



Assessing the programme

Monitoring visits by Australian staff 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.

Six criteria were used to evaluate the program:

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

These were derived from criteria used by Oxfam. In addition to these, the program was monitored against its objectives.

The 1998 monitoring visit of October and November disclosed 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 and 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
- increasing the availability of food crops through 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; no count of gardens is available, however observation suggests that the number is 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 that would otherwise have been the case; agriculture and family health were successfully linked through nutritional education carried out by the Primary Health Care Unit
- the growth in membership of the Solomon Islands Planting Material Network provided an indicator of increased effectiveness; membership at the time of the evaluation was 100, including village farmers, NGOs, government agricultural extension workers and school teachers; around 140 species were then in cultivation by the PMN.

Boosting effectiveness

To boost its effectiveness, the KGP has:

- built on core strengths of agricultural training and the exchange of planting material through the Planting Material Network
- anticipated partner needs through the compilation of baseline information that made possible the planning of training

activities; the 1998 community food assessment on Choiseul, led by Brazilian community worker Liliana Peres, provided a new tool for assessing community nutritional needs

- encouraged self-reliance and innovation and the acceptance of reasonable risk in the trialing of new ideas; this has led to an innovative approach by staff and a willingness to incorporate new ideas; the PMN has laid the basis for greater farmer self-reliance in the supply of seed
- boosted organisational competency – productivity gains have been sought through staff training to the limited extent that it is available; a consultative approach has contributed to a more participatory type of management; an innovative type of staff performance agreement has been tried
- the hands-on, value-driven approach adopted by the program is based on values of participation, local control and shared decision making
- maintaining a flexible organisational structure inclusive of informal and less-frequent formal monitoring and evaluation of program work, regular meetings of staff and shared planning of programme activities have maintained an openness to new influences while protecting core values.

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 use of funds.

The combined implementation of activities for the three pre-2000 projects during visits to Choiseul resulted in the conservation of funds and staff time.

Progress

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

Although progress has sometimes been faltering, the overall trend has been towards the achievement of objectives. Some objectives, however, have been changes 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 as a security measure and the partial abandonment of the project centre at Burns Creek.

Impact

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

Sustainability

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

Financial sustainability

An urgent need for new funding came with the ending of AusAID support in late 1998. The six month period of funds shortfall which followed was caused by a lack of early planning to find new sources and was largely due to constraints on staff time. The obtaining of new funding in 1999 solved the funding problem.

It is the nature of agricultural development programs that they are reliant upon external donor funding. Consequently, time to produce funding applications should form part of the program's workflow.

Organisational sustainability

Staff training will need to be formalised in some way to provide the skills and knowledge base for future operations, especially if the program starts work on Bougainville.

Training would provide the skills to continue to adapt to the needs of rural communities and the changing social, economic and security circumstances of the Solomon Islands.

The future of the Honiara project centre will have to be questioned if the present three year lease arrangement with Joini Tutua changes. In the year 2000, regional project centres were set up at Mana'Abu, North Malaita, and on the island of Munda, north of Guadalcanal, in response to the deterioration of the internal security situation in Honiara.

This, in effect, led to the decentralisation of the KGP, an idea discussed earlier in the programs development but not acted upon. In retrospect, the decentralisation can be seen as contributing to program sustainability although its motivation was reactive, in response to the security emergency.

In 1999, the major assets held by the Kastom Garden Program, such as the photovoltaic power supply and office equipment like computers, appeared to be adequate for present needs. Unfortunately, the photovoltaic panels were stolen during security crisis of mid-2000.

Overall, its been progress

Despite earlier struggles with too few staff and too little funding, and despite the setbacks and disruptions caused by the year-2000 security crisis in Honiara, the overall direction of the KGP has been forward. Progress has been slow, but achievements have been made.

Now, in late-2000, the leadership is starting to look more to the region as a focus for the program. Tony made a month-long fact finding journey in Bougainville – a large Melanesian island recovering from a decade of civil war-in 2000 – and found prospects for program work there. Contacts were made and project outlines worked up.

There remains the possibility, but not the likelihood at present, of work in Papua New Guinea and East Timor. As always, it is the availability of resources and funding which limits the possibilities, not staff or organisational enthusiasm.

What worked

If project managers really want to implement a philosophy of continual improvement, then the identification of what has worked is as important as finding out what has not worked.

The small size of the Kastom Garden Programme and the closeness with which the staff work has made the identification of such facts an informal process.

Approaches to training

- The KGP crew wanted to try out the idea of growing vegetable closer to the house in small 'nutrition gardens' or 'sup sup gardens' to encourage greater use of annual vegetables to improve the family diet; within a short time the idea caught on and the number of gardens increased; observation indicates that the gardens have been successful
- 'table gardens' – a soil-filled growing tray to perhaps 30 centimetres in raised to around waist height and supported on timber legs – raising vegetable crops out of reach of chickens and dogs.

Nutritional education

The main focus of nutritional education was the role of a balanced family meal in maintaining 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 was developed by nutritional educator, Maria Zabel, at Sasamunga Hospital
- 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:

- the idea was that by trialing new ideas on a small area, farmers would become familiar with their management; they would then be in an informed position from which to make the decision as to whether it was worth their while to utilise the new ideas in the rest of their garden; the idea was slow to get started and required a great deal of talking with gardeners before they were willing to give it a try.

Limiting the number of new techniques

Too many new ideas at once produces confusion, suppresses 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 they 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.

Informal examples in communities

The visibility of new techniques in village gardens made use of the demonstration effect:

- people see the results of ideas tried out
- it encouraged informal 'education by doing'
- village-based voluntary trainers were expected to use and demonstrate the techniques passed on by the program in their own gardens; it was not always the trainers who provided the examples but people who excelled at practical work and put into use what they picked up at workshops

- there was often a considerable period of time before gardeners adopted what they learned.

Building on indigenous knowledge

From the start, KGP staff assessed traditional methods of agriculture and incorporated them into the program where they proved effective.

Appropriate technology

In essence, the KGP was all about appropriate technology:

- the use of farmer experimentation, the assessment of traditional knowledge, food plants and agricultural technologies reflect the project's attempt to retain what is useful from the past and to introduce what is affordable and manageable from the modern world
- an example was the use of local methods of using mulch to maintain soil quality; 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.

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 have a high level of motivation for their work
- workshops provided an entry point to communities but without follow-up visits the workshops would not have contributed to change
- repeat visits make it possible to monitor project work over time, providing an additional source of information on how well or poorly particular techniques work.

Generally, follow-up involves:

- group meetings
- capacity building of local groups
- individual garden visits
- follow-up workshops
- farmer visits to other gardens.

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:

- during KGP workshops, participants would visit gardens as a group
- KGP trainers used questioning and discussion to assist the group assess what was being done in the gardens
- project staff also visited individuals and encouraged the sharing of experience.

Voluntary village trainers

Choosing voluntary trainers proved to be a challenge:

- those selected generally worked out well
- a more realistic expectation would have been to gain only a few enthusiastic and capable trainers from all those selected
- voluntary trainers were responsible for working with their own communities and, sometimes, with nearby communities
- they attended KGP training workshops
- voluntary trainers were expected to demonstrate what they learned in their own gardens; for the most part this happened; sometimes, however, it did not, foregoing the opportunity to reinforce formal training with a demonstration of techniques
- 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 trainers.

Factors limiting the effectiveness of voluntary trainers included:

- personal problems
- sickness
- migration to the city
- uncertainty among young people about what they wanted to do in life
- the failure of some trainers to substantially implement what they taught.

Focus on practical training

Emphasis on practical rather than theoretical training encouraged the 'learning by doing' approach so necessary in the Solomons:

- the emphasis on practical training took into account the literacy levels and educational standard of participants; only 50% of participants in KGP projects were literate or semiliterate; KGP trainers consequently limited lecturing and made use of participatory techniques
- demonstrating, then encouraging people to try new ideas for themselves, proved successful.

Use of local languages

Although Solomon Pijin is widely used throughout the islands, many local languages remain in everyday use. It was found that teaching in those languages greatly facilitated training.

Farmer field school

A successful mode of agricultural extension in some other countries have been the 'farmer field schools':

- 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
- 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 worked in their own gardens and met every couple of weeks to share information about how their field experiments were progressing; the approach worked reasonable well with the introduction of mulching and some botanical pest control sprays being promoted; perhaps the main difficulty was the inability of the KGP resource person to get to the village for the fortnightly meetings
- a limitation occurred 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 and proved to be a good group building exercise
- with more intensive support, field schools could be very successful in the Solomons
- as an alternative to the field school, people in Wagina, Choiseul, formed small groups of four to five to work in each other's gardens.

Integrated pest management

There appears to be little knowledge about the control of insect pests among Solomon Island subsistence farmers:

- plant damage due to insect pests attack worsened during the drought of 1997 when plants already weakened by the dry conditions were attacked by insects; 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
- until the integrated pest management program made its start on Malaita in 1999, what training had been provided had been opportunistic and sporadic

- here remains a clear need to further integrate training in IPM into the program's field activities.

Quick results

There is nothing quite as motivating as early success. Consequently, the opportunity to achieve quick results was built into the training program:

- quick results do not replace the need for long term change; they encourage farmers to set out on that longer road by building in motivators
- mulching, green manuring and erosion control works failed to produce the quick results 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.

Producing nursery inputs

To minimise costs, inputs into the farming cycle were scrounged rather than purchased:

- organic material scraped from rotting coconut husks and mixed with soil was found to make 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 stored by the Planting Material Network
- a simple and reliable nursery system was developed which greatly assisted vegetable production, especially of the popular Chinese cabbage.

Association with an institution

The linking of the training program with an institution was a reason behind the success of the Luru Kastom Garden Project:

- the link with the Sasamunga Hospital Primary Health Care Unit made possible the provision of agricultural training to support the unit's nutritional work
- another benefit was access to the unit's motor canoe to transport the training team to partner villages and the provision of office space for the program in the unit's small building in Sasamunga
- the support of the hospital's doctor was critical to this sharing of resources.

Employment of local trainers

The benefit of employing local people who have standing in the community, who speak the local language and who possess initiative in the role of regional coordinators was clearly demonstrated in the Luru Kastom Garden Project.

Transfer of training

The transfer of useful information from trainer to participant, and the participant's use of that information to make improvements is at the core of all 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 were not workshop attendees picked up what was taught there
- some of the most successful implementers of sup sup gardens and bush gardening techniques were people who tried out for themselves what they learned from others who attended the training
- word of mouth was critical in the transfer of information in a village community.

Agricultural techniques

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 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 has been the growth of weeds, probably because burning killed weed seed and mulching does not
- during the 1997 drought, crops planted into soils covered by mulch generally continued to live, whereas bare soil gardens died.

The use of legumes

Legumes are plants which produce nitrogenous compounds which support plant growth and provide fibrous material that increases the organic matter content of soils. Nitrogen is one of the main plant nutrients:

- encouraging farmers to grow legumes has been a strategy necessary to the improvement of garden productivity
- promoting the planting of legumes has been reasonably successful, particularly in small gardens close to the house.

Mulching

Mulching – the placing of organic matter such as cut grass and plant residue on the garden soil where it breaks down and becomes plant nutrient, has been heavily promoted by the KGP:

- particularly though the use of slash and mulch systems, mulching is seen as a substitute for the slash and burn cycle, now nearing its ecological limits in parts of the Solomons
- the use of mulch is an agricultural technology achievable by village subsistence cultivators

- traditional precedents for mulching have been used by KGP trainers as encouragement and validation of the practice
- for most subsistence cultivators, mulching seems to be a relatively new idea; patience and clear explanation of its benefits have been necessary
- the KGP has achieved a reasonable degree of success in encouraging the use of mulch
- composting has limited potential for use by village-based subsistence cultivators in the Solomons because it is a high-maintenance practice requiring more knowledge than mulching
- the use of mulch complies with the principle of keeping things simple.

The digging stick

The pointed digging stick is a traditional agricultural tool in the Solomon Islands. It is used mainly for the planting of the root crops.

The digging stick has been found to be less efficient for cultivating hardened soils. Here the metal digging hoe works better, making cultivation easier and opening the soil to allow air and moisture penetration.

Trials of digging sticks have been made at the KGP project centre at Burns Creek. Satisfied with their utility and their advantage as a soil conservation tool, the KGP has promoted them for use in the situations where they work best.

Alley cropping

Alley cropping proved a mixed success:

- the practice was introduced in the Sasamunga Hospital garden and at the project centre's Burns Creek garden
- 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 repeated

- 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.

Focussed training

Too many innovations can lead to failure and too few farmers will adopt the innovations:

- in Sasamunga and elsewhere on Choiseul, the clearly focused training and follow-up program of sup sup garden development produced good results
- the training provided in North Malaita and on Guadalcanal was more general, focusing on bush gardens, sup sup gardens, alley cropping, hillside gardens and more
- while some technique 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.

What did not work

In drawing learnings from the experience of a development programme, analysis of what did not work can be revealing.

With this knowledge, we can:

- identify areas for improvement
- identify shortcomings in project management, administration, communication and with NGO management in the home country
- improve planning for similar projects in future – we know what to leave out and where to focus our efforts.

Discovering what did not work, or worked in only a limited way, taught us to that cultural attitudes and practices can make a development approach or tool that has worked in other countries less acceptable in the Solomon Islands.

What follows are some of the things which proved less successful.

Demonstration gardens

Demonstration, shared or community gardens met with limited success.

Experience with the community gardens at Bouna village, Guadalcanal, and at Sasamunga, Choiseul island, disclosed that community gardens serve well as training venues during the early phase of a project 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. Skills acquired, they then return to their home gardens where they make use of the new ideas.

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 family home or bush garden and worked through community-based village organisations, using home gardens as training venues.

Following visits to communities on Bougainville, which forms part of Papua New Guinea and is located adjacent to the northern Solomon Islands, Tony Jansen identified a clan-based approach to development as having potential.

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. Living fences, if well made, also exclude village dogs and pigs.

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 and 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 and its stem used in Asian cooking) is a clumping grass but it was found to be too wispy, lacking the stiffness of foliage needed for a living fence
- the most successful grass for use as a living fence has been vetiver grass, a stiff-leaved, clumping, upright growing grass that

can be close-planted to form a dense, almost impenetrable barrier to nuisance animals.

Other limiting factors common to the construction of living fences included:

- too many gaps through which chickens can enter and damage vegetable crops; living fences have to be close-planted and form a solid barrier without gaps
- gates left open or not maintained
- the time needed to establish a living fence and the problem of protecting vegetable crops while the fence grows.

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 or leguminous shrubs or trees are planted to reduce the downslope movement of soil and organic matter during heavy rains or to establish an alley cropping system.

Despite the acceptance of the A-frame by farmers 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. This 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. Visiting

the gardens of farmers participating in the training programme is a practice that was found to encourage the sharing of knowledge.

Crop rotation

Widely used in elsewhere 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.

The limited acceptance of the practice took the form of introducing a legume into the cropping cycle of annual vegetable gardens to maintain soil fertility. Foliage was slashed and using as mulch.

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.

SWOT:

strengths, weaknesses, opportunities, threats...

As part of the monitoring report, a SWOT (Strengths/ Weaknesses/ Opportunities/ Threats) matrix was prepared to provide a quick summary on influences on the Kastom Garden Program at the time.

SWOT analysis is a technique widely-used in development assistance and business circles to provide an overview and discern trends in a project or organisation.

Information brainstormed and entered into a SWOT matrix can provide points to explore later. The brainstorm process can throw up unexpected factors, especially considering it is a shared, participatory process.

Findings

Strengths

The strengths of the KGP were found to include:

- a trained, motivated staff
- technological, managerial and administrative capacity
- a practice of learning from experience
- a positive reputation gained through quality of work
- training provided by APACE staff when they were in-country
- a readiness to try and to assess new techniques and approaches
- the participatory implementation of the agricultural training program
- the availability of overseas expertise (such as Brazilian community worker Liliana Peres and the Seed Savers Network in Australia)
- improvement made to administrative procedures

- the existence of the Memorandum of Understanding with Sasamunga Community Hospital covering cooperation with the hospital in the delivery of training in subsistence food production and nutrition as part of the hospital's Primary Health Care Unit.

Weakesses

The KGP experienced a number of weaknesses including:

- staff were frequently overworked
- limited staff time limited what could be accomplished
- adequate but limited managerial capacity; this could have slowed any expansion of the programme unless augmented
- a relative shortage of staff at the project centre in Honiara.

Opportunities

Staff knew that the existence of opportunities did not imply that there would be sufficient resources to take advantage of every one.

Opportunities would be characteristically be assessed as to their viability, given the capacity of the program. Those found to be viable would then be prioritised if the decision to move on them was made.

Opportunities identified included:

- cooperation with the Solomon Islands government's new agricultural policy; little eventuated from this
- the possibility of generating a small volume of cash income through the sale of produce grown at the Honiara project centre; this was not followed up in a structured way due to limitations on staff time
- seeking cooperative arrangements with medical and other institutions; this proved successful
- a possible waste-to-resource project based on the conversion of organic wastes at the Solomon Islands College of Higher Education in Honiara; nothing came of this.

The idea of generating small amounts of cash from farm gate sales was trialed when Australian development worker, Emma Stone, spend several months with the program in 1998. Although sales were made and the potential to produce vegetables and eggs for sale at Honiara Central Market was considered, it was a lack of staff time which made the option unviable.

The waste-to-resource project – essentially a green waste composting operation – failed to materialise when the person behind it moved to another island. Enquiries were successfully made in Australia about finding expertise to advise on the project.

Threats

Threats are those factors which could close down or severely limit the program.

Frequently, threats will come from outside the program and staff will have no opportunity to influence the threat. Sometimes, however, threats can come about through the worsening of a weakness within a program.

The identification of threats can lead to the development of contingency plans in case the threat materialises.

Threats facing the KGP were identified as:

- funding shortfall, resulting in loss of staff
- hostility from a highly-placed, senior public servant.

Funding shortfall at times threatened the curtailment of program activity, but sufficient funds were found to continue. The KGP entered a more stable period of funding when APACE obtained programme agency status with AusAID which provided more flexibility in the deployment of funds.