Solomon Islands Community Sector Program (CSP)
Agricultural Livelihoods Program

Impact Assessment

Six Month Report: April to September 2009

A report by the Impact Assessment Team of the
AusAID Agriculture Livelihoods Program implemented under CSP.

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Solomon Islands CSP Agricultural Livelihoods Program

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A report based on analysis of data collected during field work carried out over six months assessing the impacts of the CSP agriculture livelihoods program. This work was carried out as part of the impact assessment activity of this program.The assessment was made as part of the AusAID-funded Sustainable Livelihoods for Isolated Rural Areas Project.

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Participating organisations

Agriculture Livelihoods

CSP Agriculture Livelihoods Program is an integrated series of activities focussed on increased agricultural productivity for food security and sale as well as improved market access and smallholder terms of trade.

Australian Agency for International Development (AusAID)

Part of the Department of Foreign Affairs, AusAID administers the Australian Government's aid budget and provides financial support to development assistance projects and programs in the region. AusAID funded the Solomon Islands CSP Agricultural Livelihoods Program

TerraCircle development assistance consultants

The South Pacific development assistance consultancy, TerraCircle, works with local NGOs and agencies, governments and intergovernmental organisations in the region.
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Contents

Abbreviations and acronyms

ARI	Acute Respiratory Infection
CBO	Community Based Organization
CLIP	Cocoa Livelihoods Improvement Project
CSP	Community Sector Program
CBTC	Community Based Training Centre
DME	Direct Micro Expelling
FNTP	Fruit and Nut Tree Improvement Project
KGA	Kastom Gaden Association
NGO	Non Government Organization
PGS	Participatory Guarantee System
PNG	Papua New Guinea
PRA	Participatory Rural Appraisal
RCDF	Rural Constituency Development Fund
RTC	Rural Training Centre
SEAREM	Searem Niu Plant Long Gaden Project
SI	Solomon Islands
SLA	Sustainable Livelihoods Approach
SP	Sweet Potato
TA	Technical Assistance
Vars.	Varieties
VCED	Value Chains for Enterprise Development

1. Executive summary

This report describes the analysis undertaken for CSP Agriculture Livelihoods Program (Component 3) based on the Methodology for Impact Assessment (May 2009 – Annex 8). The approach taken has been a participatory one involving the CSP Agricultural Livelihoods team, program partners and clients, program beneficiaries or users.

Methodology summary

- fieldwork with a sample of CSP Agriculture Livelihoods projects
- use of a sustainable livelihoods framework for analysing impacts
- allow beneficiaries to progressively define indicators of success
- overall participatory research approach.

Vulnerability context

The table below summarises the vulnerabilities identified during field work. This is the context within which the Agriculture Livelihoods program operates.

	Trends	*Shocks*	*Seasonality*
Natural Capital	· increased use of external inputs among farmers selling into Honiara market · 'feminisation of agriculture'	· natural disasters	· climate change · variable pineapple flowering
Social Capital	· 'people easily give up if not visited regularly' – vanilla lead farmer		
Human Capital			
Physical Capital	· maintenance of community infrastructure · expectation for handouts	· failure to maintain existing roads in reasonable condition · too few buyers · changing international prices	
Financial Capital	· moving from one livelihood option to another handout approach – based on experiences with other donor and government. initiatives		· farmers prefer to have regular income. For some crops such as vanilla this is not possible as it only produces about once a year · reliance on external income coming in to support local markets.

Impact assessment for the six months up to October 2009

Lessons learned

- continue and expand approach of short training, mentoring
- recognition that program interventions play into an often long and complex history of other interventions and often complex livelihood strategies – the program may not be the highest importance for a particular family at a point in time
- short workshops and training fitting in with local schedules is more suited to women and entrepreneurs
- families are the right level of intervention particularly at production level (as opposed to communities)
- no 'workshops' approach seems to be working well with the focus on short, on-site practical training and visits to other successful farmers
- nurture a number of alternative 'middle men' along the value chain to reduce risk.

Recommendations

In general the data presented in this report points to significant positive impacts of the Agricultural Livelihoods Program.

Based on the analysis of data we have come up with a series of immediate practical recommendations for the continued development of the Agricultural Livelihoods Program. This includes a series of recommendations to allow us to fill in some gaps in impact evidence identified during this period as well as a number of technical areas that arose based on our field work.

As we are not able to visit the entire program we do not aim to make overall recommendations for the whole program - but rather have focussed on the activities that we were able to assess.

1. Annual reflection meetings.

It would be very useful in terms of impact assessment data collection for the IA team to be able to participate (and help facilitate if required) annual reflection meetings for each Program activity. Participants would include the program team and representatives of activity users and partners (gender balanced).

We propose that the workshop would include one day to do the following:

- use of Bennets Hierarchy to map out users and understand as a group what the activity is aiming to achieve
- use of the results chain framework to define indicators and discuss activity progress
- run through a gender checklist group exercise
- possibly test a tool to define indicators for changes expected in each of the SLA types pf capital.

2. Gender

a. **gender analysis of each activity and value chain of the Program** to be done progressively by IA team working with the Program team (could be done in reflection workshops above)
b. **gender targeted training:** women will be more effective as extension workers for women — the program needs to develop/nurture more female lead farmers and female trainers as well as male
c. **gender targeting of information resources produced by the Program:** ensure it is in a format accessible to men and women
d. **a short training of the Program team in gender sensitivity and gender analysis:** as a Program team workshop perhaps — the aim being to sensitize male and female team members in the gender implications of how they work.

Gender analysis being:

- what women do and why
- who has access to and control over resources and benefits
- what needs men and women have and why
- linkages of above factors with the larger social, economic, political and environmental context.

3. Tools and technology

a. assistance for users in locating appropriate tools — some ideas:
   - the program helps private suppliers make their tools more accessible to people in rural areas (already being done in some cases)
   - provide farmers with some clear price and selection information to help them make a wise purchase of their own tools
b. natural, locally available alternatives should be suggested wherever possible to reduce a dependency on external inputs and to reinforce local knowledge and innovation – eg... bamboo or banana fibre poly bags, local alternatives for flower arrangement materials.

4. Soil fertility

a. simple training on contour farming for pineapple farmers with A-frame for contour delineation plus farmer trials in the use of cover crops and intercrops to increase soil fertility, especially in Davala, Central Province; this could be provided by a KGA lead farmer
b. soil fertility: KGA should develop more models and the skills of germplasm centres to trial and demonstrate to farmers new methods of building soil fertility; this is envisaged in the new KGA program.

5. Stronger nutrition improvement focus of FNTP.

Micronutrient deficiencies are a problem in SI impacting on human health. Eating fruits, nuts and leafy greens can ameliorate this, however a change in attitude is required that the activity could contribute to.

Some ideas:

a. integrate nutrition improvement messages into FNTP activity, especially concerning fruits and nuts as sources of micro nutrients useful in combating noncommunicable disease and as an essential food for infants and small children
b. increase gender targeting of nursery operators and training to ensure connections are made to fruit sales within women's networks
c. consider facilitating connections between nurseries with nurse/nurse aid networks to link the availability of fruit and nut trees in areas with poor infant malnutrition

d. consider links with schools for the planting of germplasm collections and for targeting nutrition messages
e. a media campaign to generate long term growth in fruit consumption.

6. Information resources

Increase accessibility of Program-generated information resources ranging from value chain and marketing studies through to farmer manuals. This could include a website download or placing the collection at a public library – eg. SICHE.

7. Value chains:

a. a women entrepreneur network, the aim being to nurture the growth of existing successful women's business; the group could then be presented with some of the business opportunities coming out of the value chain work, such as coffee marketing, vanilla marketing or value adding etc, or simply assisted to continue with their own priorities
b. financial skills training across the program.

General

a. share monitoring reports with partners and stakeholder groups as a part of institutional learning; seek their feedback and input
b. look at ways to make pineapple growth flowering hormone available in smaller quantities at trade stores in pineapple producing areas — this may make it more accessible to women
c. simple and clear training or other awareness materials on agriculture inputs – fertilizer, pesticide, herbicide, fungicide — and their pros and cons, as well as organic alternatives
d. look at ways to facilitate more cross -linkages between program activities
e. nurturing new entrepreneurs – particularly women in small business — there is a need to balance the risk of 'backing the winner' or of overloading winners
f. better targeting, reserved allocations and disaggregated record keeping for young people involved in the program.

Methods

Impact assessment team

The CSP Agriculture Livelihoods Program (from here referred to as the 'Program') contracted Tony Jansen of TerraCircle Inc and Phyllis Maike to carry out regular inputs to assess the impact of the Program on beneficiaries (defined as 'first users' and 'final users' [1]).

A realistic methodology was developed in February 2009. This is a participatory research approach drawing on Sustainable Livelihoods Analysis and Participatory Rural Appraisal (PRA) methods and background knowledge of rural livelihoods and agriculture in the Solomon Islands.

Quarterly field-work was carried out in April and June/July 2009 for this report by visiting a sample[2] of Program activities across selected provinces.

Rapid reports are produced after each period of field work. This is the first of planned six monthly reports with more detailed analysis of data and description and analysis of its impact on sustainable livelihoods. The format of the report is expected to evolve based on feedback from readers and as a larger data set evolves over time.

1 this definition of first and final users is based on the Bennets Hierarchy model of program evaluation

2 sample is 'purposive' rather than random – refer to methodology in Annex 9 for description

Core features of participatory research include the following:

- **concern with relations of power:** emphasis on the perspectives of rural and disadvantaged people and offsetting biases in dominant or outside paradigms
- **analysis by local people:** researchers facilitate local involvement in analysis in order to learn with and from them; learning takes place face to face and on the spot
- **continuous analysis and progressive, systematic learning:** the process of inquiry is cumulative; favours use of open questions and semi-structured interviews rather than preset questionnaires.
- **seeking multiple perspectives:** recognise complexity and looks for diversity of individual and group perceptions to understand contradictions and differences; this can involve purposive sampling rather than statistical sampling for participants
- **triangulation:** cross checking by using different methods, disciplinary perspectives, sources of information, and entities sampled
- **visual medium:** forms of diagramming that are visual and open to groups can encourage participation of marginalised people; by making the process open to those who do not read, are not used to verbal communication or do not share languages, diagramming can have an equalising effect; visual techniques include mapping, time lines, seasonal analysis, matrix ranking and scoring and linkages diagrams
- **context specific:** researchers are encouraged to use methods flexibly, to innovate and improvise with conscious exploration in different circumstances. No blueprint for researchers; the adaptability of methods and possibilities for different sequencing according to local conditions encourages greater sense of ownership
- **leading to change:** the process of inquiry embodies a strong capacity building element for local participants, research team and other stakeholders. Dialogue and joint analysis help to define changes and motivate people to act; depending on commitment of participants and stakeholders, action can include further capacity strengthening for implementation of desired changes, or for increased participation in advocacy, decision making and policy development.

Source: http://www.chronicpoverty.org/page/toolbox-participatory-approaches

Field work

For this report a total of 49 person days of field work was carried out by the facilitators.

Thirty three villages were visited and a total of 405 people interviewed (186 male and 219 female). This includes people joining meetings and group exercises as well as individual interviews (see list of tools used below).

The field work covered four provinces: Guadalcanal, Central, Malaita and Western.

A table outlining field work carried out is included in Annex 4.

Tools used

- interviews (focus groups and semi structured)
- use of PRA type diagramming exercises: gender roles and gender weekly and daily routine diagrams, networking and Venn diagrams, sources of income and expenditure matrix
- garden visits, transects and field observations
- empowerment evaluation exercise
- a Bennets Hierarchy exercise
- a simple checklist was used during field work to guide discussion along with a list of key questions.

Where possible, group discussions were separated by gender.

Recording and interpretation

Comments were recorded in notebooks by a facilitator with a lined blank margin on the side for later coding and analysis. Additional comments and observations of interest were also recorded by facilitators. These comments might have also come from conversations in kitchens, houses or gardens during the period of visits.

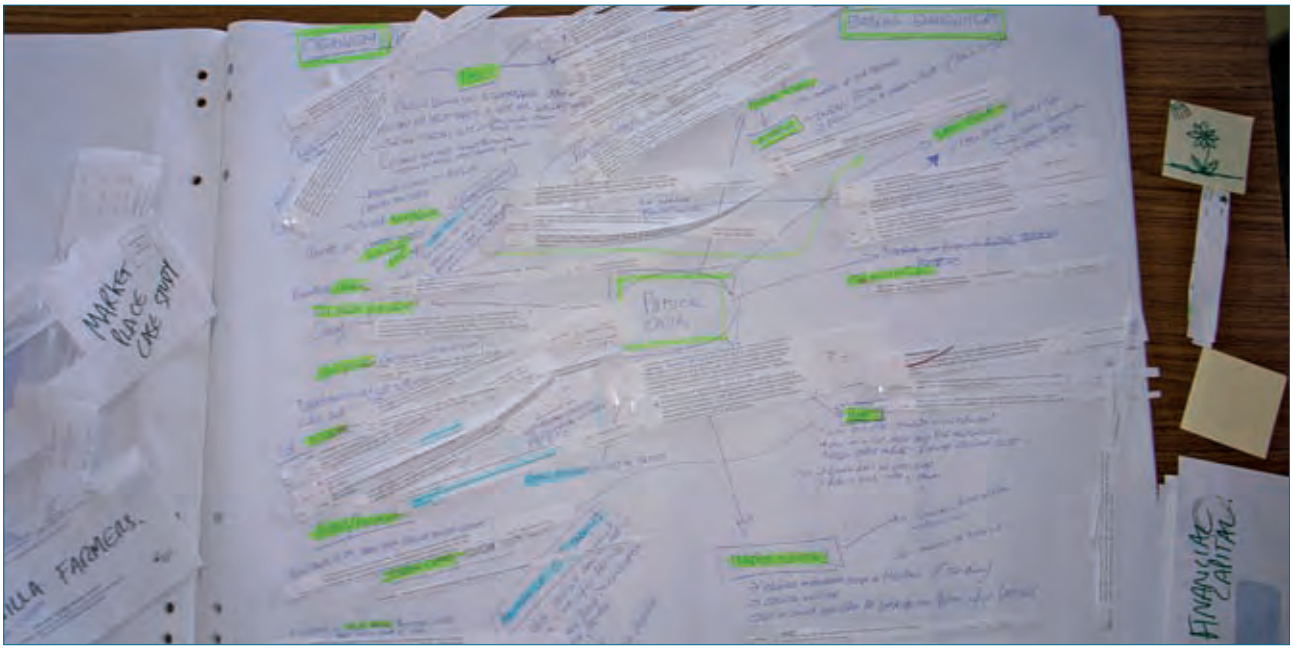
Diagrams made by group participants were photographed or copied into notebooks.

Overnight stays were made in communities where possible to facilitate the informal sharing of information and observation.

Data analysis

The data was entered into an Excel spreadsheet. Text information was grouped according to agreed codes (sometimes called 'information labels' or 'descriptors'):

1. human capital
2. natural capital
3. physical capital
4. financial capital
5. social capital
6. innovations
7. indicators
8. gender
9. youth
10. vulnerability



The data under each code was then analysed and 'interviewed' using metaanalysis methods. A chart was prepared showing different themes, sub themes and issues. Data was broken down into these sub themes.

These analysis charts were then written up. Case studies, photos, diagrams and quotes were added to illustrate the themes and issues identified.

The data from the fieldwork was sometimes interpreted using other literature sources as a reference point including Program reports and internal documents.

Quotes were selected to highlight key points and issues. Issues raised by a number of people were generalized.

Where appropriate, a tally was made of the number of times references were made to codes or key points and compiled into tables. These 'density' tallies did not necessarily refer to only one farmer raising the issue but often referred to the issue being raised by a group during discussions and the group or part of the group agreeing in general on that comment or issue. Livelihood 'assets' tallies under each of the five SLA assets areas were prepared for each program activity by the IA team. These were confirmed through discussion with program team members.

Whenever possible, the tables were disaggregated by gender and to inspect any regional or provincial differences.

Presentation of the data

The report is divided into sections based on the five sustainable livelihoods assets.

Each chapter includes a theoretical introduction to that livelihood asset from DFID Sustainable Livelihoods Guidance Sheets.

A Vulnerability analysis table is included under each of the livelihood assets. This is followed by a summary of how the program impacts on asset accumulation. Following is each of the Program activities in more detail describing how they contribute to asset creation or depletion. The cross cutting areas of gender and youth are included as a separate section. We have noted innovations by the Program and farmers or other program clients. Five case studies were selected and are used to illustrate impacts from each section and the complexity of livelihood programs in Solomon Islands.

Limitations

1. Secondary sources of information have been used and we are not able to confirm the reliability of all the information in these documents (refer to Annex 1).
2. 49 person days of field work has been completed. The Program is very large and it has not been possible to visit all of the activities underway or all the different geographic areas where activities occur. As such the results are biased toward those activities where the IA team has had more contact. This bias should become less so over time as more activities and sites are visited progressively.
3. Planned involvement in annual review workshops for different activities which — were planned to involve different stakeholders/clients and partners did not eventuate. In many cases (CLIP, Peanut, Vanilla) these workshops were delayed or cancelled for reasons out of the control of the IA team.
4. The SEAREM activity in particular is too large for the IA team to do comprehensive impact assessment and so we have decided to use case studies of a few selected germplasm centre to assess impact as well as some analysis of KGA internal reports and data and regular discussions with the KGA project team.
5. The impact assessment methodology does not include assessment of efficiency of the program (the extent to which program inputs support the cost of the effective achievement of program outputs). This is considered to fall in with management level M&E.
6. Most of the program activities are in early stages of implementation – some only just starting. As such limited impact evidence should be expected so early in the program and given the time required for some of the program activities to transfer into real livelihood impacts at the family level. Some activities have been in an analysis and learning phase working with target groups – eg.. VCED and Peanut.

Some weaknesses of the SL approach

'Multiplier effects' are often presumed and that it is always possible to expand people's 'asset pentagons' in a generalized and incremental fashion. Inequalities of power and conflicts of interest are not well acknowledged, either within local 'communities' themselves or between communities and, for example, urban elites and government agencies.

There is tension between participation and intervention, with unresolved tension between these two words. Enhancement of the livelihoods of one group may undermine the livelihoods of another group.

Defining 'sustainable' raises many questions that are not resolved. Sustainable for whom? By what criteria? In the short term or the long term? There is concern that a simplistic representation of assets and capital can disguise some of the underlying causes of poverty.

Source: http://www.chronicpoverty.org/page/toolbox-livelihoods-approaches

2. Sustainable livelihoods approach

What is a sustainable livelihoods approach?

The sustainable livelihoods approach (SLA) is a way to improve understanding of the livelihoods of 'poor' people (see discussion below on poverty definition in Solomon Islands).

It draws on the main factors that affect 'poor' people's livelihoods and the typical relationships between these factors. It can be used in planning new development activities and in assessing the contribution that existing activities have made to sustaining livelihoods.

The two key components of the SLA are:

- a framework that helps in understanding the complexities of poverty
- a set of principles to guide action to address and overcome poverty.

The sustainable livelihoods framework is increasingly used in development interventions.

Fundamental questions when using a sustainable livelihoods approach include:

- How can we assess who has a sustainable livelihood and who does not? What are the relevant outcome indicators?
- What are the livelihood resources, institutional processes and livelihood strategies which are important in enabling or constraining the achievement of sustainable livelihoods for different groups of people?
- What are the practical, operational and policy implications of adopting a sustainable livelihood approach?

Scoones 1998

The literature is not particularly clear on defining outcomes for sustainable livelihoods.

Chambers and Conway (1992) – cited in Scoones 1998, define a sustainable livelihood as:

> *'A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses, shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.'*

Five key elements can be extracted from this definition:

1. **Creation of working days**: or how a particular combination of livelihood strategies create gainful 'employment' (there are three aspects of 'employment': income, production and recognition)
2. **Poverty reduction:** may be absolute poverty based on a 'poverty line' or relative poverty and inequality.
3. **Well being and capabilities.** A well being approach allows people themselves to define the criteria which are important in their livelihoods. This can diversify the outcomes to things like self esteem, security, happiness, vulnerability, power, exclusion as well more conventional material concerns.
4. **Livelihood adaptation, vulnerability and resilience**: ability to cope with and recover from shocks.
5. **Natural resource base sustainability**: ability of a system to maintain productivity when subject to disturbing forces. Measuring natural resource sustainability is notoriously difficult as it is critical to link indicators of resource depletion or accumulation (eg.. soil fertility levels or vegetation cover) to both the temporal dynamics of system resilience (ie. ability to recover from disturbance) and livelihoods needs (ie. does natural resource change result in permanent declines in useful products or services').

Principles of SLA

- **people-centred:** focus on perspectives, priorities and strengths of people - especially poor and vulnerable women/girls and men/boys
- **holistic:** recognize that different factors and processes influence the livelihood opportunities and choices of people, and that people have multiple livelihood strategies in pursuit of multiple livelihood outcomes
- **dynamic:** recognize that poor people's livelihood strategies can change rapidly
- **building on strengths:** start with an analysis of strengths rather than needs
- **macro-micro linkages:** consider the linkages between the two levels to inform more supportive policies and institutions
- **sustainability:** Include analysis of environmental, social, economic and institutional sustainability.

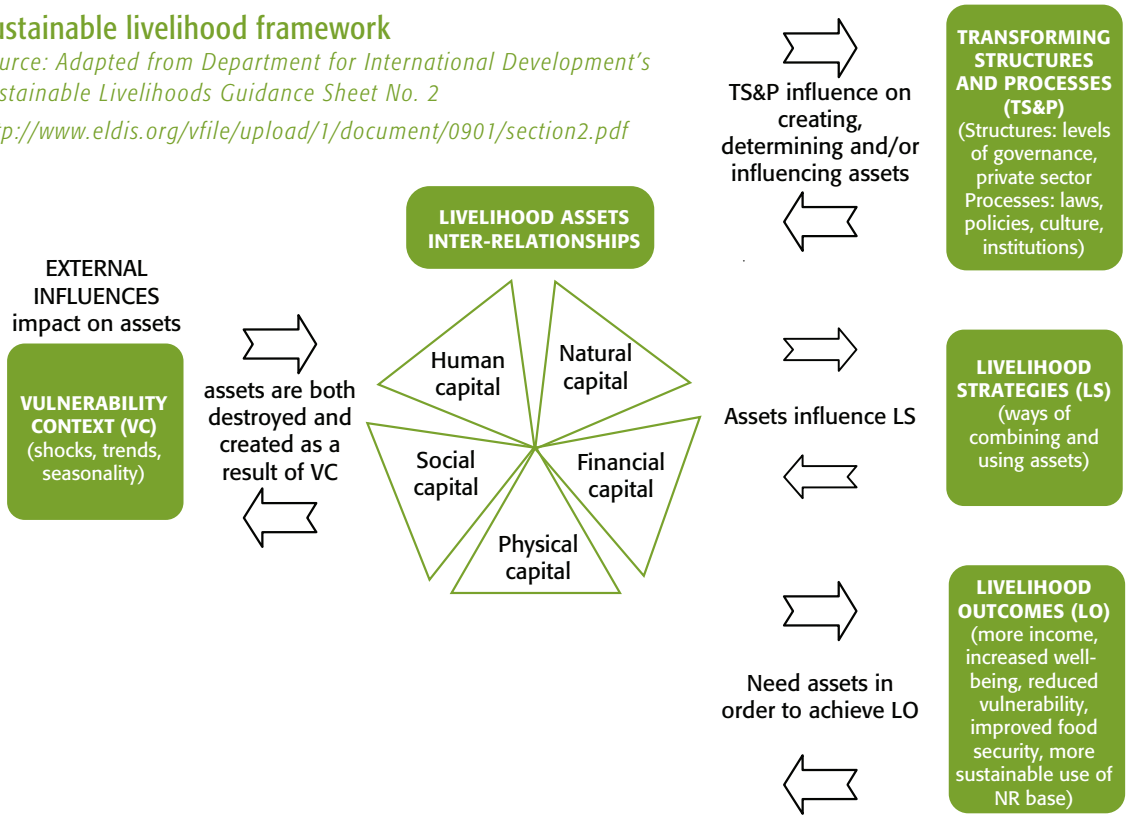
Source: NZAID: http://nzaidtools.nzaid.govt.nz/sustainable-livelihoods-approach/principles

The term of SL is subject to negotiation. Contradictions and tradeoffs between components and livelihood assets must always be recognized. The SLA framework is presented in schematic form below and shows the main components of SLA and how they are linked. It does not work in a linear manner and does not attempt to provide an exact representation of reality. Rather, it seeks to provide a way of thinking about the livelihoods of poor people that will stimulate debate and reflection about the many factors that affect livelihoods, the way they interact and their relative importance within a particular setting. This should help in identifying more effective ways to support livelihoods and reduce poverty.
(Source:http://www.ifad.org/sla/)

The framework is not a model that aims to incorporate all the key elements of people's livelihoods, nor a universal solution. Rather, it is a means of stimulating thought and analysis, and it needs to be adapted and elaborated depending on the situation (DFID - 2002).

Sustainable livelihood framework

Source: Adapted from Department for International Development's Sustainable Livelihoods Guidance Sheet No. 2
http://www.eldis.org/vfile/upload/1/document/0901/section2.pdf



Sustainable livelihoods in Solomon Islands

What is poverty in Solomon Islands ?

UNDP estimates that 19% of rural Solomon Islanders and 32% of urban Solomon Islanders live below the poverty line. With poverty defined by UNDP as the ability to meet food and non food basic needs (UNDP 2008 based on HIES 2005/2006).

Poverty = Hardship. It is defined as 'an inadequate level of sustainable human development' manifested by:

- a lack of access to basic services (e.g. education, health, transport and Ccommunications)
- a lack of opportunities to participate fully in the socio-economic life of the community (employment, economic activities)
- a lack of adequate resources (including cash) to meet the basic needs of the household or customary obligations to the extended family, village community and/or the church.

Source: UNDP 2008

There has been ongoing debate on the definitions and indicators of poverty in Solomon Islands. Many Solomon Islanders object to parts of their society labeled as being 'poor'. This debate is influenced by the recognition by Solomon Islanders that their 'wealth' is composed of more than just cash incomes and includes things such as communities, customary land, home grown food and sharing of food, resilience and culture. These 'assets' are perceived to be widely accessible despite often low to very low cash incomes.

A sustainable livelihoods approach can be used to analyse these cash and non-cash components of wealth/poverty. But there has been a tendency among policy and decision makers to draw two overly simplistic divides:

1. between rural and urban
2. to paint all rural Solomon islanders residing in rural areas on their customary land as 'equal' in their livelihood situation and lack of poverty.

Clearly this is not the case and there is a growing body of opinion and evidence to support the large inequality in income, productivity, and other quality of life indicators that exist in different parts of Solomon Islands and in different households within communities themselves.

Some examples of factors that have a strong influence on poverty are included below:

Geographical determinism and poverty:

- distance to services
- accessibility to roads and/or other reliable transport
- environmental productivity and limitations — particularly topography and annual rainfall appear to correlate very strongly with levels of subsistence productivity and food security *(Jansen et al – 2006, Jackson et al 2007)*
- population density — also links with productivity as higher population density tends to link with higher land degradation and reduced productivity
- access and distance to safe water (and to lesser extent sanitation).

Vulnerability within communities

Again there is little consensus but poverty may be strongly influenced by:

- women headed households
- the landless or land poor[3]
- disabled
- income levels
- sense of peace / security
- maintaining culture / traditions and identity.

Indicators of household poverty are difficult to define:

- permanent or impermanent housing
- level of use (or non use) of kerosene for lighting – energy poverty (Jansen et al 2006).

Source: drawn from CSP internal document – Baseline Concept Paper – 17/03/05

3 while most Solomon Islanders have access to land somewhere, increasing numbers of people reside in places where they have reduced or limited rights to customary land.

In Solomon Islands a typical rural household has multiple assets they can draw upon in their livelihoods. This is described in the diagram below. How a household mobilizes these assets depends on a complex interplay of opportunity, knowledge and the enabling environment. Flexibility and resilience in livelihoods is considered very important in Solomon Islands.

Results

The rest of this report presents the findings of the impact assessment team. The format is a section on overall livelihood impacts of the program including a summary, five case studies and analysis of impacts of the program on each of the five sustainable livelihood assets: natural capital etc.

The livelihoods balance

Assets a Solomon islands household or family may use for livelihoods. Not all households have access to all of these assets nor is it a complete list of all potential assets.

3. The CSP Agriculture Livelihoods Program

The CSP Agriculture Livelihoods Program has the outcome of 'agriculture livelihoods strategically improved through targeted interventions'.

The program developed out of the 2006 AusAID Small Holder Agriculture Study[4] that recommended and prioritised a series of interventions focused on key constraints in improving livelihoods.

The study, and the interventions proposed, introduced an important concept of strengthening the 'twin pillars' of subsistence and income generation as being the appropriate strategy for Solomon Islands.

The recommendations of this study were implemented and added to through further learning and analysis of livelihoods and value chains by the Transitional Support to Agriculture Program (TSAP) and within the CSP program itself (eg.. Vanilla, market places and DME). These two programs were later merged into the CSP Agriculture Livelihoods Program.

The program is not promoting 'new livelihoods' but seeks to improve and add value to existing crops and livelihoods strategies. It uses a value chain approach in planning interventions across 12 targeted crops. The key existing value chain constraints in production through to logistics, processing, transport and final marketing to consumers have been targetted.

A value chain is made up of the activities needed to bring a product or service from conception through production and delivery to consumer. A broader systems approach to value chains looks at the complex range of activities implemented by various interests from primary producers, harvesters, processors, traders, service providers and upstream suppliers to downstream customers. This is also sometimes known as a value system.

This Value Chains for Enterprise Development (VCED) approach of the Program identified value chains as having three components: production at one end of the value chain and marketing at the other end but with the chain linked by what is called the *'bit in the middle'* that is comprised of post harvest preservation, processing and transportation.

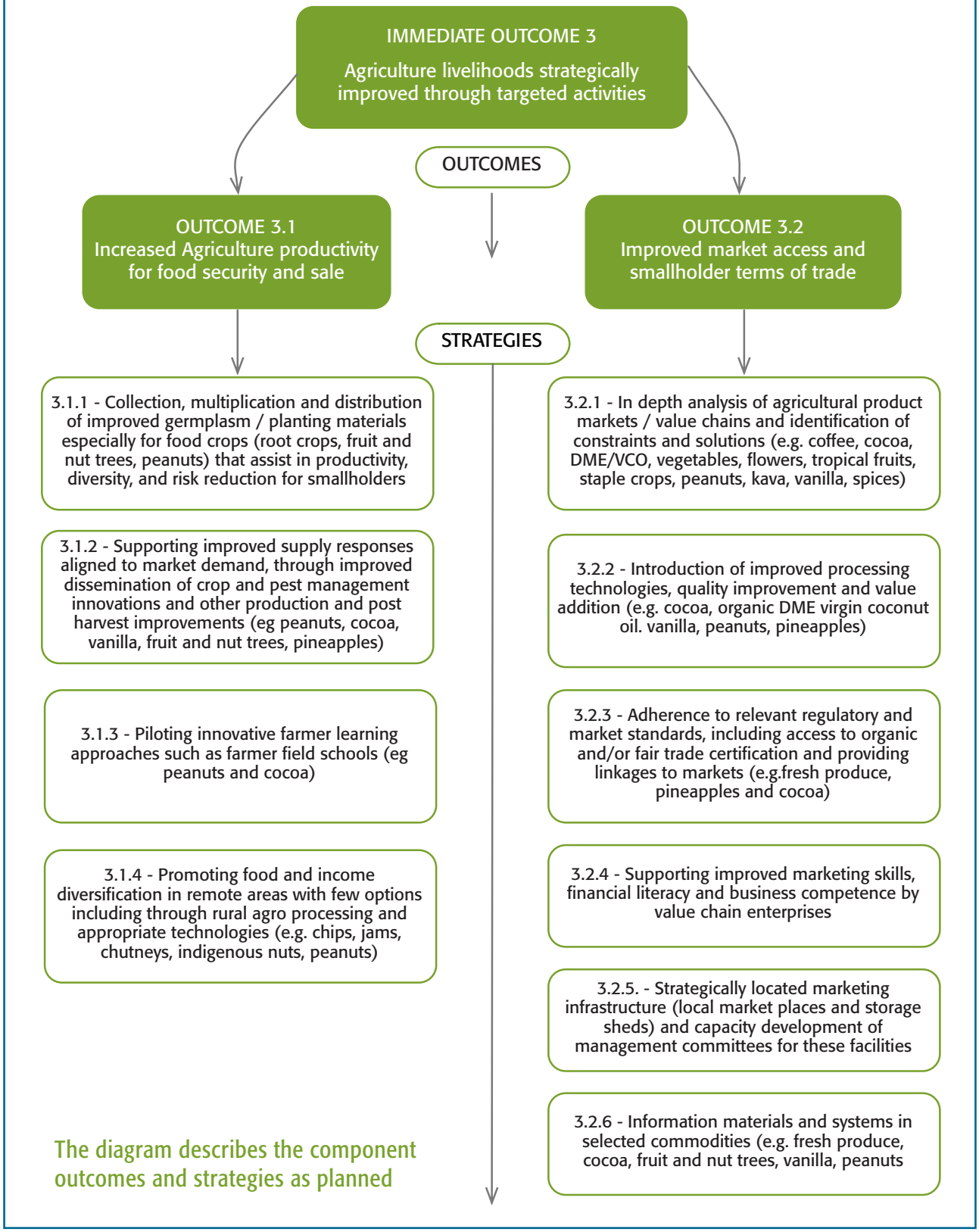
This *'bit in the middle'* has often been neglected in the past. *(Vinning, G – Milestone Report 35 - October 09).*

This is summarized in the diagram on page 24 which was prepared with input from the Program team in Honiara.

Typical value chain approaches look at an enterprise. The Program has taken a more innovative approach and looked at products as an enterprise.

Each of the Program activities impacts on livelihoods in different ways. Using an SLA framework, the program is seen as aiming to contribute to 'asset creation' for sustainable livelihoods. This is summarized in the diagram that follows.

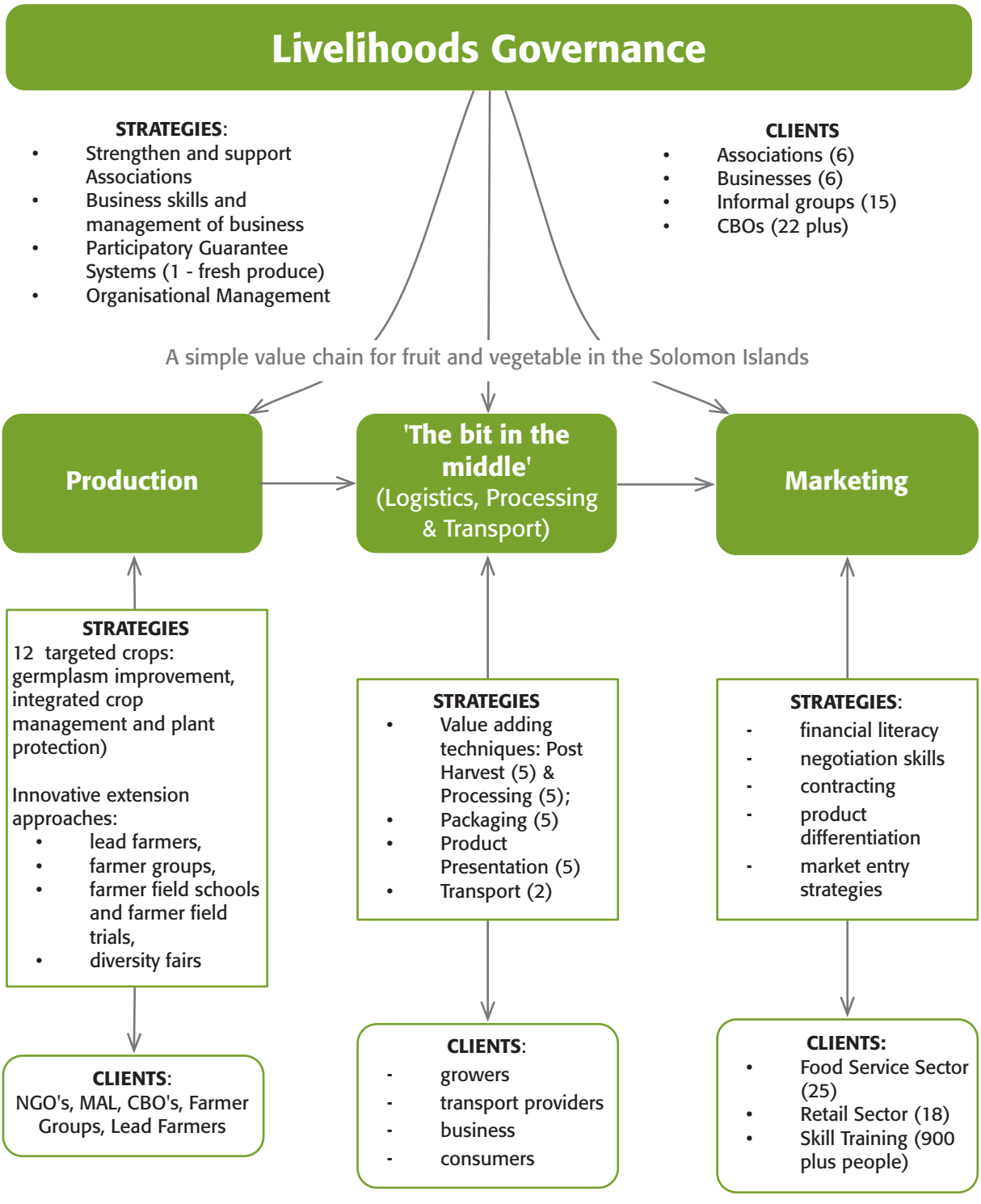
4 http://www.ausaid.gov.au/publications/pubout.cfm?ID=4088_5412_1071_6193_2813



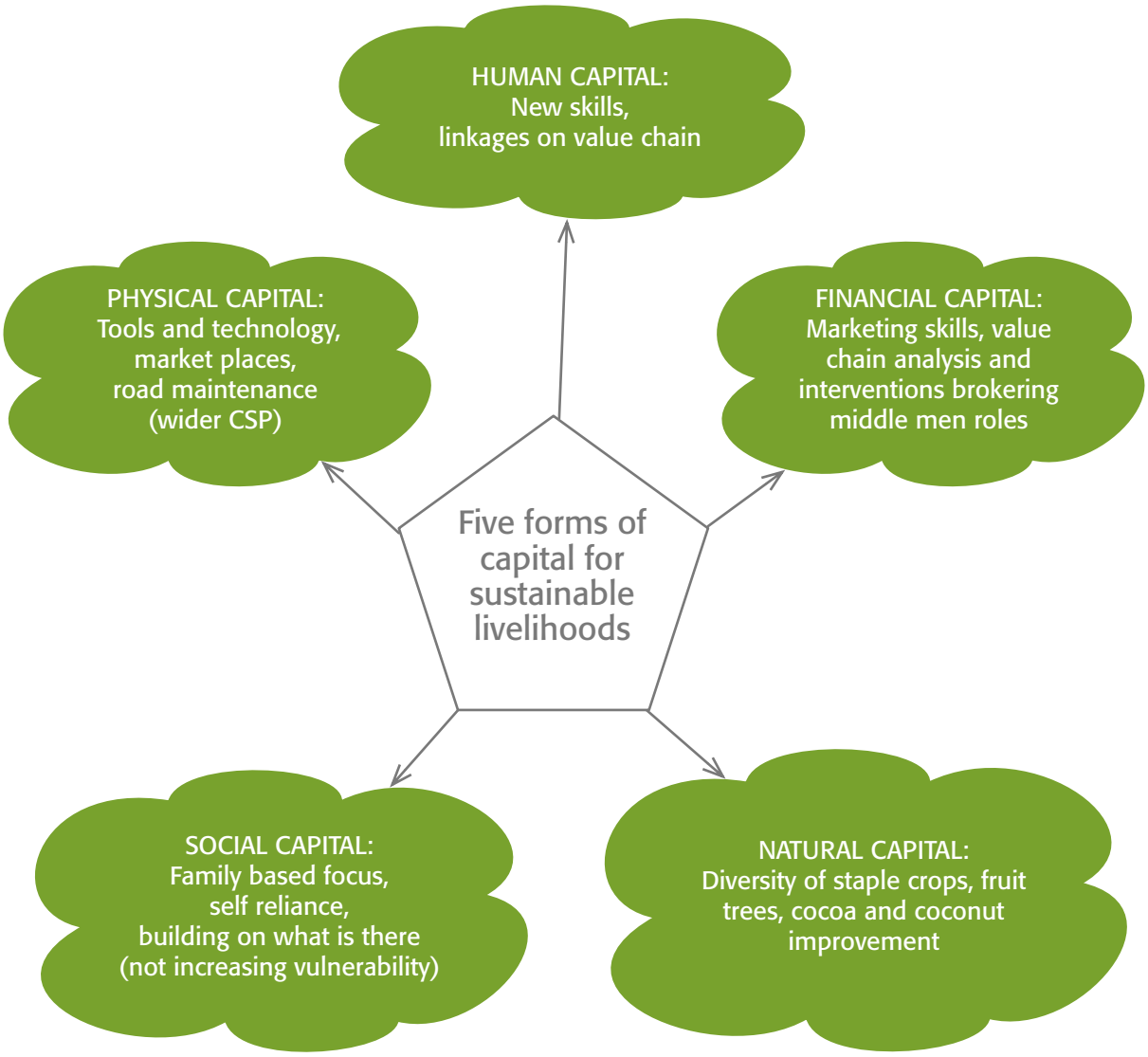
The diagram describes the component outcomes and strategies as planned

Value chains approach of the Program used to describe strategies and clients of the program

Source: the diagram above was produced in the CSP office through a series of small group discussions with CSP Ag. Livelihoods staff and advisors. For a listing of the numbers referred to in the diagram see ANNEX 5.



This diagram describes some of the ways in which the program is expected to contribute to asset accumulation using SLA analysis



4. Beneficiary indicators

The program reports estimate the current beneficiaries/ users as:

- rural households
- private sector actors on the value chain
- food service sector outlets
- retail outlets
- institutions
- government departments.

For a more detailed list of clients of the program refer to Annex 5.

During fieldwork farmers (and progressively other program beneficiaries) will be asked what they would see as 'indicators of success' of their involvement in the Program. Some comments received were quite general such as:

> *"We want to see our lives improve and see all of us have change in our lives."*
>
> *Ara'ao market building committee members, Malaita province*

More specific indicators suggested by beneficiaries or users of the Program are being compiled into a table that is included in Annex 1.

At this stage we do not have a lot of input on indicators due to a number of planned workshops being delayed. As this list of user indicators grows it will be progressively included in impact assessment checklists, questions and reports.

5. Impact summary

The Table summarises the impact evidence presented according to the two overall outcomes of the program:

- Outcome 3.1: increased agricultural productivity for food security and sale
- Outcome 3.2: improved market access and smallholder terms of trade.

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
Vanilla	*Positive:*	*Positive:*
	• sustainable method of production • teaches use and value of mulching • soil covered / protected • use of legume trees as shade tree • minimal land use for a cash crop and there fore little competition with other land uses • is able to make use of land already cropped for food gardens (ie. does not require fertile soil) • vanilla curing starter kits • improved knowledge in vanilla agronomy • improved mulching techniques to maintain soil quality • lead vanilla farmers also show good organization and allocation of time and labour • work in vanilla farms well suited to women & children	• prices from Honiara buyer for farmers are good relative to world prices • high value and low weight product well suited to more isolated places with poor transport links • effort is being made to strengthen the one existing buyer and to diversify the number of buyers • value added product - vanilla essence • packaging samples • improved knowledge in curing vanilla beans to produce top quality vanilla beans • established local vanilla extract processing and buyer of the extract • improved knowledge in curing vanilla beans to produce top quality vanilla beans
	Negative:	*Negative:*
	• not suited to wetter areas which includes most of Solomon Islands and particularly many of the more isolated areas • demanding on labour particularly when harvest is limited to once a year	• vulnerability of a 'weak buyer' who is currently the only outlet to sell vanilla • farmers earn income about once a year • farmers wait 3-4 years for first harvest with high level of care in between • many farmers started in the 'fever' with unrealistic expectations of price and lack of skills for growing this quite different crop

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
FNTP	*Positive:*	*Positive:*
	▪ practical nursery methods for raising trees. Other trainees who are also planting flowers, cocoa and vegetables are using nursery techniques learnt ▪ contributes to sustainable food production ▪ habitat biodiversity in rural, village agriculture landscapes ▪ rehabilitation and collection of seed from degraded national fruit and nut tree collections ▪ improvement in germplasm through grafting, cuttings and other tree improvement technologies ▪ poly bags and shade cloth ▪ some fruit nursery owners are young people who have been to Form 6 but unemployed in the village ▪ learned that fruit is important for health	▪ believed to be growing demand for fruits in urban and some rural markets ▪ specialised trees – rare fruits, grafted varieties – have generated interest and are likely to be able to be sold as trees for planting and later as fruits ▪ certain rare fruits already have good income potential in larger urban centre
	Challenges/Opportunities for improvements:	*Negative*
	▪ use of disposable plastic polybags is a small waste issue in the village ▪ some skills (grafting) taught, maybe too technical for village farmers with limited access to tools and materials ▪ need to show nursery owners use of local materials for nursery/grafting	▪ uncertain about how much increased fruit production can be sold in local markets ▪ difficult to transport to distant markets due to perishability ▪ uncertainty over how viable nurseries as income generating business will be

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
SEAREM	*Positive:*	*Positive:*
	▪ diversification of existing food crop staples ▪ introduction of new staple crop – African yam – resistant to disease and tolerant of lower soil fertility than traditional yams ▪ sharing of existing varieties between centres and areas ▪ enhanced food security ▪ reduce vulnerability to climate and other shocks ▪ some farmer innovation on wider farming systems including soil fertility and pest management as result of network ▪ varieties placed in long term storage in SPC for return after disaster or other loss of genetic resources ▪ igloo houses for germplasm centres ▪ rapid multiplication techniques ▪ fostered opportunities for centres to experiment with different planting techniques and conditions & sharing of findings to build information base within KGA ▪ identification of high yielding varieties (SPC & local) ▪ encouraged intercropping of particularly local crop varieties traditionally used for drought & low food production times of the year. ▪ provided skills trainings in processing chips & jams ▪ provision of HF radios to farmer run germplasm centres	▪ increased production of sweet potato means potential for increased sale in local markets ▪ potential to provide modest regular income even in isolated areas ▪ highly suited to improving womens income ▪ radio network provided really good means of communication and information distribution
	Challenges/Opportunities/Negativ	
	▪ risk of displacement of existing diversity ▪ not addressing fundamental soil fertility decline issue driving crop change	

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
CLIP	*Positive:*	*Positive:*
	• long term breeding for better SI cocoa varieties • promoting best existing variety (amelando) with proven performance • rehabilitation of existing plantations • tree crop is sustainable farming system • cocoa dryer equipment with 25% farmer contribution • mini driers for cocoa farming households in remote areas	• adds value and increases production to existing plantation crop • yield increases and quality increase have potential to lead to increased income for large number of rural households • encourages cash contribution and investment by cocoa farmers rather than handout mentality • working to address some of the constraints in very limited number of players involved in exporting of cocoa
	Challenges/Opportunities/Negative	*Negative*
	• risk project leads to expansion of land under cocoa and displace other uses and biodiversity • potential loss of valuable shade trees providing other functions – eg.. ngali nut, timber etc	• resistance to cash contribution
Pineapple	*Positive:*	*Positive:*
	• adding value to existing cash crop • farmers know how to induce pineapple flowering for off season harvests • skills on pineaple jam and juice making • families with big pineapple farms have organized weekly program with days allocated for farms, gardening & community work • change in attitude from spending all money earned on small goodies into building permanent house for family (Pateson – Haleta) • demanding on labour but families happy with cash earnings • crates for pineapple and fresh produce transport (planned)	• pineapples have become the main source of income for many households • some households have been able to reinvest pineapple income into 'physical capital' assets such as improved housing and solar panels • potential for some value adding and contract marketing has been identified but yet to be taken up • pineapple hormone is now stocked by private sector supplier and is available in sustainable way for commercial farmers
	Challenges/Opportunities/Negative	*Negative:*
	• increased soil erosion in some locations • a weed known as 'devils fig' is covering older pineapple plantations in Arabala area • limited uptake of skills trainings provided in value-adding (jam/juice making)	• value adding opportunities are yet to be taken up / proven on commercial scale • many famers have ongoing difficulty with business skills in their pineapple marketing making it difficult for them to assess and make decisions concerning new marketing opportunities • limited understanding on impact of flowering hormone on human health creates resisitance to use (Auki market)

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
Peanuts	*Positive:*	
	• nine new varieties introduced from PNG with different characteristics for different market *Uses:* • peanuts are legumes and so wider cultivation can be good for farming systems through nitrogen fixation • field testing improved planting techniques to assist peanut farmers see difference in yield first hand • appropriate harvesting time & drying techniques for quantity and quality of nuts • knowledge in proper care and use of pesticides & herbicides • hands–on training in negotiation techniques with buyers • improved planting techniques require less labor in for plant care because it crowds out weeds and enhances nut production at the base • knowledge in nutritional value of peanut compared to other protein sources	• new skills to negotiate contract or bulk sales of peanuts • nine new varieties being tested – each with characteristics suited to different uses – eg.. oil, roasting, fresh peanut etc • have potential to increase sales income through increased production and new products • new methods of presentation of product – e.g. roasting, salting, with salt or without etc. • improved business skills
	Challenges/Opportunities/Negative:	
	• some concern over soil erosion in sloping monoculture plots	

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
Flowers	*Positive:*	*Positive:*
	▪ makes use of existing resource that is valued by communities and women in particular – flower gardens ▪ enhanced knowledge in plant horticulture & flower cuttings preservation techniques ▪ extending local knowledge on flower arrangements ▪ develop sense of pride and interest in women to use in new ways	▪ new technical skills in flower production and arrangement have allowed growers to add value to their product ▪ new opportunities for financial arrangements between growers and sellers have opened up ▪ business skills are improving ▪ domestic market has best potential for growth – so not tourism dependent ▪ understand how to grow plants and flowers for profit (not just beauty) ▪ boxes for transport of flowers on Solomon Airlines (domestic) – orchid transport box ▪ largely a women focused industry which means gains in value on the value chain will fall to women ▪ develop capacity of Floriculture Association ▪ main florists in town organising their network of flower growers to source flower when needed ▪ flower exhibition exposed women to less passive flower sales techniques
	Challenges/Opportunities/Negative	*Negative:*
	▪ trade in rare orchids could see resource depleted or threatened if not managed with care	▪ still operating as passive sellers – not proactive ability to knock on doors and find buyers ▪ commercialisation of landscaping has not occurred ▪ resorts and tourism are not such a good business source ▪ at present flowers are overpriced for domestic market compared to Fiji
Coffee	*Positive:*	*Positive:*
	▪ adding value to an existing tree crop ▪ good for isolated areas – requires altitude which means bush communities ▪ tree crop can be part of sustainable farming systems with shade provided by scattered rainforest or other tree	▪ improved product quality of Varivao Holdings ▪ improved packaging and presentation of coffee ▪ income source for very remote bush communities (Isabel, Guadalcanal and potential for Malaita and Makira) ▪ packaging samples (coffee) ▪ VHL management introduced to more proactive marketing techniques (coffee tasting at Panatina Plaza)
	Negative:	*Negative:*
	▪ only one buyer of coffee in Solomon Islands – buyer may not be committed to Guadalcanal crop where bulk of expansion is occurring	▪ concern over only one buyer and their questionable commitment to the products development and potential to increase vulnerability for those in remote areas planting crop ▪ irregular supply of coffee to local sales outlets is threatening the growth of a local market for quality coffee

	Outcome 3.1: Increased agricultural productivity for food security & sale	Outcome 3.2: Improved market access and smallholder terms of trade
Processed Foods	*Positive:*	*Positive:*
	• food safety training • identified pacific business' able to provide technical assitance • promising 'wet' and 'dry' products for further support identified	• feedback to farmers results of respective market studies
Marketplaces & Storage Sheds	*Positive:*	*Positive:*
	• market places provide more comfortable environment for vendors (covered from weather) • more hygienic • generally well organized committees and structures to supervise markets. • ability of communities to mobilize cash and non-cash contributions of labour and locally sourced materials to complete buildings fosters cohesiveness and ownership • better sanitation facilities	• potential to increase rural incomes/trade – not yet proven as markets visited were not yet open • more comfortable and safe trading environment for vendors and buyers • creates opportunities for village people to learn to display produce attractively • foster competitive attitude towards sales due to increased supply • provide protection for marketers who are mainly women from bad weather conditions
	Challenges/ Opportunities /Negative:	*Negative:*
	• potential for waste generated by market places to be an issue	• concern raised that local economy may not be vibrant enough to absorb increase in produce at the market?
DME	*Positive:*	*Positive:*
	• adds value to existing plantations • sustainable farming system especially with organic certification part of process • livestock feed a useful by product • DME equipment for selected individuals who build building as contribution • knowledge/skills to add value and other downstream processing opportunities • ability to produce top quality oil attracting better prices • ability to mobilize family labor and others for continuous production	• adds value to existing plantation crop – coconuts • partnership with Kokonut Pacific who have long term market developed • some coconut oil (cooking and biodiesel) and left over coconut meal has potential to be sold locally • potential for increased income to wide number of households • DME owners must make significant cash and materials and time contribution to the project start up • good for isolated areas – higher value, nonperishable product • creates employment opportunity – 8 people a day work at each village based facility
		Negative:
		• some uncertainty over financial viability of Kokonut Pacific continued expansion without ongoing funding from external sources (ie. other donors) • only one buyer at present for virgin coconut oil • high cost per unit

6. Livelihood case studies

Five case studies have been selected for this report to illustrate how the Program is impacting on rural livelihoods.

The case studies are:

1. Davala Village pineapple farmers, Central Province
2. Nancy and Mary's story, Hanipana Germplasm Centre, Central Province
3. Nelsons Family and Bernard: keeping up and giving up on vanilla farming
4. DME virgin coconut oil production: support to Kokonut Pacific Ltd, Honiara
5. Empowerment for business: Orchid Arts and Crafts, Honiara.

CASE STUDY 1: Davala Village pineapple farmers, Central Province

After attending a 2007 CSP pineapple training in Guadalcanal, a group of families who make up the small community at Davala village in Gela island, Central Province, started planting large plots of pineapple to sell in Honiara market.

Prior to the workshop they had planted a few pineapples but had never considered it a commercial crop. Instead, they relied on fishing as their main source of income.

They learned many skills: new methods of planting, management and marketing, including the use of a flowering hormone to extend the limited season.

They started with 600 pineapples for their first crop and in 2009 they have at least 13,000 pineapples among three families. They apply flowering hormone, purchased from Farmset Ltd. in Honiara, to 70-100 pineapples each week, enabling year round production. Farmset provides a 40% discount negotiated by CSP on behalf of the commercial pineapple farmers.

The plots are well managed in a valley close to the village, however there is evidence of serious erosion of the sloping, red clay soils. Pineapples do not hold soil well or provide much cover from the erosion of rainfall imapcting on the barren soil between the rows.

Patteson Tiva and his wife, with the support of their family, are one of the lead pineapple farmers in Davala:

Patteson and his wife come to Honiara to sell their pineapple crop every two weeks. They used to transport the pineapples on interisland ships but now they mostly charter OBM boats. Although this is more expensive it allows them to get to the market on the days where sales are best.

When they arrive in Honiara they hire a truck and sell some produce at a discounted price (of around $14 each) directly to a few regular suppliers whom they deliver to. This more or less covers their expenses to get to Honiara. They take the remaining pineapples to the main market and sell them typically at the higher price of $25 each. Either Patteson or his wife will stay in the market while the other one goes back to the village and brings a second round of pineapple. They sleep in the market until the crop is sold.

Production expenses include the hire of labour – usually ten people at one time for weeding at $15 day. Sometimes, they hire a youth group to do this work. Contract work for youths in pineapple farms has become their main source of fundraising income in this village. Typical expenses to get to market include freight for one tray of pineapples @ $20 each, ship fare at $50 each way, truck hire in Honiara for $200 and then market fees for $12 a day. They have tried selling pineapples in their local market at Tulagi but the market place is too small and they cannot sell large numbers of pineapple.

They usually come back with $600-$2000 after three to four days in Honiara after paying their expenses. Often, instead of returning with cash they invest this money into physical assets for the family. Last week Patteson bought back a solar panel. And he has progressively purchased the supplies to build his family a new, permanent house – the first of its kind in their village. Other pineapple farmers are also starting to build permanent houses.

The family feel pineapples have made a substantial change to their lives in terms of income and the use of that income to make practical improvement to their quality of life. They have achieved a balance in time management, with home food production in gardens occupying three days a week and two days on the pineapple farm. They have enough home grown food to eat.

Women pineapple farmers from Haleta village believe commercial pineapple production has had a very positive impact on their lives.

When the IA team visited, Patteson did not acknowledge strongly how CSP had helped him. Instead, he focused on the lack of physical handouts received and complained about how '…four times CSP has come to visit me and for three years I have asked for help but with no response'. He has presented a list of requirements he would like from CSP including a wheelbarrow, hoe bush knife and more recently a request for an outboard motor. It seems that the idea of 'help' is still cash or material handouts.

Prior to the workshop, fishing was the main source of income in the village. This has now been replaced with pineapples.

Livelihood impact:

- farmers have reliable and reasonable cost access to Honiara market (by regular ship or short distance outboard motor)
- easy to purchase flowering hormone – available from agriculture supplies company Farmset Ltd in Honiara where they go to sell pineapples (the Program helped facilitate the stocking of the flowering hormone by Farmset making it regularly available to farmers as well as offering a discount)
- wide and regular use of flowering hormone by a group of families had led to pineapple being a new and consistent year round source of income for this community
- a large increase in income that has been successfully invested in improving their lives – including better housing and access to modern energy (solar)
- a reasonable balance made between time and labour allocated to food production and cash crops
- a lead farmer who has good understanding of farming as a business
- Spinoff benefits include an income source for youth groups and hired labour.

CASE STUDY 2: Nancy and Mary's story, Hanipana Germplasm Centre, Central Province

The Hanipana Germplasm Centre is part of the KGA network set up by the SEAREM activity. The centre is run by Nancy Pule (centre coordinator) and her husband Robert (who is the chairman of the committee) with support from their daughter Annette who keeps all the records. There are 36 adult members (23 women and 13 men) and 42 youth members (24 girls and 18 boys) of the centre drawn from surrounding communities. There is a steering committee with 7 members.

Hanipana records show they have received at least nine[5] new 'SPC' (ie. virus free) sweet potato varieties from Kastom Gaden.

5 Hanipana records show the following variety names: IB088, IB226, IB197, IB209, IB083, IB217, IB262, IB083, IB216 but KGA records show more being distributed to the centre

Photo: Sweet potato germplasm collection at Hanipana (April 2009)

Their involvement in the SEAREM activity started with a contract with KGA in 2007 to bulk planting materials, evaluate the varieties with local farmers and conduct awareness and distribution to farmers. Prior to that, Nancy was an active member of the Planting Material Network – a farmers' network of KGA promoting

improved food production using organic and low external input methods.

Nancy has a detailed knowledge of the SEAREM project and its objectives and she showed us copies of project documents and logframes that she kept in their leaf house home office for the centre. Hanipana maintained detailed records of their collecting and distribution activities, kept by Nancy's daughter, on forms provided by KGA. They became frustrated when they sent these forms back to KGA but did not get any feedback. KGA staff in Honiara later reported that Hanipana provided better written records than any of the other 21 germplasm centres.

Hanipana centre has been linked to a CSP civil society grouping for Central Province and have been asked to give a presentation on food security to this group.

A key finding of Hanipana is that monitoring or 'go visit the farmer' is very important after they receive germplasm or other training. Under Nancy's coordination the centre has linked in with womens groups and women farmers very effectively.

Support from KGA staff in Honiara for the centre was good in 2007, declined in 2008 and improved again in 2009. They had to cancel a second planned Diversity Fair that was to coincide with a harvest of one of their bulking plots in January - March 2009 because KGA did not respond to their proposed plan and budget. Instead they harvested the crop from the bulking plot and sold it in the market.

Nancy and Robert maintain regular dialogue with the other SEAREM germplasm centres across Solomon Islands with the HF radio and solar system provided by KGA. The centre was contracted by KGA to bulk up local varieties of the root crop 'pana' for KGA to share in Isolated areas. The Hanipana area specializes in this crop. Hanipana also arranged their own exchange of pana germplasm for Kava planting materials with Kilukaka training centre in Isabel.

The centre promotes the organic farming approaches advocated by KGA. Nancy reported that one of the results of this is that many people are now not

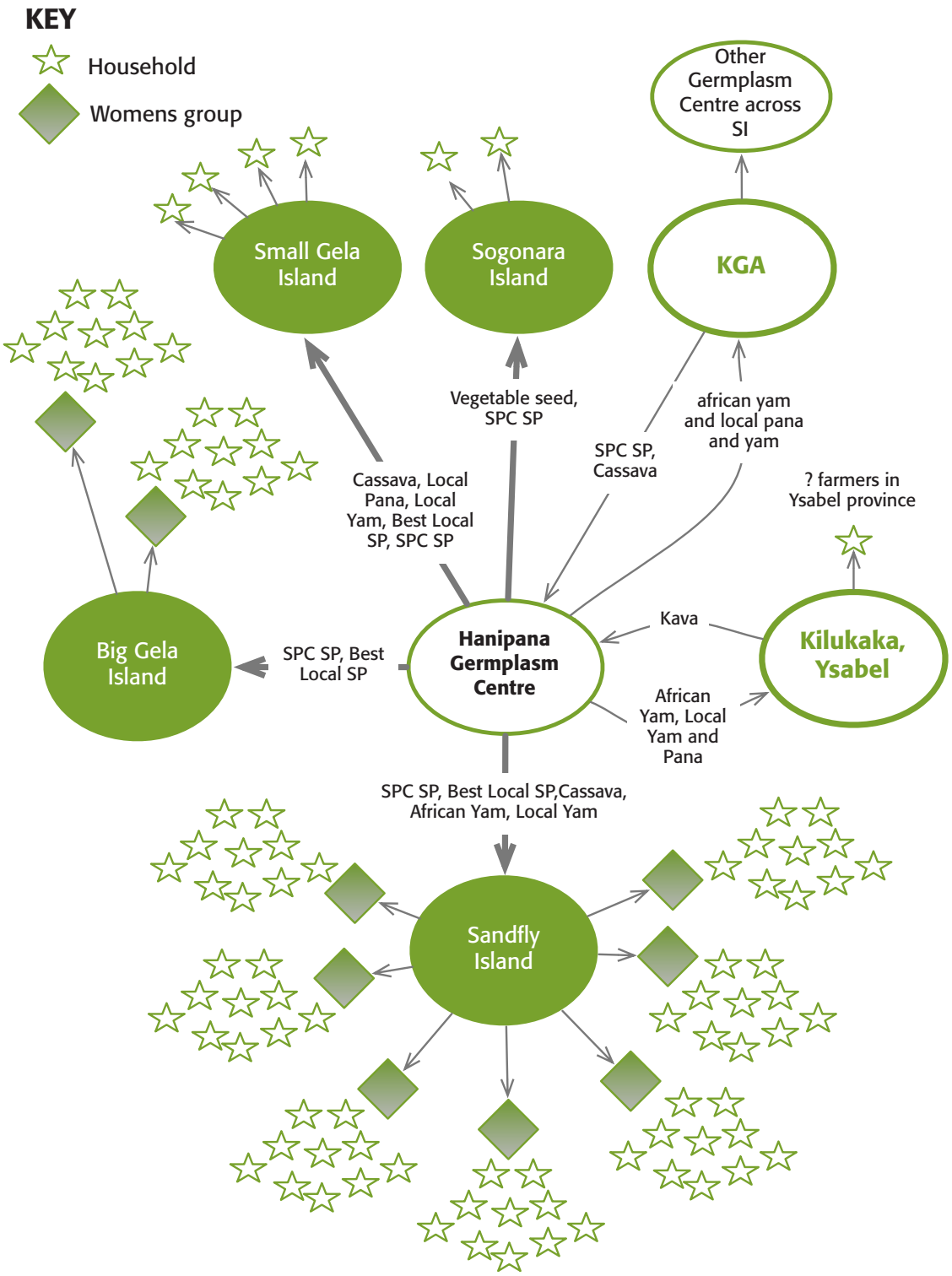
Nancy Pule visiting nearby women farmers in their sweet potato gardens

burning their gardens after hearing awareness from her and backed up by the Kastom Gaden weekly radio program on SIBC. 'Bruno (Idioai) from an agriculture training centre in Bougainville came here and told to do fixed site gardens and stop clearing the bush.'

Bruno is an experienced organic farmer from PNG visited the centre as part of a KGA organized meeting of the Melanesia Farmer First network. Bruno was concerned about the state of their fallows and soil on the island. Since then Mary has started to do trials of mucuna – a legume cover crop – provided by KGA as a rapid soil improver.

The Hanipana centre has provided staple root crop varieties to at least 97 households on four islands – mostly through distribution by womens groups. The varieties are also spreading through sale in local markets. This is shown in the diagram opposite.

Distribution impact map from Hanipana Germplasm Centre, Central Province.
Source: PRA discussion with Hanipana family group



Usage case studies: Mary, subsistence and local market farmer, Sandfly Island, Central Province

We visited one of five of Mary's gardens on Sandfly Island, Central Province. The garden was on a slope close to the sea side. The site appeared to be have been under about a three or five year fallow since previous cultivation. This is much less than traditional fallows of 10 to 16 years and provides evidence of the land pressure on these small islands. Mary is able to find fertile places to grow food but the soil is not as good as it used to be and she has to sometimes walk long distances.

Mary is a farmer associated with Hanipana Germplasm centre. She grows food in five shifting cultivation fields for feeding her family, sale in local weekly village markets and to feed pigs. She does all the garden work herself – clearing, cultivation, planting, weeding, harvesting and carrying produce back to the village. Sometimes her children accompany her. Her husband rarely assists with food production work. She has SPC sweet potato varieties in one of her gardens that she received from the nearby Hanipana Germplasm Centre bulking garden. So far she has not shared the new sweet potato varieties with anyone else.

The SPC sweet potato varieties were mixed with local varieties of sweet potato and yam in her garden and she has been selling the SPC sweet potato varieties in the local markets.

Sale of sweet potato and slippery kabis in the local market is her main source of income and used to support basic needs for the family. Other women in the market often question her about the new SPC varieties when she sells them. They know they are different to what they usually see in their area. She lied to them and told them she got them from 'any kind variety in my garden' when they asked where it came from.

Mary's family eat some of the new SPC sweet potato at home and have shared produce with relatives. For her, the SPC varieties she tested have had mixed results – some do very well and others poorly, however she is still keeping all of them. Mary believes the SPC varieties have a lower incidence of insect attack.

Her favourite variety is SPC 197 because it is high yielding, tastes good and has big size tubers. It is popular in the market.

Mary was able to name all the varieties according to their SPC accession number and describe their

Photo: Two SPC varieties with very different growth results in Marys garden

characteristics in detail. We were not able to confirm if these labels were correct but have no doubt that Mary is a very observant farmer who knows all the varieties and their characteristics and requirements.

She liked the African yam provided by the centre (via SEAREM) but finds it can suffocate the local yams if planted among them, so she plans to plant it separately next time.

According to Mary, African yam tastes good and is particularly good for cooking pudding. Yam and pana is the main staple in Gela group of islands. She is planting African yam now for the second time and has shared African yam planting materials with close relatives from a number of families, however she would not give it to anyone who just asked for it as, according to her culture, yam is a very special thing and not be shared with just anyone.

Mary also received one variety of cassava from the Hanipana centre. She planted this variety called 'my life' cassava in her garden. She considers it to be about equal with her best previous cassava variety and she is now growing both of them in plots side by side. She plants cassava after she harvests sweet potato as the final crop before leaving the field for fallow.

'Kumara (sweet potato) is second priority in Gela – out daily kai kai is pana and yam'. Because of this, sweet potato is a relative newcomer and not as widespread as elsewhere in the Solomons.

'We say unless you have pana and yam in your garden you are a poor person'. (Nancy, Hanipana Germplasm centre, Central Province.'

CASE STUDY 3:
Nelson's family and Bernard: keeping up and giving up on vanilla farming

Nelson started growing vanilla in 2003 on his own and currently has a plot of 1500 plants with beans situated next to their family home on Guadalcanal plains. He has road access to Honiara. He had some contact with government department of agriculture extension officers but they were not able to give him any useful technical advice.

He heard about CSP having a vanilla program and made enquiries. Piero came to do training and he learned a lot, including: how to disturb plants to induce flowering, tipping, pollination and curing. Before this, they used to uproot the vanilla plants to induce flowering (killing the plants after one flowering) and did not provide enough mulch. CSP provided him with the required tools for curing when he had quality beans on his vines ready to harvest.

Nelson and his family are committed in the long term to making vanilla work for them.

So far it has helped a little with income – in the first year they sold 7kg, last year they sold 6kg and this year they are expecting 30-35kg, worth up to $6000 at current prices offered by Varivao. He had already sold 22kg at time of visit. They sold all their harvest to Varivao holdings and, more recently, some direct sales to individuals facilitated by CSP.

Nelson has helped some nearby farmers. Some have given up, but those he has encouraged and given advice to are continuing. If a new potential vanilla farmer asks him about growing vanilla he advises them to plant 50-100 plants and shows them the vanilla book from CSP. Nelson believes the book has enough practical, picture-based information for farmers to get started.

The vanilla farmers in his area meet together and share information and encourage each other. Nelson has heard about plans to form a vanilla association but feels they are not ready for this and prefers the informal farmer groups.

In his household, the main source of income is cocoa, vanilla and vegetables. Vegetables provide a regular income and they might earn from $50-$200 a month selling tomato, pepper and slippery kabis.

The boys and girls work in the vanilla together – girls doing the mulching, pollinating and looping while the boys do the pruning and help with carrying of mulch. Nelson is now using *gliricidia* branches for mulch as he found coconut husk encourages fungus. This is an innovation that is being shared with other farmers.

All four of Nelson's older daughters are married. The oldest daughter has children and lives with her family close to Matepona River. They all contribute in working in the vanilla farm on a regular basis. For the women the vanilla farm requires a lot of work but also stated that it suits them and their children because the work is not hard. So far their father, Nelson sells the vanilla and buys food and other needs and distribute it among his children. Nelson's daughters are hopeful that their vanilla farm will one day help them get permanent housing to live in.

Case Study: Not successful with vanilla: Bernard Uimae, Guadalcanal Plains just outside Honiara

A number of closely related families established a large community plot of over 2000 vanilla plants on the outskirts of Honiara. They had very high expectations that they would earn a lot of money, having planted during the 'vanilla fever' when there was much misinformation on potential prices.

The vanilla plants were planted too close together, along with a number of other management deficiencies and there has been little management of the plot in recent times. It is now very overgrown and cannot be expected to produce much quality vanilla.

The young boys of the family did most of the work but by December 2007 they had given up working on the plot because they did not believe there was a buyer in Honiara. There were also internal issues between the families over management

They did have it pointed out to them that there was a buyer but it seems interest has died away and they were not prepared to follow through with advice given on management and curing.

They were expecting easy money and when it did not eventuate moved onto other activities to earn income, of which they have plenty of choices being only a few kilometers from Honiara. Some of the family members also have paid employment in Honiara.

CASE STUDY 4: DME virgin coconut oil with Kokonut Pacific

The DME project is targeting 14 individual families in total — four operating, five about to be, others in pipeline — with support to establish enterprises that are seen as having wide community benefit by the supply of coconuts, hired labour and spinoff products made available in the local community (coconut oil for cooking and lighting, coconut meal for animal feed). The families make a contribution to the project through construction of a specific type of building for the DME facilities to be housed within. This is considered 'in-kind' contribution but for many families it means a large cash investment for labour, timber, chainsaw hire and other materials.

Kokonut Pacific Ltd consider themselves the leaders in virgin coconut oil production in the Pacific and cannot get enough oil to meet demand. They have a unique model based on decentralized production units buying from smallholder coconut growers. Their oil is sold as a food grade product.

Kokonut pacific promotes an integrated model that is 'like a Subway Franchise'. They buy all the oil that producing DME enterprises can make. Producers are independent of KP and can sell their oil elsewhere if they choose. Oil sold to KP has a stable, assured price, and the freight costs are paid by KP. KP also maintains an organic certification systems and covers all the costs of certification. This is a complicated system that requires each producer to nominate up to 20 coconut suppliers who then have their plantations certified organic. In practice they find about 10-15 farmers supply regularly. The producer keeps records of produce from each of the certified farmers. KP has an annual audit by NASAA (National Association of Sustainable Agriculture Australia) where a sample of 40 farmer producers are inspected.

They have supported the development of an independent producers association which allows the producers to give feedback to KP.

A production unit should aim to use 550-500 coconuts a day putting $150 per day into local farmers hands. Their model estimates operations for three days a week, the aim being that the producer should also continue with other livelihood activities such as food production.

CSP has funded DME production units costing about $110,000 each that are part of the KPL network. KPL feels CSP has added considerable value in that their network of coordinators, and the efforts of Mike in Honiara mean that the people chosen have a higher success rate than those who just walk in the door and ask to buy a DME unit or those funded by other donors. 'They have good people in the field, passionate staff and they call a spade a spade'. 'Without CSP help we don't have a hope of knowing anything about these people'.

Once selected by CSP, the production unit must build the facilities to house the DME equipment at their own cost. During construction and when competed, KPL trainers visit the family involved to train them in oil production. There trainers stay in village for a couple of weeks. They feel this is important and rushing in and out in a day does not work in transferring skills and commitment.

KPL sees one of the benefits is the spinoff products that can be sold and used in the local community – oil for cooking, coconut meal for feeding pigs and charcoal for soap making. They have experienced 40 percent growth per year in their domestic sales of coconut oil for cooking.

Without the support from CSP, KPL would still be here but their expansion would have been slower. They probably would have focused on fewer units and increasing the number of presses in the units already on the ground. They feel their partnership is very good and KPL is a business and not a project and, therefore, will be there for the long term.

CASE STUDY 5: Orchid arts and crafts, Honiara

Ann Maedia owns Orchid Art, a floral art business. Orchid Art grows flowers but mostly sources flowers from its network, particularly from members at Areatakiki village in Guadalcanal, to sell on to its customers in Honiara as bundled and/or arranged. Orchid Art has a network of up to 300 flower growers in Guadalcanal, Malaita and Renbel.

Ann Maedia is also a member of the executive committee of Floriculture Solomon Islands, the country's peak floricultural organization that emerged as a result of VCED teams' work with different flower growers, buyers and sellers. Ann and her group took part in training organized by VCED on flower production techniques and floral art display techniques and have seen immediate increase in sales of arranged flowers.

Orchid Art, with support from VCED team, is working with Tavanipupu Resort for weekly supply of flowers for all the huts and their restaurant.

VCED contracted South Seas Orchids and Tadra Flowers from Fiji to provide local growers and florists with training in floriculture production and floral art display. Participants in the training included members of Matana Ara Women's Association from Kakabona and Betikama Flower Growers, Areatakiki community, Guadalcanal.

Training was also conducted for flower growers and florists from areas around Auki in Malaita Province.

The Guadalcanal training culminated to the Solomon Islands Inaugural Independence Day Floral Art Display. Local business houses, offices, hotels and the donor community were invited to view the arrangements. Heritage Park Hotel identified two separate florists to provide flowers/plants for indoor and outdoor on the spot.

Floriculture Solomon Islands will manage all aspects of the December inward mission by the Fijian specialists.

VCED has also been conducting marketing skills trainings with the flower growers/sellers and floral artists. Negotiating price based on customers' needs is a new concept for passive sellers, however there is some evidence that some flower sellers at the Honiara main market are implementing what they've learnt.

VCED has produced a flower booklet out of the floral art display training that is taken on by the Floriculture Association for marketing purposes.

7. Natural capital

Natural capital is the term used for the natural stocks from which useful resource flows and services needed for livelihoods are derived. There is wide variation in the type of assets that make up natural capital ranging from water and biodiversity through to specific assets for production such as crop varieties, trees and land.

There is usually a very close relationship between natural capital status and vulnerability. Many of the shocks that can devastate livelihoods are themselves natural processes that destroy natural capital (eg.. cyclones, floods, climatic variation) or human-induced changes to natural capital (eg.. logging, soil fertility depletion through agriculture practices).

Natural capital is very important for agriculture livelihoods. Its importance goes beyond agriculture as none of us would survive without the help of environmental services and food produced from natural capital. (DFID 1999)

Solomon Islanders depend on functioning ecosystems for their wellbeing. Rural livelihoods are based on the interaction and utilization of services provided by natural ecosystems such as soil fertility, genetic resources (varieties of plants) and balanced biodiversity (which contributes to pest and disease management among others).

Vulnerability context for natural capital

	Trends	*Shocks*	*Seasonality*
Natural Capital	▪ declining soil fertility due to reduced fallow periods ▪ increasing rainfall approaching limits of sweet potato for reliable yield (climate change impact) ▪ increased use of external inputs among farmers selling into Honiara market ▪ feminisation of agriculture ▪ deforestation and reduction in availability of timber for fuel wood and construction resources ▪ high turnover of crop varieties ▪ increasing pest and disease problems	▪ natural disasters – cyclone, drought, ▪ new pest, disease and weed risks	▪ climate change ▪ variable pineapple flowering ▪ hunger periods in isolated areas with very high rainfall ▪ cyclical migration to urban centres, especially Honiara for cash income

CSP agriculture livelihoods and natural capital

The IA team analysis of the program found it provides direct support to natural capital assets accumulation for rural livelihoods through:

- improved food crops and self reliance in food production (staples, vegetables, pineapples, fruit and nuts)
- enhanced use, rehabilitation and management of existing tree / perennial crop plantations (cocoa, coconut and vanilla.

The program interacts with natural capital through:

- new methods or knowledge acquired by rural farming households including:
  - use of flowering hormone to induce out of season pineapple flowering (PINEAPPLE)
  - nursery propagation methods for fruit and nut trees (FNTP)
  - rapid multiplication and farmer network methods for bulking root crops (SEAREM)
  - management and curing of vanilla
  - training in organic farming for vegetable growers
- new germ-plasm provided or made accessible to farmers by the program activities
  - long term cocoa breeding program stated at black post on Guadalcanal (CLIP)
  - new varieties of staple root crops (SEAREM)
  - peanut variety testing and multiplication (PEANUT)
- physical rehabilitation of natural assets – eg. plantations of cocoa and vanilla – including:
  - radical pruning of cocoa plantations by trained teams (farmer contributes 25% costs – CLIP)
  - materials and information for replanting of amelando cocoa vars (CLIP)
  - improved practices in management and curing (VANILLA).

Improved food crops and self-reliance in food production

PROGRAM STRATEGY:

3.1.1 - Collection, multiplication and distribution of improved germplasm/planting materials, especially for food crops (root crops, fruit and nut trees, peanuts) that assist in productivity, diversity, and risk reduction for smallholders

3.1.2 – Supporting improved supply responses aligned to market demand, through improved dissemination of crop and pest management innovations and other production and post harvest improvements (eg. peanuts, cocoa vanilla, fruit and nut trees, pineapple).

The Program activities and their impact on natural capital assets is discussed below:

Fruit and Nut Trees Activity (FNTP)

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Use of disposable plastic polybags is a minor waste issue in the village	Practical nursery methods using for raising trees
	Contributes to sustainable food production (tree crops for food)
	Mixed fruit and nut trees (many indigenous) contribute to habitat and biodiversity in agriculture/ rural village landscapes
	Rehabilitation and collection of seed from degraded national fruit and nut tree collections
	Improvement of germplasm through grafting, cuttings and other tree improvement technologies

'My aim is to help my children so they have fruits to eat'.

The FNTP activity started in October 2008, has the potential to contribute significantly to natural capital accumulation through increased planting of a variety of fruit and nut trees across the four targeted provinces.

Fruit and nut trees have beneficial impacts on natural capital.

They:

- hold soil
- provide habitat
- are perennial sources of food which is less nutrient-demanding than annual food crop production).

Once in production (three to five years after planting) they provide a long term source of food for consumption (contributing to food security) and sale (yielding income).

The activity is at an early stage and many of these impacts will not be realized until well after project completion (ie. when trees mature and produce harvests)

A total of 23 main and 159 small nurseries have been established in Choiseul, Western, Guadalcanal and Makira provinces.

Nurseries typically range from 50 to 1000 trees each and covering a range of up to 26 fruit and nut tree species.

They are generally well run and reflect a good transfer of skills. Most of the nurseries are still at establishment stage and not yet ready to plant out into the field. Some nurseries are reported to be ready for technical inputs to do grafting onto prepared root stock *(William – personal communication).*

Nursery establishment activities of FNTP project to date:

Province	*People trained*	*Main nurseries*	*Small nurseries*	*No of villages*	*Institutions*
Malaita	123	5	35	6	0
Guadalcanal	239	9	12	5	4
Western Province	90	4	32	3	1
Choiseul	115	5	80	4	1
Total	**567**	**23**	**159**	**18**	**6**

There is strong interest in the community to plant fruit and nut trees. Among those we talked with who are engaged in this activity the most common aspiration was along the lines of 'to help my children or myself in the future'.

Farmers believed there were potential opportunities to sell fruits in local markets but were equally interested in growing more fruit for family consumption. This is an important outcome discussed further under human capital as the major nutrition issue in Solomon Islands is micro nutrient deficiencies for infants and children – which could be substantially addressed by increased fruit consumption.

The model promoted by the activities of planting blocks of fifty trees at a time per household is popular and realistic. It has an added benefit that it would avoid any risk of overallocation of family resources to a new activity or large scale plantings of a long term tree crop that might have an impact on land used for other purposes, such as food crops.

Small Family based nursery

Dalcy Misi, Bina area, South Malaita: Dalcy, a mother and farmer, has about 50 fruit and nut trees growing in poly bags supplied by the program on a raised platform near her house. She attended the training workshop run by FNTP. Species in her nursery include ngali nut, guava, five corner, lemon, soursop, bush apple, mandarin and rambutan. All have been grown from locally collected seed. Other women expressed interest to start their own nurseries of fruit and nut trees if they had poly bags and were given some training.

Festus Ngasi:

"My aim is to help my children so they have fruits to eat. I will put in the first 50 trees and then keep going in blocks of fifty. "

Festus attended the Bina workshop and has a healthy small nursery established under the shade on the edge of his cocoa trees. His main livelihood is from cocoa and pineapple but he was pleased to have this chance to establish some fruit and nut trees as well.

A possible commercial nursery:

Fred Aremao at Dala, Malaita.

Fred has established a well cared for nursery and is able to tap into the valuable germplasm from the nearby abandoned ministry of agriculture collection. He has avocado, durian, rambutan, sapodilla, nutmeg, jackfruit, guava, ngali nut, big fruit alite and two or three that he did not know names of. Some of these are rare trees in the Solomons.

Fred is a trained technician in fruit tree grafting and propagation and used to work with William in the ministry of agriculture Research Station at Dodo Creek on Guadalcanal. He has been a private farmer for many years.

The FNTP project has engaged former nursery technicians from DAL in the project in their home villages. William knows these people personally, having worked with them at Dodo Creek, and knows that they have the technical skills required.

The financial viability of commercial fruit and nut tree nurseries in rural areas is discussed in the financial capital section.

Rehabilitation of national germplasm collections

An immediate impact of the FNTP activity has been:

- the rehabilitation of Department of Agriculture Research Division fruit and nut tree collections at Ringgi Field Experiment Station, Kolombangara, Western Province
- the informal collection of seeds/seedlings from rare fruit and nut trees in an abandoned MAL collection in Dala, Malaita Province which has now returned to landowner control where trees were slowly being lost to shifting cultivation and being cut for firewood.

These collections are a valuable genetic resource of fruit and nut trees considered to have commercial potential in Solomon Islands.

Ringgi has in recent years been staffed with only one government officer and the site was completely overgrown when the FNTP Activity started.

At the time of visit about half of the tree collection had been cleared through a contract supported by the FNTP activity. Trees are already showing good signs of recovery with fruit being produced and some new pruning methods applied. Propagation material is being collected and a nursery with shade house has been established. There are plans to link these collections to the central farmer nurseries and then make the more unusual fruits and nuts available to farmers.

Sharing varieties over a wider scale

'We could exchange between provinces – for example some seeds from Temotu, Malaita does not have. If they send them elsewhere they are preserved'

Suiti Okesi, Malaita

All of the farmers involved in the activity requested access to new varieties outside of what they could collect in their immediate area. Nursery operators feel that the appeal for purchase of trees will be stronger if they have unusual trees not readily available locally. There are plans to facilitate such a sharing network between provinces and also to introduce grafting of superior cultivars onto root stock being established in some of the more advanced nurseries. Grafted varieties produce fruit faster and have consistent desired characteristics such as sweet fruit, characteristics that can be variable in fruit trees grown from seed.

Pineapples

Summary impacts on natural capital assets

Negative impacts	*Postive impacts*
Increased soil erosion in some locations	Adding value to existing cash crop
A weed known as 'devils fig' is covering older pineapple plantations in Arabala area, Malaita –	

Pineapple is an important cash crop for certain areas of the country (estimated number of producers in the Financial Capital section).

The Agriculture Livelihoods intervention in pineapples has been at different points in the development of this product for different areas. In Malaita, it builds on many decades of local and government supported pineapple industry development:

- in Central Province, CSP training was the initiator for a much expanded local pineapple industry focused on Honiara market
- on Guadalcanal, it has led to expansion of the cropping season for farmers who were already involved in pineapple farming.

Timeline of pineapple farming in Bina, Malaita Province

Prior to 1950's: pineapple grown in home gardens for family consumption only

1950s: first pineapples grown in gardens in area

1975: first village to sell pineapples in Auki planted by John Agi

1978: pineapple spreading with heads from John Agis farm

1970's: cocoa took over from pineapple for a while but then dropped back when black pod disease came in

1986: Cyclone Namu destroyed pineapple crops and slow to restart

1994: Pineapple Juice factory established in Auki under Malaita Province

1995: factory broke down due to bad-luck, management and marketing difficulty

2006: CSP pineapple workshop conducted. Flowering hormone applied for first time

Present: pineapple farming is increasing again with new gardens planted. Some farmers have tried planting pineapple across the slope instead of down. (some farmers were confused and asked why they should do this?)

Pineapple has been consistent as a cash crop through all this time.

Source: group discussion with Bina pineapple farmers Men's group

The timeline from Bina prepared by farmers demonstrates how the Program intervention is part of a long history of interventions and livelihood changes running back to the 1970's. This was similar to a long history of pineapple farming at Arulgo while in Davala, Central province the program introduced pineapple farming as a new activity.

Activity steps:

A value chain study (Stice et al 2008) was undertaken on pineapples with interventions targeted:

- training on use of flowering hormone for off season pineapple fruiting
- training on business and marketing skills
- planned inputs on other parts of value chain including testing of crates for better transport of pineapples to market.

Impacts

Flowering hormone has had variable uptake by farmers:

- high among farmers in Davala (all 4-5 families) village in Central Province
- reportedly used by 11 out of 50 farmers in Aruligo area, Guadalcanal province (Andrew Sale, VCED team personal communication)
- low in Bina and Arabala areas in Malaita Province (farmers are yet to purchase inputs themselves and instead a few men and women have tested the samples provided by the Program).

The impact of these new practices on livelihoods is discussed in the case study on Davala Pineapple Farmers.

CASE STUDY 1: Malaita pineapple farming – a different result than in Central province:

Some reasons why farmers have not adopted the program recommendations on flowering hormone:

- 'seasonal change' appears to be not such a market advantage and at certain times may be a disadvantage as they are not able to compete with off season growers closer to the market (in Central and Guadalcanal Provinces)
- flowering hormone not easily available especially for those who only sell in Auki
- poor calculation and understanding of costs/ budgeting for their pineapple marketing
- concerned that flowering hormone is contributing to seasonal inconsistency for their main pineapple season[6]
- concern over consumer perceptions of flowering hormone as 'spray' and avoiding their produce as unsafe (discussed more under financial capital section)
- farmers here may just be slower to adopt change as they have more entrenched practices with pineapples having grown them since 1975; a few farmers getting results with trials of the flowering hormone as this may provide the impetus for others to try.

6 Farmers are associating changes with the increased local use of flowering hormone. This is very unlikely to be correct. Many pineapple farmers report that their pineapples are fruiting more irregularly and many in Bina and Arabala talk of a reversal of seasons from August-June to June-January. For some in Malaita this was advantageous as it meant they had small numbers available on a regular basis for an extended Weed infestation is an issue in older pineapple plots period of small scale marketing. For Auki market this suited them well.

Ethrel and environmental impact

> *"If farma seleva laekem hem usem" - "its up to each individual to decide if they want to use it (flowering hormone) or not."*
>
> *Group discussion with pineapple farmers in Arabala, Malaita Province*

Many pineapple farmers were concerned about the use of flowering hormone. In Solomon Pidgin it is unfortunately referred to as a 'spray' which puts it, in the minds of local people, in the same category as fertilizers and pesticides.

There is a great a deal of confusion evident among pineapple farmers (and probably rural households in general) about agriculture inputs, the differences between different types of inputs and the potential risks to themselves or consumers of each of these inputs. While flowering hormone is considered safe by CSP, there is a need to better inform farmers of the pros and cons of its use in a simple and understandable form, combined with helping farmers gain a wider knowledge base on general agriculture chemicals and how flowering hormone compares with other possible agriculture inputs.

Soil erosion

Pineapple farmers in Central and Malaita are using two different approaches in terms of soil cover crops.

- in Malaita, pineapple is intercropped with sweet potato, which appears to reduce soil erosion
- in Gela, pineapples are monocropped with bare soil in between rows made up and down the slope.

Serious sheet erosion was evident in plots visited. Both systems would benefit from some on-farm trials of use of different cover crops such as velvet bean (*Mucuna* sp.)– see SEAREM) or other erosion control methods such as vetiver grass hedgerows on contour.

While sweet potato may reduce the erosional impact of rain and surface runoff it does not contribute to improved soil fertility and may increase the rate of soil fertility decline. It is a food crop though, and therefore contributes to household food security. Weed infestation is an issue in older pineapple plots in Arabala, Malaita, and this may also be addressed successfully with better integration of cover crops.

SEAREM

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
▪ risk of displacement of existing diversity ▪ not addressing fundamental soil fertility decline issue driving crop changes ▪ inadequate support led to some germ plasm centres losing their collection	▪ diversification of existing food crop staples ▪ introduction of new staple crop – African yam – resistant to disease and tolerant of lower soil fertility than traditional yams ▪ sharing of existing varieties between areas ▪ enhanced food security ▪ reduce vulnerability to climate and other shocks ▪ some farmer innovation on wider farming systems including soil fertility and pest management as result of network ▪ varieties placed in long term storage in SPC for return after disaster or other loss of genetic resources

A second case study is included to contrast with the one on Hanipana Germplasm Centre.

Soil erosion in sloping and exposed soil pineapple plots, Gela, Central Province

CASE STUDY 2: Takwa Germplasm Centre, Malaita

The Takwa germplasm centre is run by Laurence and Roko Aldo and their extended family and is situated in a very high population density area of North Malaita.

At the beginning of the project they duplicated the sweet potato collection from nearby Suluigata Germplasm Centre following a farmer diversity fair. Takwa was not to be the main centre for this part of North Malaita., but in 2008 the germplasm centre was moved to Takwa when Suluigata Centre failed to meet contract expectations. They collected 38 local varieties of sweet potato from farmers and have had one type of African yam in their area for a long time, however SEAREM has introduced another new variety which they are also multiplying.

They have three types of lowland taro resistant to the plant disease 'alomae'. At the time of visit they were bulking four SPC varieties.[7] The plots were well labeled, grown between alleys of *gliricidia* (see discussion on soil fertility improvement).

Distribution records are poor. At least 12 families have received planting materials in the local area. In addition, there have been visits from groups and individuals from other parts of North Malaita facilitated by KGA. This has included a training attachment by three boys and two girls from other communities in north Malaita. These young farmers have received follow up visits by the centre and are reported to be putting into action the new skills they learned which included the importance of crop diversity and practical skills such as mulching, use of *gliricida* for soil improvement and how to make seaweed-based organic fertilizer.

The students took home sweet potato and African yam planting materials from the centre. All the groups who visited the centre have taken planting materials. Some local farmers complained that the germplasm was only being shared with the extended family of Laurence and Roko. Four farmers who have received germplasm from the Takwa centre were visited.

7 IB137, IB133, IB132 and IB13

1. Leoa and Patrick

Leoa and Patrick have planted two varieties of sweet potato from the centre (IB088, IB216).

The garden is typical of the high land pressure around Takwa – it was cleared from short fallow bush (less than a three year fallow) and they have planted sweet potato twice before planting the SPC varieties.

They have had very poor yield, perhaps not to be unexpected in this kind of exhaustive cropping pattern. They did, however, experience unusual growing conditions with very heavy rain and flooding.

Leoa planted six vine cutting per mound whereas Roko planted three cuttings per mound in similar conditions and had a good harvest. Their best local variety, 'Nabo', was able to provide a good yield even in these adverse conditions and planting methods. Nabo was planted, however, in a better drained part of the garden. Nabo is one of the varieties collected locally by the germplasm centre and is being shared with other parts of the country. Altogether they have six sweet potato varieties growing. They have not shared the SPC variety with other farmers yet. They want to first try it in different conditions and to be convinced it is a useful variety.

Of interest is that they are starting to plant *glircidia* (a nitrogen fixing legume tree) to improve soil fertility, taking the lead from what they have seen at the germplasm centre and learned from the training provided by Kastom Gaden Association.

Long cutting of glircidia ready for planting for improved, long term soil fertility. This is a very big change from traditional practices.

2. Salome Koiko, Takwa, Malaita

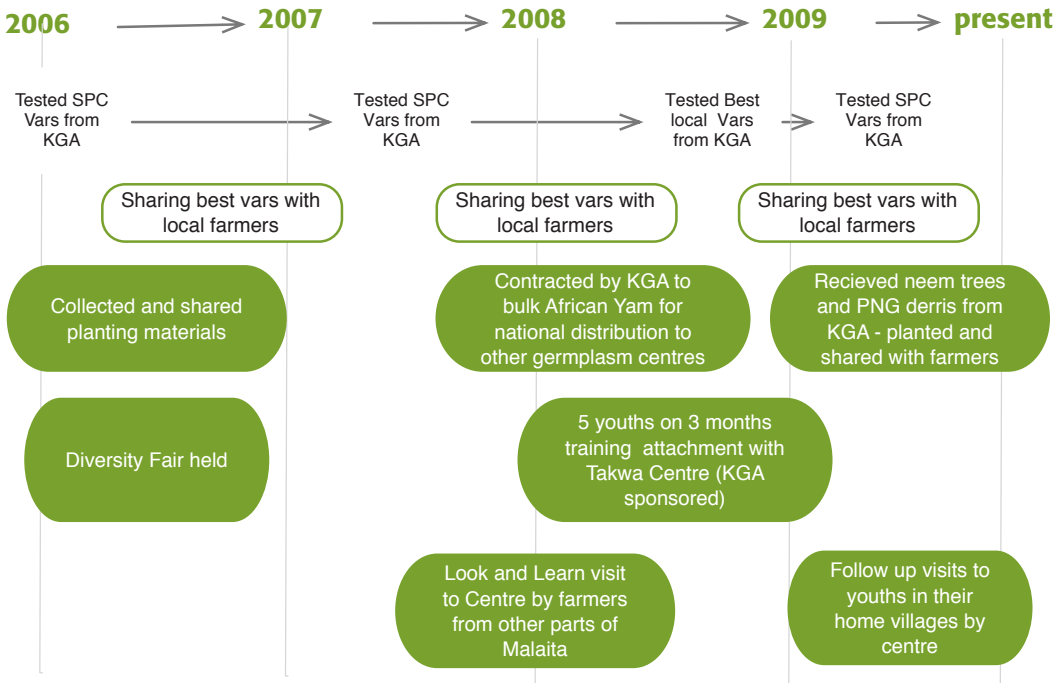
Salome Koiko planted three new varieties of sweet potato she was given from the Takwa Germplasm centre – two SPC and one 'farmers best' from another province known as '02'. She also has five other sweet potato varieties that she has been planting for some time.

The garden was in a new area and had been cleared after five years under fallow. Land like this is becoming rare in this area. Scattered mango, ngali nut and bush apple were left standing in the garden area.

Salome no longer burns her gardens, a practice learned from Kastom Gaden Association trainers. Over the last two to three years rats have become a big problem in their family gardens, eating much of the produce and even climbing coconut trees to eat the fruits. This seems to be declining in incidence.

Salome has not harvested the sweet potato yet but so far the new varieties appear to be growing well.

Timeline of activities at Takwa Germplasm Centre



Activity objectives and strategies

The SEAREM (Searem Niu Plant Long Gaden Project) activity of the program was implemented by Kastom Gaden Association and has the following objectives:

1. To ensure that the Solomon Islands has access to high potential root crop varieties for use by farmers.
2. To ensure high potential root crop varieties are available to farmers throughout the Solomon Islands.
3. To build the capacity of farmers, farmer groups and RTC's/farmer schools to identify, conserve, evaluate and disseminate root crops.

Key activity strategies

1. Dissemination of local, selected varieties based on farmers own characteristics such as yield, harvest time, market acceptance, taste and use as an animal feed using diversity fairs and farmer networks.
2. Rapid multiplication of and use of screened 'igloo houses' to prevent reinfection of virus free planting materials.
3. Introduction as pathogen-tested tissue cultures of elite Papua New Guinea, Solomon Islands and Vanuatu sweet potato varieties (and those from elsewhere currently stored for the region in SPC Regional Germ-plasm Centre).
4. Use of formal and informal farmer organizations, e.g., Rural Training Centres (RTC) and Community Based Training Centres (CBTC) and farmer schools to evaluate, accumulate and share planting materials in the selected rural areas using experience and contacts of the KGA supported by the members of the Solomon Islands Planting Material Network.
5. Capacity building at the farmer group, RTC/CBTC and NGO level.

The assumption of this activity is that households having access to increased varieties of existing staple food crops and broadening of their staple food crops with new species of root crops contributes to food security.

Farmers adopt new crops and new varieties for a number of reasons, including productivity (yield), taste, marketability, other important uses.

In particular, the activity aimed to test the hypothesis that removal of virus from sweet potato varieties through tissue culture and pathogen testing would lead to significant yield increase when made available to farmers.

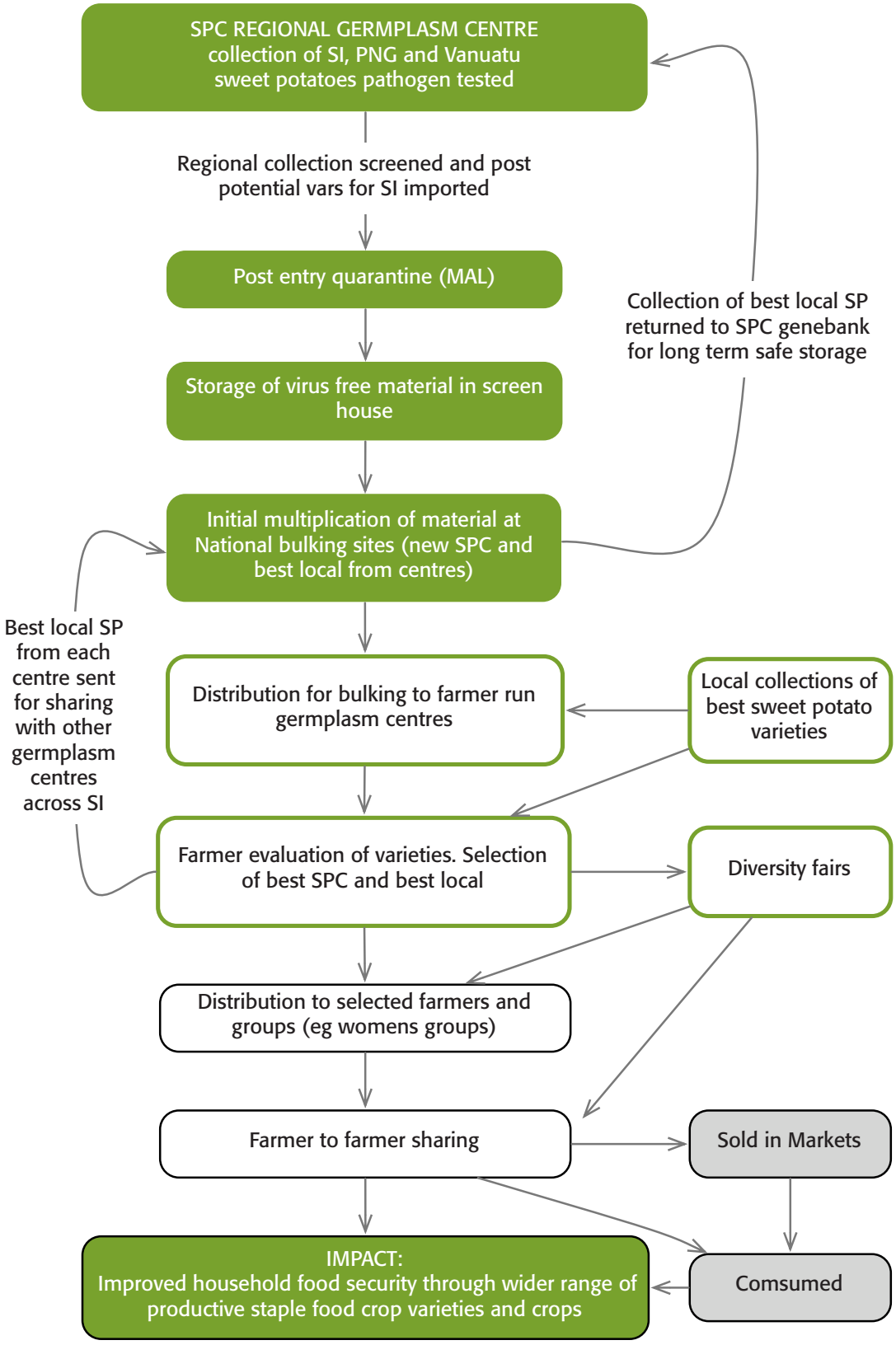
Farmer run germplasm centres

The activity design document proposed establishing 22 farmer operated germ plasm centres in all provinces of Solomon Islands. This target was exceeded although not all of the centres continued until the Activity's completion.

Centres have had various levels of success and all 22 centres have distributed germplasm to farmers. It was not intended that all these centres would continue indefinitely; rather, that they would fulfil their function to evaluate, bulk and distribute local and introduced improved root crop varieties.

The 'failure' of some centres to continue with their activities has been strongly attributed by KGA staff and germplasm centre operator groups to a decline in support and resources provided by KGA in 2008 and into early 2009. This was a period where KGA was undergoing organisational restructuring.

Flow chart of SEAREM activities and their impacts



In August eleven centres[8] were considered to be an ongoing success, according to KGA reports. These centres have shown a high level of commitment to the aims of the activity and values of KGA (KGA staff meetings and KGA field visit reports). Many of these are also service providers for other activities of KGA outside of this CSP program. At least five centres[9] became dependent on receiving grants to carry out work. When the grants stopped or had breaks, work stopped and proved difficult to restart.

8 Ghatere, Western Province, Mouta, Makira Province , Hanipana, Central Province, Takwa, Malaita Province, Gwaunafiu Farmer School, Malaita Province, Tepabakia, Teabamangu, Tunabusi, Masilana Seed Centre, Malaita Province, Mondo, Western Province, Tetena Community Learning centre, Makira

9 ausama, Western Province, Toroa germplasm centre, Makira Province, Suluigata, Malaita Province, Nana – collection destroyed by a tractor, Makira Province, Zaeba Learning Centre, Choiseul

Impacts of new varieties

The Activity distributed new varieties of sweet potato, cassava and African yam.

In general, if a variety of a staple food crop is adopted widely by farmers or is popular according to their criteria, it can be assumed this is making a contribution to food security and livelihoods.

Its more specific impact may relate to increased yield or other qualities of variety performance such as taste, use as animal feed, cooking qualities. These two areas are being examined for impact.

Spread of varieties, the activity design assumes that:

- each germplasm centre will evaluate (with farmers) the collections brought in from outside
- they will distribute them widely
- once varieties are in farmers fields and local markets they will spread further into the community.

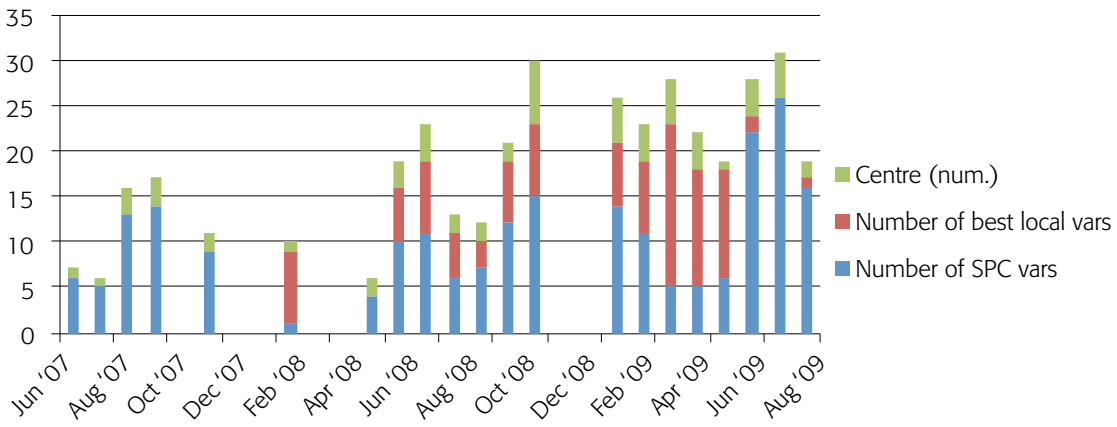


Table: Distribution of new varieties of sweet potato to germ-plasm centres (Source: KGA data)

Sweet potato

Sweet potato, cassava and African yam varieties have been distributed to 22 germplasm centres across the country.

In addition, at least 126[10] local sweet potato varieties have been collected by these germplasm centres and nine varieties shared as part of a national collection of farmers best local varieties. Some varieties have also been sent to the regional germplasm centre in SPC, Fiji, for pathogen testing and return as virus-free planting material. This will also be kept in long term storage in the genebank to be reintroduced to the Solomon Islands in the event of a local loss of variety.

The project aimed to collect data on the performance of the SPC 'virus-free' varieties across all the germplasm centres. Farmers were trained in recording yields and other characteristics using simple forms. In practice, this has proved difficult, with very little yield records maintained.

KGA has detailed records of the distribution of varieties to centres for testing. Centres were given forms to record performance results and distribution to households. Unfortunately, the forms do not seem to have been properly tested before distribution and some unclear questions will make data unreliable. The forms are not easily available in a central place and there has been little attempt to collate the at-best patchy reporting information. What was available has been referred to in this report.

In general, the best SPC varieties have performed similar to the best local varieties. Some of the SPC varieties have performed poorly in each location. This is to be expected as the aim was to test a range of varieties across Solomon Islands.

All farmers interviewed are wanting to continue to test the varieties further in order to evaluate:

- their performance in different soils and conditions
- the use of 'better' planting materials than those from the original plantings (different types of vine are used in a wide range of different traditional planting methods that can have a significant impact on yields, the best results coming from the vine tips)
- experimenting with different mounding and planting methods with the new varieties.

10 Some of these 126 varieties will be duplicates of each other with different local names.

> Yield is considered important by farmers but is not the only criteria of importance. For example, some SPC varieties are reported as having vines which can last a long time without rotting.
>
> 'The Tetena Germplasm Centre in Makira has recorded yields of the best performing SPC and best local sweet potato. The top yield recorded was 8kg per mound from a local variety. The favourite of farmers based on a diversity fair evaluation was a 5.5kg per mound yield but best tasting (local) variety. The best SPC variety was also considered to have good taste but the highest yield was 5kg per mound'
>
> Mary Timothy report on Makira visit – KGA internal document

The table below shows the SPC sweet potato varieties most commonly referred to as 'best varieties.'[11] Eight varieties scored two or more, indicating they may perform well across a wide range of conditions and locations. Thirteen varieties performed well in only one location. This may indicate some varieties are quite site specific in their ideal conditions with others more versatile. This supports the testing of a wide range of varieties in each location.

SPC Variety accession number	*Score*
IB226	XXXXXX
IB088	XXXXX
IB197	XXXX
IB071	XXXXX
IB262	XXX
IB246	XX
IB123	XX
IB240	XX
15 other varieties[12]	X each

X = observations from yield trial by KGA technicians, Verlyn and Glendon

11 From our interview data and reference to KGA internal documents provided from the Honiara office and germplasm centres visited

12 (IB083, IB235, , IB062, IB239, IB109, IB259, IB288, IB062, IB035, IB096, IB135, IB263, IB216, IB141, IB140)

Farmers best local sweet potato varieties

"The 'tangarare' (Guadalcanal) best local variety sent to Makira is doing very well and spreading."

Mary Timothy -comment in KGA group meeting.

Seven of the 'farmers best' varieties sent by the germplasm centres are currently being evaluated by KGA in Honiara at a plot at KGVI national secondary school and in the proves of being sent out to other centres.

All the farmers best varieties scored nine out of ten (which meant a harvest of close to 10kg from five mounds).

Three SPC varieties had comparable yields to the farmers best varieties.

African yam

"African yam can grow well after sweet potato. Our local yams could never be planted after sweet potato. It also has a very big fruit, tastes good and is not effected by lightning (anthracnose disease)"

Laurence Aldo, Takwa, Malaita

African yam has been distributed to most centres.

Spread of African yam under the activity has been slow but steady. It is slower to multiply requiring a nine month growing season (as opposed to three to five months for sweet potato). Less planting material is produced per plant (pieces of tubers are planted as opposed to pieces of much more plentiful vine or stem in the case of sweet potato/cassava respectively).

African yam has not grown well in places such as Mogga, Guadalcanal. The reasons for this are unclear and may need further trialing in different soil types and may also be related to the quality of planting methods used.

Left: Roko Aldo with African yam harvested from the Takwa Germplasm centre

Below: Collection of 'farmers best local varieties' of sweet potato at KGVI school in Honiara – farmer selected material sent by the germplasm centres to Honiara is being multiplied for sharing between all the germplasm centres. A second round of SPC varieties are also being multiplied.

Cassava

New cassava varieties have been distributed to all centres including one new variety from the SPC regional germplasm centre and one best local variety.

Peanut project

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Some concern over soil erosion in sloping monoculture plots	Nine new varieties introduced from PNG with different characteristics for different market uses
Peanuts are legumes and so wider cultivation can be good for farming systems through nitrogen fixation	

Cut Flowers

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Trade in rare orchids could see resource depleted or threatened if not managed with care	Makes use of existing resource that is valued by communities and women in particular – flower gardens

The VCED work on orchids and cut flowers is focused further along the value chain and not so much on production. A potential area that could be impacted is the trade in rare indigenous orchids, although this is prohibited for export under CITES but is not controlled for domestic market. It is not considered a major issue with the current scale of the industry as present.

Marketplaces

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Potential for waste generated by market places to be an issue	-

The construction of selected market places for fresh produce and fish marketing has not had a significant impact on natural capital assets. The Programs marketplace activity is discussed more in Financial and Physical capital.

One issue of concern when the market places are opened is the management of waste and the potential to educate market users for better understanding of waste issues.

Rehabilitation of existing plantations and export crops

PROGRAM STRATEGY

3.1.2 - Supporting improved supply responses aligned to market demand, through improved dissemination of crop and pest management innovations and other production and post harvest improvements (eg. peanuts, cocoa, vanilla, fruit and nut trees, pineapples)

The program is building natural capital assets through targeted interventions that address specific technical problems and needs for each of the following existing income generating cash crops:

- vanilla
- cocoa
- coconut.

Vanilla is grown under shade of leguminous trees in small plots with covered soil and mulched vines – a very sustainable and low environmental impact system.

Vanilla

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Not suited to wetter areas which includes most of Solomon Islands and particularly many of the more isolated areas	▪ sustainable method of production ▪ teaches use and value of mulching Soil covered / protected ▪ use of legume trees as shade tree ▪ minimal land use for a cash crop and there fore little competition with other land uses ▪ is able to make use of land already cropped for food gardens (ie. does not require fertile soil)

The vanilla project has interacted with a total of 250 vanilla farmers, mostly in Northern and north west Guadalcanal.

Recently, the project has expanded to include visits in Malaita, West and Makira although none of these areas are considered optimum for vanilla due to excessive rainfall.

Key contributions of this activity to accumulation of natural capital assets are:

- **sustainable farming methods:** no external inputs are used
- **use of legume trees and cover crops:** contributes to soil fertility and reduces erosion
- **small plots are efficient use of land:** very little land is required to take up this crop on the recommended scale (100 plants has potential to produce 20-30kg of cured vanilla at each harvest).

Methods:

Methods teach farmers the use of organic matter and mulching – concepts which can have wider application

Methods adopted include:

- training and visits
- farmer to farmer visits
- curing kits
- availability of the vanilla manual
- facilitated linkages with and support to buyers and including product and market development.

Outcomes:

Quality vanilla is being produced by those farmers who have persisted with their crop in a sustainable system.

Example: Adrian Norua, Talaura, Guadalcanal plains

"I sold 22kg of vanilla to Varivao holdings this year – most of it was first grade. I started vanilla growing for many years after taking planting materials from Dodo Creek when it was still operating. A padre staying in our community advised me to restart my vanilla."

Adrian feels a very important reason for the success of his farm is that he has registered his land and so there are no land disputes. They live on their own on their registered land and not in a village community.

CSP advice support to Adrian:

- advice on not to use jatropha
- training in quality curing
- provision of a curing kit
- facilitating visits by other farmers to his farm
- enabling a market through assisting a local business to become a quality vanilla buyer.

Further vanilla farming case studies are included in the Financial Capital section.

CLIP

Summary Impacts on Natural Capital Assets

Negative impacts	*Positive impacts*
▪ risk project leads to expansion of land under cocoa and displace other uses and biodiversity ▪ potential loss of valuable shade trees providing other functions – eg. ngali nut, timber etc	▪ long term breeding for better SI cocoa varieties ▪ promoting best existing variety (amelando) with proven performance ▪ rehabilitation of existing plantations ▪ tree crop is sustainable farming system

The Cocoa Livelihoods Improvement Project (CLIP) activity, which began in mid 2009, is addressing the following problems:

- declining yield (nationally from 4500 tonnes a year to 3000 tonnes now)
- smoky cocoa
- poorly dried cocoa.

Declining yield is addressed by supporting rehabilitation and improved management of cocoa plots targeting farmers with plantations of 5ha or less of cocoa. Downstream processing improvements is through that sale of subsidized driers for downstream cocoa processors and mini driers for cocoa farmers in remote areas. Both contribute to livelihood asset creation.

Key inputs:

- radical pruning of cocoa plantations and shade trees/ secondary vegetation
- promote replanting using amelando variety
- Long term breeding program
- provision of drier flutes for cocoa processors.

Expansion of land under cocoa

"We cannot just expand cocoa into areas of food gardens or forest"

In general, the project is not promoting expansion of areas under cocoa. This strategy is widely supported as significant expansion could threaten the 'livelihood balance' of households. However, there are some conflicting messages and the activity team will need to be careful to ensure the focus remains on preexisting

plantations and not new plantings except in the case where existing plantations are being replaced due to age or other factors.

The activity is just getting underway so we are not able to measure impact on households or their assets – more in the next report.

> *"Some people have tried to plant new cocoa plantations and their relatives have gone and ripped them out because it is their area for food. Many farmers in this area are clearing old coconut plantations in order to grow food – if we were not doing this we would not have enough to eat. Grow too much cocoa is a system for hungry – for me I am never hungry and I don't need to grow cocoa."*
>
> *Laurence Aldo – Takwa germplasm centre, North Malaita*

As illustrated by the quote above, there was some discussion on the impact of new cocoa plantations during discussions with farmers in north Malaita.

DME coconut oil

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
	▪ adds value to existing plantations ▪ sustainable farming system especially with organic certification part of process ▪ livestock feed a useful by product

The DME project is working with selected (NO?) individuals to establish small cold pressed coconut oil production.

As discussed in the case study, the activity contributes to natural capital through value-adding to an existing asset of many households – their established coconut tree crop plantations.

The DME model is linked to the company Kokonut Pacific which promotes organic farming and organic certification of their coconut oil products. This is additional asset creation in promoting sustainable low external farming systems and adding value to existing products.

Coffee

Summary impacts on natural capital assets

Negative impacts	*Positive impacts*
Only one buyer of coffee in Solomon Islands – potential to increase vulnerability for those in remote areas planting crop. Buyer may not be committed to Guadalcanal crop where bulk of expansion is occurring.	▪ adding value to an existing tree crop ▪ good for isolated areas – requires altitude which means bush communities ▪ tree crop can be part of sustainable farming systems with shade provided by scattered rainforest or other trees

The program intervention is in the area of market and product development/ improvement, which is discussed more in other sections of this report.

The Program did support a study of coffee production practices and issues on plantings in the East Central Guadalcanal Highlands, centred on the village of Salamarao in Kolokarako Ward (Ward 14).

The main findings were:

- the coffee farmers are producing quality washed Arabica coffee parchment, a product suited to the high end local market; simple changes to their processing methods – fermentation techniques, drying times and storage planning - could improve quality to export grade
- farmers should have the harvest size and processing capacity to serve the Solomon Islands market in 2009 and beyond
- farmers need more processing equipment, better farm planning and processing training, and an improved trail system to get the goods to market
- 25 percent of coffee trees are dying in after 7 to 8 years; in addition to potential nutritional deficiencies in the soil, the trees appear to be suffering from both die-back and the white stemborer.

Tomlinson et al 2009

Other problems

During field work other issues were noted that were raised by Program users. The issues of concern related to natural capital assets is included here:

- pigs have become a major problem destroying food gardens on Big Gela – reportedly driven into garden areas by logging in the interior
- the need to improve soil fertility for home gardens in Tulagi (and potentially other small urban settlements)
- rat damage to sweet potato crop in some parts of North Malaita and Western Province
- other deficiencies in soil fertility being experienced variously by fruit tree farmers and food crop farmers – symptomatic of pressure on shifting cultivation in Solomon Islands.

Farmer innovations in natural capital asset creation

Production innovations

Timothy Tom in Namona, Malaita has solved the problem of beetles (*nissotra*) on his slippery kabis by introducing a species of red ant to the garden –'.. its not the small red fire ant….' .

People are just realizing that avocado and carambola are good feeds for pigs. Some people are starting to collect from a nearby plantation of avocado where most of the fruit rots on the ground each season. (Fred Aremao, Dala, Malaita)

Fred has been experimenting with timber shingles for his roof – a kind of construction never done before in Malaita. He is also planting rows of indigenous timber trees – akwa, and buni, as well as the exotic balsa.

Germplasm

Silas Kere at Kukundu with experimental methods of planting kumara using new varieties. – see case study under human capital.

Legumes for soil improvement

As mentioned in the Takwa and Hanipana germplasm centre case studies – there is experimentation occurring on new methods of improving soil fertility other than the traditional bush fallow.

Vanilla

Nelson Sopi found that using coconut husks for mulching in his vanilla plot was leading to a fungus problem. So he now uses 'rotten' (not fresh cut) sticks/branches of glircidia pruned from the shade trees and is getting good results

Vanilla farmers have discovered that the use of a over crop is good in their plantations. This technique is now spreading.

Pest and disease management

Planting of coleus flowers in gardens is a traditional method that has faded in many areas. Laurence Aldo has restarted the practice and believes it stops 'worm' from spoiling slippery kabis crops.

"This was our traditional practice and now we are bringing it back."
Laurence Aldo, Takwa, Malaita province

Use of klin liquid – left over from washing of clothes – is good at keeping insects off plants in fruit and nut tree nursery.

Soil fertility

Oiga: people say 'Oiga hemi lase, no save bonem gaden' but now they realize that the methods work and this is spreading.

"Mi barava hapi long kaen work – mi benefit from takem sileni. Enough foa kipim famili."
Boneface Oiga, Takwa, Malaita Province

Many farmers, including Oiga above, are now moving to a system of slash and mulch rather than slash and burn. This is a positive development in areas where fallow periods are falling.

8. Financial capital

PROGRAM STRATEGIES

3.2.1- In depth analysis of agricultural product markets / value chains and identification of constraints and solutions (e.g. coffee, cocoa, DME/VCO, vegetables, flowers, tropical fruits, staple crops, peanuts, kava, vanilla, spices)

3.2.2 - Adherence to relevant regulatory and market standards, including access to organic and/or fair trade certification and providing linkages to markets (eg. fresh produce, pineapples and cocoa)

3.2.4 - Supporting improved marketing skills, financial literacy and business competence by value chain enterprises

Vulnerability context for financial capital

	Trends	*Shocks*	*Seasonality*
Financial capital	▪ moving from one income generating option to another ▪ handout approach to projects– based on experiences with other donor and government. initiatives ▪ low cash returns to labour ▪ lack of savings ▪ uncertaintly over 'real' economy outside of aid inflows ▪ logging ▪ short term planning	▪ changes in prices – particularly of export products – cocoa, coconut and in future vanilla ▪ increases in cost of living / food	▪ farmers prefer to have regular income; for some crops such as vanilla this is not possible as it only produces about once a year ▪ reliance on external income coming in to support local markets

For details on what these scores are composed of see the relevant activity description in this section.

The program contributes to financial capital assets accumulation (increased income of men and women) through:

- increased production of cocoa and improved processing by medium and micro driers
- value adding of existing coconut plantations – virgin coconut oil (DME)
- sales of pineapple off season through new inputs, negotiation skills and crates for transport
- improved business and marketing skills and financial literacy
- improved productivity, product diversification and income from peanut sales
- improved post harvest handling, grading, roasting, packaging and product presentation for coffee
- increased diversity of staple root crops (sweet potato, casssva and African yam) available for sale in local markets
- sales of fruit and nut trees to farmers and future sale of fruit and nut tree produce
- value chain support eg. through strengthening of buyers
- support to cut flower growers and sellers for increased profitability and value chain development
- establishing new market opportunities along value chain with particular focus on food service sector which appears more promising than retail sector
- business mentoring approach with key players on various value chains
- financial literacy training for women and youth groups
- testing of pineapples to compare 'sweetness' (Pineapple)
- curing kits for successful vanilla farmers (Vanilla)
- training handbooks (vanilla and flowers) (Vanilla and VCED)
- specific technical and business advisory support for actors on the value chain (eg. Varivao holdings and the inputs of coffee, vanilla and value chain specialists; VCED).

Livelihoods - discussion on sources of income

"Most people want cash crops where they can earn income a few times a year"

Kokona village farmer group meeting, Guadalcanal

Main sources of income	*Score*
Pineapple	7
Vegetables (including sliperi kabis)	6
Coconut	5
Cocoa	5
Sweet potato / root crops	3
Fishing	2
Vanilla	1
Betel nut	1
Flowers	1

The table above displays a tally derived from comments and PRA exercises made with beneficiaries interviewed for the impact assessment when discussing their most important sources of income. The Program is working with all the income sources mentioned except fishing and betel nut. The sample is biased to people already involved with CSP activities. It will be expanded with future field work.

The top score for income sources was pineapple. This result is distorted as a large number of semicommercial pineapple farmers were interviewed to date. Fresh produce marketing in local markets or urban centres is one of the most important sources of income for most households – regardless of whether or not they are engaged in other livelihoods activities such as pineapple or vanilla.

Fresh produce marketing is particularly important for women in both local and urban markets. No CLIP (cocoa) project beneficiaries were visited, however cocoa still ranked as the third most important source of income overall.

Coconut (copra) remains important but frustrations were expressed at current low copra prices and high expenses for transport. Once underway the virgin coconut oil DME operations may change this by offering a higher price, closer to growers within the catchment of each DME operation.

Vanilla ranked low because many vanilla farmers are yet to earn income from the crop but the few who have started to earn income are pleased with the results. Those who are continuing with vanilla with more sound understanding of requirements and limitations are optimistic about the future for this crop. Some lead vanilla farmers earned their first income this year and this will increase next year.

Interestingly, large scale commercial logging operations were underway or had recently been completed in at least three of the sites visited but logging did not appear as one of the top five sources of income in any of the discussions indicating royalty from logging are going elsewhere. The negative effect on natural capital was clearly evident.

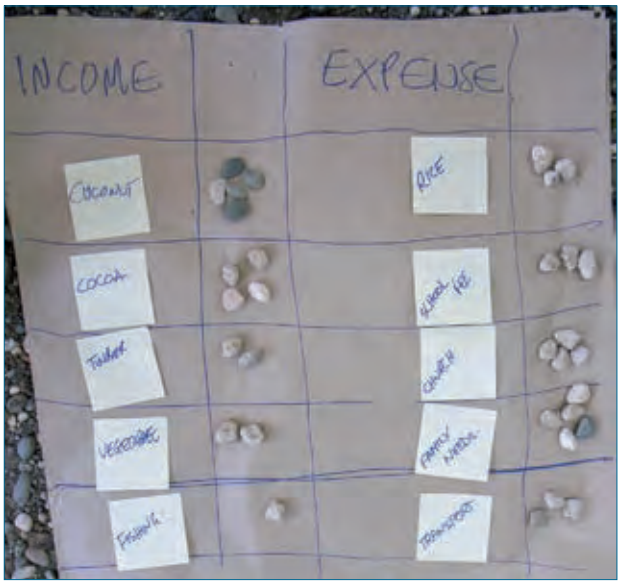
Uses of income/expenditure

> *"People will get money (from their new plantations) and use it wrong, then they go hungry and go and steal from others gardens."*
>
> *Malaita farmer group*

How households manage their income earned is an ongoing challenge for livelihoods. An estimated 70 percent of low income rural household income is spent on food (UNDP 2008).

Much of this is assumed to be the purchase of imported carbohydrates (rice, flour and noodles) which contributes to poor nutrition and increasing rates of diabetes. Meeting cultural/wantok obligations have been cited in many Pacific countries as amongst the primary causes of cash shortages in households, thereby constraining their ability to meet normal day-to-day basic needs expenditure. (UNDP 2008). Our data confirms this in Solomon Islands.

There is little evidence of cash savings. In areas where ANZ banking is operating it was suggested by farmer groups in Bina it would be interesting to see how many accounts are being opened by those involved in Program activities.



PRA group Exercise on income and expense sources with scores from 1-5.

Each Program activity and its impact on financial capital is discussed below

Vanilla

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
1. vulnerability of a 'weak buyer' who is currently the only outlet to sell vanilla 2. farmers earn income about once a year 3. farmers wait 3-4 years for first harvest with high level of care in between 4. many farmers started in the 'fever' with unrealistic expectations of price and lack of skills for growing this quite different crop	1. prices from Honiara buyer for farmers are good relative to world prices 2. high value and low weight product well suited to more isolated places with poor transport links 3. effort is being made to strengthen the one existing buyer and to diversify the number of buyers 4. value added product (vanilla essence) with domestic market demand 5. advice based on commercial experience in the Pacific (Vanuatu)

'Vanilla is generally a last choice for a cash crop – its good for areas that do not have too many alternative sources of income.' Piero Bianchessi – CSP Vanilla Adviser

'(with vanilla) …you can only earn money once a year. Most people want cash crops where they can earn income a few times a year ' (Kokona vanilla farmer group discussion, Guadalcanal)

Managing expectations of farmers

The preactivity situation for vanilla was a large number (250 plus) of farmers planting vanilla with little or no knowledge of its climatic or agronomic requirements and very unrealistic expectations of vanilla prices based on stories from PNG. This was the 'vanilla fever'. Most of these farmers were unlikely to ever produce a quality product due to poor production and post harvest practices and their price expectations likely to never be met. There was no outlet for farmers to sell their product in the Solomon Islands.

The situation today is a transformed one. A core group of at least 14 successful lead vanilla farmers are producing high quality product with the skills and experience to train other farmers in the agronomy and curing requirements for vanilla – among 250 trained and visited. There is a local buyer – Varivao Holdings – and a potential domestic market demand for vanilla beans and vanilla essence that exceeds current production.

The Activity has successfully trained and visited approximately 250 farmers in the requirements for quality vanilla production.

For many families the project has helped them to make a balanced decision to exit vanilla farming and concentrate on other livelihood activities as well as reduce the hype and misinformation that surrounded the crop prior to the Programs intervention

In practice many farmers who started during the 'fever' have given up on their vanilla crops. Vanilla has a number of disadvantages in terms of financial capital:

- you only earn income about once a year
- it is quite difficult and time consume to produce (grow and cure) quality vanilla (and only quality vanilla can be sold) — the technical challenges and changes in skills are discussed in the human capital section
- it takes three to four years to the first harvest.

Vanilla also has specific climatic requirements. The largest area of Solomon islands with these conditions also coincides with the catchment area for Honiara market.

This is unfortunate as vanilla is well suited to isolated areas with poor linkages to markets as it is of high value, light weight and can be stored for a long period.

Most of the isolated areas of Solomons islands receive too much rainfall to produce quality vanilla on a regular basis.

A core group of lead farmers

Of those farmers who have continued with their vanilla a core group has emerged who have the skills to produce very high quality vanilla and some of these are showing an interest to teach other farmers – being ideal lead farmers.

Honiara based vanilla buyer:

"I sold 3.5kg the first year, then I sold 11kg the second time for $275kg from Varivao"

Guadalcanal Vanilla farmer

The program has also worked with a local business Varivao Holdings (already involved in kava and coffee marketing) to develop an understanding of the requirements to be a vanilla buyer and how to engage with the local and export market for quality cured vanilla and vanilla essence. Inputs have included grading skills, product development, packaging and labeling, product presentation advice and links with suppliers for necessary inputs.

This has had some success with Varivao taking on the purchase of vanilla for the last two years and developing a vanilla essence product with high demand from buyers in Honiara. Current vanilla buying prices from Varivao Holdings:

- 1st Grade : $200 kg
- 2nd Grade: $180 kg
- 3rd Grade: $160 kg.

"…even by Australian standards these are good prices."

Piero Biencessi

At these prices to farmers, the price of Solomons vanilla in an export market of Australia (allowing for typical mark up) would be close to AUD$75/kg. This means Varivao Holdings or other Solomon Island exporters will have to find a premium buyer in Australia (or other markets) who understands the much better quality they are getting compared to some other lower priced sources of vanilla. Venui Vanilla in Vanuatu has proven that this approach can work.

At present it appears that the domestic market for vanilla essence and potentially 'take home' vanilla packaged for tourists and expatriates can absorb much of the vanilla production for the next couple of years. Beyond then it may be necessary to develop export markets which will require a committed player on the value chain.

Concern over Varivao Holdings as sole buyer

"We need to have more than one buyer, in future maybe we could even export ourselves." (Fatima vanilla farmer group) – was a common comment from vanilla farmers.

Despite the TA provided Varivaos response has been lacklustre.

Recently, the program has responded to the weak response of Varivao to vanilla as a core part of their business by seeking to diversify the number of vanilla buyers in Solomon Islands.

Kokonut Pacific and Jedom are two local entities where discussions are at an advanced stage on the commercial opportunity of vanilla both for export and a for sale of vanilla essence and vanilla beans domestically. Neither have made a decision and both may be reluctant to diversify from their current core business. VCED investigations indicate a very strong potential market for vanilla essence among food service sector.

Pineapple

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
1. value adding opportunities are yet to be taken up / proven on commercial scale 2. many famers have ongoing difficulty with business skills in their pineapple marketing making it difficult for them to assess and make decisions concerning new marketing opportunities 3. some consumers in Auki market have shown resistance to out of season pineapples produced with flowering hormone	1. pineapples have become the main source of income for many households 2. some households have been able to reinvest pineapple income into 'physical capital' assets such as improved housing and solar panels 3. potential for some value adding and contract marketing has been identified but yet to be taken up

"Looking at the changes since the 1970s to present pineapple has made a big contribution to the lives of local people. Income from pineapple has been used to build the many permanent houses you see in the village."

Arabala pineapple farmer and community leader, Malaita

Pineapples are a successful cash crop in certain areas of Solomon Islands with access to larger urban markets (Honiara, Gizo and Auki) and good soil conditions for pineapples.

Program surveys (2008) indicate there are 55 families at Aruligo with over 500 pineapples, 28 at Arabala, Malaita and 35 at Bina, Malaita. For example, the group who joined an impact assessment meeting of 18 male and female pineapple farmers in Bina, Malaita had a combined current pineapple crop of 25,000 pineapples with a potential market value of $300,000 (valued conservatively at $12 each). This makes pineapple a very important cash crop in these areas delivering an average household income of about $16,000 per crop.

Demand is high all year and there is potential for other areas with suitable access and soils to get involved in commercial pineapple production. This makes pineapple farmers among the better off farmers in Malaita.

The Activity has aimed to help these farmers improve their production and returns through value chain analysis (Stice et al 2008) and targeted interventions.

Off -season pineapple production

The major intervention to date has been the introduction of flowering hormone for off season pineapple production. This has been very successful in Central Province as shown in the Davala case study, with farmers taking up the opportunity of supplying off season pineapple to Honiara (and reportedly for Aruligo, West Guadalcanal Farmers and Mile Six farmers in Gizo, Western Province who all received similar training from the Program).

For Malaita pineapple farmers results have been more mixed with few, if any farmers going beyond the trial stage.

There has been low uptake of use of flowering hormone in Bina and Arabala, Malaita for a number of reasons:

- farmers are concerned about the effects of flowering hormone on their marketing with some consumers concerned about 'spray' pineapples as well as on perceived consumer preferences for 'natural' or 'organic' produce[13]
- if flowering hormone is used in middle of year pineapples are ready at same time as Guadalcanal farmers – resulting in low prices in Honiara. One Bina pineapple stated he was forced to sell his pineapples for $5 each in Honiara at an overall loss. They could apply flowering hormone earlier in the year but some were concerned that it would not work if applied in rain season. Malaita pineapple must undergo longer transport and so do not appear as fresh as Guadalcanal pineapple – increasing the risk of marketing in Honiara
- confusion about the price of flowering hormone and how to incorporate this into their financial planning with overall poor business skills[14] of most farmers
- flowering hormone is not easily available in Malaita (although CSP office had offered to bring it over for sale to farmers and they were aware of this offer) – when discussed some women farmers though that if it was for sale from a trade store at a per ml price they felt more people would buy it
- most farmers are in a stable pattern of selling smaller quantities of pineapple to Auki market with surplus sold in bulk to take to Honiara.

The activity has also looked into opportunities for contract selling to larger buyers. Some Malaita farmers looked into this but found that the larger buyers such as SICHE still only wanted relatively small amounts of fruit at a time (100 in case of SICHE, and the Mendana Hotel is reported to be similar) and it was not viable for them to make a trip to Honiara for this number of sales. Farmers in Guadalcanal and central province have been more successful in taking up some of these opportunities and informal arrangements

Transport

There are plans to introduce suitable crates into pineapple value chains to improve the transport of produce. Research into farmer preferences has been completed and crate trials are planned. Initially it was proposed to import crates from Natures Way Cooperative in Fiji but a suitable crate, meeting farmers criteria, was found in stock at George Wu Ltd in Honiara.

13 This has been confirmed by interviews conducted by Grant Vinning with restaurants in Auki, some of whom are opposed to selling pineapple produced with any external inputs including flowering hormone.

14 he skills required according to the activity adviser are the need to include costs and an ability to estimate pineapple production from a known set area and provide a value for family labour.

FNTP

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
1. uncertainty about how much increased fruit production can be sold in local markets 2. difficult to transport to distant markets due to perishability 3. uncertainty over how nurseries as income generating business will work	1. there is believed to be growing demand for fruits in urban and some rural markets 2. specialized trees – rare fruits, grafted varieties – have generated interest and are likely to be able to be sold as trees for planting and later as fruits 3. certain rare fruits already have good income potential in larger urban centres

.

"I plan to graft sweet five corner varieties onto root stock. I have 500 pots of root stock that I have started growing. I think I could sell these for $10 each locally – so that's $5000. I would like to grow more trees but it all depends on poly bags. I also want to put some of the trees aside to plant on my own land."

Suiti Okesi, Manakwai, Malaita

Nursery as microenterprise model

The project document proposed the establishment of fruit and nut tree nurseries that will sell trees to farmers and be viable as microenterprises themselves.

There is some concern over the sustainability of a nursery model based on sale of trees but it is too early in the project to assess. For example, early results from Aruligo, West Guadalcanal, are showing that farmers are more than willing to buy grafted carambola from a farmer (John Maeli) nursery (William Sotabatu – FNTP Nursery Specialist). Better links with the VCED might be useful to help farmers to develop the best business models and skills for long term nursery operations.

On the positive side there are farmer examples of a high-value trade in fruit tree seed and fruits at the local level. For example, seed of a prized large fruit variety of guava are sold for $1 each in Malaita.

"(I have) No idea about selling trees – I am just growing them for myself." Kwailatua Malaita

Some farmers with established nurseries had no idea that their nurseries were considered to be for sale. They felt they were growing trees to plant themselves.

Fruits with potential

One exception showing the potential for exotic fruit sales is durian. Local people who have collected the fruit from trees established at a former agriculture research station have been surprised to see they can sell it for $10-$50 to Asians (in Auki market). Avocado is also starting to sell in local markets. (Fred Aremao, Malaita)

Farmers talked with in Malaita felt marketing of fruits to Honiara might be difficult due to perishability. They wondered if there was some kind of processing that could be done. However they did see demand for fruits in their local markets (e.g. Bina weekly market) and knew they would be able to earn income from growing more fruits.

Cut flowers

Summary Impacts on financial capital assets

Negative impacts	*Positive impacts*
1. still operating as passive sellers – not proactive ability to knock on doors and find buyers 2. commercialisation of landscaping has not occurred 3. resorts and tourism are not such a good business source 4. at present flowers are overpriced for domestic market compared to Fiji	1. new technical skills in flower production and arrangement have allowed growers to add value to their product 2. new opportunities for financial arrangements between growers and sellers have opened up 3. business skills are improving 4. domestic market has best potential for growth – so not tourism dependent 5. understand how to grow plants and flowers for profit (not just beauty) 6. boxes for transport of orchid flowers on Solomon Airlines (domestic) 7. largely a women focused industry which means gains in value on the value chain will fall to women.

Flower growers have learned new methods through training provided by the Program.

Flower growers in and around Honiara (Betikama and Kakabona) have had their technical and business skills improved. The result is improved product presentation, increased sales and confidence and improved organization of the industry – as shown in the Orchid Arts and Crafts case study.

The profile of the industry has increased through media publicity and a high profile flower arrangement competition. Attendance at flower industry training activities has exceeded expectations demonstrating very high demand.

The flower business is not the main source of income for most of these peri-urban households – in many cases the husband is employed in Honiara. It has become an important supplementary income controlled by women and a source of great pride and interest for the women involved.

Market potential

VCED has identified the domestic market as the main area for potential growth (Stice 2008). At present, many flower products are over priced for this market. But government meetings and churches already create relatively high demand for flowers for important events.

Resorts provide some limited opportunity for growth and some linkages have been made. For example, Tavanipupu resort would like to have orchid flowers sent from Honiara on a regular basis. To facilitate this VCED has imported cardboard flower boxes from Fiji for a trial run for air freighting of flowers on Solomon Airlines domestic service to Marau. The case study shows how Orchid Arts sees the potential for these boxes.

The market chain has shown some development with the emergence of flower buyers who are concentrating on the retailing end of the chain.

SEAREM

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
	▪ increased production of sweet potato means potential for increased sale in local markets ▪ potential to provide modest regular income even in isolated areas ▪ highly suited to improving womens income

VCED Program analysis of data from the SIG Household and Expenditure Survey indicates the value of production of 'food home consumed' and 'food given' to be $686 million per annum ($7,912 per household). *(Vinning et al 2009-16).*

Root crops and marketing of fresh produce is often the most important source of income for rural households and is particularly important for women with the income earned from local markets often being used to meet basic household needs.

The SEAREM activity focus is on increasing production and diversity in staple root crops. This increased production and resilience resulting from diversification is expected to have an indirect impact on income through sales in local food markets. VCED is also carry out training on organic farming for commercial market gardeners.

CASE STUDY: sweet potato marketing for local markets in North Malaita

Boneface Oiga, Takwa, Malaita

Oigas family rely on sale of sweet potato as their main source of income. They sell in local village markets and by order in 50kg bags.

Since the reopening of the road at Takwa the local markets are flourishing and many people travel long distance by truck and bus to trade at the local markets.

Boneface received three varieties of sweet potato (SPC varieties) and two best local varieties from the neighbouring Takwa Germplasm Centre. He and his wife planted the varieties in their garden and, so far, the SPC varieties are not bearing well but the two new local varieties are. He plans to plant more.

"If husband and wife work together than you will succeed at home. When you live in the village what else can you do? I used to work in town and just collected my pay packet. When I moved back to the village I did not even know how to plant potato – now I work winem wife! Our main source of income is sweet potato . We make more money selling potato in the local market than running a trade store or cocoa."

A simple value chain for fruit and vegetables in Solomon Islands

An estimate of SBD$100 million is made for the retail value of fresh fruit and vegetables in Solomon Islands *(Vinning et al 2009).* Allowance must be made for transport costs and post harvest losses to convert the retail value to a farm-gate value.

Transport costs are between 25-33 percent of gross sales *(Vinning and Sale 2009a, 2009b, 2009c)*. Post-harvest losses are around 25 percent depending on the crop and how it gets to market *(Jansen 2005a).*

Taking these into account, the retail value becomes an ex-farm gate value of SBD$50 million. After deducting production costs and making an allowance for farmer and farmer family labour costs *(Vinning and Sale 2009d, Jansen 2005b)*, the production value of fruit and vegetables is estimated to be $25 million.

This approach shows that the market value-adds a factor of four to production. The implication is that the greatest returns to interventions to improve the marketing of fresh fruit and vegetables lie with activities directed at 'the bit in the middle' and the actual marketing rather than with the production component of the marketing chain.

VCED interventions to improve the value chain of fresh fruit and vegetables in Solomon Islands include:

- identification of costs for all participants along the chain as a basis for negotiations
- negotiation skills training, especially the development of an *Ask-and Offer* matrix
- development of contracting arrangements that include producers to sellers and producers with transport arrangements
- the use of crates to reduce post-harvest losses and improve efficiencies in handling.

A simple value chain for fruit and vegetables in Solomon Islands

Participatory guarantee system for fresh produce

VCED is undertaking research into a participatory guarantee system (PGS) for fresh produce marketing.

This is an innovative approach aimed at linking producers and consumers (whether direct consumers or service sector actors) with an agreed standard. This will be covered next report.

Peanuts

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
▪ risk of aflotoxins if peanuts are poorly handled	▪ new skills to negotiate contract or bulk sales of peanuts ▪ 9 new varieties being tested – each with characteristics suited to different uses – eg. oil, roasting, fresh peanut etc ▪ have potential to increase sales income through increased production and new products ▪ new methods of presentation of product – eg. roasting, salting, with salt or without etc. ▪ improved business skills

The peanut activity is in its early stages. Trials and multiplication plots are established and some training has been done in Guadalcanal, Savo and Makira. Growers are learning to negotiate prices based on volume – for example accepting a lower price for bulk sales rather than waiting all day in the market for a higher sale price and higher risk. Some technical issues with peanut butter have been identified and solutions are being researched – eg. how to produce a peanut butter with oil mixed into the peanut butter as this is what one resort requires.

New varieties have been selected based on potential for product diversification – a novel approach.

DME Coconut

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
▪ some uncertainty over financial viability of Kokonut Pacific without ongoing funding from external donor sources (not CSP) ▪ only one buyer at present for virgin coconut oil ▪ high cost per unit	▪ adds value to existing plantation crop – coconuts ▪ partnership with Kokonut Pacific Ltd who have long term market developed ▪ some coconut oil (cooking and biodiesel) and left over coconut meal has potential to be sold locally ▪ potential for increased income to wide number of households ▪ DME owners must make significant cash and materials and time contribution to the project start up ▪ good for isolated areas – higher value, nonperishable product ▪ creates employment opportunity – 8 people a day work at each village based facility

The case study discusses how the Program has been able to assist KPL to expand their operations in a sustainable manner.

CSP has added value through its ability to screen, assess and support potential applicants for DME processing units.

At the time of visits the DME facilities were still under construction. They were close to being commissioned by Kokonut Pacific. The next report will assess how the facilities are operating and impacting on livelihoods.

DME facility close to completion at Mana'ere, Malaita province

CLIP

Summary impacts on financial capital assets

Negative impacts (potential)	*Positive impacts (planned)*
▪ resistance to cash contribution.	▪ adds value and increases production to existing plantation crop ▪ yield increases and quality increase have potential to lead to increased income for large number of rural households ▪ encourages cash contribution and investment by cocoa farmers rather than handout mentality ▪ working to address some of the constraints in very limited number of players involved in exporting of cocoa

The CLIP project was just getting underway at time of report writing so it is not yet possible to assess its impact on beneficiaries.

Given the importance of cocoa as an income source for a large number of rural households this activity has potential for very wide impact. Next report will have more focus on CLIP.

VCED is interested to look at how the method of production of cocoa – eg. organic or rainforest friendly – can be turned into a marketing advantage. Cocoa buyers are also seen as an embedded nest of entrepreneurs who could use their skills in handling large amounts of capital and logisitics for other product development.

Marketplaces

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
	▪ potential to increase rural incomes/trade – not yet proven as markets visited were not yet open ▪ more comfortable and safe trading environment for vendors and buyers

The IA team did not visit any operational market places – more next report.

Coffee

Summary impacts on financial capital assets

Negative impacts	*Positive impacts*
▪ concern over only one buyer and their questionable commitment to the products development ▪ irregular and inconsistent quality of supply of coffee to local sales outlets is threatening the growth of a local market for quality coffee	▪ Improved product quality of Varivao Holdings ▪ improved packaging and presentation of coffee ▪ income source for very remote bush communities (Isabel, Guadalcanal and potential for Malaita and Makira) ▪ technical inputs based on real commercial experience in Pacific (Vanautu)

VCED is supporting the development of a niche coffee industry. A stable coffee industry with reasonable prices offered to farmers will provide an income source for very remote communities who currently have some of the lowest incomes in Solomon Islands. (KGA- weather coast report).

Coffee imports are worth SBD$5 million per annum with potential for sale of ten tonnes per annum of roast and ground products for local consumption. Improvement in quality and product presentation of the product line of Varivao Holdings has been achieved through technical inputs from the Program. This has looked at handling, roasting, and packaging as well as support to coffee outlets to ensure their espresso machines and grinders are operating at optimum potential to deliver the best coffee.

There is considered to be a large opportunity for increased sales of coffee on the domestic market. Unfortunately there have been issues with inconsistent supply and variable quality leading some outlets to discontinue purchasing from Varivao.

"I sampled this year's harvest from one of the farming families in Nakola Village, Guadalcanal.

"The farmer roasted the coffee in a frying pan, pounded it into powder and strained coffee into cups. While not the standard for cupping coffee, this traditional village method is more than suitable to determine the basic characteristics of the coffee.

"I found it clean and balanced (acidity and body) with interesting citrus and spice notes. Not only was the quality good, but the coffee had what I believe are unique characteristics prized by specialty coffee buyers.

"More importantly, the coffee I sampled was quite different from that offered by Verivao (Holdings)."

Tomlinson et al 2009

Processed foods

Summary impacts on financial capital assets

Negative impacts	Positive impacts
	▪ food safety training ▪ identified pacific business' able to provide technical assistance ▪ promising 'wet' and 'dry' products for further support identified

VCED is working with producers of wet and dry products and has also identified cassava flour as an opportunity area for further inputs.

No IA work has been done on these areas as yet other than a discussion with women trained in jam production in Tulagi.

CASE STUDY: Jam making – value adding for pineapples

A Training of Trainers (ToT) food processing workshop was held with women from Tulagi and nearby villages, including some Davala pineapple farmers in late 2008.

Three representatives of church groups from Tulagi attended with the aim that each woman would be a trainer for their church group members.

After the ToT each of the women did a training on jam making with their respective womens groups. Most families then proceeded to make jam at least one time. They bought pineapples in the market for the usual local price of $5-$6 each, but because of the sudden demand for pineapple in this small town, the growers put up their prices to $10-$20 each. The women gave up buying pineapple as they could not make profit at this price and the price (and sales) collapsed again. Many of the women continue to make the occasional jar of jam for home consumption only. They are happy with this new skill as before they rarely consumed jam at home as it was considered an expensive luxury item.

They now have the technical skills to make jam but do not have the business skills to negotiate with the growers or to find markets for the jam.

The women commented that 'if there was a buyer then we would go ahead with it'.

After further discussion about the small trade stores in Tulagi it appears that there is a market opportunity that the women had not identified. For example, the womens centre canteen in Tulagi sells 8-10 bottles of imported jam each time a workshop is held.

In contrast, the VCED team report that a person trained in Auki Malaita has now taken on jam making as a business and is finding this successful. VCED has identified the need to focus on 'jam as a business' and the potential of the service sector as a more appropriate market.

Innovations in financial capital

The program is promoting innovation including:

- packaging and labeling inputs
- processed foods – wet and dry product training
- flowers – boxes for transport
- Participatory Guarantee Systems (PGS) for fresh produce
- using appropriate models
- pacific entrepreneurs as TA/trainers
- SEAREM Lessons Learned – use of farmer groups for germplasm assessment and distribution to expand staple food crop production
- peanuts selected on basis of market product diversification.

There are plans to share and discuss these and other innovations of the Program at a seminar/ meeting later in October/November 2009.

9. Social capital

What is social capital?

Social capital is taken to mean the social resources upon which people draw on in pursuit of their livelihood objectives.

These are developed through:

- networks and connectedness, either vertical (patron/client) or horizontal (between individuals with shared interests) that increase peoples trust and ability to work together and expand their access to wider institutions such as political or civic bodies
- membership of more formalized groups which often entails adherence to mutually – agreed or commonly accepted rules, norms and sanctions
- relationships of trust, reciprocity and exchanges that facilitate co-operation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

Social capital is the most connected to 'transforming structures and processes'. It can be useful to think of social capital as a product of these structures and processes, though this over simplifies the relationship.

Mutual trust and reciprocity enable people to work better together which means that social capital has an impact on other types of capital. Social capital can have positive and negative influences on livelihoods. Social capital may be a particularly important 'resource of last resort' for the poor and vulnerable.

It can provide a buffer to help cope with shocks, act as a safety net during periods of insecurity; compensate for lack of other types of capital *(DFID 1999)*.

Social capital is very important in the Solomon Islands. The 'wantok system' is the pidgin term for the complex range of social obligations and support networks that are embedded in Solomon Islands culture. These provide safety nets ensuring that almost all people have access to basic needs, that the elderly and sick are cared for etc.

In the subsistence economy, surplus production is often disposed of by converting to social capital through giving and sharing. At the same time, these obligations create pressure and stresses on households with cash income. The tradeoffs between social capital and financial assets is of increasing concern to many Solomon Islanders.

Vulnerabilities in context of social capital

Trends	Shocks	Seasonality
▪ more money based society ▪ decline in community labour and other community contributions ▪ people easily give up if not visited regularly – vanilla lead farmer	▪ conflict ▪ economic shocks	Returns on social capital are often very long term

Results from field work

Social capital impacts

CSP Agriculture Livelihoods Program Activities	*Negative impacts*	*Positive impacts*
VCED		
FNTP		
Vanilla		
CLIP		
SEAREM		
Pineapples		
Peanuts		
DME coconut		
Market places		
Flowers		
TOTAL		

'Sileni no moa woka' – changing attitudes to community work

"These days everything is based on money"
Ara'ao market committee chairman, Malaita

In general, the program works with individual families. This makes sense as most livelihood activities are carried out at the household or family level rather than at the community level. An important lesson has been the failure of community based business models for income generation and that families are the right level of intervention particularly at production level.

However, some activities involve community infrastructure such as public market places require the community to mobilize resources as a group and provide either an in-kind or cash contributions. Many involved in these projects spoke about changing community attitudes and the challenges of getting people within the community to fulfil agreed or expected commitments.

We are not able to comment on the social impact of new market places as they were not operating at time of visit – this will be the subject of future reports.

Three different examples of communities attempting to meet their community commitments were observed

Community effort – Lambi Market Place, Guadalcanal Province

Nine communities are working together to build up the Lambi market place on the road side near the coast. They have a community work day every Wednesday. The project was behind schedule (according to Program staff) but local people seemed generally pleased with the progress and confident it would be finished. (The market place was completed and opened in June – 6 month report).

Province as community contribution – Tulagi Market Place, Central Province

Nearby communities were requested by the Province to come and help carry gravel and sand for the Tulagi market place project. '…we waited for days and they never came.' (Chairman of the Market Place committee). Instead the market place committee requested that the province provide some support instead of the planned community contribution. The province committed finance (at least $20,000 in site preparation and bricks) and other contributions including manpower and resources from the works division. The committee felt that this contribution of the province was representative of community contribution and they had the support of the local CSP officer who presented their case in Honiara. The Market place started operating around June 2009.

Contractors in place of community – Ara'ao Market Place, Malaita Province

Community work has been a challenge. At first many people did not believe the market place project would actually happen. They put in some effort to begin with but less and less people came on community work days to carry timber and then none. In the end the market committee hired youth groups to complete some of the work intended to be done by the community and the rest was done as additional contribution by the contracted local builder. The contractor says they are going to recover their extra costs by taking part of the market fees for a period of time. The market place was planned to open in October 2009.

Community mobilization – contracting versus self motivation

The SEAREM activity contracted farmer groups (some informal and some more formally structured) to carry out germplasm evaluation, multiplication and distribution (as described in natural capital section).

Some of these individuals and groups had previously done this or similar types of work on their own without financial reward albeit usually on a smaller scale and slower time frame.

There is a risk that contacting can undermine community commitment and mobilization of their own resources to provide services. The balance between providing incentives in the form of contracting arrangements to scale up work done (and therefore wider and faster potential services and benefits to others) versus facilitating self help approaches is another trade off.

The Searem project did contribute to social capital through the networking of these centres on a provincial and national level, through some training on group management, attending meetings or other KGA/SEAREM events and HF radio contact.

A similar example of the potential for rapid roll out of projects to undermine home grown efforts was mentioned in Ara'ao, Malaita:

> *There is a local self help SSEC youth group who is hired by families to clean up their cocoa plantations. This home grown effort could potentially be undermined in this particular community by the work teams contracted under CLIP. But CLIP has the larger scope and aim of a large national increase in cocoa production and how to achieve this as quickly as possible.*

These are tradeoffs between achieving short term activity and project aims and longer term social asset creation in communities own capacities to help themselves and not depend on outside institutions.

Supporting individual enterprises with wide community benefit (eg. DME examples)

The DME project is described in case study number four. The project generates social capital assets through:

> *Creation of a network of suppliers of green, husked coconuts around each DME unit, and the involvement of each DME unit in a national network under Kokonut Pacific. This network provides training and support structures as well as a guaranteed, organic certified market for the coconut oil produced.*

Social impact on markets and marketing

"Social pressures and perceptions can influence marketing. Traditional markets were more about facilitating access to needed products in order to maintain social harmony than for individual gain."

Converation with Grant Vinning – VCED adviser

'mi fala laes long kemical' – chemical free consumer preferences

A strong preference has been found among buyers and service sector outlets in Auki and potentially in other places for 'organic' or 'chemical free' fresh produce. This has had an unexpected negative impact on acceptance of pineapple produced off season using flowering hormone. The flowering hormone, known as 'spray' has been associated with other more toxic agriculture inputs which consumers have become wary of.

A similar example has been the effect of perceptions among pineapple farmers in Arabala, Malaita that their pineapple were not as sweet as a competing nearby region at Bina. This had led to them having a lack of confidence in their product in the market place.

> Many Arabala pineapple farmers were convinced that their fruits were not as 'sweet' as their competitors. This perception was reversed through testing of sugar content of their pineapple fruits by the Progam. This was done using a refractometer to test sugar content. This has resulted in a marked change in attitude of Arabala farmers to their product – they are now confident that their pineapple is as good or even better then their competitors.

Conversely social capital can be built by giving people increased confidence and social standing through new or improved livelihood activities as shown in the Orchid Arts Case study

Social leveling

There are strong social 'leveling' mechanisms at work within rural communities. Jeolousy, complaints, not standing out are all common concerns. Anyone who is successful above the norm in their livelihood – particularly for cash generating livelihoods – will be asked to provide more for their relatives. These effect both men and women.

The complaints are usually combined with requests for 'helpem' people – ie. to redistribute money or other gains from new livelihood activities.

There is little understanding of things like cash flow versus profit. In some cases these subtle or not so subtle pressures lead people to abandon promising new livelihood opportunities rather than face social criticism and pressures. For example, one woman making a fruit tree nursery (case study in natural capital) had heard complaints from other women that '…she was wasting her time.'

Farmer to farmer approaches

The program contributes to social capital through the use of innovative extension approaches that build relationships and capacities to learn and share information about livelihoods and agriculture improvement. These include:

- farmer visits (done by experts ranging from program TA to lead farmers who make regular field visits to farmers and other program clients and provide informal advice and support)
- diversity fairs (SEAREM) – large gatherings of farmers where varieties of crops are shared and information about varieties exchanged, sometimes prizes provided
- look and learn (SEAREM, vanilla, peanuts)
- encourage sharing (of varieties and knowledge – all activities)
- radio program (SEAREM)
- exchanges (SEAREM, VCED)
- farmer field school (CLIP).

Farmers involved have provided positive feedback on these approaches with many requesting more.

The ultimate impact should be reflected in changed practices but a more intangible impact is the new links, relationships and group formation that occurs.

The Farmer Field School model of CLIP is an innovative approach not yet tried in Solomon Islands but with much success in other parts of the world.

In some locations, African yam has been 'hidden' by some farmers (ie. not shared with others) which reflects its value to them but also is a setback for wider sharing. This is similar to traditional practices of keeping prized taro varieties 'hidden' from others and reflects the importance the crop is being given. *Jansen 2002*

> In other locations, African Yam has reportedly been widely shared, for example, in Kukundu and Mondo on Kolombangara African yam is now growing commonly outside village houses.
>
> Internal report KGA by Claudine Watoto

Challenges of farmer-to-farmer approaches include:

- misinformation
- hiding knowledge and varieties.

As shown in the case study by Mary, farmers may choose to not share with others or only share within certain family groups, particularly if a variety or new skill is valuable and may give one an advantage over others. In another example, a new vanilla farmer in west Guadalcanal had gone to see another more experienced vanilla farmer who had lied to him about how to cure vanilla to intentionally mislead what he thought of as potential competition.

Institutions

Each activity has its own institutional partners. During field work we also asked farmers to draw diagrams of how external institutions impact on their community and livelihoods (see photo next page top right). These will be used to monitor changes over time and to build up a wider picture of the types of institutions and the strength or weakness of their connections to rural communities from the view point of beneficiaries.

Some early findings are presented:

Score	*0*	*1*	*2*	*3*
Institutions linked to pineapple farming livelihoods	Government	Agriculture extension	Youth groups	Road
		extension	Market places	CSP
		Ships	SIDT	Hospital/clinic
		Transport providers	School	Church groups
				Labour and effort of families and individuals

The scoring of Bina pineapple farmers demonstrates:

a) the important of village based institutions – youth and church group who assist with labour needs, hospital/clinic for servicing health needs, CSP for their recent work on pineapple extension and the road that links them with the market; also mentioned were market places, SIDT who is working with the community on capacity building and the importance of their school. They felt this group needed improvement

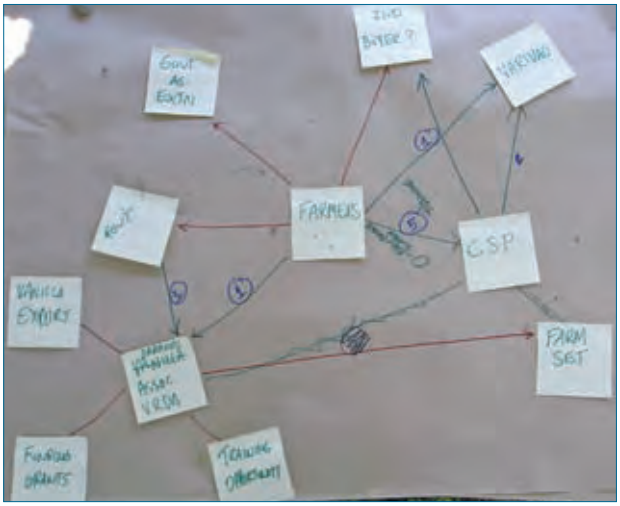
b) agriculture extension, and transport providers on the road and sea were considered very important but not currently meeting their needs and so scored low

c) the strongest frustration was with government whom farmers felt had done little, if anything to help them improve their livelihoods.

> There are early indications in the FNTP project that different nursery institution types eg. RTC, government, or farmer operated, are leading to different results. This will be explored more in future inputs.

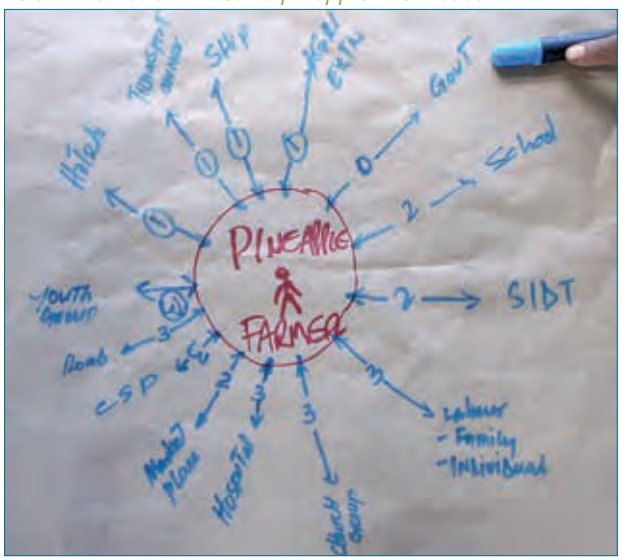
The formation and support of 22 rural germplasm centres was achieved under SEAREM (see case study under Natural Capital). Many of these centres later complained about poor support from KGA which in some cases led to centres abandoning their collections. Vanilla and some other farmers expressed a desire to move slowly with formalizing informal institutions at the community level.

> Floriculture SI has been established as an organization to represent flower growers. The Association will take over the marketing of flower booklets produced by CSP.



Above: farmer links to organisations

Below: institution linked to pinapple livelihoods



Changing livelihoods

The issue of 'swinging livelihoods' was raised a number of times in discussions.

There is a concern that many households sway from one livelihood focus to another without consistently applying themselves in one area. Donor projects are seen as having an influence in that they lead people into one new area but then another project comes along and pulls them in a different direction. Changing prices also have an influence with families attracted to new crops when prices are high but then abandon them when prices are low.

Culture and livelihoods

Some examples are included of how the Program can have spin off impacts on culture and livelihoods.

John Kiri, Bitama, Malaita

John Kiri planted many of the SEAREM SPC sweet potato varieties but found only two that performed very well. He realized they were local varieties from 'before' that has been lost in their area. They used to call them Fafulolo and Abereba (SPC 088) and the old people instantly recognized these varieties from the past and were excited to have them back. Younger people had only ever heard stories about these legendary varieties from their grannies. Since the projects distribution around Bitama these varieties are spreading very fast and are now common in the local market. It takes three months to harvest, is high yielding and tastes very good. But perhaps more importantly it is seen as a return of a lost cultural item.

Similar stories have been reported in western province where some of the 'new' SPC varieties have been recognized as the same as existing local varieties. Women report the yield is of the 'new' (virus free) is higher than their local ones.

Claudine Watoto – KGA meeting

Insitutional innovations

Land ownership

A group of landowners in Ara'ao, Malaita have grand aims for their land. They have put aside an area of land between the road and the coast for development of a 'town centre'.

The land has been surveyed and plans, including roads and allotments, put to government authorities to support their aspirations to develop a town within their customary land.

The vision is to have public facilities as well as land available for long term lease for private business to be established within the centre. They saw the CSP funded Ara'ao market place as an early part of this rather visionary plan.

Taking crop diversification to heart

A number of germplasm centres have taken the principles of collecting and sharing varieties learned in SEAREM and applied it to other crops important for food security and livelihoods.

These activities have been done on their own with no support from the project and demonstrate a strong commitment by these groups to the value of crop diversification and conservation of their local diversity.

- in Mouta, Makira, women who were involved in bulking activities and also making banana chips decided to start collecting varieties of banana and sweet potato suitable for chip makinngThe same group in Mouta, Makira has been practicing organic farming methods such as alley cropping with legume trees and mulching
- Kukundu and Rarumanu, Western Province germplasm centres have taken on bulking Pana as another activity
- in Maniki women involved in bulking sweet potato started to collect and bulk banana varieties at their own initiative.

10. Human capital

Human capital represents the knowledge, skills, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At the household level human capital is a factor of the amount and quality of labour available, varying according to household size, skill levels, leadership potential, health status etc.

As well as being of intrinsic value, human capital (knowledge and labour or the ability to command labour) is required in order to make use of the any of the four other types of assets. It is therefore necessary though not on its own sufficient, for the achievement of positive livelihood outcomes *(DFID, 1999).*

PROGRAM STRATEGY

3.1.1 – collection, multiplication and distribution of improved germplasm that assist productivity, diversity and risk reduction for small holders (SEAREM, FNTP and Peanuts)

3.1.3 – piloting innovative farmer learning approaches such as farmer field schools (peanuts & Cocoa)

3.1.4 – promoting food and diversification in remote areas through rural agroprocessing and appropriate technologies

3.2.6 – information materials and systems in selected commodities (fresh produce, cocoa, fruit and nut trees, vanilla, peanuts).

Vulnerabilities in context of human capital

Trends	*Shocks*	*Seasonality*
▪ very high population growth rate (2.6%) with 4.6% fertility rate. 39% of total pop. Under 15 years of age, 25% women in child-bearing age, 42% in dependant age group ▪ limited absorptive capacity of the formal employment sector yet most high school graduates flood to urban areas for opportunities ▪ high malnutrition among children less than five (13%) with 46% suffering from anemia, while 10% of pregnant women are anaemic ▪ women carry the bulk of the household, food production and cash crop responsibilities	▪ illhealth resulting in decreased quantity and quality of labour	▪ seasonal nature of agricultural crop production makes for unreliable income source and provides limited employment opportunities

Human capital scorecard

HUMAN CAPITAL IMPACTS:

CSP Ag. Livelihood Activities	*Negative Impacts*	*Positive Impacts*
FNTP	xx	xxxxx
Vanilla	xx	xxxxx
CLIP		xx
SEAREM	xxxx	
Pineapples	xxx	xxxxxxxxxx
Peanuts		xxxxx
DME Coconut		xxxx
Market Places		xx
Coffee	xx	xx
Flowers		xxxxxx
Vegetables	x	xx

The livelihoods program is designed to contribute towards accumulation in the human capital for rural farmers through improvements in knowledge and skills on agricultural and food production, processing, product improvements (quality and marketability) and market development and accessibility. This contributes towards food security and improved incomes which in turn can be invested in further accumulation of human capital (education, health) and even hiring labour inputs towards further improvements in the production and marketing process.

As the input by the program in most activities is still in its early stages, it is unrealistic to expect major changes due to time delay in practicing change, the lead in time to first harvest and seasonality of agricultural crops. Improvements in human capital so far can only be assessed in relation to the improvements in the specific crop knowledge base and skills of the farmers resulting in improvement in their farming systems, production levels, adoption of better techniques, adoption of improved varieties, processing or value adding to improve opportunities for marketability and access to the market.

It would be unfair to the program to try and assess impacts on other broader and longer term factors such as investments in education, health status etc at least for now because these are knock-on effects resulting from improved livelihoods.

The program contributes to human capital assets accumulation (knowledge, skills, ability to labour), training/demonstrations, continuous field support and on farm trials with farmers:

- training and field support provided on care for vanilla plants - shading, mulching, looping, pollination and curing - vanilla agronomy (vanilla)
- skills in proper nursery soil mix for best results, grafting, cuttings and other propagation and plant care technologies
- improved farming techniques:
  - rapid multiplication, on farm trials and crop observations, intercropping, use of soil management techniques, supsup gardening beside houses
  - skills to record findings and build information base on varieties (SEAREM)
- cocoa rehabilitation techniques, cocoa agronomy and quality drying techniques (CLIP)
- skills and techniques on year round production and value addition (pineapple)
- planting material selection, improved planting techniques, harvesting, storage, processing (peanut)
- flower agronomy, floral arrangement techniques, sales and market development techniques, contracting and networking skills
- improved coffee processing, packaging, marketing techniques
- value adding, downstream processing and exposure to appropriate technologies (DME)
- negotiation skills for better returns as well as for contract buying (peanut, vegetables, vanilla, flowers)
- access to better planting materials (peanut, cocoa, SEAREM, vanilla)
- business management and marketing skills (VCED).

Vanilla

Negatives	*Positives*
▪ requires continuous care but only one harvest per year ▪ difficult for farmers to maintain interest in vanilla farm without any field visits	▪ work well suited to women and children ▪ less work than cocoa and copra but earnings are higher ▪ care, maintenance, pollination and curing were not known until CSP got involved with the crop in 2007 ▪ lead farmers within close proximity ▪ information and knowledge available for extraction of vanilla essence

"We used to uproot the plants to get them to flower which killed the plants. CSP brought Piero to do training and he provided technical advice in areas we did not know about. Now we know everything about vanilla"

Nelson Sopi, lead farmer in Guadalcanal Plains

Information, knowledge and extension support in vanilla farming, prior to 2007 when CSP Sustainable Agriculture Livelihoods started getting involved, was sketchy and inaccessible by most farmers. This resulted in use of bad planting material, poor spacing, shading and drainage, farms in areas with unsuitable climatic conditions and nonflowering plants. The strength of CSP Agriculture Livelihoods programme has been the continuos training and field support (extension) to farmers particularly in Guadalcanal and more recently to Malaita and Makira, and also encouraging farmer to farmer support.

"In 2007, I joined a workshop with Piero on curing and they (Piero/Max/Pita) have visited my farm several times now providing advice. Main changes seen are in pollination, mulching, curing and being able to sell to VHL".

Vanilla was first introduced in Solomon Islands in the early 1990s at Dodo Creek Research station and through Western Province from Bougainville. Farmers started planting vanilla in late 1990s and within three to four years the plants should have been producing beans. The program started getting involved with vanilla in early 2007. Piero conducted first training in curing in April 2007 and he has been back several times more in the last three years for more training and on-farm support to key farmers. First cured beans were not bought by VHL until late 2007.

Handouts on vanilla farming and curing have also been useful to farmers. Hilda Kii of Mt Austin Vanilla farm said...

"[she] learnt to grow vanilla out of Piero's handbook"

...even though she has never attended a formal vanilla training. She is taking care of 400 plants.

Only one member of the vanilla farming families – in most instances the male head of family — have attended formal trainings conducted in the past. However, there is strong evidence of farmers transferring knowledge to family members enabling them to participate in vanilla farming activities effectively. Also on-farm support both by the program team and the lead farmers has been effective in information and skills dissemination to broader group of people.

Some farmers particularly in Guadalcanal have emerged as lead farmers who willingly provide field support to other farmers (Nelson, Pio, Norua, Joseph etc). This is resulting in increasing interest in vanilla farming again and better quality cured vanilla beans.

Initial harvests with some farmers in 2007 were mostly thrown out either because they were not ripened or cured properly (Hilda/Norua/Pio). Access to information and technical support on good vanilla farming practices has seen increasing yields. Norua sold 22kgs in 2008, Nelson sold bean twice (60 plants & 100 plants now 200 plants flowering; Joseph sold first 3kgs & 11kgs). Sales increasing as a result of improved knowledge and skills in harvesting and curing.

Varivao Holdings Ltd has been trained to process vanilla beans into essence and El Shaddai is buying all monthly essence productions so far.

100 plants require 1 day a week work. Most vanilla farming families visited either have weekly family work programs or hire labour for support. Hired labour for vanilla is used mostly for cleaning/weeding, mulching, pruning and help with gardening while pollination, tending to beans and curing is done by farm owners. Women and children particularly feel that work on vanilla farm is well suited to them because it does not require such heavy labour.

One harvest per year has been quoted as a disadvantage to the crop.

SEAREM

Contribution of SEAREM towards human capital accumulation has been through trainings at KGA premises, on farm trials and evaluations, distributions of information and planting material, visits from KGA staff, annual reflections, weekly radio program and ongoing support through the radio network.

Negatives	*Positives*
▪ limited support (technically & financially) from KGA during restructuring period demotivated some germplasm centres ▪ limited active sharing beyond those who took directly from germplasm centres ▪ confusion in sweet potato names as they get distributed between different centres & KGA ▪ centres also involved with other funded activities	▪ increase in food security (high yielding sweet potatoes and disease resistant, soil fertility tolerant African yam) ▪ skills in rapid multiplication and bulking ▪ public awareness and distribution of planting materials through diversity fairs ▪ collaboration with educational institutions (KGVI), RTCs and CBTCs for mutual benefit ▪ weekly radio program very helpful ▪ evaluation and identification of sweet potato varieties with high carotene content (part of separate but linked ACIAR CIP project) ▪ promotion of supsup gardening techniques beside the house in most germplasm centres ▪ nonchemical pest and root crops disease management techniques ▪ food processing and preservation techniques ▪ higher yields has allowed women to sell more sweet potatoes to earn income for basic needs ▪ collaboration with KGVI School for a bulking site at their grounds has given the agriculture classes at the school opportunities for practical learning experience

High collaboration with insufficient coordination

Some germplasm centres such as Sausama, declined because once donors and other NGOs saw their success in implementing activities related to SEAREM and KGA in general, and start engaging the centres in other activities.

The germplasm centre in Sausama, Western Province also became involved with Apheda as well as EU Micro Projects II all at the same time. While this is good because it highlights the potential other organisations see in the centre, it also stretched the limited labour available to the centres in an effort to satisfy the competing demands placed on them, leading to decline and frustrations.

Learning centres

Some centres have not only been involved bulking and distribution but also providing opportunities for interested individuals from other areas to spend few weeks learning by doing.

The Kukundu and Sausama centres in Western Province have done this on several occasions whereby people as far as Vella La Vella, Rannonga and Shortlands have spent few weeks in their farms learning about small scale farming techniques.

The evaluation team could not reach those individuals to assess impact of their learning experiences. Most centres promote organic farming practices, intercropping, supsup gardening beside the house, use of legumous plants, sharing of experiences in biological pest controls etc. Silas Kere, of Kukundu centre works with the local nurse in having weekly talks promoting healthy lifestyles and diet.

Peanut

Negatives	*Positives*
	▪ knowledge and skills in improved peanut farming techniques ▪ knowledge in nutritional value ▪ skills training on negotiating with peanut buyers ▪ market research in Honiara has identified the periods during the year that peanut sales is profitable and farmers advised

The program on peanut farming is still in its infancy. Nine varieties have been introduced into the country from Papua New Guinea. Initial training has been carried out with farmers from Makira, Savo, Guadalcanal and Malaita on planting material selection, improved planting techniques, chemical and biological pest controls, harvesting time, drying and storage, and proper handling of chemicals and applicators. Each participant was given a kilogram each of two 30 days varieties to plant. Two demonstration plots using traditional and improved planting methods have been setup at Papanga village in East Guadalcanal. Ability of the farmers to implement what they have learnt and acquired is yet to be assessed.

FNTP

Negatives	*Positives*
▪ long time to wait before earning money unlike vegetables ▪ women in rural areas do not serve fruit for meals even if available	▪ people have been planting lots of teak which is long wait and one harvest but with fruit and nut trees, continuous harvest and good for health ▪ practical knowledge on proper nursery (soil mix, shade and care for plants in polybags) ▪ nursery knowledge can also be applied in any planting especially with women in their vegetable gardens ▪ skills in grafting shortens the period before fruit/nut production as already seen by some farmers ▪ combined with VCED's marketing skills training has led to 'new' marketing of fruit for local farmers. Some farmers have already seen improvements in income earned and lessened time women spent sitting at the Honiara market house

Farmers acquire new skills

"I have never did this type of nursery before. My only experience with nursery has been with cocoa. It is only through the training that I have become involved in growing fruit trees".

Jack Aulalo, Malaita

Many farmers involved in FNTP nurseries expressed excitement in the skills they have acquired from the trainings that they are using in their nurseries. For some, including Dalcy Misi of Toae, Malaita it is a big change for them to start to plant fruit trees. Fruit is not plentiful in their village and they only eat it occasionally. FNTP trainings also stress the importance of fruits and nuts in health and this has been educational for lots of participants.

Nurseries that are ready have also undergone hands on trainings in grafting techniques and some farmers such as John Maeli at Aruligo, Guadalcanal are already witnessing the changes in their fruit trees.

Farmers interest for information and skills

Farmers express interest to know more. Some had further questions about spacing of trees when the seedlings are planted on the ground, about pruning of seedlng where more than one shoot comes out of seed, for example mango seedlings, or about knowing what nutrient is lacking in their seedlings and plants and what can they do about it etc. Women in Sausama, Western Province were interested in knowing whether they could use similar nursery soil mix for their vegetables, a regular income earner for them in addition to fruit.

VCED Support enhances FNTP work

"I have sold fruit for a long time now. I have seen changes in my income since I adopted the marketing techniques on wish, want and walk pricing taught by VCED. My misis also spends less time at the market now because I take the fruit to customers"

John Maeli, Aruligo Fruit farmer

VCED having a cross linkage with other livelihoods activities has been providing business and marketing skills trainings for farmers. John Maeli, a farmer from Aruligo that have implemented these skills have found his income levels not only improved but also reduced the time spent by his wife sitting down at the market. John now takes fruit to offices and stores and has identified regular buyers and quantities wanted, particularly among the Chinese community.

Flowers (VCED)

Negatives	*Positives*
	▪ interest in flowers continues to increase as can be seen in sales at the market and other sources ▪ some women involved in training and show have seen increase in orders for their arranged flowers ▪ weekly orders established for 3 florists ▪ Kakabona women are practicing wish, want and walk pricing on their potted plants and flowers allowing them to negotiate with buyers for better deals ▪ involvement in floral art has helped most women to gain self confidence ▪ adoption of more aggressive marketing

Impact of skills trainings

Confidence to negotiate for the price has been developed particularly among some women in Kakabona selling potted plants. In their most recent flea market, members of Matana Ara women in Kakabona had no price tags on their plants and negotiated with their buyers.

DME

Negatives	*Positives*
	▪ knowledge in food grade oil production and other downstream products (soapmaking, kerosene, animal feeds etc) ▪ organic virgin coconut oil healthier option than imported oil ▪ despite a 'new' oil introduced in areas with a mill, the uptake is quick and some producers are finding it more profitable to sell locally than for export.

Virgin coconut oil – a healthy alternative

Virgin coconut oil is a healthier alternative to imported low quality palm oil. Virgin coconut oil is considered to have many similar properties as cold pressed olive oil. DME sites have the option of selling some of their oil in the local market and some producers are finding it more profitable to sell oil in the local market.

Skills in downstream processing

KPSI in collaboration with other experienced mill owners also provide trainings on soap-making using third grade coconut oil, animal feeds and have been experimenting and promoting use of coconut oil for kerosene. Ever increasing costs of imported soaps, kerosene for lighting, and animal feeds make these local products very important, whether production is by users or by an entrepreneur.

CLIP

Negatives	*Positives*
	▪ plans to train youth in cocoa rehabilitation techniques will provide youth with employment and make money using their skills ▪ farmers in Malaita are ready to work with technical support from CLIP and complained of minimal support from MAL for many years

CLIP is still in its very initial stages of implementation and changes in human capital are yet to be seen.

Coffee

Negatives	*Positives*
▪ insufficient attention/ commitment on the management of coffee production by VHL ▪ VHL could be involved with too many products and so unable to commit necessary time for improvements in any one product they are involved in – inability to specialize?	▪ improved packaging, labelling and presentation of coffee ▪ improved marketing skills and technique ▪ technical support provided has real experience on commercial coffee industry in the region

Skills improvements

VHL has been producing coffee for a number of years now and undoubtedly their knowledge and skills in coffee production have grown with time and various support they may have received.

The technical support by VCED however, is targeted towards upgrading skills of the staff to meet international requirements and standards in coffee processing, food safety and operational efficiency in the production process. VHL coffee has new and better packaging and labeling. For the first time, a promotional coffee tasting morning was organized at Panatina Plaza in September 09 which led to increased demand on the product.

Commitment to manage VHL operations

VHL is one of the very few processing companies in the country and their ability to take risks and venture into new products is admirable especially in Solomon Islands. However, there seems to be issues with operational management of the business.

Whether it is lack of management skills, lack of clarity in roles or the delegated responsibilities, or that they are involved in many products and not concentrating and further improving one or two product chains.

Vegetable

Negatives	*Positives*
▪ size of gardens and ability and commitment to meet supply requirements given that most vegetables are planted in gardens and not farms	▪ market research in Munda/Noro area and technical support is developing into a contract to supply vegetables to Solomon Taiyo Ltd by 4 farmers from the area ▪ market research in other areas (Auki, Gizo, Guadalcanal etc) have potential for similar arrangements

Vegetable marketing is the most common source of income for families with access to market outlets. However, most families grow their vegetables in their gardens and not farms and this can affect consistency in supply of required quantities. This is a new and innovative approach for farmers serving outside of Honiara. Continued support to ensure farmers understand and are able to meet contractual obligations is needed.

Pineapple

Negatives	*Positives*
▪ some farmers need to practice soil erosion management techniques ▪ farmers need to experiment with planting techniques that manages rat problems in their pineapple farms ▪ limited understanding of costs of flowering hormone and how this relates to selling prices (reportedly none of them have actually purchased it yet and there is some confusion on the price)	▪ farmers have understanding and knowledge in inducing flowering for off-season harvest ▪ value adding skills in jams, juice and ingredient in other food preparation ▪ income from pineapple is contributing towards school fees for kids and permanent housing and solar lighting for better living conditions (Haleta farmers) ▪ income from pineapples is used to hire labour (individuals and youth groups) for farm maintenance (Haleta farmers) ▪ some awareness on new ways of potentially selling pineapples but yet to put into action

Small improvements in knowledge big results

Support to farmers in terms of knowledge to induce off season flowering of pineapples and for some farmers additional business training by VCED is showing some major impact (financial and physical) for pineapple farmers in Aruligo, Guadalcanal and Haleta in Central Province.

It is interesting though that some farmers do not value the knowledge gained but complain that CSP has not done much for them.

Market places and storage sheds

Negatives	*Positives*
	▪ ability of the people to organize themselves and provide resources (timber, sand, gravel, labour etc) regardless of difficulties and commitments on their parts is commendable ▪ better facilities for vendors and customers as well as protection from bad weather

Publications

The Program is creating assets for future and current skills and knowledge development through a range of papers and publications targeted at different types of users.

Farmer manuals

Copies made available:

- *Growing and marketing Gingers and Heliconias in the Pacific – a Pictorial Guide* (Stice,k & Hintze, J. – 2009). Koko Siga (Fiji) Ltd and Jan Hintze – Jungle Plant and Flower Service
- *Vanilla Agriculture and Curing Techniques* – Venui Vanilla
- *Vanilla Handbook* – Venui Vanilla.

Produced and published by program:

- *Growing and Handling Cut Flower Orchids in the Solomon Islands – a Pictorial Guide*. (Don & Aileen Burness & Stice, K. 2009). Koko Siga (Fiji) Ltd and South Sea Orchids

In development:

- trainers manual on fruit and nut tree production
- students handbook on fruit and nut tree production.

11. Physical capital

Physical capital consists of the basic infrastructure and producer goods needed to support livelihoods.

Infrastructure can be considered the changes to the physical environment that help people to meet their basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively.

In SLA the following components of 'physical capital' are usually essential for sustainable livelihoods:

- affordable transport
- secure shelter and buildings
- adequate water supply and sanitation
- clean, affordable energy
- access to information (communications).

Infrastructure is often a common good which is used without direct payment.

Physical capital is important. A core dimension of poverty is a lack of particular types of infrastructure. Without adequate access to services such as water and energy, human health deteriorates and long periods are spent in nonproductive activities such as collection of water and fuel wood.

The opportunity costs associated with poor infrastructure can preclude education, access to health services and income generation. With poor transport infrastructures producers work at a comparative disadvantage in the market.

> *"Infrastructure – such as roads and communications are key to the integration of the remote areas where many of the poor live. Not only are rural people able to move between urban and rural areas more easily if the transport infrastructure is good, but they are also more likely to be better informed about opportunities (or the lack of them) in areas in which they were thinking of migrating either temporarily or permanently."*
>
> *DIFD – Sustainable livelihoods Guidance sheets*

Solomon Islands rural households operate in an environment of extremely constrained physical capital. Virtually all of the prerequisites for livelihood improvement in the theory of SLA developed in other parts of the world is either absent or very weak in Solomon Islands. This includes roads, access to modern forms of energy, sanitation and communications. In general, the program has not aimed to change these larger public goods type of infrastructure. The exception is marketplace buildings and road maintenance on Malaita – both are discussed in this section.

In our analysis we have also taken physical capital to include the tools and technology needed to sustain livelihoods in the areas where the program has made interventions.

	Trends	*Shocks*	*Seasonality*
Physical capital	Maintenance of community infrastructure Expectation for handouts	Failure to maintain existing roads in reasonable condition Too few buyers Changing international prices	

CSP agriculture livelihoods and physical capital

Physical capital scorecard

Ag. Livelihood Activities	*Negative impacts*	*Positive impacts*
VCED		
FNTP		
Vanilla		
CLIP		
SEAREM		
PINEAPPLES		
PEANUTS		
DME COCONUT		
Market places		

The program addresses the accumulation of physical capital assets through:

- the provision or improved increased accessibility to new (appropriate) technologies and some tools
- provision of physical infrastructure and some direct and indirect impact on the enabling environment
- negotiation skills for use of transport and other services.

Tools and technology

Summary impacts on physical capital assets

Negative impacts	*Positive impacts*
▪ risk of encouraging a handout or dependency mentality ▪ some tools and inputs not available outside of Honiara – more difficult for those engaged in more local marketing and potentially not accessible for women Vanilla curing starter kits ▪ sustainability of some equipment uncertain over long term (eg. igloo houses under SEAREM) ▪ replacement costs needs to be considered by families/businesses	▪ polybags and shade cloth ▪ flowering hormone for pineapple farmers ▪ crates for pineapple and fresh produce transport (planned) ▪ packaging samples (vanilla, coffee) ▪ orchid transport box ▪ igloo houses for germplasm centres ▪ cocoa dryer equipment with 25% farmer contribution (planned) ▪ mini driers for cocoa farming households in remote areas (planned) ▪ DME equipment for selected individuals who build building as contribution ▪ HF radios for germplasm centres (communication)

CSP infrastructure

Summary Impacts on physical capital assets

Negative impacts	*Positive impacts*
▪ communities have different capacities to meet the community contribution requirements	▪ road maintenance in north Malaita ▪ market places provide more comfortable environment for vendors (covered from weather) ▪ more hygienic ▪ generally well organized committees and structures to supervise markets ▪ provision of HF radios to farmer run germplasm centres..

"Where to go for information and equipment is an issue for us"

Adrian Norua, Vanilla Farmer, Guadalcanal

How incentives and handouts are provided to households can be a critical issue for the success and sustainability of a project.

A vanilla farmers wheelbarrow with a $50 day for hire sign on it – a local more sustainable solution to access to this tool useful for collection and movement of mulch for vanilla plots.

Small tools

'Ni fala nidim wheelbarrow'

Donor assisted projects in Solomon Islands have an unfortunate precedent of providing many free handouts and subsidies to beneficiaries. This includes past programs and many current donor and government initiatives that are operating at the same time as the Program. This leads many beneficiaries to expect handouts to 'help' them.

During field work we encountered many beneficiaries asking if the program could provide them with various tools and inputs ranging from ladders for vanilla pruning through to labour costs for pineapple farmers. As shown in the Davala Pineapple Farmers Case study in Haleta, farmers felt that CSP had provided them with 'nothing' as they had not received any handouts, despite the Program giving them training and marketing skills that had transformed their livelihoods with a new and significant source of regular income.

This type of 'cargo' attitude to aid is very entrenched, is reinforced by RCDF and others, and forms part of the background that any aid program in Solomon Islands has to negotiate.

The Program does provide some carefully targeted subsidized or free inputs in the way of tools for different activities.

These include:

- curing 'starter kits' for vanilla farmers who have beans ready to cure
- training manual for vanilla farmers
- samples of flowering hormone (ethrel) for pineapple farmers who attend training
- polybags and shade cloth for farmers establishing central fruit and nut tree nurseries
- packaging samples and start up trials for new types of product presentation.

Each of these inputs has been thought through carefully with the aim to bridge needed gaps but also not to create dependency on the Program or disputes among beneficiaries over who received what inputs. This is a delicate balancing act but so far the program seems to have been successful.

Vanilla farmers asked for ladders for pruning, pruning saws, wheelbarrows and more curing kits. One male farmer asked for assistance with labour for their tree planting but when pressed said that '…even without the labour assistance I will plant my trees anyway'.

Many farmers requested tools be provided to them. This is a common request. The program has wisely chosen not to provide many handouts but rather focus on technical skills development, market chain linkages and carefully targeted inputs.

> *"…its difficult to get to town to buy tools and I don't know where to go. If CSP came to the village with a ladder for sale I would buy one and I think other vanilla farmers would as well."*
>
> *Kokona village vanilla farmers*

Where inputs are provided, the Program has aimed to work with local private sector suppliers to ensure they can supply these products on an ongoing basis – eg. Ethrel and nursery polybags from Farmset Ltd, plastic produce crates from George Wu Ltd and current discussions with Orchid Arts to stock orchid transport boxes and sell orchid/flowers as business training manuals.

Farmers who had started fruit and nut tree nurseries almost universally asked for more poly bags. Over 19,000 poly bags have already been handed out.

Big tools

The CLIP and DME activities make larger investments in equipment and facilities for carefully selected individuals. Both activities expect large cash and in kind contributions toward cocoa drier equipment and the DME mini factory.

- **DME equipment and small factory:** with substantial contribution by family based owners; described in the Kokonut Pacific case study
- **planned under CLIP:** mini driers for cocoa farmers in remote areas; medium size fermentary equipment with 25 percent cash contribution from beneficiary plus paying for transport; this marks a significant change from past donor internventions in this sector where subsidies and handouts dispersed by MAL have been the norm; it is already clear the approach of cash contribution will face resistance but we believe it is a step in the right direction to reduce dependency and ensure serious and committed cocoa farmers are assisted.

Appropriate technology

The project could look at low cost or local material-based alternatives where it promotes inputs that are more difficult for farmers to access on a regular basis and may form a constraint to them sustaining their work. A few examples are given here but an appropriate technology lens would be useful applied to all inputs in the program to ensure a range of options from low tech to higher tech.

- **flowers:** there are many local material innovations for flower arranging as replacements for more commercial products
- **polybag alternatives:** can include bamboo or use of banana fibre are two simple options that could be included in training.

> *"Pineapple in trucks gets damaged – we need proper storage for our pineapple"*
>
> *Arabala pineapple farmers group discussion*

Storage containers for pineapple and other fresh produce transport is planned under the VCED project. This will be assessed next report.

Land

"One reason I feel so confident to plant so much vanilla is I have registered my land. No one can dispute my ownership."

Adrian Norua, Guadalcan al Plains Vanilla farmer

One vanilla farmer made the comment but there was no other mention of land issues during our field work. It appears that land tenure is not a constraint for livelihood improvements of the type promoted by the program.

Enabling environment physical capital

CASE STUDY:

One active farmer establishing an FNTP nursery from the bush in west guadalcanal had moved his family to the coast to be close to the road and services.

He preferred to live in the bush where he has fertile and product land and a good climate for growing many highland crops.

He saw opportunity there but transport and services such as access to schools for his children had tipped the balance. He is planting vegetables and also coffee in the highlands.

He plans to sell fresh produce in the soon to be completed CSP market place at Lambi or transport the produce to Honiara.

He also is hopeful to produce coffee in coming years from trees he already has growing in the highlands and will hopefully have a buyer in the form of Varivao Holdings should he get to that stage.

Timothy Tom – Nomana area, West Guadalcanal

Roads

"In the 1950's and 60's it took a full night to paddle to Auki from Arabala. Marketing was very difficult. When the road came in 1973 marketing became much easier."

Arabala Pineapple farmers community meeting, Arabala, Malaita

"The downfall of farmers in the east of Malaita is lack of transport and access to market"

Agriculture extension officer, Malaita, CLIP Planning meeting

"The premier [of Malaita] suggested the project concentrate on areas with road access"

...when discussing the CLIP project in a MAL meeting in Auki.

The South Malaita road built in 1973 made it possible for a pineapple industry to develop. The benefits of roads have included mobile banking services, traders, lower costs goods and inputs (eg. fuel), lower cost and more reliable transport, access to services and opportunity for cyclic migration.

For many rural people in Solomon Islands the situation remains as it was in the 1950s, with no access to roads and the services and the opportunities that come with them. Farmers away from roads or regular shipping services connecting them to urban markets have far fewer income generating choices (less financial capital assets) and are compelled to engage in a higher level of self-sufficiency based on other livelihood assets.

Many of the targeted crops and value chains under the program are dependent on access to roads and other links to market – eg. pineapples, cocoa and a large proportion of fresh produce marketing.

Where households are very remote from transport to market then other options can be considered, such as vanilla, jam making, virgin coconut oil production or other interventions in the value chain to attempt to overcome some of the constraints by either reducing perishability or reducing costs to get to market.

The CSP road maintenance and upgrading of roads in Malaita is not part of component three and so is not covered by this impact assessment. There is, however,

much evidence that many of the CSP Agriculture Livelihoods Activities are dependent on this and other roads being open and maintained.

By contrast, areas of Guadalcanal where roads have not been maintained have turned to vanilla as one of their few income generating options:

> *"Vegetable marketing would be a more important income for us if the road was good. But the road has been no good for more than 10 years. We do sell and barter vegetables in the local market but now it is rare to take produce to Honiara"*
>
> *Fatima community meeting, Guadalcanal – mixed vanilla farmers*

Logging roads

At a number of locations logging roads were observed to be in rapid decay and unusable, despite community expectations that they may now have road access into the bush. Some communities mistakenly take on logging with the expectation that they will get ongoing road access into the interior areas of their tribal lands. Unfortunately, these roads are constructed for short term gain only.

Mobile phones and communication

> *"I just purchased a mobile phone. If I go somewhere (in the bush) people can call me to come back to my house. If there is someone sick or any problem in Honiara I can know."*
>
> *Suiti Okesi, FNTP nursery operator, Manakawi, Malaita*

Communication is a constraint on rural livelihoods in Solomon Islands. Most rural areas have no telephone coverage, with the only communications option being HF radios.

Mobile phone coverage is minimal in Solomons Islands. This is likely to change substantially in the near future with the current monopoly on communication services set to end in April 2010 with the entrance of Digicel. In the meantime, Solomon Telekom has embarked on a very modest expansion of their mobile network.

For areas where mobile phones do not reach (most of the country), HF radio remains an important form of communication.

HF radios were installed at all the germplasm centres who did not have them already. This has created a large national network of farmer organizations who are now able to communicate with each other and service providers. But there is a need identified by KGA for better agreements and systems for maintenance of the radios when they break down.

A widescale and reasonably priced mobile phone services in rural areas (promised by Digicel) will open up many opportunities for livelihood improvements.

The program should plan to take up the opportunities that will soon open up due to this significant change to the enabling environment.

Market buildings

The Program has been constructing market place infrastructure in various locations across the country. Eight market places and storage sheds have or are being constructed in Guadalcanal (2), Malaita (2), Central (1) and Makira (2).

We visited three market place sites – At Mana'ere in North Malaita, Lambi in West Guadalcanal and Tulagi in Central Province.

We observed:

- the quality of buildings built appeared good
- well organized committees.

Some potential issues:

- displacement of other traditional market places
- challenges of mobilizing community contribution without pay for large projects
- size of market house.

Flower market

The VCED project is planning to negotiate with Honiara City Council to provide a shaded area of the Honiara Main Market for the sale of cut flowers.

As these market places open and come into regular use, follow-up visits will be made to look at impacts on vendors, consumers and livelihoods.

Further inputs by the IA team will explore the impact of market places on users – both vendors and consumers – for the next report.

Market place under construction through community effort at Lambi, West Guadalcanal

12. Gender

Overview

Gender issues are often highlighted as being a deficiency in the Sustainable Livelihoods Framework (DFID-2002). Gender is assessed as a cross-cutting issue in the Program impact assessment methodology.

Both men and women are involved in agriculture in Solomon Islands. There are typical patterns in the division of agriculture roles and livelihoods, while recognizing that the reality varies from household to household. Women take primary responsibility for much of the workload in food production and their labour contributes significantly to other cash crops including small holder plantation agriculture, the care of livestock and collection of firewood. Some of these patterns are described in the table below.

Gender in agriculture in Solomon Islands – some general patterns.

	Women in agriculture	*Men in agriculture*
Income generated	▪ lower – but more often spent on basic family needs	▪ higher – but more often spent on nonessentials
Productivity	▪ focus on stability and resilience – multiple criteria on crops/varieties	▪ maximise yields / production
Agrobiodiversity	▪ higher – polyculture ▪ self-reliance ▪ risk adverse – different varieties	▪ lower– more monoculture ▪ more use of hybrids and external inputs ▪ higher risk
Marketing	▪ more often local and home consumption / sharing	▪ more distant markets – capital city or exports
Identity and social status	▪ based on meeting traditional roles – feeding family, making food gardens; practice 'garden'	▪ based on cash income, adopting 'new things' and practice 'agriculture'
Access to land	▪ low priority – pushed to marginal and more distant land	▪ high priority – prime land close to village / road for 'mens' cash crops
Labour contribution	▪ all stages of crop cycle for food production (cultivation, planting, weeding, harvesting), also contribute labour to cash crops, fuel wood collection, daily care of pigs; major family caring (cooking, child care) and community labour and social systems roles	▪ larger role in cash crops/plantations, optional roles in food production (usually clearing and cultivation/ hoeing), less contribution to caring, community decision making roles

Key issues

Intensification of shifting cultivation and the Feminisation of agriculture

One of the scarcest resources of rural women is time (World Bank 2009). This is confirmed by PRA timelines done by the IA team.

Women in rural communities spend large amounts of time on:

- productive agriculture activities
- household and child care
- community obligations (church, school clinic and others).

Community obligations may occupy up to two full days per week in some communities. This has been a long term pattern but it is being impacted further by trends in agriculture.

Land use for agricultural purposes is intensifying in Solomon Islands. Most of this is under shifting cultivation with land used for food production for consumption and sale in local markets . This is largely driven by high rates of population growth – itself a gender issue.

Diversion of land to other uses such as permanent plantations of cocoa, coconut or for commercial logging adds to the problem.

The impact of this intensification usually results in increased workloads for women. This happens in a number of ways:

- reduced fallows become part of women's work to clear; in the past, large forest fallows were traditionally cleared by men; similarly, as firewood foraging changes from large forest trees to small secondary bush, the workload shifts to women
- if gardens are pushed further from home, then women must walk long distances and carry heavy loads; this impacts on their health and the time they are able to spend caring for babies and infants.

Examples of how these issues impact on livelihoods is described in the case study on Mary from Hanipana area.

The result can be a cycle of degradation, declining yields and an increasing burden and workload on rural women — a pattern sometimes described as the 'feminisation of agriculture'.

In solomons islands this is occurring in context where men already had a lesser traditional role.

Other important issues to consider in gender in agriculture include:

Issues	*A gender lens…*
Identity and social status	Women are the traditional producers of food and carers of family in Solomon Islands. In many parts of Solomon Island a womans social standing is impacted by her ability to grow food
Crop biodiversity and natural resource base	Women are custodians of crop biodiversity. As the main decision makers in what is planted in food gardens they need to be targeted for any intervention focussed on food production, food consumption and diversifcation
Male extension services	Women have their own information networks and these networks often do not overlap or connect with formal, male dominated, agriculture extension services. (eg. women focused extension approaches are needed if women are an expected target group)
Cash crops	Womens labour will make up a substantial contribution to cash crops such as cocoa and copra
Technology development	Women have their own networks for sharing information and are involved in innovation much as men are. But these networks are often disconnected from extension services and other external institutions. It is important to assess how technologies are chosen and how they impact on the roles of men and women in livelihoods

Results from field work:

Summary impacts on gender

With current data we are not able to provide a summary of gender impacts by Activity. This will be done in the next report. Some examples of gender issues within activities is included in this section.

Negative impacts	*Positive impacts*
	• Crop diversification (SEAREM) • Labour saving technologies

The gender division of household/ family labour

The labour division between pineapple and vanilla is shown in the charts below.

Pineapple farming activity	*Women*	*Men*
Brush (Clearing of new pineapple field)		X
Burn, clean up organic matter	X	
Pick heads of pineapple for planting (from old garden) and carry to new garden	X	
Mark lines / rows		X
Dig holes for planting along rows		X
Planting of pineapple heads into holes	X	
Weeding when required – major weeding at six months	X	
Harvesting of pineapple fruits		X
Carry Pineapple to house / road	X	
Transport pineapples to market and sell		X
Wait for income	X	

Source: Womens group discussion on gender roles in pineapple, Bina, Malaita

Peanut

For peanut farmers at Papunga, Guadalcanal, men and women have their own peanut plots and carry out their own peanut marketing. The women commented that they are the main peanut growers and the men are more involved in cocoa.

Vanilla

> *"Vanilla is an easy job for women and children to do"*
>
> *Fatima village - mixed group of women and men*

Men tend to be more involved in pruning and brushing the plots. Girls and women do mulching, pollination and looping.

In a number of locations women and girls commented that they thought vanilla was a good crop for them to be involved in. Girls and women are interested in this crop as they feel is it easy for them, as discussed in the vanilla case study.

CLIP

Cocoa is more a male controlled cash crop. Women's labour, however, plays a key role in cocoa and copra with women often being responsible for collecting coconuts and firewood for copra driers (see Box on womens workload).

Men are more likely to be responsible for drying and marketing of cocoa, thereby controlling the income.

The program will have to be careful in looking at ways of empowering women so that they can be involved in cocoa farming and marketing should they be interested in doing so and, also, how changes in production impact on women in particular.

These are generalizations and there are plenty of families that demonstrate a different way of working. In Patima village, for example, both men and women do their own cocoa and copra and take it to market themselves. These types of examples could be shared more widely.

Womens workload

Women are involved in agriculture in many ways. But women also carry out other roles that occupy significant time and can have detrimental effects on their health which can feedback into their agriculture livelihoods. One example of this is the collection and use of firewood for fuel.

The collection of firewood is almost always a women's activity. Locating, chopping with an axe and carrying of firewood often long distances back to the village is time consuming, hard work. 95% of Solomon Islands households cook over open fires which impacts on women's health due to the large amount of time they spend in smoky kitchens – contributing to high rates of ARI, pneumonia and other health problems *(Millenium Development Goals Indicator Database[15])*.

This energy poverty is an often forgotten issue. In urban areas many low income households continue to rely on firewood for cooking and have to spend limited cash income to purchase expensive firewood – again often a role of women and womens income sources.

A similar story occurs with household lighting in rural areas. Most households use kerosene lamps for lighting. This is poor quality and relatively expensive lighting. Womens income sources are often used to purchase kerosene for lighting as a household essential. Very poor households will not use kerosene lamps or consider it a luxury for occasional use.

Its important to consider how livelihood changes can make positive or negative impacts on the collection and use of fuel wood:

15 http://www.millenium indicators.un.org

Potential negative impacts of Program

- cocoa and copra driers use large amounts of firewood – usually women will be responsible for collecting this firewood although men are usually responsible for the drying itself and cocoa dryers are 'smokeless' in their design); while considerable effort has been made to produce smokeless driers for a higher quality cocoa product for export/income generation, the serious health issue related to womens daily preparation of food has been largely ignored
- in some cases, users of cocoa and copra driers target particular species of trees – eg. mangrove – for high temperature fuel; this can contribute to environmental and food security impacts if the resource is over harvested.

Potential positive impacts of Program

- *Gliricidia* is used as shade tree for both vanilla, cocoa and, more recently, by innovative farmers for soil improvement for food crop production; it is a good source of firewood particularly in high land pressure areas where forests have disappeared
- DME reportedly requires significantly less fuel than copra production; households that sell coconuts only are able to realise a stable income without the need for cooking copra and its heavy burden on women for collection of firewood; women may be employed and the sale of green coconuts opens up an opportunity for women to get direct income rather than relying on men to carry out copra production and then sale
- virgin coconut oil can be used as a fuel for lamps and is made available by Kokonut Pacific, potentially reducing household expenses and or making lighting available to very cash poor households
- in Haleta village, a pineapple farming family has used the income to purchase a solar power system, saving on kerosene purchases and providing a better and cleaner lighting alternative.

Marketplaces

Market places have potential to have a positive impact for women, providing men and women vendors a more comfortable and healthy environment to trade and a more hygienic presentation of fresh produce to buyers. This will be explored in discussions with market users during follow-up visits.

The market committees in Tulagi consisted of men only. The market committee at Ara'ao, Malaita had three women on it although at the time of visit we were not able to talk with them due to a death in the community.

FNTP

The FNTP Activity, given its focus on increasing production of fruits and nuts, is well suited to addressing important gender issues around nutrition, decisions over household food consumption, and the sale of fresh produce in local markets. These are both areas traditionally under the control of women.

To date activity has been a little weak on gender balance – eg. Mile 6 training in Western province about 50/50 women and men; in Sausama, Western Province it was only 1/3 women.

Gender indicators

Expected impacts on women could include:

- improvement in women's income
- overall improvement in rural well being
- adoption rates of new practices and technologies among men and women
- number of women trained (against pre-Program situation)
- improvement inland management practices, reduction in land resource degradation
- improvement in productivity of degraded lands
- women's empowerment and overall well being – nutrition and health
- changes in capacity of staff in Program and partner institutions to deal with gender issues
- gender sensitive monitoring in program activities.

The IA team propose a number of changes to improve the gender sensitivity and targeting of the program.

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ANNEX 1: Beneficiary/user indicators from interview data

Program activity	*Beneficiary indicators -*
Market places	▪ rural people sell improved quantity, quality and variety of produce ▪ vendors can sit down and also protected during bad weather and from the sun ▪ reduce wastage of produce ▪ markets that are illegally operating are closed down ▪ increased income for vendors (IIIII) ▪ more people selling in the market ▪ people can buy in a clean and healthy place in a market with a roof to protect from weather ▪ the market house is kept clean ▪ money will come in from sales to improve our standard of living ▪ market is the first step in a mini town centre developing
Vanilla	▪ that we have beans on the vines ▪ cured beans get sold Increased income ▪ knowledge to produce best quality cured beans ▪ our children become interested in vanilla farming and return to the rural area
FNTP	▪ having fruit to sell in the market / earn profit from selling ▪ in three years trees are over ten feet high in the ground ▪ produce enough for family to eat and sell in the market ▪ farmers are interested to keep planting more fruit and nut trees ▪ serve fruit during meals
Jam making for women	That we have a buyer for our jams.

Other activities are still to collect user indicators.

ANNEX 2: Secondary sources of information and reports

- ***Information from Centres***; internal document of KGA. Undated, estimate early 2009. Lists in summary form all varieties distributed to ten germplasm centres.
- ***Distribution of SPC varieties to Centres*** (2006, 2007 & 2008); internal KGA document (records distributions from Honiara by date listing accession number and centres who were sent the material)
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ANNEX 3: Summary table – germplasm centres under SEAREM activity

SEAREM ACTIVITY GERMPLASM CENTRES SUMMARY INFORMATION

Source: KGA Internal records and field visits by IA team

Centre	*Province*	*SPC SP variety distribution*			*African Yam (AF) & Cassava (CA)*	*Distribution (Household or Groups)*	*Best Local*	*No. of Local SP vars. collected*	*Best SPC var. according to farmers*
		2006 Vars. Rec.	*2007 Vars. Rec.*	*2008 Vars. Rec.*					
1. Teavamagu	Renbel		9	10					
2. Tepabakia	west		3	5	AF,		Tafusu (21)	10	IB268
3. Hanipana	Central	6	18		AF, CA		Tafiru (05)[1]	25	
4. Takwa	Malaita		9	7	CA, AF	33 HH	?	36	
5. Mouta	Makira		5	13		25 HH	MC01	20	
6. Tetena[2]	Makira			1					
7. Nosa	Makira		13		AF, CA	150 HH	Paul Iu (MM15), Nosa (NT10)	13	
8. Makorukoru	Makira			10					
9. Manivovo	Makira						Ngeera, Warito		
10. Vuranini	Guad.	6	9	5		10 groups	Not sent	6[3]	
11. Kilokaka	Isabel		13						
12. Tunubusi same as kilokaka	Isabel	7	15	9	AF	54HH	Isa26, Govea, Keredy	5	IB226, IB209, IB234
13. Masilana	Malaita	4	12	7	AF, CA	19HH	Pamua, Keke, Amagela	11	IB071,IB 226,IB06 2,IB035, IB262,IB 096
14. Parana (Dilean Sarukale)	Choiseul		8						
15. Sasamuqa	Choiseul			7					
16. Lauru	Choiseul		13		AF, CA		Sosoko, 3Moon, Egarimata, 02		3 did well (not named)
17. Sepi	Malaita		6	2					
18. Mouta	Ulawa, Makira		8						

1 Have sent six best local varieties to KGA including one orange fleshed variety

2 Did not want to provide information in Feb09 as no support from KGA head office

3 also have a collection of 18 taro varieties and 6 yam varieties

Centre	Province	SPC SP variety distribution			African Yam (AF) & Cassava (CA)	Distribution (Household or Groups)	Best Local	No. of Local SP vars. collected	Best SPC var. according to farmers
		2006 Vars. Rec.	2007 Vars. Rec.	2008 Vars. Rec.					
19. East CHY development Centre	Choiseul	13							
20. Ghatere	West	10							
21. Sobiru	West	8		5					
22. Kukudu	West		16						
23. Ringgi (granny)	West		5						
24. Labulabu	West								
25. Parana									
26. Ilito'ona	Malaita		8						
27. Gounafiu	Malaita		17	8					
28. Suluigata	Malaita		14						
29. Toroa	Makira		10			49HH + 3 villages[1]			SPCIB096 IB062, IB135
30. Nana	Makira		7						
31. Betikama – bulking	Honiara		6						
32. Boro'one	Makira (satcliff								
33. Monga	Guad.		9	5					
34. Burns Creek (group1)	Honiara		5						
35. Burns creek (group 3)	Honiara		4						
36. Teavamau	renbel								
37. Visale - luiz	Guad.		7						

Total distribution of 460 households from records from 7 centres who provided information.

Assume 50% recorded properly = average of 131 households per centre

22 centres * 131 = 2882 households as beneficiaries. This is considered conservative.

1 Masadonia, Maruguaghe, Manikia highlands. (Mary Timothy report)

ANNEX 4: Field work

Date	*Villages*	*Village tally*	*Description*	*Activities Covered*	*Province*	*Male*	*Female*	*Total*
Wed 1st April	Lunnga	1	Vanilla farmers (failed) – Wate and Kii plots	Vanilla	Guadalcanal	1		1
	Mt Austen	1			Guadalcanal		1	1
	Honiara		CSP Ag livelihoods team - Piero, Grant, Pita, William			4		4
Thurs 2nd April	Talaura	1		Vanilla	Guadalcanal	1	1	2
								0
								0
	Kekena	1			Guadalcanal	4	4	8
	Honiara - Varivao	1				1		1
Fri 3rd April	Fatima	1	Fatima community vanilla farmers	Vanilla	Guadalcanal	14	10	24
Sat 4th April	Kokona	1	Kokona vanilla farmers & Lambi Market place	Vanilla	Guadalcanal	5	1	6
	Lambi	1		Market Place	Guadalcanal	1	1	2
	village near lambi?	1		Vanilla	Guadalcanal	5	5	10
Mon 6th April	Honiara		KGA/ SEAREM;	SEAREM	Honiara	3	5	8
			Duddley/ Varivao	VCED		1		1
Tue 7th April	Tulagi							0
		1	Tulagi market place; Hanipana Germplasm centre	Market Places; VCED	Central Province	8		8

Date	Villages	Village tally	Description	Activities Covered	Province	Male	Female	Total
	Tulagi	1	Jam making group	VCED	Central Province		8	8
	Haleta	1	Pineapple farmers	Pineapple	Central Province	4	6	10
Wed 8th	Hanipana	1	Hanipana Germplasm centre	SEAREM	Central Province	2	5	7
Thur 9th	HONIARA		Data write up and methods for analysis	N/A				0
Fri 10th	HONIARA		Data write up	N/A				0
Mon 13th	HONIARA		Data Analysis	N/A				0
JUNE inputs								
Wed 24 June	Meeting CSP office to plan IA program							0
Mon 29 June	Fly to Auki	1	Arabala	Pineapple/ VCED	Malaita			0
								0
								0
	Bina	1				11	9	20
	Bina			FNTP	Malaita	5	4	9
Tue 30 June	Arabala	1		Pineapple	Malaita	15	15	30
								0
								0
Wed 1 July	Dala Nursery	1		FNTP	Malaita	1		1
								0
	Mana'aere	1		DME	Malaita	1		1
								0
				Market place	Malaita	3		3
Thu 2 July	Auki		Join part of Mala Ag. Meeting at start up of Cocoa project	CLIP	Malaita	25	5	30

Date	Villages	Village tally	Description	Activities Covered	Province	Male	Female	Total
	Auki		(afternoon-5pm join flower farmer visits with CSP team)	VCED	Malaita	3	4	7
	Auki		Auki Floral Arrangement Training – join	VCED	Malaita	4	25	29
Sat 4 July		0						0
	Manakwai	1		FNTP	Malaita	1		1
	Malu'u FNTP nursery	1		FNTP	Malaita	1		1
Sun 5 July	Write up notes		Silolo					0
Mon 6July	Takwa	1	Takwa – SEAREM Germplasm Centre	SEAREM		2	1	3
Tue 7 July	Takwa surrounds	1	Takwa	SEAREM		1	3	4
Sat 11 July	Data entry of field work interviews		Takwa					0
Sun 12 July	Return travel to Honiara from North Malaita							0
Mon 13 July	Debrief at CSP Honiara office and plan program for next input							0
9-Oct-09	Honiara		Kokonut Pacific meeting	DME		1		1
	Honiara	1	Flower	floral art display techniques	Honiara	2	53	55
1-Jul-03	Mile Six	1	FNTP	training on nursery	West	16	10	26
6-Jul-09	Poitete	1	DME	DME		1		1
7-Jul-09	Ringgi	1	FNTP	FES		1		1
7-Jul-09	Kukundu	1	germplasm centre	SEAREM		1	1	2
7-Jul-09	Vangga	1	FNTP	nursery		1		1

Date	Villages	Village tally	Description	Activities Covered	Province	Male	Female	Total
8-Jul-09	Sausama	1	FNTP	nursery training		13	6	19
9-Jul-09	Tabaka RTC	1	FNTP	nursery		2	0	2
9-Jul-09	Munda	1	VCED	Vegetable marketing		3	7	10
14-Jul-09	Tetere	1	Peanuts	Peanuts farming		3	14	17
15-Jul-09	Tetere		Peanuts	Peanuts farming				
16-Jul-09	Papanga	1	Peanuts	On farm trials		15	15	30
TOTALS		33				186	219	405

ANNEX 5: Brainstorm of contents of agricultural livelihoods program

Breakdown of lists used to describe component parts in value chains approach:

Targetted crops/ crop groups

1. Cocoa
2. Coconut
3. Sweet potato
4. Cassva
5. African yam
6. Peanut
7. Vanilla
8. Pineapple
9. Vegetables
10. Fruits and nuts
11. Coffee
12. Flowers

Associations (not necessarily registered names)

1. Savo Farmers Association
2. Betikama Flower growers Association
3. Kakabona Flower Grower Association
4. Gizo Pineapple farmers
5. Papanga Peanut farmers association
6. Aretekiki Vegetable farmers association

Private Business/ Private sector

1. Varivao Holdings Ltd
2. Jedom
3. Rain Tree Ltd
4. El Shadai
5. Maaraghoto
6. Orchid Arts

Groups targeted for business skills and or financial literacy

1. Haleta village pineapple farmers
2. Bina pineapple farmers
3. Makira womens groups in Arosi producing chips
4. Docas Association – Honiara
5. Auki Food Processors
6. Youth group Honiara
7. Womens group Honiara
8. Womens group Munda
9. Prison service

Farmer groups for production based activities

22 farmer germplasm centres (refer to ANNEX 2 for list)

Post Harvest Technologies

1. Coffee: improved roasting, grinding, packaging
2. Vanilla: curing, grading, pricing, storage, packaging
3. Pineapple: crates and use of flowering hormone
4. Vegetable: crates

Processing

- Vanilla: essence
- Wet products: eg. jams
- Dry products: eg. banana chips
- Food safety training

Packaging

1. Coffee: improved packaging, labeling
2. Vanilla: improved packaging
3. Flowers: boxes

Product presentation

1. Wet products
2. Dry products
3. Flowers
4. Vanilla
5. Coffee

Transport

1. Crates (pineapples and fresh produce)
2. Negotiation skills – users and suppliers

Marketing skills clients

Food service sector:

1. Uepi resot
2. Tavanipupu resort
3. Wilderness lodge
4. Solomon Dive Adventures
5. Mendada Hotel
6. Heritage Park Hotel
7. Westwind Accomodation
8. Small Manufacturers Association of Solomon Islands
9. Point Cruz Yacht Club
10. Rain Tree Café
11. El Shaddai
12. Lady Pogo Recreation Centre
13. Iron Bottom Sound Hotel
14. Gizo Hotel
15. Soltai Cannery
16. National Fisheries Development
17. Matekure Resort
18. Seghe Guest House
19. Gizo Prison
20. Auki Prison
21. Aruligo Prison

Retail sector clients

1. Maraghoto Holdings
2. Varivao Holdings
3. Womens Resource Centre
4. Matana Ara Womens Association
5. Aruligo
6. Jedom
7. Orchids Arts and Crafts
8. DORCAS
9. Kastom Gaden Association
10. Floriculture Solomon Islands
11. Betikama Flower Association
12. CEMA
13. Royal Distributors
14. Wings
15. Panatina Deli
16. Panatina Rumours
17. Lime Lounge
18. Honaira Sewing Centre.

ANNEX 6: CSP Agriculture Livelihoods

Impact assessment framework

CSP agriculture livelihoods outcome (purpose Level)	*Key questions*	*Methods/tools (checklist of indicators w/each tool)*	*Project defined indicators*	*'User' defined indicators*[1]	*Who, when, how etc*
Outcome 3.1: Increased agricultural productivity for food security	What changes have occurred in production?	1. yield data from germplasm centres 2. interviews (focus groups & semistructured) 3. garden/crop survey 4. monthly project Data (SEAREM, Vanilla) 5. gender roles diagram	· changes in yield & production · household self food reliance (Consumption/ sales/Nutrition) · improved land & resource management practices · changes to gender roles, division of labour, benefits and power relations		· field observations · field workshops · annual reflection workshops · project documents
	What changes have occurred in diversification?	1. interviews (focus groups & semi structured) 2. relationship/ networking diagrams (within and between projects) 3. source of Income & Expenditure matrix/ 4. gender roles map/timeline	· diversity of food crops (Consumption/ Sales) · reduced losses and pest management · spread of appropriate technology; germplasm; land & resource management systems · changes to gender roles, division of labour, benefits and power relations		· field workshops & observations · annual reflection workshops

1 To be progressively added based on 'user' interviews on their indicators of success. Will be updated in six monthly reports.

CSP agriculture livelihoods outcome (purpose Level)	*Key questions*	*Methods/tools (checklist of indicators w/each tool)*	*Project defined indicators*	*'User' defined indicators*	*Who, when, how etc*
Sub-Outcomes: 3.1.2 3.2.1 3.3.1 3.3.3 3.3.4	What changes have occurred in land and soil management?	1. interviews (focus groups & semi structured) 2. field Surveys	▪ diversity of food crops ▪ improved land and resource management practices ▪ reduced losses and pest management ▪ changes to gender roles, division of labour, benefits and power relations		▪ field workshops & observations; ▪ annual reflection workshops ▪ project documents
	What type of information/ technology is available to and accessible by other farmers?	1. relationship/ Networking Diagrams 2. interviews (focus groups & semi structured) 3. gender roles map/timeline 4. empowerment evaluation	▪ changes to farmer networks and farmer organization ▪ changes in group capacity ▪ availability, accessibility and spread of appropriate technology; germplasm; land & resource management techniques ▪ availability and accessibility to women & youth		▪ field observations ▪ field workshops ▪ annual reflection workshops

CSP Agriculture livelihoods outcome (purpose Level)	*Key questions*	*Methods/tools (checklist of indicators w/each tool)*	*Project defined indicators*	*'User' defined indicators*	*Who, when, how etc*
Outcome 3.2: Improved market access and small holder terms of trade	What changes have occurred with your sources of income and prices?	1. interviews (focus groups & semi structured) 2. gender Roles Diagrams 3. source of Income & Expenditure matrix/ historical matrix	▪ changes in Income (by gender) ▪ changes in expenditure patterns (imported food items?) ▪ access to financial services (Increase in Savings) ▪ changes in the range; quantity; quality; returns, income from processed & other traded products		▪ annual reflection workshops ▪ field workshops ▪ buyers/SME records or reports
Sub-Outcomes: 3.1.1 3.2.2 3.3.2 3.3.3 3.3.4	What changes have you made with your production and, or processing?	1. interviews (focus groups & semi structured) 2. gender Roles Diagrams 3. source of income & expenditure matrix	▪ changes in the range; quantity; quality; returns, income generated from processed & other traded products ▪ changes to gender roles, division of labour, benefits and power relations		▪ stakeholder workshops; ▪ field observations; ▪ market information

CSP Agriculture livelihoods outcome (purpose Level)	*Key questions*	*Methods/tools (checklist of indicators w/each tool)*	*Project defined indicators*	*'User' defined indicators*	*Who, when, how etc*
	What changes has taken place in your organization in terms of access to information and markets?	1. relationship/ networking diagrams (value chains) 2. empowerment evaluation 3. iInterviews (focus groups & semi structured) & questionaires for SMEs 4. membership records	▪ -Changes to linkages between SME and producers; new partnerships and alliances on value chain ▪ changes in product quality; quantity & price; markets of SME (provincial and urban) ▪ reduced post harvest losses ▪ increase gross margins and capacity of local SMEs (business competence) ▪ wage employment/ hired labour in rural areas ▪ changes in market accessibility for women & youth		▪ field workshops & observations;

There remains an empty column in the framework for 'User Defined Indicators'. Indicators of success of activities from the viewpoint of program beneficiaries/users is being progressively collected during our field work and meetings. We will update this column in the six-monthly report.

ANNEX 7: KGVI trial results

A plot of seven 'farmers best' varieties chosen by germplasm centres from among their local collected varieties was made by KGA technician Verlyn at KGVI school in Honiara. The plot aims to multiply planting material to share it with the other germplasm centres. Observations were also made on the performance of each variety. Yield was estimated roughly by harvesting tubers from five mounds and placing them in a 10kg bag. A score from 1-10 was then made based on how full the bag was. All the farmers best varieties scored 9 – ie. close to 10kg from five mounds. Results from five of the farmers best varieties and 3 recently imported SPC varieties grown in the same plot are presented in the table below.

Variety Name	*Flesh colour*	*Skin colour*	*Tuber shape*	*Growth Period*	*No. of Harvest*	*Tuber yields*	*Root sprout (B4 harvest)*	*Yield score*	*Market score*	*Home use*	*Pest/ disease notes*
Goveo TG 27	white/ purple strips	Dark pink	round			Base	Yes		10	7	SP weevil1, scab-8, beetles 5, root scurf-8
Lauru	Dark orange	Dark pink	Long/ round		1	Vine & Base	yes	9	9	10	None
Tombe	Light orange	Light Pink	Long/ round	6	1+	Base of plant	No	9	10	10	SP weevil-4,scab-4
Jerry	Orange	Red	big/oval		3	Vine & Base	No	9	10	10	None
Atara		Dark pink			1+	Base of plant	No	9	10	10	None
IB 0732	White	Pink	Long/ big			Vine & Base	No	9	10	10	SP weevil-9, scab-10
IB 0702	Light yellow	Pink	Round	6		Vine & Base	Yes	9	9	9	None
IB 0701	?	?	?	6		Vine & Base	No	9	9	9	None

Additional notes to table:

- all varieties preferred clay/coral soil except for Tombe which preferred Clay/lime and Goveo which preferred humus soil
- all were planted in similar sized mounds at the same time at KGVI bulking plot
- seven of the farmers best varieties were grown out
- no fertiliser was applied to any of the varieties – in line with typical farming practices
- no dislikes about these varieties were noted – all are considered good tasting varieties
- three varieties were damaged by sweet potato weevil - one severely. Three were also effected by scab and one was attacked by beetles and root scurf.

ANNEX 8: CSP agriculture livelihoods – component 3

Impact assessment methodology (version – May 09)

This document sets out the direction to be used for impact assessment activities of Component 3 – Agriculture Livelihoods of the Community Sector Program (CSP). The TOR calls for a participatory approach to develop an M&E system focussed on measuring impacts of the overall CSP Livelihoods program and incorporating the viewpoints of primary stakeholders as well as partners and CSP implementing staff.

Baseline data collection will not be a major focus as experience in Solomons has shown baseline surveys tend to detract from overall impact assessment activities due to the typical delays in implementation and often end up being incomplete or unreliable. This despite substantial resources going into them. Existing sources of information will be used where available (eg... HIES, Small Holder Study, CSP pineapple baseline survey and CSP Snapshot survey). Qualitative tools will be used to measure stakeholder perceptions of the scale and impact of changes to their livelihoods over time both before, during and after program interventions. One possible exception may be the use of a 24 hour diet recall survey.

The M&E system aims to capture adequate impact information to support the Component 3 Livelihoods impact assessment needs. The model proposed is summarised in the form of an overall framework (Attachment I) and a diagram that describes the M & E model (Attachment II). It does not aim to be a comprehensive M&E system for each sub activity and these activities will need to continue with their own 'project' based systems.

The framework has two layers:

- one representing the view point of the program team, the original Activity PDD and other design and planning documents
- the second layer is the view point of the beneficiaries or 'users' of the activities; this second layer will develop progressively over time as different user groups are contacted and their views on expected activity results/ impacts and their indicators of success incorporated; 'users' include household level beneficiaries as well as other partners and stakeholders (eg. SME's).

The M&E framework consists of:

Measuring progress toward the overall outcomes of Component 3 - Livelihoods:

1. increased agriculture productivity for food security and sale
2. improved market access and small holder terms of trade.

Seven key questions have been drafted with a list of indicators drawing from the overall program log frame and 'activity' design documents. This list of indicators will be added to based on inputs from project 'users'. Gender and youth impacts will be cross cutting issues.

Tools – most in the form of Participatory Rural Appraisal (PRA) type - are proposed to collect information on these indicators. Where possible two or more tools collect information on each indicator allowing for some triangulation of data. Tools are described in ANNEX III. The selection of tools is a compromise to collect the minimum data required in order to effectively measure impact rather than develop a cumbersome but comprehensive base line and measurement system that is unlikely to succeed in implementation. The current list is probably too many but we prefer to field test them and see where overlap occurs before prioritising them.

The tools chosen are expected to work well in Solomon Islands conditions. However, the list of tools and their use will be revised and improved based on experiences during field work and data analysis. For example, if gaps develop in certain areas of assessment or the range of tools proves too time consuming for beneficiary groups to participate in effectively. Partners, CSP Activity Managers, and relevant CSP Provincial staff

will be invited to assist and be involved with the field work. This may include some follow up work where required and considered realistic.

In addition to the use of the 'tools', data will also be collected through:

- attendance / co-facilitation of some sessions at project inception workshops (Cocoa Activity) or informal meetings with project teams and stakeholders for activities already underway
- facilitation of impact measurement sessions at annual reflection and planning workshops (all activities)
- project reports and other existing data/reports as a source of information for analysis
- regular communication with CSP team and key partner organisation contacts.

Field work, to be lead by the M&E specialists, is estimated at approximately six weeks per year.

Field work will be assessing impacts of the main CSP livelihoods activities (in order of priority for impact assesment work):

1. Cocoa
2. Value chain
3. Fruit Trees
4. SEAREM
5. Vanilla
6. Peanuts
7. Market places and storage sheds
8. DME coconut oil.

Field work will be done on a provincial basis with some monitoring done on a sample of different CSP livelihood activities in that province. The first field work is proposed for Guadalcanal and Makira in April and it is expected that this methodology will be updated based on that test run of the tools. Field work will involve group discussions and exercises, informal interviews, and field observations in a mix of structured and informal meetings. The M&E specialists experience in Solomons livelihood context and agriculture issues will be valuable.

Collected data will be analysed by the M&E specialists using a sustainable livelihoods framework for meta-analysis of the data looking at the impacts on the five SL assets at a household level:

- natural capital
- physical capital
- human capital
- financial capital
- social capital.

Results/summaries will be presented back to component team and where possible stakeholders for confirmation and feedback and to assist the learning process within the program. Networking analysis tool developed by R. Davies (http://mande.co.uk/special-issues/network-models/) will be used building on social network analysis approaches. Presentation of results will include case studies, selected MSC stories, relevant diagrams and photos from the field work and project teams. Based on the results the M&E specialists will make practical recommendation for particular activities and the program as a whole. This will be done through:

- debriefing after field work
- presentations at relevant workshops/meetings (eg.. annual activity reviews)
- 'technical' reports will be presented to CSP Livelihoods every 6 months. The frequency, format and usefulness of reports will be regularly reviewed.

Timetable

Activity	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Develop methodology												
Attend inception workshops												
Review workshops - empowerment evaluation												
Field work												
Guadalcanal												
Malaita												
Makira												
Western												
Central												
Choiseul												
Data analysis												
Six monthly reports												Rep Feb 2010

Component 3: activities by province

Activity	Guadalcanal	Malaita	Makira	Western	Choiseul	Central
Cocoa						
Value Chains						
FNTP						
SEAREM						
Vanilla						
Peanuts						
Market Places & Storage Sheds						
DMEs						

= Yet to be started in this province but planned.

Role of partners

In the first year it will not be realistic to expect too much focus on 'M&E Capacity Building'. However partners and key CSP staff at provincial and national level will be invited to be involved in:

- agreement with the approach proposed
- field work and initial analysis of results
- ongoing feedback.

The capacity building for M&E for the CSP livelihoods team will be achieved through this joint field work. Assuming there is continuity in staff, over time this is expected to build up a group of staff within CSP and partners with experience in these methods of impact assessment.

Prepared by Tony Jansen and Phylis Maike,Feb 2009
CSP Livelihoods Team