Narii Pitakaka, Sasamunga, Choiseul
- lima bean** - from PNG
- cow pea** - from Guadalcanal
- poor man's bean** - from Australia
- pigeon pea** - from Mr Clement, Anokwasi, Malaita
- soya bean** - from Republic of China farm, Honiara
- four corner bean (winged bean)** - purple—from Bouna village, Guadalcanal
- luffa** - has ten corners—from Australia
- sorghum** - a new seed donated by Republic of China farm, Honiara
- okra** - from Honiara
- amaranthus** - from Bouna, Guadalcanal
- sweet basil** - from Joini Tutua, Guadalcanal
- kang kong** - from Eden Seeds, Australia, and from Sasamunga
- cos lettuce** - from Seed Savers Network, Australia
- eggplant** - long purple—from Honiara
- eggplant** - striped white and purple—from Honiara
- eggplant** - short fat black—from Wagina
- eggplant** - Boansa purple Malu'u type—from Malu'u, Malaita
- capsicum** - dwarf—from John Garaba, Sasamunga
- hot chilli** - Maggi's orange—from Moli, Choiseul
- jack bean** - giant purple— Australia and from Martina Unui, Honiara.
- long bean** - long tumas—Sasamunga, Choiseul
- wax gourd** - white—Nom, Malaita



The future

The KGP has done a lot with little. Through trial and error, learning and persistence, it has succeeded in introducing new ideas and has validated traditional technologies and practices that are still useful.

At the start of 2001, the staff knew that new sources of funding would be needed and that new projects would have to be developed:

- the Planting Material Network national meeting in 2000 had identified where members wanted the organisation to go
- the armed conflict of 2000/2001 served notice that the Solomons had changed and entered a new period in its history; the KGP had started to adapt to this through the decentralisation of the PMN and the seed distribution project funded in mid-2001 through the AusAID Community Peace Restoration Fund.

When APACE withdrew from agricultural development in mid-2001, the need to set up a new organisation became urgent. Meetings were held and the process of setting up Kastom Gaden Association was started. Kastom Gaden, however, will need to address the same things that the KGP would have had to:

- a structuring of activities to reflect the realities emerging after the resumption of civil life following the conflict
- increasing the capabilities of the management team to run an agriculture program
- moving ahead with the decentralisation of the PMN.

In effect, the PMN is now a separate NGO to Kastom Gaden.

Prioritising new funding

The future of the program is completely dependent on success in fundraising.

For development professionals, funding is a continual source of frustration. They know that it can take years until a local NGO develops the ability to stand on its own feet and that the continuance of funding is critical during this period.

Many subscribe to the ideological notion of developing countries managing their own development, of local NGOs becoming self-reliant in the sourcing of funding and in management. The KGP leadership also subscribe to these ideas, however they know that these remain distant goals. The scenario for developing country NGOs over the medium-term future is reliance on funds flowing from the developed world although aid budgets show no sign of growing.

Towards self-funding

Proposals for self-funding often focus on income-earning capacity developed through small business. To date, this has met with limited success and NGOs continue to rely on external funding.

Unless the aim of the project is small business development, fundraising through business activities can take staff away from their development work and rob the agency of time and resources. This was the experience of the KGP when it tried farmgate sales of seeds, eggs and vegetables to raise supplementary income.

Maintaining funding

For Kastom Gaden, the priorities are likely to be:

- setting aside time for staff to produce funding applications
- maintaining contact with donor organisations
- scouting out untapped funding sources
- investigating business opportunities to increase earnings; this will necessarily be a lower priority.

Find and hold quality staff

A critical element in sustaining the work of the KGA will be the ability to find and retain qualified staff.

This is not an easy thing to do in the Solomons, however the pool of trained people is slowly growing.

It is difficult to find people with the right combination of technical skills and the willingness and attitude to work and live with the people in the villages.

Proposed action:

- attract and retain staff by paying them at rates competitive with other NGOs in the Solomons, depending on funding
- locate training to improve staff skills
- maintain good staff relations by ensuring structures for participation, problem solving and dispute resolution are in place
- adopt a management style that seeks mutual benefit for both staff and the program.

Employ local people

As happened in the Sydney office, the KGP offered voluntary staff paid positions as they become available.

This is a sensible and efficient way to gain experienced and capable staff. Sometimes, however, staff have been hired through advertising.

The preference of the Solomon Islands office was to employ local people to:

- enable the program to continue under local control when Australian staff leave
- increase the pool of skilled people available in the Solomons
- provide local people with a means of making a living in the development of their own country.

When needed skills are not available locally or are not of sufficiently high standard, there is no alternative to bringing in people from overseas.

When this is done, as in the case of Emma Stone, the expats train local staff to assume responsibility for the work when the expat's tour is finished.

Through its history, the KGP employed only one Australian in the Solomon Islands—program manager Tony Jansen. All other staff were Solomon Islanders. The situation will be much the same with Kastom Gaden.

After APACE broke ties in mid-2001, Tony received funding from Australian Volunteers International to continue his work. Over time he is likely to reduce his role as local staff assume greater responsibility.

Proposed action:

- continue to fill positions using local staff where possible
- when expats are brought in, include a skills transfer process in the placement agreement.

Build on core activities

The evaluation and intensive monitoring of the past three years indicated that the way forward for the KGP is to build on its successes.

A move in this direction has been:

- the integrated pest management project on Malaita with its use of the Participatory Technology Development approach
- the documentation of the bush food resource of the Babatana language area of Choiseul through the Lauru (Babatana) Ethnobotanical Manual Project
- the in-situ conservation of useful species through the Solomon Islands Planting Material Network.

Proposed action:

- Kastom Gaden and the PMN design new projects to utilise the learnings, resources and skills of previous projects.

Changing the perception of subsistence agriculture

The KGPs focus on subsistence farming sets it apart from much official development aid which is centred on the commercial agriculture sector.

Important this might be, but an improved subsistence agriculture remains the most effective means of improving the family diet and boosting the health of communities in the Solomons.

Subsistence gardening remains important where communities live beyond the reach of roads linking them to urban areas and on isolated islands.

Erroneous assumption

Underlying the commercial agriculture focus of official development aid has been the often-unstated assumption that farmers move from subsistence to commercial agriculture as a natural progression.

While subsistence farmers will sometimes sell their excess production at local village markets, participation in commercial market gardening in the Solomon Islands is limited by:

- isolation from urban markets
- the cost and frequency of sea transport to move produce, with its limited life, to the urban markets.

The failure of subsistence gardeners to move on to cash cropping leads to the erroneous linking of subsistence gardening with poverty. Such a view ignores the fact that in communities where social structures remain intact, there is not only access to food but access to customary land, participation in society, support from family and other customary benefits frequently absent in the urban centres. In fulfilling these social welfare roles, the subsistence economy can be said to subsidise the formal economy.

The important role of rural subsistence living was demonstrated with the repatriation of Malaitan settlers from Guadalacanal in 2000. Forced to evacuate Guadalacanal by the Isatambu Freedom Movement, these internal refugees returned to their home villages, swelling local populations. Had a subsistence rural safety net and the opportunity to return to subsistence gardening not been available, the conflict would have degenerated into a major regional humanitarian crisis.

Where subsistence farming skills have been retained and where customary rights of residence and access to land remain intact, a population has a social safety net and a source of long-term food security. In this sense, subsistence gardening, with fishing for coastal dwellers, has the potential to reduce the likelihood of famine and to provide a means of weathering periods of national or regional crisis. Subsistence agriculture remains at the core of village food security and contributes to a high quality of life for those engaged in it.

Proposed action:

- in its educational and advocacy activities the KGP should continue to assert the positive social role of subsistence farming.

Affordable farming

The low external input (LEISA) model remains the most affordable to Solomon Island rural communities living on the edge of the cash economy. LEISA methodology is applicable both to subsistence growing and to small scale cash cropping.

The KGP's success in supporting agricultural training with a reliable supply of non-hybrid seeds shows that it is a model worth perpetuating and is replicable by other agricultural development agencies in the Pacific wet tropics.

Proposed action:

- Kastom Gaden Association and the PMN continue the work of the KGP in the development of locally relevant methods of low external input farming
- project staff document the process of working with these methods, record the results irrespective of whether they succeed or fail and publish the information for the benefit of other NGOs and the interested public.

Towards independence

The establishment of a staffing committee consisting of representatives of APACE's renewable energy program and the KGP in 1998 was the first step in boosting local decision making and participation in the regional APACE organisation.

The outcome was expected to be APACE Solomon Islands, an organisation based in Honiara with greater autonomy than APACE development programs had to date. The idea went the same way as the APACE agriculture program, there was no move to develop it further.

The longer term goal of the KGP was to establish the proposed local agricultural NGO. That is now underway with the formation of the Kastom Gaden Association, a local agricultural NGO continuing the work of the KGP.

The direction and control of the KGA is now be in the hands of Solomon Islanders.

Proposed action:

- continue the process of increasing local staff decision making by developing relevant staff structures
- seek out project work to consolidate the new NGO.

Why not use volunteers?

The idea that project management work could be done by volunteers, freeing extra funds for project work in-country, was entertained by APACE management. The idea appears an attractive proposition until the limitations of volunteers are assessed:

- volunteers are likely move on and give little notice when they receive an offer of paid work or when they leave for other reasons
- they are often less reliable than paid staff because they may have less of a sense of obligation to the agency
- voluntary work with an agency is sometimes a means of entering the industry—of 'getting a foot in the door'; this can reduce commitment to the agency and increase the likelihood of the volunteer moving on with little notice when they find paid employment
- volunteers are not always available when needed or at short notice; when that happens, it is the paid staff who have to deal with the extra work
- volunteers may be choosy about the work they are willing to do, avoiding the tedious activities involved in project administration; this was confirmed by the many people who approached APACE about voluntary work; most of them were interested in an overseas posting and expressed little interest in helping in the Sydney office despite the opportunity to learn about the management of projects, funding, relations with government and the operation of NGOs.

For the few willing to work in the organisation's Australian office without the promise of overseas work, the internal dynamics of the agency created a situation in which it was difficult to retain them. There was, however, a small core of long-service volunteers who would at times help in the more tedious work of the Sydney office.

Volunteer, Emma Stone, proved to be a successful placement, indicating that there will remain a role in the field for the skilled, motivated and reliable volunteer with a specific role with whom a clear job description has been worked out.

Agencies planning to take on volunteers, especially where they will fulfil important functions, might consider:

- securing an agreement with the volunteers about a minimum period to be spent with the agency
- developing and presenting in writing an outline of training that will be made available to the volunteer

- appointing a staff member to coordinate volunteer activities
- ensuring that volunteers do more than repetitive, tedious tasks
- making best use of volunteer training and skills if they are relevant to project activity
- providing new volunteers with printed material describing the agency, its aims, operations and systems
- providing some idea of the prospects of the volunteer being offered paid work if they are volunteering as a means of job training.

The future of the KGP

The end of AusAID funding through the NGO Environment Initiative, the ANCP funding window and, later, APACE program funding brought a closure to a period of establishment and consolidation for the KGP.

Project management

Moving the program towards self-reliance has been the increasing project management capability of local staff.

Roselyn Kabu, who has been with the KGP for around seven years, appears to be the most likely person to take over Tony's job when he leaves.

Just when that will be remains unclear. In 1995, Tony guaranteed APACE that he would stay with the KGP for at least five years. Now well past the end of that period, Tony looks likely to stay on longer but plans to take a less intense management role. He now describes his position with the KGA as an 'advisor'.

The critical challenges for Kastom Gaden lies in building capacity, both in managerial and field skills, obtaining funding and identifying the needs of rural communities so as to design training activities which directly address these.

The evolution of the KGP into a coherent structure of field activity consisting of community food security assessment, project design and implementation has systematised the approach to agricultural development and given it a nutritional health focus.

It has been encouraging for KGP staff to discover that there has been interest in its work from organisations and communities elsewhere in Melanesia. This indicates that the aim of making the work of the KGP into a replicable model might prove successful.

To Bougainville

By mid-2001 and in early 2002, Tony visited the island of Bougainville. The visits — up to a month in duration — put Tony in contact with the Paru Paru agricultural training centre in the island's mountainous interior.

Through the ten years of the civil war with PNG Paru Paru developed:

- improved methods of food gardening
- methods of mixed cropping that use tree crops
- the renewed use of bush foods
- an innovative clan-based approach to agricultural training that Tony thinks could prove useful elsewhere in Melanesia.

By late-2000, signs were positive for some kind of cooperation with Paru Paru. The Australian NGO APHEDA, funded by the Australian Council of Trade Unions, provided financial support for Tony.

Had APACE chosen to continue its agricultural work the KGP might have been extended to cover a Bougainville operation. Now Tony is exploring involvement in Bougainville through the KGA. Project activity on Bougainville would likely include the Seed Savers Network with its training and networking capacity.

A new model

During the life of the KGP the South Pacific has changed—unrest is now part of the development equation although political tensions reduced through 2002. This development should not deter agencies from operating in the region, just of doing so with attention to the safety and security of their staff.

At the same time, the People's Republic of China has stepped up its interest in the region and could in future offer aid to buy political support, much as Taiwan/ Republic of China does at present in the Solomons. Clearly, the provision of aid in the region is becoming more political.

Changes such as these can make life difficult for small NGOs working directly with civil society institutions and indigenous communities. But the agencies must accept the challenge of a more complicated political environment and ensure that overseas aid gets to the people who can most benefit from it—people at the village level.

That is the challenge for the Kastom Gaden Association and the Planting Material Network in the post-APACE period. It is a challenge that the agency can meet because it has built a track record of experimentation, persistence and success.

If things go well, Kastom Gaden and its supporters may just be able to build a new and viable model that brings together people in Melanesia and Australia for the sustainable development of communities in the region.

Challenges and solutions

When the KGP was evaluated it was found to face a number of challenges.

Challenge	Solution
<p>Matching project activity to time availability</p> <p>Initially, projections of what could be achieved by the Kastom Garden Program were a little ambitious. There has always been more work to be done than there has been staff time and funding to do it.</p>	<p>More realistic estimates of what could be achieved with limited staff and funding emerged as the program evolved and as staff gained increased experience in project work.</p>
<p>Cancellation of workshops due to events in villages</p> <p>Unanticipated events and other demands of village life led to the cancellation of workshops.</p> <p>Usually, project staff would be notified of the inability of villagers to participate in project activities, but there were instances where trainers arrived in villages to learn that the planned activities could not go ahead. This was expensive in terms of staff time and money spent on transport.</p>	<p>Cancellations due to unforeseen events in village life are a risk associated with project work and are beyond the influence of project staff.</p> <p>While the visits can sometimes be used for other purposes, the cost and delay to project implementation through cancellations are accepted and, usually, the activities can be reprogrammed for a later date.</p>
<p>Maintaining interest in project training</p> <p>Participants sometimes lose interest in seeing something through and move on to another activity. The abandonment of methods may be a sign of inappropriateness.</p>	<p>Project trainers should encourage participants to fully participate in the program by highlighting the benefits of doing so.</p> <p>The prospect of specialised training for selected village trainers and similar possibilities might provide an incentive to participation.</p> <p>The sup sup garden competition organised on Choiseul was introduced as a way of stimulating interest and participation.</p>
<p>Conflict within village associations</p> <p>Personality conflicts and conflict over political agendas can delay or bring a project activity to a stop.</p>	<p>Interpersonal dynamics within village communities are beyond the influence of project staff.</p> <p>Such conflicts must be seen as an objective condition influencing project work.</p>
<p>Discouragement of participation in project activities</p> <p>Sometimes, people discourage others from participating in activities, reducing the impact of training and the adoption of new ideas.</p>	<p>Persist and encourage participation by pointing out the potential benefits.</p>
<p>Requests for financial allowances to attend project training</p> <p>The demand for allowances to attend training activities is seen by participants as compensation for the loss of monetary or nonmonetary income.</p> <p>A willingness to make the effort and give up other activities for a limited period is regarded as a sign of commitment to training. It is an indicator of willingness to participate in development and self-help.</p>	<p>A living allowance is paid where people give up their usual activities for more than three days.</p>



Challenge	Solution
<p>Lack of commitment to honour the agreement to support project staff</p> <p>In return for the training offered, communities make a contribution of providing simple accommodation and food for visiting project personnel.</p> <p>One of the reasons this was introduced was to move away from the old image of development assistance of 'giving things away'—the 'charity model' of overseas aid which encourages continued reliance on aid. This attitude is prevalent in some areas of the Solomons as it is in other developing countries.</p> <p>The KGA does not have the resources to support such a model and is philosophically opposed to it because it fails to encourage self-help and local initiative.</p> <p>Community contribution is a modest measure of the village's commitment to its own development. Sometimes, however, the village reneges on its agreement.</p>	<p>Sensitive negotiation outlining the mutual responsibility of the two parties is the only means of restoring the agreement.</p> <p>Staff are provided with an allowance adequate to meet day to day needs in the field.</p>
<p>Renewal of program/ project funding</p> <p>For an agricultural program to fully train participants to a level at which they are competent to continue on their own, a minimum period of around five years is needed.</p> <p>With project funding commonly allocated for only two years or so, considerable effort must be put into the securing of continued funding.</p>	<p>Although the securing of continued funding is seen as a priority, there is nevertheless reticence over the allocation of staff time to the writing of funding applications, most of which produce zero results.</p> <p>In addition to writing applications it is necessary to maintain positive relations with the representatives of donor bodies in-country. This is a networking function for which there is no immediate return for time spent. It is better done as a strategic activity—one with long-term possibilities—and seen as a normal part of NGO work.</p> <p>Liaison and networking with donors and other NGOs creates a 'presence' for the project and funding applications can then be submitted in the knowledge that networking has educated the donor representative about the organisation, its aims and activities.</p>
<p>Maintaining a program of staff training</p> <p>Trained, skilled and reliable staff are a development program's major asset.</p> <p>Training, however, removes staff from their work, consumes funds and may necessitate the bringing in from overseas of trainers if the skills are unavailable locally.</p>	<p>While the investment of limited resources in training is a costly activity, it is necessary for the successful implementation of activities.</p> <p>Complicating the decision to provide staff training is the probability that, sooner or later, staff will move on to other NGOs or other organisations. In this sense, staff training becomes part of the career path of the development worker and contributes to the development of expertise in the sector.</p> <p>The KGP has taken advantage of visits by Australian program staff and supporters to provide staff training.</p>





Challenge	Solution
<p>Maintaining the backing of community leadership for project work</p> <p>The support of village leadership validates the presence of the project and its work. It indicates that the community sees a real need for the project.</p>	<p>The KGP responds to invitations to visit villages to introduce the program. An agreement is then made about project activities.</p> <p>Efforts to maintain good relations with village associations and their leadership boosts the prospect of successful project intervention.</p>
<p>Maintaining regular reporting to donors</p> <p>The KGP was originally supported by AusAID funding. This necessitated a reporting schedule which met AusAID's needs. Reporting to AusAID was a task of the Australian project manager who, in turn, was reliant on regular reporting from the Solomon Islands office.</p> <p>Reporting to donors can be a continuing challenge to any overseas aid program because reporting schedules are easily disrupted by changes to project activities, inclement weather such as cyclones, disruption of communications, civil disturbance and the daily necessities of project management.</p> <p>Reporting by the KGP was complicated because each of the three projects making up the agriculture program had its own reporting schedule.</p>	<p>To maintain a picture of the status of the project in Australia, a quarterly reporting schedule was devised. Both a narrative and a simple financial report were produced.</p> <p>Financial reports were produced by the Honiara-based bookkeeper and narrative reports by the program manager or by Roselyn Kabu.</p> <p>The reporting schedule worked most of the time but it proved necessary to recognise the reality of project work in the field and to make allowance for late reports.</p>
<p>The funding of project overheads</p> <p>Most project funding schemes do not provide funds to cover the necessary overheads of project work such as office rent and the purchase and maintenance of equipment in the head office.</p> <p>It is mainly field work which receives funding.</p>	<p>Research to locate donors which will fund overheads is critical. Unfortunately, this was not prioritised in Sydney and the APACE office had little success in finding funding to cover administration. Those funding submissions that were written failed to produce results.</p> <p>The practice at APACE as in other development assistance agency head offices was to write the costs of administration into the project budget. This would generally be around ten percent of the budget and it would cover the services of a project officer several days a week as well as other costs.</p>





Postscript

In mid-2002, seven years after Tony Jansen walked off the aircraft at Henderson Field in Honiara to search for a project base, the future of the agriculture program appeared to be viable. Over those years it has faced uncertainty, challenge, funding shortfall, the loss of support from the Australian NGO and the uncertainties brought by the deterioration of internal security in the Solomons.

In its brief lifetime the Kastom Garden Program and its successor, the Kastom Gaden Association, has successfully met its many challenges by being adaptable, a characteristic that has enabled it to cope with changes to the international development environment in both the Solomons and Australia. The attribute of adaptability is attributable to the people who have made up the program — aid and development projects, after all, are only as good as the people who work in them.

So what are the outstanding features of the KGP/KGA? What has made them unique? What has given them their strength?

People—the critical element

First of all, there's the persistence of the long-term staff—Tony Jansen, Roselyn Kabu and Mary Timothy—who have stayed with the program since the early days. They have tied together the valuable work of people who spent less time with the program, brought continuity and guided the evolution of the program through times of doubt, turmoil and triumph. While attending to numerous short term demands, they have kept their attention focused on the long term goals and have successfully prioritised their work to move towards those goals.

Also bringing continuity has been that other constant in the life of the KGP/KGA—the Solomon Islands Planting Material Network. From a humble

handful of garden beds at Burns Creek, Honiara, the PMN became what, in all modesty, could be described at the South Pacific's most successful farmer-based agricultural seed biodiversity organisation. As well as to Mary Timothy and Roselyn Kabu, credit must go to the Australian supporters of the PMN, most notably the Seed Savers Network's Jude and Michel Fanton.

Continuity has also come from a Solomon Islander who has been critical to the entire APACE program in the islands, including the micro-hydroelectric program. Without Joini Tutua, APACE's work, the KGP/KGA and the PMN with its seed farm at Burns Creek would have been the lesser. Joini deserves credit for his role in the development of his people and their country's future and for bridging the gap of culture and communication with the project's Australian counterparts.

Institutional support important

Then there has been institutional support—mainly through APACE which started the program and raised the initial funds from AusAID, funds that saw the program into the new century. It is unfortunate that APACE could not have continued to evolve as an organisation and devolve its work further into the Solomons. Ex-APACE staff, such as Lisa McMurray (who went on to another aid agency), the author (now a freelance journalist) and Fiona Campbell (who served on the APACE Executive Committee) have continued to give what support they can, most recently through the TerraCircle consultancy.

For Tony Jansen, the establishment of the KGA and of the PMN as NGOs based in the Solomons has seen the move in a small but significant way towards the regionalisation of the program and towards Tony's dream of 'south-to-south' aid, of developing countries assisting in the development of each other. The involvement of Solomon Islands-

based KGA staff in work on Bougainville has been the first practical step in this type of development. The more-recently created Melanesian Farmer First Network has successfully linked agricultural and health NGOs in the Solomons, Bougainville, PNG and Vanuatu and provides institutional support and training. The intergovernmental Secretariat of the Pacific Community must be credited with foresight in supporting the Network.

Links between people

In a wider context, the program has made—and continues to make—a contribution to regional development which has made positive links between the people of the South West Pacific and Australia.

The KGP/KGA provided the opportunity for people at the community level to make supportive links and to learn about each other. Links between individuals and community-based development organisations in both developing and developed countries provide an alternative to large-scale government aid which is becoming increasingly conditional and politicised.

For the community-based Seed Savers Network I believe that the Solomon Islands Planting Material Network represents its greatest success outside Australia. Although most credit for the success of the PMN must go to its trainers and seed curators, the training offered by Seed Savers and the continuing relationship between KGA, TerraCircle and the Network has been vitally important.

The KGP/KGA has also provided an example in which the responsible, accountable and frugal use of modest government funding can make a lasting contribution.

A wider potential

What of the program's wider potential?

The PMN, the adaptation of development methodologies such as PLA/PRA, PTD and community food security assessment and, early in the life of the KGP, the publication of *Sapa*, a manual for small scale agriculture in the Pacific wet tropics, provide models for development agencies and professionals who are in there for the long haul, for truly sustainable development based where it really counts—at the community level. This is not an easy path but it is a path that situates development and the control of that development directly with those who are supposed to benefit.

For island states in the South Pacific, a region now involved in political and economic change and in

which the security of people and their communities has become a factor, the KGP/ KGA and the Planting Material Network provide examples which might be replicated to provide some level of security for communities amid the economic and political change that surrounds them.

The fact that the KGA persisted through the first period of intercommunal conflict and coup in the Solomons, though its activities were affected, and was unscathed (though the Burns Creek premises came close to being burned down) by the sudden renewal of tensions during which Honiara's Chinatown district was burned out in 2006, indicates the existence of a durable and resilient organisation.

A modest hope

Time creates perspective—error and success become visible, long term trends evident and the contribution of individuals clearer—and the KGP/ KGA comes to be seen as a continuum through which individuals and organisations come and go, each exerting an influence that, over time, sets direction and influences the future. Some of those people—Tony Jansen, Emma Stone, Joini Tutua, Roselyn Kabu, Mary Timothy, Jude and Michel Fanton and all the others—have contributed substantially to making the KGP/KGA the success it is.

From where I write in Sydney, Australia, I look back over the life of the program and see the good times and the hard times, the success, the failures, the work complete and work yet to be started.

With the continuing evolution of the KGA it is my hope to see a type of regional development based on people-to-people and organisation-to-organisation links that involve those in the region's developing countries and those in Australia in a common program to improve life and to make the future of our shared region secure and prosperous in a changing world.

**Russ Grayson, Pacific Edge Media,
Sydney, Australia, June 2002.**

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A1: On to Bougainville

Between 1 May and 23 May 2000, Tony Jansen and Joini Tutua—the Honiara organic market gardener who has done so much to support KGA and APACE work in the Solomons—visited the Avaipa district on the island of Bougainville. Their purpose was to assess the potential for a partnership with the Paruparu Education and Development Centre (PEDC) to focus on food security.

Bougainville is a continental island the southern tip of which lies north west of Choiseul. Away from the beaches, Bougainville rises to a mountainous interior covered in tropical rainforest and populated by isolated village communities.

Tony and Joini's three weeks on Bougainville followed the visit to the Solomons by Bruno Idoai, head of the PEDC's Agricultural Sciences Department. Bruno was accompanied by Thomas, a PEDC rural extension officer from the Avaipa district in central Bougainville. The visits were made possible thanks to funding by APHEDA and APACE. The Bougainville Community Based Humanitarian Program, a local NGO, was also involved.

The conflict

For the people of Bougainville, the visits were part of the reconstruction phase then getting underway following a decade of civil war.

Initially focused on traditional land rights, environmental and economic issues stemming from the operation of the Panguna mine, a CRA and PNG government joint venture, the civil war quickly grew into one of independence from PNG. It would pit Bougainvillians against the PNG defence forces and against each other in a conflict that may have killed as many as 20 000. The conflict would see the imposition of an economic and humanitarian blockade by PNG which would completely shut Bougainville off from contact with the outside world. As the civil war and blockade dragged on, communities fell back on traditional ways, placing increasing pressure on traditional resources.

A ceasefire in 1997 was followed by negotiations which produced an agreement in 2002 over the future of Bougainville. A multinational peacekeeping force, including elements of the Australian Defence Forces, moved in.

Tentatively, individuals and communities that had taken different sides in the war started to seek reconciliation.



A bush garden in the hills of Bougainville.

Traditional agriculture

The traditional agriculture of Bougainville is the same as that of the Solomon Islands and other parts of Melanesia—shifting cultivation in bush gardens. This was described by Tony in his report on the pre-feasibility study:

Land is cleared, organic matter heaped and then burned or laid along the edges of the garden. The garden is then planted to a diverse mix of crops, the staples of which are all root crops with the notable exception of plantains. Garden sites are cropped for one to three seasons and then left to a forest fallow, traditionally from 20 to 30 years.

As population grows, fallow periods are typically shortened to a bush fallow system with fallows from 5 to 15 years.

PEDC

Located five to seven hours walk from the nearest road, the Avaipa district consists of interconnected valleys, fast flowing rivers and forest. The population numbers perhaps 4000 people who follow a largely traditional lifestyle with land passed on through matrilineal lines.

It was here that the Paruparu Education and Development Centre (PEDC) was formed in 1991 to make use of local skills to help the people to get through the civil war and PNG blockade.

According to Tony:

PEDC was formed by a group of educated people with a vision for a new model of development. They received almost no assistance and even today continue to operate largely from their own resources.

From 1993 to 1995 the centre ceased to operate for security reasons. It resumed in 1995 and was reorganised with nine departments.

Agriculture and primary health care are priority areas... and PEDC was able to improve the health and organisation of the people during very difficult times. Radio technicians from PEDC kept communications going in the rebel controlled areas during the crisis, including the Radio Free Bougainville transmitter run from a coconut oil-fueled generator.

The organisation has something around 30 staff and operates 14 different 'departments'. A main training centre provides accommodation but PEDC also operates a number of smaller, decentralised training centres. The agriculture

department is located in one of these in the high part of a valley a few hours walk from the main facility.

The agriculture department

The department operates an agricultural extension service to help farmers provide food for their families. Thrown back onto their own resources during the war, the department has developed a number of foci:

- holistic management of natural resources
- development of productive, forested buffers along waterways and ridgetops
- multiple use 'mini-forests'
- fixed gardens in place of shifting cultivation
- low external input livestock management for food production.

PEDC takes a unique clan-based approach to agricultural extension, with families encouraged to develop a timetable to prioritise their work on a weekly and monthly basis. According to Tony, this clan-based approach could prove successful elsewhere, such as in the Solomons and PNG.

Fixed gardens

Shifting cultivation is capable of supporting populations that are more or less stable in numbers. Its capacity to provide for growing populations depend on the amount of uncultivated land available, the ability to access that land through customary land ownership arrangements and the fallow period needed to return farmland to fertility. Other factors include the availability and affordability of artificial fertiliser or access to soil management techniques, such as those familiar to farmers using the 'organic' methods, that do not rely on artificial fertilisers.

The challenge for communities using traditional agriculture, like those of the Avaipa district during the civil war which were forced into increased self-reliance, was to produce sufficient food for nutritionally balanced family diets. One solution developed by PEDC extension officers was to encourage fixed, rather than shifting, gardens. This, according to Tony, has been successful:

The main innovation that has been introduced in the food gardens is a raised bed system for the cultivation of sweet potato, the main staple food.

Long trenches a half-to-one metres deep are dug along each side of raised—1.5 to 2 metre



On the track to Aware market, a five hour trek through the forest, with a load of pandanus leaf and yam.

A farmer with upland rice, a grain now widely grown on Bougainville.



wide—beds, typically across the slope though not always. That allows for much improved drainage and this has drastically improved sweet potato yields in this very high rainfall area.

The new method is coupled with crop rotation and green manuring. This occurs when the crop is harvested. Crop refuse is left to dry on the beds. The drains are then cleaned of fallen soil and organic matter which is deposited on top of the crop refuse. This is then planted to a rotation crop—typically peanut and sometimes soya bean although a number of other local legumes were observed planted on the edges and in the raised beds.

At the end of the drains there was often a final barrier drain to prevent soil being washed downslope. This soil could then be collected and used to bury the green manure.

I observed sweet potato, corn, beans, peanuts, upland rice, aibika growing in this system. Aibika and a local legume were occasionally planted in the drains or along the borders which indicates that they must be tolerant of occasional inundation. A number of farms in the Avaipa district now use this system.

On an aerial survey we could see the trench system on most gardens in the valley—an extremely high uptake by local farmers. One family would typically have three fixed garden sites to facilitate good rotation between them. The method has prompted a switch to more intensive landuse, presumably because of the increased yield and the initial labour investment to establish the raised beds.

The food forests

The oldest of the mini-agroforestry systems that Tony and Joini saw had been cropped for about 15 years. This was at Bruno's home. Other systems they visited were located close to villages or on the outer boundaries of the fixed gardens. There were more established on the river banks.

Characteristic of the mini-agroforests were:

- multistorey cropping—the growing of different crops of different heights in the one system in layers corresponding to the tall tree layer, understorey, groundcovers, shrubs and vines
- multiple use—crops included food, medicine, timber, fuelwood and animal fodder with chicken forage in the understorey.

Like the natural forest, the food forests served ecological functions such as binding the soil, habitat for wildlife, protection of water catchments and windbreaks.

Tony reported that each family is encouraged to grow the following quantity of crops:

- galip nut (an indigenous tree crop) - 50
- pau nut - 50
- mango - 25
- breadfruit - 25
- avocado - 25
- guava (a shrub) - 25
- five corner (carambole, a tree crop) - 25
- orange - 25
- mandarin - 25
- bush apple (lau lau) - 50
- rambutan (a tree crop) - 25
- betel nut (a palm with mildly narcotic effects that is widely chewed throughout the region) - 100
- other bush foods - 25
- pineapple - 100.

This amounts to something around 600 trees, a significant perennial cropping system. According to Tony:

In reality, the integrated forests we saw had many more species.

Tony and Joini also visited a model development that was diversifying existing cocoa and coconut plantations where, in a plantation of around 1000 trees, a system similar in structure to the food forests was being set up.

Livestock and fisheries

Livestock and fisheries are promoted by PEDC as a source of protein and for income generation.

During the crisis, as the war is known on Bougainville, the keeping of livestock and the consumption of legumes helped to reduce protein deficiency in the diet.

Fish farming is carried out in ponds of 10 to 15 square metres in size. These are fed by stream water diverted through canals or pipes with the overflow returned to the stream. Other ponds are of the barrier type which accumulate seepage from springs or, less commonly, are formed when weirs are built across streams. Bamboo pipes or pipes salvaged from the Panguna mine site are sometimes used to divert stream water.

Tony observed that:

The ponds are stocked with silver perch, tilapia, carp and local fish species fed on termites, African snails and bush fruits. The ponds are reported to be very productive and allow for a good income for the owners comparable to owning chickens.

Most of the ponds observed were owned and built by ex-combatants of the Bougainville Revolutionary Army. This type of heavy work appears to satisfy many of these ex-soldiers. Inland fisheries is one of the agricultural technology focus areas for the PEDC as protein sources are limited in the bush areas on Bougainville due to distance from the sea and the situation was exacerbated during the crisis when protein deficiency was a serious problem. Inland fisheries are also promoted because wild inland fisheries are reported to be depleting rapidly due to overharvesting.



A micro-hydroelectric turbine typical of those made from scavenged parts during the civil war.

Small livestock

Small livestock such as chickens and ducks are kept in pens made of local materials such as bamboo and enclosed by living fences.

Tony reported that:

Chickens and ducks are often able to free range for certain periods of the day but spend the nights in pens to allow easy collection of eggs, protection from predators and a regular feeding regime.

Local feeds have been developed that include different bush and garden foods that are sometimes processed for storage. An example was the drying of scraped coconut on a piece of iron over the fire. This was stored in bamboo containers in the kitchen in the smoke and mixed with other feeds such as ground sorghum for feeding to the chickens on a daily basis.

The development of improved local feeds interests PEDC and could include simple technologies for processing and milling. In discussions with Bruno and others such as Charles from the Appropriate Technology department it was felt that this could include hand operated machinery or machinery powered by the micro-hydro turbines used in the villages—turbines made from parts scavenged from the mine or the towns.

Agricultural training

PEDC's agricultural training is based on a network of model farms around the PEDC training centre.

Tony observed that:

Students visit and stay on these model farms. This is an innovative approach that eliminates the need to maintain elaborate demonstration sites. Farmers learn from other farmers and a distillation of ideas and experience is facilitated at the centre. Rural extension officers are trained and assisted to develop local models in their own places. These models then serve as a network for further training in that district. PEDC would like to extend this approach into other areas.

Other initiatives

PEDC also operates five community schools and has a teacher-in-service training program staffed by volunteers. The schools are encouraged to have their own gardens, some of which Bruno has helped develop on the PEDC model.

There are micro-hydroelectric systems that produce energy for lighting and radios and small appliances.

Tony reported that:

There is an electrical outstation of PEDC where bush knives are sharpened and new handles attached as a free service.

Steel garden forks were also being produced, sometimes from old home-made gun barrels, a hopeful sign of confidence in the peace process. The workshop uses an angle grinder and a hand drill, both of which cannot be operated at the same time because they overloaded the system.

Fish ponds producing edible species such as carp and tilapia have proven successful in making available protein to people living in the Bougainville highlands.



The main problem identified by Michael, head of the PEDC electrical department, is electrical accidents. He thinks they need a simple hydro kit that they can use and maintain safely and reliably.

Recommendations

Tony and Joini made a number of recommendations following their visit:

- APACE should develop a sustainable agriculture program in Bougainville in partnership with the PEDC agriculture department
- the draft strategic plan developed during their visit should be used to seek funding and support for a joint APHEDA/ APACE/ PEDC sustainable agriculture program
- plans should be developed to continue the exchange process between PEDC and the KGP in the Solomon Islands with an initial focus on Planting Material Network involvement
- information on organic certification and markets should be provided to PEDC and APACE should facilitate an organic market and producer's study tour for administrative decision makers in the Bougainville Peoples Congress.

Bruno Idioai, head of the PDC Agriculture Department, is at the right hand side of the photograph. Solomon Islander, Joini Tutua, who accompanied Tony on the visit to Bougainville, is seen at centre, third from left.

The rugged nature of the landscape in which the Paruparu Educational Development Centre works is evident.





A2: Taro-gen project

A news item posted by Michel and Jude Fanton of the Seed Savers Network in April 2002 reported on the taro diversity fair held in the Solomon Islands. The fair was part of the Taro-gen project of the South Pacific Commission for which the PMN is carrying out field work...

A total of 843 varieties of taro have been collected by the Planting Material

Network in The Solomon Islands over the last year with funding from the EU and the South Pacific Commission's Taro-gen Project. In each of the four provinces a central garden has been used to grow out the provincial collection and a diversity fair held. These were timed for the taro harvest in March and April.

Michel and Jude of The Seed Savers' Network attended the diversity fair on 15 and 16 April on Malaita, an eastern island of the archipelago. It was held inland in the mountains in Central Kwarae and attracted over 200 people from around Malaita.

Over 200 taros had been grown out and were on display. Groups of people took samples of ten taros enclosed in nodes of a large bamboo to cook in the fire, then taste-tested and scored them. At the end of the two days the taros were divided for people to grow in their own gardens. In all their lives, the older people had not seen such a diversity.

Taro is the most nutritious of the root crops grown in Melanesia but is becoming neglected in favour of sweet potato and cassava that require less fertile soil.

Soil fertility is reducing due to population pressure on fragile and steep forest soils. However taro is considered the best crop for weaning babies and feeding young children and the Planting Material Network is focusing on methods of improving soil and conserving as many taro varieties as possible.

Retaining diversity is very important as some varieties perform well in dry years and others in wet, some are more resistant than others to the



Villagers with taro species collected from their fields.

many diseases and pests of taro and others are suited to particular soils.

Some of the visitors brought along more varieties and were awarded prizes. In the competition for how many varieties you could name, an older woman won the prize by naming twenty.

I felt I knew a bit about taro before I went along, but by examining so many varieties, I now know where to look for distinguishing marks and there are many. For example colour, whether green, purple or red and what shade—of the leaf spots, stems, collars, tubers and flesh—is an obvious determining characteristic. Then there are stripes on some stems and some tubers are round while others are elongated.

While cooked by steaming sealed in a bamboo node is a delectable way of eating taro, taro chips fried in oil and boiled, mashed taro are delicious.

There are many strong customs related to the growing of taro. One must not enter the taro garden after eating turtle or mangrove fruits. Menstruating women are not allowed in. The taro must be cut and harvested with a small shiny sharpened specific shell, not with a knife. Taro has a mystical significance for many tribes. It is likened to human beings.

The speeches from a beautifully decorated dais emphasised the need to conserve taro diversity in situ and to value both the nutritional and cultural aspects of this crop.

...Jude Fanton



A3: Conference paper

The following excerpts are extracted from the paper *Improved Household Food Security in Lauru, Solomon Islands Through Grassroots Extension, Kitchen Gardens and Nutrition Education*.

The paper was written for the Australian National University's Development Studies Bulletin in 1999 and revised for presentation to the PNG Food and Nutrition Conference in 2000.

The authors of the paper are Tony Jansen, Caleb Kotali and Gweldolyn Pitavani...

We have written this paper in the difficult environment of political and social unrest in the Solomon Islands. This made travel, communications and other things difficult with stress and anxiety affecting all our people. We chose to press on as best we could because the issue of food security at the village level is very much highlighted in the uncertain environment that the Solomon Islands finds itself in.

Careful planning and action are needed to strengthen the self-reliant base of our communities to withstand this type of crisis. An economic collapse in the cash economy of the Solomon Islands may soon occur and will cause suffering for our people for many years to come. We thus need to have careful strategies in place for strengthening the food security and good nutrition that Solomon Island people have traditionally had.

Alternative ways of approaching development are needed. When we talk about food security we are very much talking about the survival of future generations as well as our own. We believe that much of the development that is currently occurring is threatening the future food security of our children and future generations.

Village agricultural development

Our approach is that development needs to strengthen, not undermine, the subsistence food sector. In the rush for 'development' traditional knowledge, sustainable land and resource management and a healthy diet and way of life are slowly dying out. Development practitioners and agencies need to create models of extension that can strengthen local food production and that can involve women, youth, indigenous knowledge and local experience in the process.

From experience, we have learned that most big national scale developments designed by outside economic planners and endorsed by national governments end in failure. In the past a lot of money has been invested in projects, most returning very little or nothing at all to village people.

Diet and nutrition

Food consumption patterns (in the Solomon Islands) are changing with an increasing proportion of the diet coming from 'store foods' (mostly imported white rice, white flour, sugar, oil, noodles and tinned fish and meat. These foods are often perceived as superior in taste and value to local foods (Pires et al 1999).

There is a rapid increase in non-communicable disease and other health problems related to nutrition (Solomon Islands government 1998). It is clear that there is a relationship between food production difficulties and dietary change but the links are complex and direct causal relationships are difficult to establish. Nonetheless, some nutritional problems that appear to result from changes to the shifting cultivation system were identified by the Sasamunga Hospital Growth Monitoring Program.

They include:

- difficulty in providing a 'mixed meal' (a meal with staple food, some protein, greens and vegetables and fat mixed with it) every day (most households visit their garden only two to three times a week and poor weather and commitments also affect garden visits and, therefore, food availability, especially of perishable greens and vegetables)
- difficulty in providing mixed meals for vulnerable groups who cannot maintain the labour and time inputs for regular bush food production (eg sick people, especially mothers, elderly adults, widows and single mothers)
- other community commitments making regular, consistent food production and harvesting difficult at different times of the year
- increasing pest problems affecting yields
- the fact that garden are getting further and further away (in Sasamunga up to five hours walk) making it difficult to feed children during the day when women are working in the gardens.

Kitchen gardens

The 'sup sup' garden is a widely known approach that was developed by the Honiara Town Council (supported by UNICEF) to promote small home gardens in urban areas. Sup sup gardens are small kitchen gardens close to the house.

The approach is well known and accepted by many village people however it has not been widely applied in rural areas.

APACE's field experience has shown that the major constraints are the need for:

- availability of low cost but reliable fencing to prevent damage by domestic animals
- education in appropriate soil fertility maintenance techniques
- a supportive training program and the sharing of information as a group.

Without these three essentials, many people who try a sup sup garden gave up when animals destroyed the garden or when subsequent crops grew poorly.

APACE developed a simple, participatory training package that was trialed in a grassroots extension program in Guadalcanal and Malaita. The project staff established trial plots in Honiara at the field office and at their homes. All APACE trainers and extension staff have their own sup sup gardens. This gives credibility to the project in the eyes of village people because trainers and extension staff are seen to be 'practising what they preach'.

Working with primary health care

The Sasamunga Hospital (the referral hospital for Choiseul Province) began an innovative infant growth monitoring program in 1994. When first established 25% of the children were found to be underweight. By 1997 after three years of an integrated primary health care program, including the Lauru Kastom Garden Project, this had dropped to 15% and is still declining. The program initially identified a need for nutritional education combined with agricultural advice to help families provide three mixed meals every day, especially for children.

In 1995, APACE was invited by the hospital to work in Sasamunga. The aim was to facilitate and explore the potential for sup sup gardens close to the house with a hands-on workshop and follow-up activities.

Practical village training and participatory planning

The three day village workshop program involves little theory. A series of practical techniques explores the constraints of village gardens and potential solutions using simple technologies and methods already tried or observed by the trainers. PRA exercises also begin the long-term process of identifying problems, constraints, resources and opportunities within the food production system.

Three days has been found to be an appropriate time for workshops with village people—long enough to explore the topics and complete practicals in some depth, but short enough not to cause too much disturbance to village routines and commitments.

The methods used at Sasamunga were adapted to the local situation from a training program originally put together in another province. Examples include the adoption of a local practice called 'tuku' (in the Babatana language) where organic matter is laid in lines across bush gardens during clearing. This was adapted as a type of compost/ mulch line in the sup sup garden. The use of the traditional digging stick was encouraged as a method of minimum cultivation. The aim was to build on local knowledge and to seed the possibility of using sup sup garden methods, where appropriate, in the bush garden. Later, there was substantial evidence of this occurring as farmers grasped the concepts of soil fertility and applied them in new ways on their own.

Other methods include the use of living or low-cost fencing around the garden, the use of legumes (annuals and perennials) and the use of green manures to maintain soil fertility. In the traditional way of farming, the fertile soil is seen as being in the bush and there is no experience of building soil fertility without a bush fallow. The land around homes was traditionally considered inappropriate for growing food crops.

Demonstration hospital garden

A small demonstration hospital garden plot was established and maintained by local village groups. The produce was given to hospital patients (patients are expected to provide their own food through their families). This proved an effective way for local people to gain experience in the techniques while doing community work for the hospital. Gradually, local community motivation to maintain the hospital garden declined as people felt confident to make their own household gardens.

The family members of patients were encouraged to work in the hospital garden and were then provided with food for themselves and the sick patients. In this way, the experience of the *kastom* garden spread around the island and requests came from many communities for workshops. To date, workshops have been held in more than 16 communities.

Eventually, APACE and the hospital employed two women to maintain the garden which grew to eight blocks. These women provided food for patients three times a week. The garden was able to escape the trap of becoming an expensive demonstration site with high recurring costs because it had the other major aim of feeding patients. The current costs of the two women who look after the garden on a part-time basis is justified by the produce for the patients and, also, the informal training they provide for visitors in kitchen gardening methods. Already, these women have started to participate in training in other communities.

A combination of nutritional education through the growth monitoring program and the message of the *kastom* gardens soon saw a 60% reduction in the number of underweight infants.

There was a proliferation of small kitchen gardens in many villages. In Sasamunga in particular, the community watched individual cases of severely underweight children recover their health and body weight by eating local produce from the hospital *sup sup* garden. This was practical, compelling evidence that local food was the most important 'medicine' for this problem and that food could be coming from around their homes if they tried the new methods.

Follow-up

Participating farmers reported that a key reason for the success of the project was the follow-up visits undertaken at least every three months by local trainers (mostly women) who visited individual gardens, providing advice and encouragement and facilitated the exchange of ideas.

The initial entry point to the communities was usually through the village health committees that had been established under a provincial health care program. The *kastom* garden workshops were accepted as being relevant to the people's health and people were allocated time for them by community leaders.

Traditionally, agricultural extension is associated with earning a cash income and is targeted at men. The approach through the medical services reached women directly through the clinics and had the support and involvement of the nurses. A focus on health was expected and there was no emphasis on income or cash generation. This proved to be a very effective way to establish relations and understanding in each community.

Results

Surveys and group discussions with adopters of the new methods—90% of whom were women—found that their sup sup gardens were useful to their families because they:

- allow easy access to some food at short notice—especially greens
- are helpful to people when they are sick and to old people, especially widows and those without children in the village
- resulted in improvement to the family diet with more regular mixed meals even if that meant just some greens and rice instead of rice alone
- provided a small but important source of income for some families, especially for women; people would come to buy cabbage and beans at short notice and knew they could purchase even in the evening as they had already seen the cabbage growing next to the house (ie. it was convenient, like the purchase of store foods)
- provided food in cyclones or heavy rain when it is difficult to go to the bush gardens
- make it easy to share food with others, which has important cultural value.

...Tony Jansen, Caleb Kotali and Gweldolyn Pitavani



A4: Banana Collection

Inspired by its role in the Taro-gen project, in 2002 the Planting Material network started the work of making a collection of banana varieties on the island of Makira...

Plant researchers in the Solomon Islands have discovered an unexpected diversity of banana varieties on the island of Makira.

A total of 81 different varieties have been collected and planted in a large garden which functions as a field gene bank at a rural training centre.

When the collection is further developed a 'banana diversity fair' may be held in 2003. The diversity fair may receive support from European Union Micro Projects, an aid funding body. During the fair, farmers will visit the training centre and take part in a 'festival of bananas' to share varieties, recipes, stories and knowledge about growing and using bananas.

A positive partnership

The collection is being carried out by a partnership of the Solomon Islands Planting Material Network and the Manivovo Rural Training Centre on the isolated weather coast of Makira.

"Manivovo is a vocational training centre for girls run by the Catholic Church. The PMN chose Makira Province to do the banana collection because bananas are very important to food security and many Makira people consider that they have more varieties of banana than other parts of Solomon Islands", said PMN adviser Tony Jansen.

"The Makira collection is an important first step in helping farmers to continue to grow, manage and make use of their banana diversity. All too often, people forget the important cultural heritage that different varieties of food plants represent. If people of Makira lose their banana varieties then they are losing an important part of their culture they can

never get back again. I hope this collection and the planned sharing of banana varieties through the Manivovo centre will help farmers continue to manage bananas in their own gardens".

Establishing the collection

With help from the Manivovo team, PMN field worker Dorothy Tamasia has spent the last six to eight weeks collecting from coastal villages. She plans to extend her search.

"I have yet to make a collection from the highlands and will not do that yet because it would be a tiring job to carry all the banana suckers from the mountains to Kirakira and find transport to get them to Manivovo. I plan to collect from the highlands later and plant them somewhere in the highlands", she said.

Participating in the work of collection is Manivovo Rural Training Centre's Francis Wehi. He says that farmers have shown an interest in the varieties being established in the garden and that the training centre's students are participating in the work.

"We have planted them out in careful rows with each one labelled with its accession number (a number given to each specimen to enable later identification), the person who gave the banana, its language name and where it came from. Most of the farmers have never seen so many bananas or thought about trying to put so many together in one place – they are very excited.

"The students will compare banana varieties and then take home different banana suckers with them to plant in their home villages. Interested farmers, including members of the PMN, will be able to come and get suckers from the collection. Bananas are a very important source of food for Makira people and we want to make sure we are not losing our different varieties", said Francis.

A participatory approach and the passing on of skills are key attributes of the approach taken by the PMN and its sister organisation, the Kastom Gaden Association. “Our students are doing all the work. They will learn how to describe the bananas using scientific methods taught to us by the PMN”, explained Mr Wehi.

Bananas an important food

Speaking from the Solomon Islands capital of Honiara, Tony said that bananas are believed to have been domesticated in Melanesia thousands of years ago.

“We should expect, and we know, that there are a lot of varieties all over Solomon Islands. Domestication means that farmers in the past actively selected wild varieties and improved them through selection. We know from looking in markets and talking with farmers that there is a lot of diversity here but we do not really have much idea how many varieties farmers have and how they are looking after those varieties over time.

“Bananas are important to nutrition and food security. Varieties used for cooking can provide food for up to 20 years if they are well maintained. They are nutritious and people like eating them. They have a lot of traditional ways of cooking them.

“We should encourage people to plant more bananas as they are a more intensive way of using land than growing only sweet potato. This is important in areas where there is shortage of land for agriculture. Bananas are not damaged by wild or domestic pigs and grow well in wet weather when root crops fail”.

Science at the village level

“Next year we will use morphological descriptors developed by the International Network for the Improvement of Bananas and Plantains to describe the physical features of the bananas and their fruit at Manivovo. This will be done by Manivovo students with help from the PMN and will demonstrate to students how practical scientific knowledge can be used to validate traditional knowledge and the understanding of banana varieties, their growing needs and uses”, said Tony.

“Hopefully, it will also teach them to respect the plant breeding and selection skills of their ancestors”, he added.

Farmers contributing to the banana collection receive free membership of the PMN and some seeds.

“The farmers have been very willing to share the banana suckers we collected. We will give those farmers a chance to get new banana varieties from the collection in Manivovo later on”, said Dorothy.

The collection of bananas is supported by a small grant from the Seed Savers Network.