Report of the Second Pacific Extension Summit Meeting

18th - 22nd May 2009
Novotel Hotel, Nadi. Fiji Islands.

CTA gtz Partner for the Future Worldwide FAO Australian Government Australian Centre for International Agricultural Research nzaid New Zealand's International Aid & Development Agency SPC Land Resources Division

Report of the Second Pacific Extension Summit Meeting

18th - 22nd May 2009

Novotel Hotel, Nadi. Fiji Islands.

Report of the 2nd Pacific Extension Summit

18–22 May 2009, Nadi, Fiji

Compiled by

Secretariat of the Pacific Community Land Resources Division

Secretariat of the Pacific Community (SPC)

Suva, Fiji

2009

Original text: English

Secretariat of the Pacific Community Cataloguing-in-publication data

Pacific extension summit
(2nd: 18-22 May 2009 : Nadi, Fiji) / compiled by Secretariat of the Pacific Community Land Resources Division.

1. Agricultural extension work — Oceania — Congresses.
2. Forestry extension — Oceania — Congresses.
3. Sustainable development — Oceania — Congresses.

I. Title II. Secretariat of the Pacific Community

AACR2 630.995

ISBN: 978-982-00-0405-4

SPC Headquarters
BP D5
98848 Noumea Cedex,
New Caledonia
Telephone: +687 26 20 00
Fax: +687 26 38 18

SPC Suva Regional Office
Private Mail Bag, Suva, Fiji Islands
Telephone: +679 337 0733
Fax: +679 377 0021

SPC Pohnpei Regional Office
Level 2, Pohnpei National Building
Namiki
PO Box Q, Kolonia, Pohnpei, 96941 FM
Federated States of Micronesia
Telephone: +691 3207 523
Fax: +691 3202 2725

Produced by:
LRD Information, Communication and Extension
Land Resources Division, SPC
Nabua, Fiji Islands
Photography by: SPC Staff
March 2010

TABLE OF CONTENTS **PAGE NO.**

Foreword: **2**
Opening Address **3**

Chapter One: Transforming Extension and Outreach in the Pacific for Sustainable Development .. **5**
Background
Objectives
Workshop process
Chapter Two: Setting the Scene – Extension Policy **8**
Policy development
Issues raised in discussion
Chapter Three: Lessons Learnt from Extension Models in the Region **10**
Lessons learnt from Extension models
Chapter Four: Synthesis of Key Issues and Recommendations
1. Governance, commitment, transparency and accountability 14
2. Building partnerships 15
3. Provision of technical support .....
4. How to utilise media and ICT .....
5. Development of policy briefs 16
6. How to 'scale up' succesful models 17
7. How to engage youth in agriculture .....
8. The multiple roles of extensions - trade facilitation, food and nutrional security 18
Chapter Five: The Way Forward **20**

ANNEX 1: Opening Addresses
1. Mr 'Aleki Sisifa, Director, Land Resource Division..... 25
2. Hon. Joketani Cokanasiga, Minister For Primary Industries, Fiji Islands 27

ANNEX 2: Country Reports **29**

ANNEX 3: Papers Presented
1. Extension Policy 41
2. Lessons Learnt from Extension Models in the Region 45
3. Role of ICT in Transforming Extension 58
4. The Role of Extension in Engaging Youth in Agriculture and Forestry 64
5. Capacity Building in Extension 72
6. Regional Framework Development 75

ANNEX 4: Evaluation of the 2nd Pacific Extension Summit **76**

ANNEX 5: List of Participants **84**

ANNEX 6: Summit Programme **88**

FOREWORD

Director, Land Resources Division

The 2nd extension summit has the theme, 'transforming extension and outreach in the Pacific for sustainable development' and providing an exciting and intellectually stimulating forum for Pacific Islands leaders in agriculture extension to exchange experiences, critically analyse the value of current outreach services, and plan strategies for the improvement of this important service to our farmers – the bedrock of our communities and of our economies.

Two significant areas that this extension summit examined are: firstly, policy direction of extension as a profession; and secondly, the role of extension and outreach services in contributing to sustainable management of agriculture and forestry resources, as well as adaptation and mitigation of climate change. Both tThese areas are inseparable – one deals with confronting head on the global issues that face us so that food security and livelihoods of our peoples are assured during our time on this earth and for those that will come after us; and the other deals with having a clear road map that ensures agricultural extension contributes effectively to the attainment of those goals.

SPC is strongly committed to further transform and empower extension and outreach services in the Pacific. The outcomes of this summit will make a significant difference to the food security and livelihoods of the Pacific Islands people and the environment in which they live.

SPC's development partners are acknowledged for the close collaboration in agricultural research and development over the years. In particular, the assistance of the EU, the Governments of Australia, New Zealand, France and Federal Republic of Germany is acknowledged with thanks. The close collaboration of the UN/FAO, IFAD, USP, Secretariat of the Pacific Regional Environment Programme (SPREP) and Secretariat of the Pacific Islands Applied Geoscience Commission (SOPAC) is also acknowledged. The Technical Centre for Agricultural and Rural Cooperation (CTA) has been an important partner in the regional work of SPC LRD – particularly through assisting in the establishment of the Pacific Agriculture and Forestry Policy Network (PAFPNet), as a major funder for the first and second extension summits (along with GTZ, AusAID and the Australian Centre for International Agricultural Research – ACIAR), funding of the International Symposium on Breadfruits, ICT policy and other capacity building activities in the Pacific Islands region.

Thank you

'Aleki Sisifa
SPC-Land ResourcesDivision, Director.

OPENING ADDRESS

Dr John Woodend, CTA Representative

Honourable Minister, Head of Extensions, distinguished guests, representatives from regional, international and national organisations, fellow agriculturalists/colleagues, Taiwan Technical Missions, representatives of NGOs and ladies and gentlemen.

First and foremost it gives me great pleasure to bring you warm greetings from the Director of the Technical Centre for Agriculture and Rural Cooperation (CTA), Dr Hansford Neun, to welcome you all to this very important summit. He would like to attend but has been unable to because of other responsibilities and the fact that he was recently in the Pacific for the Energy Ministers' Meeting in Tonga.

I am very glad to be back here again. Before I go any further, let me say a few words for CTA as to why we are sponsoring this event. The Centre was set up in 1984 as part of the then EU–African Caribbean and Pacific (ACP) under the Lomé Convention. In this regard, CTA is part and parcel of a signing agreement between the EU ACP countries. It now operates under the Cotonou Agreement which was signed in 2000.

When it was set up in 1984, it was given the challenging task of improving the flow of information among all stakeholders in agricultural and rural development in ACP countries, as well as between the EU ACP countries. Among its stakeholders are smallholder farmers (SHFs) (most important), multilateral organisations, inter-agency regional agriculture and rural development (ARD) organisations, national agricultural institutions, NGOs, national and regional policy-makers, and technical development agencies.

Its work focuses on the following:

- providing information products and services (e.g. publications and databases);
- promoting the integrated use of communication channels, such as traditional and new/emerging ones, to improve the flow of information – for example, e-communications, telecentres, seminars and study visits; and
- building ACP capacity in information and communication management (ICM) through training and partnerships.

The Centre's overall aim is to meet the ever-changing information needs of all its stakeholders in ACP agricultural and rural development.

Improved outreach is a centrepiece of CTA's strategic plan for 2007–2010. Therefore, we are speaking the same language.

Why is CTA co-sponsoring this summit?

- Extension, particularly of the participatory two-way type, is of crucial importance to ARD.
- Face-to-face interaction and exchange of ideas, experience and lessons learnt are of vital importance to the improved effectiveness and efficiency of impact of extension services in all ACP regions.

Ladies and gentlemen, we face a daunting challenge in ARD given: (i) the redundant performance of most ACP agriculture; (ii) the widespread or sometimes growing poverty in ACP countries; (iii) escalating food prices, and (iv) climate change and its widespread effects, etc.

Yet there are immense opportunities for us as agriculturalists to contribute to the improved livelihoods and wellbeing of our people. Of these, perhaps the most significant are the rapid emergence of improved persuasive ICT and of course the ease of production of promotion/extension materials such as posters, booklets etc.

If we are to have the desired impact on poverty through agriculture under development in our countries, we must seize and adapt these opportunities to meet our needs.

In my humble opinion, there is no other way forward but I must caution that we must be wary of improved ICT and the Internet because: (i) the veracity/reliability of information provided is sometimes questionable; ii) there is a regrettable lack of first-hand ACP information on the Internet. Sadly, reliable information from ACP ARD organisations/institutions is often lacking for ready access and use, even in the original countries themselves.

We need to not only be aware of these problems but work to alleviate them, the sooner the better.

A rapidly emerging and highly relevant technology to extension is the mobile phone. Not only are mobile phones becoming more pervasive due to plummeting costs, but so are their power and versatility increasing. Already mobile phones are being used to disseminate market information in some African countries. As a matter of urgency we need to develop ways of integrating mobile phones into extension service.

CTA is also very interested in the establishment use of telecentres in rural areas. These centres would provide computers and related services to the poor and isolated, bringing with them the possibility of providing up-to-date information and even opportunities to sell their products through websites. For example, the telecentres are currently being piloted in Africa and will, I am sure, come to the Pacific in the near future. If not I will make a lot of noise at CTA about telecentres for the Pacific.

Finally, let me again say that we are faced with daunting challenges ahead. But there is hope. We undoubtedly have the will, knowledge and technologies to improve the livelihood of SHFs.

If you asked me if this can be done, my answer would be a definitive and resounding yes we can, particularly if we work together in a transparent logical collaboration and sustainable manner.

Thank you.

Dr John Wooden
CTA Representative

CHAPTER ONE:

Transforming extension and outreach in the Pacific for sustainable development

BACKGROUND

The inaugural Agricultural Extension Summit for the Pacific Region, which was held in the Kingdom of Tonga in November 2005, brought together 96 participants from 23 Pacific Island countries and territories (PICTs) and further afield. Among these participants were extension managers, researchers and practitioners, university lecturers, members of civil society organisations and farmers.

The summit aimed to strengthen support for Pacific Agricultural Research Extension (PARE) at the regional and national level through sensitising senior policy- and decision-makers to why PARE was needed and what it could achieve. The summit's objectives were to: (a) review the status of PARE in PICTs and elsewhere; (b) develop guidelines for institutionalising PARE in PICTs; and (c) prepare a regional framework for supporting the institutionalisation process.

Country plans for furthering PARE were developed. These plans contained activities that required support at the levels of national government and regional and international organisations.

They grouped country needs into requirements for capacity building, linkage and networking, and empowerment, and made recommendations as to how to address these issues and further the outcomes of the summit.

Amongst many recommendations that are detailed in the Report of the First Pacific Extension Summit, the summit approved the formation of an extension network called Pacific Islands Extension Network (PIEN).

Through the Development of Sustainable Agriculture in the Pacific (DSAP) project, funded by the European Union (EU), led by the Land Resource Division (LRD) of the Secretariat of the Pacific Community (SPC) and implemented in 16 PICTs, many gains in these areas were realised in the four years leading up to the 2nd Extension Summit.

The 2nd Pacific Extension Summit brought together 64 participants from 11 PICTs and further afield, representing a true cross-section of public and private stakeholders and partners. A complete list of participants is provided in Annex 5. Organisation was undertaken by SPC's LRD with funding assistance from the Technical Centre for Agricultural and Rural Cooperation (CTA).
The aim of the 2nd summit was to share the lessons of four years of DSAP work in PARE and to look at ways of upscaling this work to other PICTS. In addition, with the SPC–GTZ Pacific Regional Forestry Project making advances in the area of

participatory land use planning at all levels and with the focus of Pacific Leaders on preparing the region for the effects of climate change, participatory land use planning has taken on a new significance. PICTs have not been spared the current global financial and food price crisis. Their isolation and distance from global market places has meant a re-focusing on traditional food production systems and local crops to ensure food and nutritional security. The prices of imported food items such as rice have tripled in the past year and the Pacific region has felt the pinch. The current mainstream state and non-state extension delivery mechanisms are therefore in need of not only an upgrading of skills and experiences in order to prepare to meet these new challenges, but a transformation that links clearly to meeting the requirements of building sustainable livelihoods for Pacific peoples. Hence the theme of the summit: 'Transforming extension and outreach in the Pacific for sustainable development'.

This report is a synthesis of the main findings, lessons learnt, conclusions and recommendations from the presentations and discussions of the summit. Papers presented at the summit are summarised in Annexes 2 and 3.

OBJECTIVES

The overarching objective of the 2nd Pacific Extension Summit was to improve rural livelihoods in the Pacific region through providing feasible and practical guidelines on improving the delivery of services by extension and outreach providers in the Pacific.

The summit aspired to address the pressing needs and concerns of extension services – public and private – in our current global climate. Specifically it aimed to: develop guidelines for extension policy development for the region; develop guidelines for extension and outreach to ensure food and nutritional security; develop guidelines for ensuring sustainable agriculture and forestry development in the field of extension and outreach; develop guidelines for improving extension and outreach services in improving trade; identify the role of extension and outreach services in engaging youth in agriculture and forestry; examine lessons learnt from civil society and develop guidelines for formalising partnerships; explore use of information and communications technology (ICT) to improve delivery of services; develop guidelines for capacity building of extension and outreach service providers; and outline a way forward for developing PIEN.

L-R: Dr John Wooden, CTA Programme Coordinator, Fiji Minister for Primary Industries, Hon Joketani Cokanasiga, Mr 'Aleki Sisifa, LRD Director and local reverend at the opening of the 2nd Pacific Summit.

WORKSHOP PROCESS

'Aleki Sisifa, Director, Land Resources Division of SPC offered introductory remarks and the summit opened with a keynote address by the Hon. Joketani Cokanasiga, Minister for Primary Industries, Fiji Islands (Annex 1). This was followed by plenary keynote addresses and thematic presentations. Papers were also presented highlighting: experiences of extension policy; national developments and experiences; lessons learnt from models utilised in the region; the role of ICT and the media in agricultural extension; how extension can engage youth in agriculture and forestry; capacity building in extension; and regional framework development. Up to this stage, the objective of the programme was to learn from all these experiences so that participants could move to group discussions with expanded awareness of extension learning and from that basis further explore and address the issues that came out of these group sessions.

The issues identified were grouped into the following themes:

1. governance, commitment, transparency and accountability;
2. building partnerships;
3. provision of technical support;
4. how to utilise media and ICT;
5. development of policy briefs;

6. how to scale up successful models; and
7. how to engage youth in agriculture.

Participants were asked to participate in the discussion groups of interest to them and to use the following terms of reference for group work:

1. Step 1: (a) discuss the issues given under the theme and see if anything has been missed, (b) incorporate or add any missing issues.

2. Step 2: (a) discuss what could be done to address these issues, (b) sort recommendations into what can be achieved one year from now at national and regional levels.

The process of the summit identified the need for a united vision for extension in the Pacific region. The following vision and mission statements were discussed and will be finalised through ongoing dialogue facilitated by PIEN.

Vision

To be an efficient and effective extension service in transforming the agricultural and forestry sectors in the Pacific.

Mission

That agricultural extension is committed to the development of the sustainable agricultural and forestry sectors through key stakeholders working in partnership to provide appropriate policy, information and services for the betterment of producers, marketers, consumers and the economy of the countries and territories of the Pacific region.

In order to progress the possible solutions identified through the Summit the participants issued the following statement:

The participants of the 2nd Pacific Extension Summit, representing a cross-section of government and non-government extension practitioners and leaders from the region, endorse and direct the Land Resources Division of SPC through the Pacific Islands Extension Network (PIEN) to engage partners in implementing the outcomes of the Summit and to develop a strategic way forward for transforming extension and outreach in the Pacific. The summit ended with acknowledgements to participants for taking time to attend the summit and to SPC partner organisations.

It is generally acknowledged that agricultural extension is given a low priority across the Pacific. Studies suggest the need to change and changes require reforms. It has been recognised that 'no one shoe fits all', the diversity of cultures, production systems and farmers individual needs must be met. This means a paradigm shift is required, new systems should be participatory and empowering with recognition that farmers are stakeholders in extension and not just beneficiaries.

CHAPTER TWO:

Setting the scene – Extension Policy

Policy development

Getting agriculture and extension into policy documents does not necessarily increase support for the sector or extension services; however the process of developing policy is arguably more important than the resulting document. The starting point should be a review of existing services that involves all stakeholders engaged in extension service delivery, with the aim of improving understanding of the roles of different agents. Policy development needs to be demand driven and involve clients (farmers) in setting priorities.

The development of an explicit policy represents an opportunity to bring all stakeholders together to discuss their various roles in extension service delivery. Consultations also need to include discussion of implementation plans including timeframes for achievement of outputs and crucially a budget. It is also essential to involve the ultimate clients in the process – farmers.

To provide guidance on the development of policies and the prioritisation process, should the summit see such measures as a priority, the following key policy questions in developing a policy brief were put forward for consideration:

1. What should the policy development process look like?
2. Where should governments focus with limited resources?
3. What are some case studies of best practices?
4. Key questions:
   - What opportunities exist for public–private partnerships?
   - Where should government focus resources?
   - Where are the market failures?
   - What are some success stories in the use of ICT and media?
   - How can accountability to clients be increased?

Issues raised in discussion

1. Does lack of resource allocation reflect that there is no policy in place or does it reflect that a focus on extension in local food production is unnecessary for food security?

2. There is a feeling amongst stakeholders that we are competing for the same ‘piece of pie’; we need to mobilise the resources that are available and share them. Sometimes service providers hold information and become competitors themselves; policy needs to encourage team work.

3. Policy should link extension to development goals and demonstrate a holistic approach.

4. If it is more suitable for policy to come from stakeholders rather than higher-level policy-makers, regional organisations and so on, do we want to consider a policy brief on extension or look at some framing questions and develop them at national level?

5. Policy in extension would be useful as we are tasked with extension that has multiple objectives and giving direction is very important. At the same time the issue of policy development is dynamic: at times policy has to be reactive – not in a knee-jerk way but certainly responsive.

6. We need to avoid simply window dressing without actually solving the issues. The challenges and situations are dynamic and we have to adapt; we don't want 'old copra in new bags'.

CHAPTER THREE:

Lessons learnt from extension models in the region

Experiences in extension delivery in various Pacific countries and territories were presented in the context of learning lessons that may contribute to the transformation of agricultural extension and outreach services in the Pacific. The need for revitalisation of extension services around the region, the need to outscale and upscale alternative extension models, was clear. As country participants shared their challenges and successes, the following common issues with scope for future innovation at national and regional levels were identified:

1. resource constraints – alternative models need to be created;
2. geographical constraints – particularly for PICTs that have many outer islands and for PNG where the geography isolates communities of people from information flows;
3. diversification – the need to build pluralistic agricultural advisory services for greater robustness and service delivery;
4. information flows – access by all rural stakeholders to knowledge they need to develop in appropriate ways; and
5. youth – this population group represents a huge potential resource if their energy can be harnessed, which links to the need to transform the image of farming as a profession.

Lessons learnt from extension models

The need for change

1. Change processes can be challenging for staff and institutions and can be 'hijacked' – how do we manage this area of risk?
2. The motivation to do a worthwhile and satisfying job is a prime factor in making change. The will to initiate change is important; better resources and communication and a supportive environment encourage and support the process.
3. To make change happen, there is a need to be able to work and advocate through existing systems.
4. Organisational learning and change need to be incorporated into any restructuring.
5. We need to develop workplace cultures that encourage ongoing learning – i.e. we need 'learning organisations'.
6. Change starts at home – with yourself: your own attitudes need to be adjusted before you can facilitate change anywhere else.

Resource and geographical constraints

1. We need to be able to do more with less. It is a reality across the Pacific that budgets are reducing so we need to work out how to provide extension services in this context.

2. It is common for outer islands and the larger states with poor infrastructure to face geographical constraints. Outer island and regional officers feel left out of planning and they need to be involved in planning if a truly participatory approach is to be set in place. Costs are also high in providing services to those areas.
3. People need to change their mindset to say, 'We can do it', rather than looking at all the constraints, and to find alternative ways.
4. There are opportunities for partnering and for utilising ICT to address these issues.
5. There is a need to avoid duplication, to manage resources better and to build on what is already working.
6. Focus initially on the most significant crops/ livestock in order to build the model and get it right in each country, then move the model across to other crops.

Partnerships

1. There is a lack of communication and policy to create harmonisation and facilitate partnerships between the private and public sectors.
2. The role of extension is to meet needs of farmers that will enable them to become successful farmers – yet extension officers who are not agriculturally trained are doing extension.
3. With diversification of service providers, is there a need for a generic skills set in extension provision to which specific technical skills– such as skills related to agriculture, forestry or health – can be 'added'
4. Regionalism is a long way off: Pacific Island countries and territories remain competitors in the market place.
5. We can have collective actions but we do not need to cross into competition – even within ministries there is competition for budget.
6. Farmers are also partners in development; they are the experimenters and have knowledge. We need to develop ways of disseminating information among farmers.
7. Ministries lack the resources to meet the wide range of extension needs and there are people and organisations, including the churches, waiting to partner with ministries.
8. Partnership is only possible with trust and good relationships.

Information and communications technology

1. ICT can be effective in reaching isolated atolls.
2. New technologies do not help if social constraints limit their uptake – we need to understand the context into which they are introduced.
3. The human factor of extension approaches cannot be neglected; ICT can be a useful addition to the extension 'toolbox' but it does not meet all needs.
4. ICT can be cost effective but it does not necessarily cover all areas to the same level.
5. ICT can only be effective if there is an efficient information and research system behind it.
6. Mobile phone networks and programmes such a One Laptop Per Child (OLPC) may be utilised effectively.
7. Extension needs to be more media 'savvy' and to learn how to present our information so that media wants to use it. It is necessary to build relationships with journalists and educate them. Many low-cost media options, such as talkback radio, could be exploited more fully.

Monitoring and evaluation

1. Extension has been unable to effectively provide accountability and transparency back to end users, donors or governments.
2. How do we measure the impact of extension services?
3. Extension needs to work to plans so that we know what we are monitoring against.
4. Non-governmental organisations (NGOs) and farmers' organisations can act as 'watch dogs' over a ministry's effectiveness.
5. A participatory approach is our chosen option for extension. Maybe we need to segregate participatory tools from tools focused at marginalised people; need linking, we need to look at the gaps and sensitive issues in our monitoring.
6. In trying to achieve social inclusiveness how do you identify 'social fences' in the community and ensure social inclusiveness?
7. The process of upscaling is just as important as the model.

Research and extension should be integrated

1. There is too much separation between research and extension; extension is often the 'poor cousin'.
2. There is a need for farmer training on new systems, and new research must be shared.
3. An inventory of outputs from the research stations across the Pacific would be useful; we need to network them as well to expand the information base.
4. Research should be part of extension. In reality research is threatened by the concept of extension undertaking research. It is only when we examine our own roles closely that researchers will realise they need extension and need to work with us.
5. There is a need for scientific material in relevant everyday language suitable for extension use.
6. How do we capture tacit knowledge and how do we harness it to improve our extension approaches and methodologies?

Capacity building

1. It is important to work holistically including through linkages with agriculture, forestry, water, climate change and so on.
2. There is a need to get research back to the farmers to build capacity on the ground.
3. A positive achievement is that courses have been developed since the last extension summit.
4. It is possible to develop curricula to promote farming as a professional farming career.
5. There is a need for tertiary institutions to talk to each other and share courses and resources.
6. There is discussion about the University of the South Pacific (USP) partnering with national institutions to ensure compatibility of their courses.
7. Is there a possibility of an association of tertiary institutions housed in SPC to work on transferability of courses and the achievement of other linkages?
8. How do courses ascertain competency?

Pacific Islands Extension Network

1. PIEN should link to the Australasian extension network.
2. Utilise the extension summits as a venue for presenting awards, and engage extension recipients in the summits to learn and share.
3. PIEN needs to move to a stronger governance structure.
4. PIEN needs a communication strategy to engage membership and funding.

Youth

1. It was found in participatory rural appraisals (PRAs) in Tonga that youth always feel that their sweat (labour) belongs to their parents.
2. A whole family approach is needed. Encourage parents to pay their children who work on the family farm so that these young people can see some personal financial reward for their work.
3. Starting to educate people about agriculture when they are young is effective; we need to work with primary and preschools.
4. When incorporating agriculture into the school curriculum, we should think laterally: use environment, science and informal activities like gardening projects, tree planting.
5. Education is important to complement encouragement to farm, training etc.
6. Existing youth strategies need to be are identified and built on.
7. Churches are a valuable resource in mobilising youth in agriculture; their involvement can be explored further.

4. It is necessary to build capacity in marketing.
5. Extension is important at the production end: calendar for crops etc. (planting, harvesting), technical support to farmers and institutions working with farmers/groups.
6. Provide organic certification and value adding opportunities.
7. A role of government is to provide supply chain information and facilitate market access.

The multiple roles of extension: trade facilitation, food security and nutritional security

1. Extension has many roles to undertake and finding a balance across them can be challenging.
   Strengthening relationships with NGOs and other stakeholders can lighten this burden.
2. Farmers need to be supported to remember food security rather than focusing solely on cash crops.
3. Identify opportunities and barriers to trade through consultations.

CHAPTER FOUR:

Synthesis of key issues and recommendations

Issues that rose during the presentations and group discussions were consolidated into the eight themes outlined below. Participants were asked to break into groups according to the theme they felt most strongly (were 'passionate') about and to suggest strategies that would address the issues, identifying whether the strategy was short term or long term and if it should be addressed at a national or a regional level.

1. **Governance, commitment, transparency and accountability**

   The main concerns regarding governance, commitment, transparency and accountability were that there are currently few mechanisms in place to support these areas and extension is not seen to be accountable. These fundamental concerns were expressed in the following issues:

1. How do we work around bottlenecks in our systems?
2. We need to develop effective monitoring, evaluation and learning systems that capture impact as well as outputs.
3. We need to develop effective communication at all levels, across all the stakeholders, that incorporates effective feedback loops.

Recommendations to improve governance, commitment, transparency and accountability were made in the following four areas.

Policy

1. Establish and implement clear policy and guidelines. Part of this work is to seek Cabinet approval on new and existing programmes and ensure its implementation down the structure.
2. Develop a clear strategic work plan through consultation and put it in place. Linkages to the corporate/business plan and national development goals must be clear to all. Consultation in developing the plan is necessary to ensure stakeholders take full ownership of it.
3. Streamline reporting and decision-making channels to facilitate the smooth implementation of the plan and ensure the necessary information is readily available.
4. Develop a code code of ethics and ensure that people adhere to them.

Human resources

1. Develop good selection criteria and processes for staff recruitment with clear minimum qualifications required. In addition, more weighting should be placed on other relevant issues such personality and people skills, level of interest and references.
2. Put in place a regular upskilling programme with training needs identified and analysed, and a specific training programme drawn up.
3. Establish performance-based reward and disciplinary procedures.

Stakeholder interaction

1. Set up a consultative mechanism with stakeholders. This process may include establishing core groups and meeting schedules, as well as circulating briefing and policy papers and work programmes for stakeholder information and input.
2. Develop effective communication at all levels through frequent meetings and feedback within the structure; build capacity in management and interpersonal skills; and develop a learning culture within the organisation.

Monitoring and evaluation

- Develop effective monitoring, evaluation and learning systems that capture staff capabilities, attitudes and performance. It is critical that individuals understand the process, systems etc. and that a clear monitoring and evaluation framework is developed.
- To achieve timely delivery of services, monitor and evaluate the effectiveness and efficiency of service delivery by staff.

2. Building partnerships

Given the limited availability of resources and the increasing need to 'do more with less', building effective partnerships was a recurring theme throughout the summit. Issues of concern focused on:

1. how to establish and maintain these partnerships in order to avoid duplication and enhance delegation (between partners), and work around resource constraints; and
2. how to clearly define roles, responsibilities and accountabilities.

To make partnerships an effective mechanism the following recommendations were made:

1. Jointly develop and sign a Memorandum of Understanding (MOU) that defines roles and responsibilities of partners.
2. Develop clear and well-defined work plans that link activities of all partners.
3. Monitor and evaluate the activities done under a partnership, and keep expectations realistic.
4. Establish a platform for dialogue with stakeholders to assist in developing trust and to recognise work done.
5. Make ministry briefs easily available to related ministries.
6. A steering committee may be useful for implementing and monitoring activities done under a partnership arrangement.
7. Develop government policy to support partnering.

3. Provision of technical support

The main concern concerning provision of technical support by extension was how to develop effective linkages among farmers, extension, research and institutions.

The following recommendations were made to address the need for enhanced provision of technical support:

- Improve access to modern communication technology at all levels.
- Enhance networking among players in the information chain both formally and informally.
- Establish formal consultation and training programmes to upgrade skills in needed areas.
- Create learning centres.
- Upgrade crop varieties and disseminate information on crop varieties effectively.
- Identify and roll out simple, appropriate and low-cost technologies.

4. How to utilise media and ICT

In light of the constraints on human and financial resources and geographical constraints facing PICTs, utilisation of media and ICT was identified as a valuable tool in extension delivery. The main concerns regarding use of ICT and the media were as follows:

1. How do we develop relationships with ICT and media providers to provide cost-effective services?
2. How do we ensure inclusiveness and that the 'digital divide' does not become another barrier?
3. How do we facilitate community ICT initiatives?
4. How do we work with the mass media more effectively and engage the media more actively in agricultural and forestry issues?

The following were put forward as recommended strategies to utilise ICT and the media in extension transformation:

1. Never use ICT as a stand-alone strategy. It is one of many tools for use in extension but the value of face-to-face communication must not be forgotten.
2. Link round-table media capacity training to major agriculture and forestry events such as Ministers of Agriculture and Forestry (MOAFs) and Heads of Agriculture and Forestry (HOAFs) meetings to increase the level of reporting on agriculture and forestry in local media.
3. Identify opportunities for capacity building in media production skills for extension officers. As many PICTs have non-functional information units, extension officers need basic training in communication skills in writing press releases for newspaper and radio, interviewing skills, publication and video production skills, and use of ICT for extension.
4. Develop strategies on media convergence and explore cost-effective ICT to increase intensity and diversity of media coverage of extension activities.
5. Broaden media formats to: radio talk shows and use of local celebrities/champions; local news on TV and in newspapers; partnership with other relevant sectors such as health, education, rural

development to co-sponsor media programmes; DVDs on agricultural practices; use of mobile phones and telecentres; establishment of a help desk to improve extension service; use of high frequency (HF) radio for outer islands; the Internet and email groups; and OLPC.

6. Engage media groups at national and regional levels – Journalists Association of Western Samoa (JAWS), Pacific Islands News Association (PINA), PACNEWS, Islands Business, Radio New Zealand International, Radio Australia, Pacific Regional Organisations Media Officers (PROMO) – to assist with information dissemination. Invite participation and send out press releases on national/regional agricultural events, famer field days, agricultural shows, workshops, farmer success stories, environment and health, etc. The purpose of these measures is to promote the formation of media focus groups specifically for agriculture and rural development, as a means of addressing the lack of specialised media reporting in this sector.
7. Establish media awards to acknowledge and encourage an increase in the level of agricultural reporting.
8. Incorporate a media component in national agriculture and forestry strategies to allow for the dissemination of outputs and reporting of best practices.
9. Develop partnerships with international organisations, local funding agencies, business houses, NGOs, etc. to co-fund newspaper supplements, TV programmes, video documentaries, and radio broadcasts of field days.

5. Development of policy briefs

Policy that creates an enabling environment for successful extension was identified as necessary by the summit. It was noted that development of effective policy briefs may need professional input. The following are key questions to be addressed when considering policy development:

1. What opportunities exist for public–private partnership?
2. Where should government focus resources?
3. Where are the market failures?
4. What are the success stories in the use of ICT and media?
5. How can accountability to clients be increased?

To promote national and regional policy initiatives, these strategies were recommended:

1. Explore opportunities for partnership that extend more broadly than just the public–private concept.
2. The government should focus resources where there is better likelihood of delivering expected results.
3. Create 'positive' policies – focus on market opportunities.
4. Create policy that is responsive to client needs, thereby increasing accountability.

5. Review existing national policies and strategies, in line with national and sectoral development priorities.
6. Initiate the development of a regional extension strategy.
7. Review existing extension systems, and assess how these are aligned with strategic plans of national extension services.
8. Conduct analysis of stakeholders including service providers such as NGOs, church groups, youth groups, women's groups, private sector and media. Critically evaluate how responsive extension services are to client needs, i.e. how effectively do they deliver on their mandates?
9. Develop a framework for monitoring and evaluation of the extension services at national and regional level.
10. Explore realistic agricultural market opportunities to target extension services (i.e. food security is not adequate as the only target).
11. Assess resource use – how effectively and efficiently are human, material and financial resources being used?

6. How to 'scale up' successful models

The question of how to learn from existing models and capitalise on their success through outscaling and upscaling is very significant to the future of extension. Issues of concern for this theme were:

1. the need to analyse selected models and ascertain what key features to look for;
2. the current lack of awareness of successful models across region; and
3. the need to develop structure and channels for adoption of models.

The following strategies were proposed as ways to promote outscaling and upscaling of successful models:

1. Use farmers as the carriers of the extension approach.
2. Use the mass media and the Internet.
3. Hold farmer and stakeholder field days to demonstrate models.
4. Run farmer field schools.
5. Conduct an agribusiness viability analysis of the relevant ministry or organisation.
6. Use existing religious organisations and community structures to extend the use of a model.
7. Promote the suitability, adaptability, flexibility, manageability and viability of the model through training, workshops and other extension methods.
8. Undertake capacity building through academic institutions etc.
9. Hold an extension summit.

7. How to engage youth in agriculture

Concerns regarding the 'greying' population of farmers coupled with the recognised potential of our youth resource stimulated extensive discussion on engaging youth in agriculture. Young people are perceived to lack interest and be reluctant to participate in agriculture but at the same time this sector lacks paid employment opportunities to offer them. There are weaknesses in education and training, a lack of support (from or through family, community, organisations, funding, marketing and extension) and a lack of role models. The issues to be addressed in regard to this theme are how to:

1. utilise a 'whole family' approach to reaching youth;
2. encourage youth to see agriculture as an income generation activity and a profession; and
3. empower youth to outreach to other youth.

Recommended actions to engage youth in agriculture are as follows:

- Identify role models to promote youth in agriculture in schools and youth groups, and through visits to farms. Utilise motivational speakers, media and model farmers. Develop a structure for Pacific youth in agriculture.

- Set up an award for Ms/Mr/youth farmer of the month – identify youth champions.
- Incorporate youth focus in extension programmes.
- Undertake and disseminate research that encompasses data collection, innovation, success stories etc.
- Target training to match opportunities.
- Facilitate micro-finance and income generation opportunities for youth.
- Provide youth-oriented information support (market, innovation, practices, funding, and opportunity networks).
- Provide mentors and apprenticeship programmes.
- Initiate curriculum development with formal and informal approaches relevant to each level and commencing at early childhood and primary levels.
- Implement youth volunteer outreach programmes including poor-to-poor outreach.
- Develop or incorporate programmes targeting family to support youth.

8. The multiple roles of extension- trade facilitation, food and nutritional security

The roles and responsibilities of extension services continue to expand. Two key areas for extension are trade facilitation and food and nutritional security. These areas interact with and impact on each other but each one contains defined issues to be addressed, as identified below.

Trade facilitation

Areas of concern for trade facilitation are:

1. lack of linkages with private sector and markets;
2. lack of understanding of trade requirements;
3. how to maintain commitment throughout the supply chain;
4. the need for extension officers to promote export commodities in a more holistic approach;
5. lack of networking and coordination;
6. lack of knowledge and skills in quality standard frameworks; and
7. lack of information about the markets and potential markets of local products.

The following are some solutions to the issues surrounding trade facilitation:

- Create an extension stakeholder network.
- Undertake an exploration or study tour of the regional and international market sources, trading success stories.
- Promote and encourage cooperatives and farmer associations with a trade focus.
- Source experts from Quarantine, Commerce and Labour Departments to provide training packages and deliver training to farmers and extension officers.
- Promote road shows on trade-related issues to rural communities on a regular basis.

Food and nutritional security

Areas of concern for food and nutritional security are:

1. the need for extension officers to promote food security in a more holistic approach;
2. how to encourage consumption of local food and guard against genetic erosion;
3. the need to see the issues through the farmers' eyes;
4. the reduction in money that is now available;
5. lack of ICT skills;
6. lack of knowledge about climate change;
7. the fragility of atoll ecosystems;
8. lack of promotion of local food; and
9. lack of knowledge of food nutrition.

The following are some solutions to the issues surrounding food and nutritional security:

1. Incorporate programmes promoting home-grown food for women, youth and urban residents.
2. Identify national icons to champion awareness campaigns and the benefits of local foods.
3. Incentivise farmers and manufacturers to use local produce.
4. Consult with farmers at all levels of the project process.
5. Promote traditional roles to drive food security and nutrition security.
6. Provide skills training on fundraising.
7. Provide training and technology for extension officers to more effectively utilise ICT.
8. Develop food planting programmes in readiness for the impacts of natural disasters and climate change.
9. Adopt the DSAP project to support atoll agriculture.

CHAPTER FIVE:

The way forward

1. Recommendations at country and regional levels

Participants grouped recommendations and activities into what could be undertaken at national level and what may necessitate regional intervention. The recommendations were also divided into short-term aims – to be achieved before the next scheduled extension summit in approximately 12 months – and longer-term aims. It is planned that the next extension summit will provide an opportunity for monitoring outcomes from these recommendations and for learning further lessons.

KEY ISSUES IDENTIFIED	NATIONAL	REGIONAL
How to engage youth in agriculture	**Short term** 1. Identify role models to promote youth in agriculture in schools and youth groups, and through visits to farms. 2. Develop a structure for Pacific youth in agriculture. 3. Set up an award for Ms/Mr/ youth farmer of the month – identify youth champions. 4. Incorporate youth focus in extension programmes. 5. Undertake and disseminate research, covering: a. data collection b. innovation c. success stories etc. 6. Facilitate income generation activities in agriculture. 7. Facilitate micro-finance for youth. 8. Provide youth-oriented information support (market, innovation, practices, funding, opportunity networks). 9. Provide mentors and apprenticeships.	**Short term** 1. Target training to match opportunity. 2. Develop structure for Pacific youth in agriculture. 3. Incorporate youth focus in extension programmes. 4. Facilitate income generation activities in agriculture. 5. Facilitate micro-finance for youth. 6. Provide youth-oriented information support (market, innovation, practices, funding, opportunity networks). 7. Provide mentors and apprenticeships.
	Longer term 1. Develop curriculum with formal and informal approaches relevant to each level and commencing at early childhood and primary levels. 2. Implement the Pacific youth in agriculture structure. 3. Utilise motivational speakers, media and model farmers. 4. Youth volunteer outreach programme & Poor to poor outreach. 5. Develop or incorporate programmes targeting family to support youth.	**Longer term** 1. Develop curriculum with formal and informal approaches relevant to each level and commencing at early childhood and primary levels. 2. Implement the Pacific youth in agriculture structure. 3. Utilise motivational speakers, media and model farmers.
Governance, commitment, transparency and accountability	**Short term** 1. Put in place clear policy and guidelines. 2. Set up consultative mechanism with stakeholders. 3. Put in place a clear strategic work plan. 4. Establish good selection criteria and process for staff. 5. Streamline reporting and decision-making channels. 6. Provide frequent upskilling programmes. 7. Put in place performance-based reward and disciplinary procedures.	**Short term** 1. Put in place clear policy and guidelines. 2. Set up consultative mechanism with stakeholders. 3. Put in place a clear strategic work plan.

KEY ISSUES IDENTIFIED	NATIONAL	REGIONAL
	Longer term 1. Match stakeholders' expectations with structure, resources and skills of extension services. 2. Develop effective monitoring, evaluation and learning systems. 3. Develop code of conduct and code of ethics. 4. Monitor and evaluate service delivery to ensure its timeliness.	**Longer term** 1. Match stakeholders' expectations with structure, resources and skills of extension services. 2. Develop effective communication at all levels. 3. Develop effective monitoring, evaluation and learning systems.
Building partnerships	**Short term** 1. Sign MOU with partners (defining role of partners). 2. Develop a clear and well-defined work plan. 3. Evaluate partnerships. 4. Develop a steering committee.	**Short term** 1. Develop SPC policy. 2. Sign MOU with partners (defining role of partners). 3. Develop a clear and well-defined work plan. 4. Evaluate partnerships. 5. Develop a steering committee.
	Longer term 1. Evaluate partnerships. 2. Create the platform for dialogue with stakeholders to develop trust and recognise work done. 3. Make ministry briefs available to related ministries. 4. Develop government policy.	**Longer term** 1. Evaluate partnerships. 2. Create the platform for dialogue with stakeholders to develop trust and recognise work done. 3. Make agency/government briefs available to related agencies.
Provision of technical support	**Short term** 1. Improve access to modern communication technology. 2. Enhance networking. 3. Establish consultation and training. 4. Upgrade skills in needed areas. 5. Upgrade crop varieties. 6. Identify simple and appropriate low-cost technologies.	**Short term** 1. Improve access to modern communication technology. 2. Enhance networking. 3. Establish consultation and training. 4. Upgrade skills in needed areas. 5. Upgrade crop varieties. 6. Identify simple and appropriate low-cost technologies.
	Longer term 1. Create learning centres. 2. Upgrade skills in needed areas.	**Longer term** 1. Create learning centres. 2. Upgrade skills in needed areas.
How to utilise media and ICT	**Short term** 1. Identify opportunities for capacity training of extension officers in media production skills to enrich their box of tools. 2. Broaden media formats. 3. Engage media groups at national and regional levels to promote the formation of media focus groups specifically for agriculture and rural development, as a means of addressing the lack of specialised media reporting in this sector. 4. Establish media awards to acknowledge and encourage an increase level of agricultural reporting. 5. Incorporate a media component in national agriculture and forestry strategies to allow for the dissemination of outputs and reporting of best practices. 6. Develop partnerships with international	**Short term** 1. Link round-table media capacity training to major agriculture and forestry events such as MOAFs and HOAFs to increase reporting on agriculture and forestry in local media. 2. Identify opportunities for capacity training of extension officers in media production skills to enrich their box of tools. 3. Develop strategies on media convergence and explore cost-effective ICT to increase intensity of media coverage of extension activities. 4. Broaden media formats. 5. Develop partnerships with international organisations, local funding agencies, business houses, NGOs, etc. to co-fund newspaper supplements, TV programmes,

KEY ISSUES IDENTIFIED	NATIONAL	REGIONAL
	organisations, local funding agencies, business houses, NGOs, etc. to co-fund newspaper supplements, TV programmes, video documentaries, radio broadcasts of field days.	video documentaries, radio broadcasts of field days.
	Longer term 1. Identify opportunities for capacity training of extension officers in media production skills to enrich their box of tools. 2. Broaden media formats to: radio talk shows and use of local celebrities/champions; local news on TV and in newspapers; partnership with other relevant sectors such as health, education, rural development to co-sponsor media programmes; DVDs on agricultural practices; use of mobile phones and telecentres; establishment of a help desk to improve extension service; use of HF radio for outer islands; the Internet and email groups; and OLPC. 3. Engage media groups at national and regional levels to promote the formation of media focus groups specifically for agriculture and rural development, as a means of addressing the lack of specialised media reporting in this sector.	**Longer term** 1. Identify opportunities for capacity training of extension officers in media production skills to enrich their box of tools. 2. Broaden media formats to: radio talk shows and use of local celebrities/champions; local news on TV and in newspapers; partnership with other relevant sectors such as health, education, rural development to co-sponsor media programmes; DVDs on agricultural practices; use of mobile phones and telecentres; establishment of help desk to improve extension service; use of HF radio for outer islands; the Internet and email groups; and OLPC. 3. Engage media groups at national and regional levels to promote the formation of media focus groups specifically for agriculture and rural development, as a means of addressing the lack of specialised media reporting in this sector.
Development of policy briefs	**Short term** 1. Review existing national policies and strategies, in line with national and sectoral development priorities. 2. Review existing extension systems, and assess how these are aligned with strategic plans of national extension services. 3. Conduct analysis of stakeholders including service providers such as NGOs, church groups, youth groups, women's groups, private sector and media. Critically evaluate how responsive extension services are to client needs, i.e. how effectively do they deliver on their mandates? 4. Explore realistic agricultural market opportunities to target extension services. 5. Assess resource use – how effectively and efficiently are human, material and financial resources being used?	**Short term** 1. Initiate development of a regional extension strategy. opportunities to target extension services.
	Longer term 1. Review existing extension systems, and assess how these are aligned with strategic plans of national extension services. 2. Conduct analysis of stakeholders including service providers such as NGOs, church groups, youth groups, women's groups, private sector and media. Critically evaluate how responsive extension services are to client needs, i.e. how effectively do they deliver on their mandates?	**Longer term** 1. Initiate development of a regional extension strategy. 2. Develop a framework for monitoring and evaluation of the extension services at national and regional levels.

KEY ISSUES IDENTIFIED	NATIONAL	REGIONAL
	3. Develop a framework for monitoring and evaluation of the extension services at national and regional levels. 4. Explore realistic agricultural market	
How to 'scale up' successful models	**Short term** 1. Use farmers as the carriers of the extension approach. 2. Use the mass media. 3. Hold farmer and stakeholder field days. 4. Run farmer field schools. 5. Use the existing religious organisations and community structures. 6. Promote the suitability, adaptability, flexibility, manageability and viability of the model through training, workshops and other extension methods. 7. Undertake capacity building through academic institutions etc	**Short term** 1. Use farmers as the carriers of the extension ` approach. 2. Use the mass media. 3. Hold farmer and stakeholder field days. 4. Run farmer field schools. 5. Promote the suitability, adaptability, flexibility, manageability and viability of the model through training, workshops and other extension methods.
	Longer term 1. Use the mass media. 2. Conduct an agribusiness viability analysis of the relevant ministry or organisation. 3. Promote the suitability, adaptability, flexibility, manageability and viability of the model through training, workshops and other extension methods. 4. Develop policies for extension models. 5. Undertake capacity building through academic institutions etc.	**Longer term** 1. Use the mass media. 2. Hold an extension summit. 3. Conduct an agribusiness viability analysis of the relevant ministry or organisation. 4. Promote the suitability, adaptability, flexibility, manageability and viability of the model through training, workshops and other extension methods. 5. Undertake capacity building through academic institutions etc.
Multiple roles of extension – roles in food security, roles in trade	**Short term** 1. Create an extension stakeholder network. 2. Promote and encourage cooperatives and farmer associations with a trade focus. 3. Source experts from Quarantine, Commerce and Labour Departments to provide training packages and deliver training to farmers and extension officers. 4. Promote road shows on trade-related issues to rural communities on a regular basis. 5. Incorporate programmes promoting home-grown food for women, youth and urban residents. 6. Identify national icons to champion awareness campaigns and the benefits of local foods. 7. Consult with farmers at all levels of the project process. 8. Promote traditional roles to drive food security and nutrition security. 9. Provide skills training on fundraising.	**Short term** 1. Create an extension stakeholder Network. 2. Source experts from Quarantine, Commerce and Labour Department to provide training packages and deliver training to farmers and extension officers.
	Longer term 1. Promote and encourage cooperatives and farmer associations with a trade focus. 2. Provide training and technology for extension officers to more effectively utilise ICT.	**Longer term** 1. Exploration/study tour of the region and international market sources and trading success stories.

KEY ISSUES IDENTIFIED	NATIONAL	REGIONAL
	3. Develop food planting programmes in readiness for the impacts of natural disasters and climate change. 4. Adopt the DSAP project to support atoll agriculture. 5. Provide incentives to farmers and manufactures to use local produce.	2. Provide training and technology for extension officers to more effectively utilise ICT. 3. Develop food planting programmes in readiness for natural disaster and climate change impacts. 4. Adopt the DSAP project to support atoll agriculture.

2. Pacific Islands Extension Network

The summit reviewed how PIEN began, its mission, role, membership and what it aspires to achieve. It also noted PIEN's activities to date including:

1. a participatory needs assessment for capacity building in extension in the Pacific;
2. the Pacific Excellence in Extension Service Award 2006;
3. funding for teaching of participatory approaches at USP and the Fiji College of Agriculture (FCA);
4. student projects in extension;
5. extension meeting in-country;
6. youth projects; and
7. cross-country visits.

The summit agreed to the proposal to strengthen PIEN by moving towards a 'corporate governance' model and greater accountability to the membership through a board structure. It was agreed to form a Board based on the following representation:

- 1 representative from Micronesia
- 1 representative from Melanesia
- 1 representative from Polynesia
- 1 representative from NGOs
- 1 representative from learning institutions
- SPC representatives

Delegates from each sector/region made nominations for the Board during the summit. The resulting members of the Board are:
Insert members

The first board meeting is proposed for November 2009. LRD of SPC is tasked to seek funding for this meeting. It was also identified that priority tasks of the Board will be to:

- develop a communication strategy with the dual aims of expanding membership, thus increasing active participation, and engaging donor support; and
- finalise the vision and mission for extension services in the Pacific.

ANNEX 1: Openning Addresses

Mr Aleki Sisifa, Director, Land Resource Division, SPC, Suva, Fiji Islands.

Ni sa bula vinaka to all of you; it is a pleasure to briefly address you at this official opening of 2nd Pacific Agricultural Extension Summit; special welcome to you that have travelled far to get here.

This summit has the theme, 'transforming extension and outreach in the Pacific for sustainable development' and promises to be an exciting and intellectually stimulating forum for Pacific Islands leaders in agriculture extension to exchange experiences, critically analyse the value of current outreach services, and plan strategies for the improvement of this important service to our farmers – the bedrock of our communities and of our economies.

Two significant areas that this extension summit will deliberate on are: firstly, policy direction of extension as a profession; and secondly, the role of extension and outreach services in contributing to sustainable management of agriculture and forestry resources, as well as adaptation and mitigation of climate change. Both these areas are inseparable – one deals with confronting head on the global issues that face us so that food security and livelihoods of our peoples are assured during our time on this earth and for those that will come after us; and the other deals with having a clear road map that ensures agricultural extension contributes effectively to the attainment of those goals.

A major policy document that has guided us in the delivery of services to our stakeholders, from a regional perspective, in dealing with the major issues that we face, has been the SPC LRD's first integrated strategic plan which was completed last year after four years of implementation. The Hon. Ministers of Agriculture and Forestry were appreciative of the achievements made under that strategic plan and approved the new LRD Strategic Plan 2009–2012 at their Second Regional Conference in Apia in September last year.

I am sure you would all agree that the role of the agricultural extension services has significantly expanded over time particularly with the increasing major challenges that we face, at the global, regional and national levels: the need to ensure food and livelihood security for our people in the face of volatile food prices; the need to ensure sustainable land management and at the same time open up land for development within the confines of our customary land policies; sea level rise, inundation and increasing natural disasters associated with climate change; the globalisation of trade and the need for Pacific Island countries and territories to engage more in international and regional trade; and the need to increasingly engage our youth and women in agriculture and forestry development. So we extensionists need to expand the size of our tool boxes and add new and improved tools and knowledge, if we are to make a difference through implementation of the policies and strategies that we are tasked to deliver to our stakeholders.

There have been recent and current significant interventions that have helped our cause to which this summit aims to contribute. Through the EU-funded Development of Sustainable Agriculture in the Pacific (DSAP) – significant capacity building has occurred, particularly in the adoption of participatory extension approaches, and involving youth and women in agriculture and forestry development, and in linking production to marketing. Similarly, the implementation of the Food and Agriculture Organization's Regional Programme for Food Security (FAO RPFS) in the effort to develop the supply side of agriculture and forestry has had indirect positive effects on improving the extension service.

Over the last few years, we have worked closely with the Organics Task Force with assistance of partners like the International Fund for Agriculture Development (IFAD), the International Federation for Organic Agriculture Movements (IFOAM), FAO and USP, to develop a Pacific Organic Standard, and strategy for promoting organic production in countries and territories to add value to exports and help conserve the environment. More recently, we have worked with member countries and territories, and strategic partners in particular the EU, to increase export trade through the Facilitation of Agricultural Commodity Trade (FACT) project and through improving biosecurity and trade facilitation. With the assistance of the German Government through GTZ we have started the Climate Change Adaptation project, focusing on Tonga, Fiji and Vanuatu. You have an important role to play in the conservation and further development of our genetic resources particularly those that provide for our food security.

The importance of building private–public sector partnerships, recognised now as critical to sustainability as never before, will be further explored during this summit to identify ways to create an enabling environment where these relationships can flourish for the benefit of both sectors.

Finally, this summit will look at the role that networks and ICT play to improve the communication of extension information for technology transfer in an inclusive manner.

I am particularly happy to see that the media is involved in this summit. The media is an essential partner of the extensionist and needs to be involved more if our messages are to be effective in influencing decisions of policy-makers, communities, the private sector and farmers.

I am obliged to thank most sincerely SPC's development partners for the close collaboration in agricultural research and development over the years. In particular, the assistance of the EU, the Governments of Australia, New Zealand, France and Federal Republic of Germany is acknowledged with thanks. The close collaboration of the UN/FAO, IFAD, USP, Secretariat of the Pacific Regional Environment Programme (SPREP) and Secretariat of the Pacific Islands Applied Geoscience Commission (SOPAC) is also acknowledged. The Technical Centre for Agricultural and Rural Cooperation (CTA) has been an important partner in the regional work of SPC LRD – particularly through assisting in the establishment of the Pacific Agriculture and Forestry Policy Network (PAFPNet), as a major funder for the first and second extension summits (along with GTZ, AusAID and the Australian Centre for International Agricultural Research – ACIAR), funding of the International Symposium on Breadfruits, ICT policy and other capacity building activities in the Pacific Islands region.

Before closing I wish to reconfirm the strong commitment of SPC to assisting the further transformation and empowerment of extension and outreach services in the Pacific and to supporting, to the greatest extent possible, this worthwhile work. We are confident that the outcomes of this summit will make a significant difference to the food security and livelihoods of the Pacific Islands people and the environment in which they live.

I wish you well in your deliberations over the next few days and look forward to good practical outcomes at the end of the meeting.

Thank you.

'Aleki Sisifa
Director, Land Resources Division.

Hon. Joketani Cokanasiga, Minister for Primary Industries, Fiji Islands

CTA representative Dr John Woodend, Director of Land Resources Division 'Aleki Sisifa. It is an honour for me to deliver the keynote address for the 2nd Pacific Extension Summit.

The summit's theme 'transforming extension and outreach in the Pacific for sustainable development' is quite relevant in these times as Pacific nations continue to push ahead with development in all sectors.

In essence the summit, with its wide-ranging expertise in the area of extension, will critically analyse the role of extension and outreach services in facilitating development, specifically agricultural development. Delegates will also plan strategies to improve the efficiency and reach of extension change agents against a background of limiting resources.

SPC's Land Resources Division has in the past helped provide technical services to Pacific island countries and territories, and contributed to sustainable management of agriculture and forestry resources. We acknowledge the work of regional organisations in providing technical assistance to the sustainable management of our land resources, thus safeguarding this lifeline for our future generations.

In recent times climate change has become a prominent concern both in the region and on the international scene, and we acknowledge SPC's leading role in partnering with national governments as well as international partners to help address this concern. Fiji is one of three beneficiary countries from the SPC–GTZ Adapting to Climate Change project, which will look at ways to lower the devastating effects of climate change.

We note the enormous amount of assistance our research team have received from SPC over the years – in plant protection and of note the development of control measures for the kava dieback disease, as well as the taro beetle management, to name a few examples of the technical assistance provided.
Assistance towards trade facilitation is also noted which has helped Fiji maintain its overseas markets.

The development of organic agriculture is especially recommended with SPC taking the leading role in getting expertise from the region and internationally to further develop this traditional farming method which is environment friendly.

The common thread that strings all these technical services together is extension and outreach, as the bridging mechanism for technology transfer to our ultimate clients, the farmers.

The Fiji Ministry of Primary Industry is forging ahead with its development efforts in collaboration with organisations such as SPC with its links to the international arena, a relationship which can only be described as beneficial.

In the area of sustainable development Fiji is attempting to retain scarce resources onshore rather than export valuable biomass. We are , for instance, acquiring a feed mill and will be working with the fish processors and the sugar industry to use molasses and fish meal as a base for animal feed. We have recently been introduced to the benefits of sweet sorghum and will be attempting some planting in the coming period.

Our whole existence boils down to trade facilitation. If projects and programmes are not profitable then they are not sustainable. We have injected funds into export commodities from papaya and mangoes and vegetables

and have introduced new items to our tables including capsicum, lettuce, spring onions and drumstick saigen. The Research Division is experimenting with appropriate varieties of potatoes, wheat and other starchy staples including breadfruit for year-round supply.

My extension staff are very much aware of the importance of trade though the tourism sector and we will be working with an external consultant on a completely new way of introducing more locally grown items to our overseas visitors.

I would be remiss if I did not acknowledge my gratitude and praise for the Fiji Department of Agriculture, the Land Resource Division of the SPC and AusAID in their sterling joint efforts to rehabilitate farmers and landowners of Fiji who were affected by the floods earlier this year. This is surely an example of an extension service working beyond the call of duty, shoulder to shoulder with LRD and AusAID.

I would also like to acknowledge the funding support from the SPC–GTZ Adapting to Climate Change in the Pacific Island Region project, the EU–SPC Facilitating Agriculture Commodity and Trade project, the EU–SPC Development of Sustainable Agriculture in the Pacific project and the various thematic teams of the SPC Land Resources Division.

I hope that all participants and resource personnel will fully commit yourselves to the week's programme and make use of your time here to develop the way forward for agriculture extension that will benefit our ultimate clients – the farmers of the Pacific.

I now declare the 2nd Pacific Extension Summit open and wish you well in your deliberations.

Vinaka

Hon. Joketani Cokanasiga
Minister for Primary Industries, Fiji Islands.

ANNEX 2: Country Reports

1. Fiji Islands

Production of agricultural commodities in Fiji increased at an unprecedented rate during 2008. In setting out to manage the soaring food prices, significant assistance from the aid donors has been awarded to synergise with Fiji extension services. The result has been a significant farmer return to the land. They were encouraged by the support they had from the present Government and the Ministry of Primary Industries and by the promise of a sizeable increase in income to be enjoyed from the profession of farming. At the same time a number of significant changes have been made to the management of the extension services. We increased the focus of the service by forging greater links with the private sector and with civilian NGOs and within the Ministry of Primary Industries itself. The approach focused on maximising potential of our own resources and creating an environment for strategic approaches to agriculture which, for example, has put Fiji on target to reach self-sufficiency in dairy products by 2015.

The Ministry intends to improve its communications with other interest groups by encouraging continued public–private partnerships. Furthermore efforts to achieve synergies with other ministries and departments such as Public Enterprises and Tourism will be made. In this endeavour, an all-inclusive round-table forum has been held as the tourism season begins to abate. The expected outcome of that forum will be commitment from all interest groups to increase the food input into the tourism sector. Our extension staff will concentrate on overcoming the two major obstacles in this industry – poor quality and unreliable supply. Selected farmers will be trained in producing ideal quality fruits and vegetables presented in the correct packaging and at the correct time. Middle men will be trained to act as quality controllers in this exercise.

Fiji is impacted by various external factors, including management of trans-boundary animal diseases, which require legislative and other change. Biosecurity legislation is essential to the overall control and security at the borders to lessen the possibility of trans-border incursion of diseases. The legislation will also ensure increased participation from other government agencies on these issues. Increases in petroleum prices have made bioenergy commercially viable and concerns over climate change have spurred on the search for alternatives to fossil fuels. Developing bioenergy leads to competition for land, water and other inputs, which may lead to higher food prices, food insecurity and less water available for other needs. Of the external influences that buffet small islands states such as Fiji, soaring food prices and the global financial crisis are temporary and will be issues of the past in a couple of years. Much more disturbing is global warming. The Ministry has made serious moves to strengthen drainage and dredging; however this is the rearguard action. Programmes that address upstream mitigating practices, such as programmed tree harvesting and planting on land with appropriate grading, are now enshrined in the Ministry's policies.

In summary the changes made to the extension service are:

- greater linkage between extension and research;

- greater linkage between extension and land and water resource management division;
- virement of extension staff to private/semi-private organisations;
- training of staff by end users;
- creation of centres of excellence;
- non-government extension services (prisons, youth groups, police, and church groups);
- highly defined outputs (e.g. tourism);
- raising public involvement (Teitei, Help Desk, Save Your Seeds and Plant Five a Day).

2. Cook Islands

Currently there is no extension services unit in the Cook Islands, as a result of the reforms in 1996. Instead all staff provide extension through a mobile extension service. It is a divisional approach with officers being 'jack of all trades', skills etc.

Learning from long-serving staff with experience and from the farmers and applying this knowledge are key strategies. Technical assistance is seen to have been quite effective. DSAP has built capacity of staff and the FAO project has utilised extension services.

Various extension methods are utilised; education and learning opportunities are carried out in preschools, field days are held, and PRAs and visits to farmers on their land are undertaken.

Moving to the future 'face to face' (farm, field visit) approaches is the most effective option. Capacity building of staff is required as many farmers are very experienced and have high expectations of agricultural officers. Farming information needs to be shared. Reinstating the extension division may be another option but donor support would be required.

3. Federated States of Micronesia

Extension functions (Cooperative Research and Extension – CRE) were relocated under the College of Micronesia (COM), which is a private institution funded through US federal grants.

Extension services are inefficient due to:

- the geographical set-up of the country;
- the organisational set-up, as FSM is not uniform: FSM is one nation with four states, each state having its own Constitution – effectively four countries; national government agriculture collaborates with the four states in coordinating all agriculture programmes including quarantine and forestry; there are only two full-time staff for agriculture at the national level; at the state level, agriculture is structured as a division (except in Chuuk) which is merged under Economic Affairs, with no extension agents attached to Agriculture Division;
- limited capacity and technical skills: the majority

of extension staff have no experience with the use of computers; structural set-up is not uniform; communication from national Government to state agriculture and with the extension programme is a constraint; in Pohnpei the majority of extension officers have agricultural science degrees, only three have a Bachelor Agriculture, while in Chuuk and Kosrae

no staff hold degrees, only work experience, and Yap currently does not have an extension agent; and

- limited financial resources and limited research: CRE's source of funding is mainly from the US Department of Agriculture (USDA); limited appropriation for projects – most of funding goes to salary and 40 per cent of budget for salary comes from state governments; projects depend mostly on external funding; programme services are stymied or inefficient with limited funding for resources needed for information production; services to dispersed outer-island communities are costly; and transmission of funding from SPC office in Fiji slows down programme activities.

DSAP in FSM

SPC has a subregional office located in Pohnpei and provides support in the areas of SPC's mandate. This includes conducting agricultural extension projects through DSAP, building on the existing extension programme and complementing programmes at national, state and community levels. DSAP is the only extension programme currently producing extension information, with the use of video and brochures/leaflets.

Under way in Chuuk State is a Women Association Nursery Project, through which 12 varieties of sweet-taro tissue culture have been distributed to UFO women. A seed production workshop has been held, at which seven kinds of vegetable seeds were provided, and in Weno two farmers practised the use of organic matter.

Kosrae has seen the establishment of a nursery; provision of planting materials; the establishment of a farmers' association; and the celebration of an agricultural fair in all four municipalities. Promotion of backyard gardening amongst women and partnerships with NGOs and Government are under way.

Pohnpei has promoted the Agriculture and Health School; a field day was conducted with focal farmers and neighbouring farmers in Kitti. DSAP participated in Women's Day in Pohnpei, participated in FSM State Forestry FIA Workshop, facilitated FSM women's 1st Council meeting, participated in World Food Day celebrations and facilitated a State–National Leadership Conference. The translation of simple technology into local languages has been completed and a Preliminary Damage Assessment (PDA) of the outer island of Chuuk was undertaken with national staff and US staff. Production and demand have both increased, and a supplement of vegetables has been provided. There is also an increased number of farmers.

Yap has been visited once due to distance, cost and the absence of an extension officer there. DSAP works closely with COM-FSM, CRE and AES staff and state agriculture staff. Compost training with focal farmers and technical staff has been completed, youth to youth training and a women's association have been supported, and there has also been tissue culture distribution.

4. Kiribati

Agriculture extension is a bridge or linking mechanism for farmers, researchers, administrators, policy-makers, donors and consumers, simplifying technical and scientific technology and making them accessible to the rural farmer. The extension service in Kiribati is dealing mainly with dissemination of agricultural technologies to improve agricultural production mainly in the rural villages.

There are extension officers stationed on each of the islands. They are mainly engaged with nursery demonstration plots, home gardening, establishing a farmers' association, coconut replanting and

rehabilitation programmes, livestock and vet services, quarantine services, and implementing school gardening projects.
The extension approaches adopted are mainly a participatory approach, field days, hands-on practical, informal training and immersion.

Extension officers are recruited for the specific purpose of managing 17 outer islands but currently only eight islands are occupied. Officers undergo a one-year training course run nationally for the Certificate in Agriculture, which can be upgraded – including through four agricultural USP courses through distance learning.
Headquarters attends to outer islands' requirements; monitors and evaluates the outputs; introduces and manages projects; seeks donor support; compiles (extension officer) monthly activity report; and reports to the Director.

Response to world food crisis
In 2008 the Ministry of Environment, Lands and Agriculture, through an FAO programme, distributed more than 1000 planting materials, some piglets and chickens to seven islands in the Southern group. Two weeks ago, a similar distribution was made to four islands in the Central and three in the Northern groups.

Problems encountered include smallness and isolation, communication, political issues such as councillors' policies on outer islands and administrative issues such as late release of donor funds. Agriculture has not been a priority but recently the food crisis has pushed the Government and ALD to set strategies to respond.

Resource constraints include a lack of extension officers and planting materials as well as a lack of market infrastructure.
Lessons learnt include the importance of: setting targets in a timeframe; engaging community and island councils in the planning and implementation process; and increasing self-reliance amongst farmers/rural communities. It was also noted that there is little participation of farmers in the technology development process. The importance of using participatory approach and discouraging the reward in the participatory approach were other key lessons.

5. Republic of the Marshall Islands

The Republic of the Marshall Islands is an independent island nation of 29 atolls and is highly dependent on food and textile imports. Its main revenue comes from granting fishing licences and copra from and its products; tourism is another source of national income.

The Republic of the Marshall Islands is located in Oceania. It is a group of atolls and reefs in the North Pacific Ocean, about half way between Hawaii and Australia, with a land area of 70 square miles (171 square kilometres).

Some of the major concerns in RMI are the increase in youth unemployment, overfishing, overpopulation, malnutrition and subsistence farming and fishing, and too much dependence on US aid and other donor countries.

RMI is currently establishing a mobile unemployment youth programme on vegetable cultivation, which was started August 2008, to accommodate the emergency crisis of fuel and food costs declared by the RMI President. The programme started on Majuro atoll and spread to outer islands in the three subdistricts. Now more than 100 small vegetable gardens have been established on Majuro, employing 120 youth (aged 16–24 years). Key people involved in developing this

programme are: Thomas Kijiner Jr, Secretary of Resources and Development; Henry Capelle, Chief of Agriculture; Jabukja Aikne, Chief of Livestock; Billy Edmond, SPC DSAP's Graduate Research Extension Assistant in RMI; and research and development agriculture extension staff.

Constraints to the programme include: water – there is not enough storage area; funding is limited; it is costly; the effect of rainfall; lack of irrigation systems; safety concerns due to pesticide application; and the presence of pests including invasive plant species. Groundwater is another issue: it is too deep in some areas and too salty in some areas, salt spray causes damage in many areas as the land is mostly narrow; the land is also very rocky.

6. Papua New Guinea

The agriculture industry is primarily subsistence-based, with limited semi-commercial and commercial production. It is evident that agriculture production systems are adapting to changes to tap into the market economy.

Agriculture bureaucrats have adopted the global strategy of improving service delivery mechanisms, especially extension, to promote food production at the household and national levels to contribute to improved livelihood and economic growth.

Vision of the Regional Directorate
To facilitate and improve agricultural knowledge and skills through the provision of technical advice, management support, sustainable agricultural systems and practices, to enhance the agriculture sector in a participatory manner.

Mission of the Regional Directorate
To establish linkages with stakeholders in provinces and provide support for effective delivery of goods and services coupled with infrastructure development through integrated partnership planning and decision-making.

Objectives of the Directorate

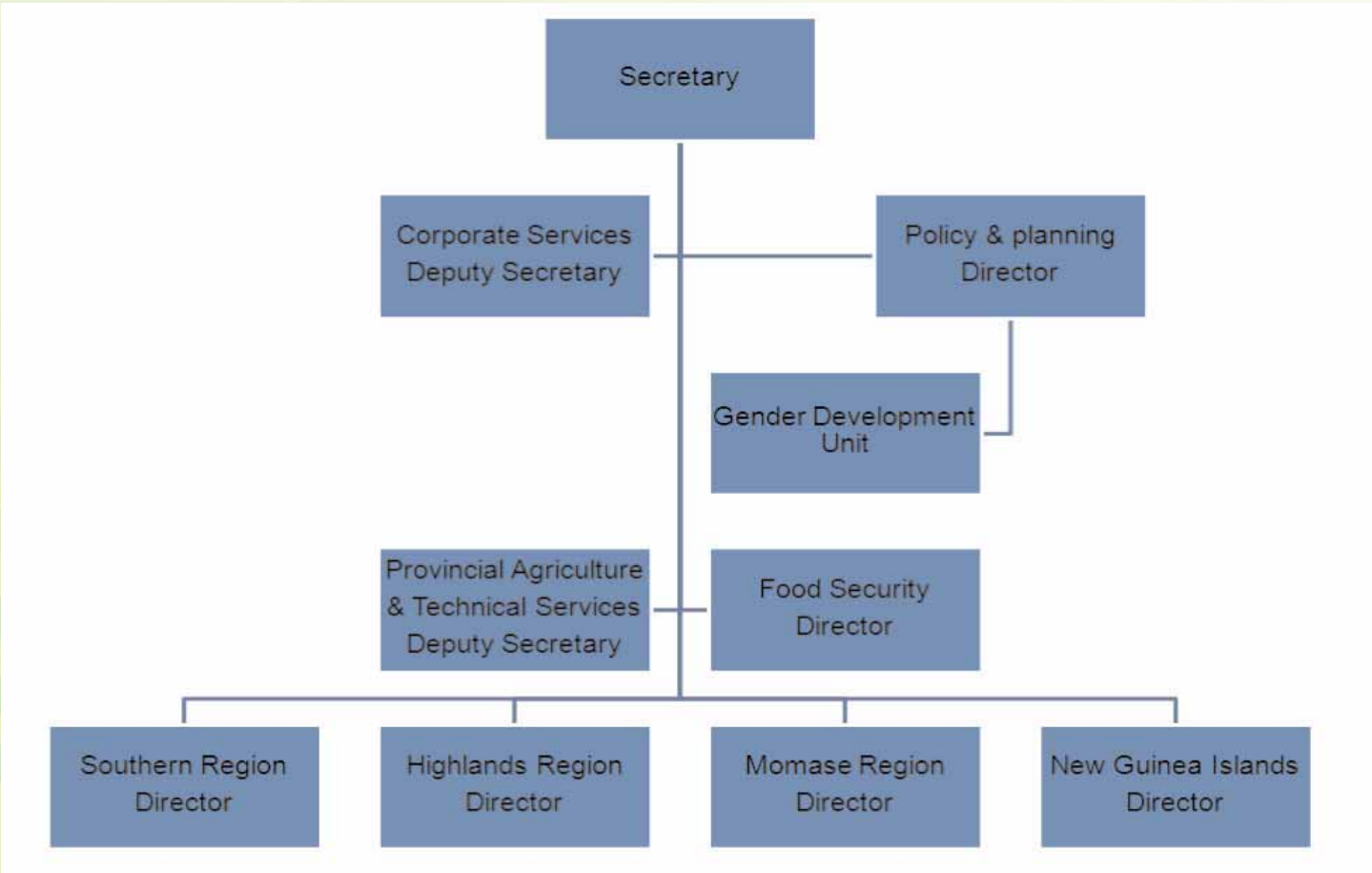
- To provide quality advice and technical support to the provinces and industries so as to further develop and expand agriculture base.
- To establish an efficient linkage mechanism through joint programme interactions and partnership with provinces and industry corporations.
- To act as a bridge or a vehicle between research, extension industry and the Department of Agriculture and Livestock (DAL) for dissemination of research information and policy statements for implementation with the provincial counterparts and other stakeholders and commodity partners.

Expectations of the Directorate
The Regional Directorate anticipated establishing and maintaining linkages and partnerships with all provincial counterparts, other stakeholders and commodity agencies to bring about tangible socio-economic development and benefits under the new National Agriculture Development Plan for the vast rural majority, which has the greatest potential to contribute to the sustenance of the economy in Papua New Guinea.

Status of extension models
DAL has 19 provincial agriculture and livestock networks, which facilitate skills and knowledge transfer. They are supported by NGOs, churches, the private sector and cooperatives.

Currently the extension system is being reviewed due to its inefficiency and ineffectiveness. There is an estimated officer to farmer ratio of 1:3600 (1200 officers in a rural population of 4.3 million).

Structure of the Department of Agriculture and Livestock



Note: There are seven specialists under the regional directors.

Extension models

There are nine public and private sector models: provincial extension systems, commodity extension systems, radio extension programmes, nucleus and outgrower estate model (oil palm industry), village extension worker (FPDA), SSSPP (Morobe/Eastern Highlands Province), model farmer (smallholder rice), farmer to farmer extension, and cooperative associations.

Constraints and issues

- Agriculture extension has declined since 1975.
- It is fragmented into 19 provincial extension systems and others.
- Most services operate without formal plans.
- Extension lacks partnership linkages.
- Extension systems are poorly coordinated.
- Responsibilities, roles and functions are duplicated.
- Resource back-up (financial, technology, personnel etc.) is insufficient.
- Infrastructure (roads, bridges etc.) is run down in all provinces.
- Many geographical features are rigid (mountainous, swampy, atolls).

The way forward

There is a need to institutionalise coordination of extension systems by means of.

- partnership and linkages;
- sustainable village-led extension types;
- improved credit access for farmers and agro-marketing agencies;
- enhanced gender equality in extension models;
- integrated research and extension;
- capacity building of extension officers and farmers;
- effective information systems; and
- good governance

In PNG, the Minister for Agriculture and Livestock has been directed by NEC decision number 88/2007 to consider the possibility of establishing an Extension Authority to guide the extension system into the next decade.

To improve extension approaches, models and reforms must be practical, have stakeholder support, be flexible and suitable to local conditions for sustainability, and incorporate rural diversity.

8. Tonga

Extension in Tonga is growing out from the traditional public services to outreach led by the private sector due to:

- political directions – the Government has encouraged private sector participation in agriculture, as part of the privatisation of government services and in view of the perceived inability of the Ministry of Agriculture and Food, Forests and Fisheries (MAFFF) to carry out extension and outreach duties;
- depleted human and capital resources of MAFFF;
- the dominance of research over extension services – research receives a substantial share of human and capital resources and it can have smothering effect on extension services; and
- less external aid to public services.

MAFFF extension partners are limited to District Agricultural Committees (DAC) although available to the community at large. Each DAC is chaired by a district officer, with membership comprising town officers who can be co-opted. The MAFFF extension officer serves as secretary.

The private sector is a rapidly growing force in extension. The response has been commercially driven (e.g. for squash), when MAFFF has failed to deliver critical services to clients (especially extension and biosecurity).

The Farmers Federation of Tonga has just been formed and is a government-funded private sector body focused on extension outreach.

Policy directions

Extension continued to struggle to meet criteria and policy directions set out in recent years.

Extension has been demoted to section level and the number of staff has been cut from six per district to one. The budget has been cut from 60 per cent to less than 10 per cent of total budget and additional research focus roles have been assigned to extension staff.

A policy document was submitted to MAFFF Heads of Division for endorsement to confirm extension mandates, appropriately allocate resources (manpower and capital) and upgrade extension services etc. However, their endorsement was not secured.

Capacity building

There has been formal training of staff, ranging from study at PhD level for management to diploma study for extension staff. However, trained extension staff have been transferred to research, and basic technical and information technology skills are lacking. Hence short-term training and sharing responsibilities with stakeholders (public and private) will facilitate capacity building.

Role of extension in trade

Extension plays vital roles in, for example: monitoring of fruit fly host crops for export to New Zealand; linking of MAFFF, farmers, exporters etc. in the production stage; and promotion and awareness raising of general community development projects.

Public–private sector partnerships

Partnerships are required to increase the export of agricultural commodities and assist as MAFFF core services become less effective; it also reflects the political direction at present. Bilateral trade agreements, work plans and flowcharts of activities demand partnership – for example, the Tonga–New Zealand work plans for export of fruit fly host commodities to New Zealand.

Tonga is on a learning curve in forging and implementing these partnerships. A review of

existing extension and outreach in the agricultural sector in Tonga is of paramount significance to sustainable development.

Youth in agriculture

Youth issues are treated on equivalent terms to issues of women in agriculture, organic agriculture and so on. Private sector youth development projects run separately from the Ministry but are very effective.

Recommendations

Tonga needs to transform its extension services and to place equal emphasis on transforming the corporate organisation to ensure sustainable development in agriculture. Extension services need to:

- upgrade human resource capacity;
- upgrade information technology capacity;
- upgrade partnership efforts with private sector agencies;
- look into adopting pluralistic systems; and
- develop greater balance with research services.

9. Solomon Islands

Agriculture is the main backbone of the livelihood for the Solomon Islands population. Ninety-five per cent of the population depends heavily on the land as subsistence farmers. The policies of the Coalition for National Unity and Rural Advancement (CNURA) Government therefore identified the agriculture sector as one of the development priority sectors in which to carry out its development policies. The Ministry of Agriculture and Livestock (MAL) is ranked fourth in terms of workforce and budget allocations.

MAL's development policy is based upon the vision to 'Enhance and promote sustainable agriculture and rural development for food sovereignty and better living standard' and the mission to 'promote, improve and lead agriculture development in Solomon Islands to be profitable and environmentally sustainable by being the premier provider of research, extension, education, regulatory and other services'. Clearly that policy involves promoting and expanding the volume of services in agriculture activities in rural sector.

Policy objectives of the CNURA Government are to encourage and promote food production, upgrade skills amongst the agricultural field staff and other stakeholders, and promote and expand the volume of services in agriculture activities in rural sector.

The expected outcomes are to:

- improve and maintain the production of traditional staple food crops to keep pace with the increasing size of the population;
- implement a national agriculture study/survey to generate data for meaningful planning for MAL and to promote export-oriented crops to fill the gap after the forestry sector (i.e. logging) is gone;
- pursue the development of oil palm plantation on existing and potential sites such as Guadalcanal Plains (GPPOL), Malaita Province (Aluta Basin and Waisisi), Western Province (Vangunu), Choiseul and other provinces with geographical potentials;
- pursue the National Rice Programme with the aim of developing 3000 ha between 2008 and 2010 to meet the national need for rice, which averages 100 kg per person per year;
- collaborate with donors and development partners in the sector to survey work and reform, restructure and capacity building of MAL to meet and sustain clients' and stakeholders' dynamic needs;
- encourage all forms of livestock production (honey, eggs, meat – pork, beef and broiler) for food security and import substitutions; and
- ensure there is a pool of trained agriculturalist available to meet the changing national demands in the public and private sectors and of farmers.

MAL recognises the value of partnership and works with the Commodities Export Marketing Authority, School of Natural Resources – Agriculture, Republic of China/Taiwan Technical Mission (ROC/TTM), Kastom Garden Association, Farmers, EU/Microproject Programme, Community Sector Programme (CSP), World Vegetable Center (AVRDC), Improved Plant Protection in Solomon Islands (IPPSI), SPC, FAO and others.

The MAL extension workforce consists of:

- Malaita Province 25
- Guadalcanal Province 18
- Western Province 24
- Choiseul Province 13
- Isabel Province 14
- Makira/Ulawa Province 14
- Temotu Province 11
- Central Province 12
- Renbel Province 4
- Urban City 3
- Extension/HQ 14

Challenges facing extension are:

- poor communication linkages between the provinces and MAL/HQ;
- delays in the payment processes and in release of funds from Finance and Treasury, creating slow implementation of MAL work programmes;
- insufficient funds for operational activities in the field, e.g. fuel, stationery, simple tools and information kits;
- poor housing conditions especially in the rural areas, creating an unfavourable living and working environment, which can be a disincentive for MAL field staff to perform at their best;
- lack of proper offices to operate from;
- old and unreliable transportation equipment especially outboard motors, canoes, motorbikes and even vehicles in some areas;
- the need for proper linkages in the rural areas;
- weaknesses due to political interference;
- few incentives for performance outputs;
- little research development of new information on crops and livestock for the rural farmers;
- lack of awareness of government programmes for the rural farmers;
- lack of logistic support to carry out regular field monitoring on projects funded under MAL;
- inconsistent reporting; and
- new staff requiring continuous mentoring and coaching on progress.

The following are some possible solutions to these challenges:

- Increase budget allocations to ensure adequate resources and personnel are available to provide effective and efficient extension services to the farmers in the rural areas.
- Encourage a capacity building programme through various development programmes, in order to improve the working environment and thus uplift the performance of individual officers, which can be measured and monitored on a regular basis.
- Implement the proposed Scheme of Service for agriculture.
- Central Government needs to prioritise agriculture.
- Look for opportunities and programmes that support initiatives of the farming communities in the provinces.
- Upgrade existing skills amongst the current staff.
- Develop long-term development initiatives to cater for future development needs of extension.
- Encourage and seek other development partners to support other initiatives, e.g. Japan International Cooperation Agency (JICA).
- Reorganise the Extension Department to ensure that services expected from the farmers are provided accordingly.
- Continue to facilitate other management decisions and work collaboratively with other stakeholders to ensure that information outflow is consistent with and relevant to the farmers' needs.
- Work with organisations who have funds.

Recommendations to the summit

With the current paradigm shift in extension approaches due to issues that have been raised in the past and during the week of the summit, and that will continue to be raised, it is important that the summit considers the following points.

- Countries and territories need to develop an appropriate extended policy agenda for agriculture extension and communication network to cater for the categories of subsistence, semi-commercial and commercial.
- Given that agriculture extension is carried out by

number of agencies, e.g. NGOs and public sector organisations, there is a need to establish a platform to promote dialogue and information sharing amongst these stakeholders. This work has to be done by regional organisations in consultation with relevant government ministries.
- Countries and territories should continue to apply systems appropriate to their own situation, and continue to encourage sharing of new innovations in the region through the Pacific Islands Extension Network.
- PIEN should continue to search for ways to improve the extension delivery process to support farmers in achieving their farming aspirations.

10. Palau

The Bureau of Agriculture is organised as follows.

Animal Husbandry
- Animal waste management
- Veterinary services (e.g. castration, spaying, minor animal treatment)
- Animal census
- Importation of animal

Forest Unit
- Forest health
- Invasive species
- Nursery
- Watershed protection alliance
- Reforestation

Quarantine Services
- Biological control
- Integrated Pest Management (IPM)
- Fruit fly surveillance
- Public awareness programmes

Horticulture and Extension Services
- Tilling services
- Plant distribution
- Nursery
- Soil analysis
- Transfer of farm techniques
- Farm visits
- Training
- Immersion

Constraints include: funding, personnel, equipment and capacity building requirements

11. Samoa

Extension services in Samoa are linked back to achieving the goals of the Samoa Development Strategy 2008–2012. The government, civil society and private sectors contribute to the goal of building a sustainable economy through a focus on food security, climate change, sustainable environmental practices and a healthy nation.

NGOs and the private sector play the following roles:

- meeting market demands;
- maintaining quality;
- adding value to products;
- maximising profits;
- seeking financial assistance; and
- establishing and maintaining partnerships with Department of Agriculture, USP, communities, and regional and international partners such as SPC and SPREP.

The Ministry of Natural Resources and Environment plays the following roles.

In regard to meteorological information, its roles are:

- integrating weather and climate information into the agricultural and economic sectors;
- improving the weather observation network;
- producing climate predictions for seasonal rainfall forecasts;
- establishing weather and climate data for public information; and
- gathering climate change information.

In regard to land management, its roles are:

- managing land to be sustainable in the long term;
- leasing land for business and agriculture.

In regard to forestry, its roles concern:

- community forestry:
- replanting of trees and forest conservation;
- sustainable land/economic support;
- agroforestry:
- integrating forestry and agriculture; and
- promoting sustainable management for agricultural land.

Extension services play the following roles:

- providing guidance and scientific information for farmers;
- selecting the right crops for the right agriculture area;
- assisting community farmers' groups in writing proposals for financial assistance; and
- undertaking research, development and advisory services to improve crop production for subsistence and commercial producers, processors and marketers.

Issues in extension services

For the Ministry of Natural Resources and the Environment, issues are: lack of appropriate data or appropriate information source; capacity of extension officers; research findings are not published or not given to farmers and private sector; need for improvement of facilities and resources; and lapses in communication, delays in feedback and appropriate responses.

For NGOs and the private sector, issues are: extension officers may not use information regarding meteorology, land management and forestry for planning; lack of resources; staff may be keen but may lack technical knowledge and technology; difficulties getting assistance from the Ministry.

ANNEX 3: Papers Presented

1. EXTENSION POLICY

1.1 REGIONAL EXTENSION POLICY PERSPECTIVE – transforming agricultural extension

'Aleki Sisifa, Director of Land Resource Division, SPC, Suva, Fiji Islands

Agricultural extension is given low priority, and studies suggest this needs to change. There should not be a clear division between research and extension; this is a false dichotomy – the two are integral. These changes require reforms; it must be acknowledged that no one shoe fits all and that farmers are stakeholders and not beneficiaries in the process.

A paradigm shift is required and new systems should be participatory and empowering. There are four key components integral to change: (i) creating and maintaining motivation for change; (ii) competence development; (iii) piloting activities; and (iv) restructuring at the organisation level.

Partnerships need to be strengthened; traditional structures and positive experiences from old systems can be capitalised on.

Issues related to efficient extension deliveries

- Capacity building is required in: agrihusbandry; administration; service delivery; social participatory methods; project management; research methods; communication; monitoring and evaluation; ICT; understanding tradition; training; soil fertility; and pests and diseases.
- Linkage and networking: use partnerships to build linkage and networking amongst stakeholders.
- Use of PRA and scaling up: what are the forces behind successes in other countries – decentralisation; farmer experimentation; and empowerment of youth and women.
- Empowerment.

Way forward

The paradigm shift needs to include:

- a broad scope of service provision,
- the extended use of partnerships and participatory approaches.
- a learning-based approach that includes negotiations with a wide range of stakeholders in order to develop workable and effective arrangements in line with specific local circumstances and objectives; and
- a larger degree of accountability to client groups.

Extension is an agency providing technical and non-technical services and plays facilitating roles, and new organisational structures are required. All these conditions point to a need for policy development.

1.2 NATIONAL POLICY PERSPECTIVE

Dr Richard Beyer, Former Permanent Secretary, Agriculture, Ministry for Primary Industries, Fiji Islands

Extension workers are the face of the government: they are the only ones that go out actively rather than in response to an issue. Priorities are set by policy-makers rather than by agriculture specialists.

Need for change

There is a lack of consultation with other divisions in the department (local lychees, Fiji asparagus and ferns are not exploited); inadequate monitoring; mismatch between service needs (frequently need more information about what is happening at the ground level) and service delivery; environment of reliance on government.

It is impossible to cope with all requests and requirements of an efficient extension service.

A clear definition of roles has helped focus and 2008 saw an increase in production. In 2009 efforts are being made to address the entire value chain.

It is noted that Fiji does not use the local resources – for example, the brewery even imports sugar. The year 2009 also saw a focus on rehabilitation of flood damage.

Policy directives

- Seek greater linkage between extension and research to address genetic deterioration and inappropriate advice to farmers.
- Seek greater linkage between extension and land and water resource planning.
- Aim for highly defined outputs for tourism and selected groups: farmers; tourists operators and middle men.
- Training of staff by end users is encouraged. For example in dairy for the artificial insemination programme, Dairy Farmers of Fiji provide the training, leading to the development of centres of excellence – e.g. Dairy Farmers of Fiji, TTM; Tutu training centre; KRS/SPC.

1.3 TRANSFORMATIVE CHANGE IN THE PNG NATIONAL AGRICULTURAL INNOVATION SYSTEM

Dr Jacqui Wright, PNG. Agriculture Research & Development Support Facility, GRM International.

'1000 times more of the same is not enough to get us where we need to go …'

Development status in PNG and other PICTs

The PICTs are at different levels of development, some more desperate than others. Until we all reach a level of development acceptable to the majority of our populations, until they are not hindered in their aspirations by the nation's developmental status … we still have work to do.

PNG is defined by its demography. Of the PNG population of 6.5 million (2008 SPC estimate), over 85 per cent live in rural PNG and are directly dependent on agriculture for their livelihood but agriculture contributes about 20 per cent of GDP.

Implications of poverty in rural PNG

Cash income is very low (less than PGK 100 or USD 35 per person per year); accessible health services are poor or non-existent; access to secondary or tertiary education is poor or non-existent; access to markets to sell produce is very limited or non-existent; food energy is generally adequate, but not always so; protein and concentrated energy in diets are generally low to very low.

If 85% of the people live in the rural areas and if agriculture is their main activity and if agriculture has failed to deliver on the development promises made by the government, then don't we bear some responsibility?

Where we've come from – extension history in the Pacific

- Pre-World War 2: Commercial agriculture centred on the institution of the plantation with little indigenous involvement. The aim was to produce as much food and raw material as possible for export to the colonial metropolis (core).
- Post-World War 2: An agricultural extension model was adopted and indigenous populations became more involved but the model was designed to continue supply of food and raw material for export to the ex-colonial powers or new core (Asia, Western world).
- During the 1980s and 1990s more participatory methodologies were introduced, down to the grassroots. Concerns included food security, adding value, etc. but it was too slow to take effect.

We have experimented with various other modalities but only in tiny pockets; nothing has really taken hold. We are still predominantly using the old colonial Ag Extension model in the Pacific and we have yet to transform to pluralistic agricultural advisory services .

Present state of the agricultural innovation systems in the Pacific

We have had limited success with truly meeting the needs of our stakeholders due to:

- the supply-driven agenda of agricultural sector service providers – we do what we can rather than what is needed;
- obstructive intra- and inter-organisational boundaries (or inadequate linkages, partnerships and coordination within and between organisations);

- lack of inter- or multi-disciplinarity;
- weak monitoring, evaluation and performance cultures (including lack of institutionalised organisational learning); and
- precarious resource conditions.

The consequences of all these conditions have been: organisational inefficiencies and management problems; decreasing investor confidence; low staff motivation and morale; high staff turnover; brain drain (leading to human capacity problems); and ultimately limited research, service and outreach outputs as well as limited development impact.

Effecting a paradigm shift for better service delivery within the national agricultural innovation system of Papua New Guinea

A cascading logic model is used as a framework to organise agricultural research, development and extension agencies to deliver results for impact at sector/societal level.

The agricultural research for development (AR4D) framework is:

- demand-driven impact-oriented results at farmer level – livelihoods;
- dependent on effective multi-agency/multi-sector partnerships.

In most AR4D systems, there are at least four key categories of agents: research, extension, education and, at the centre, the farmers' organisation.

An Agricultural Research and Development Support Facility (ARDSF) has system-wide applicability.

AusAID chose the six agricultural research institutes in PNG as the 'entry point' to start effecting this paradigm shift. The institutes are:

- Coffee Research Institute (CIC)
- Cocoa and Coconut Institute (CCI)
- Fresh Produce Development Agency (FPDA)
- Oil Palm Industry Corporation (OPIC)
- Oil Palm Research Association (OPRA)
- National Agricultural Research Institute (NARI)

The Agricultural Innovations Grant Scheme consists of:

- Components 1 and 2, which impact the national agricultural research system (NARS) through support for the NARS organisations to catalyse transformative change for themselves; and
- Component 3 (AIGS) as a competitive grants scheme to catalyse to rural innovation – 'Who wants to do things differently?'

Through the scheme, the NARS organisations can partner and innovate with other actors in the agricultural innovations system of PNG.

As a result of the paradigm shift the NARS organisations have come to some shocking conclusions:

- They can't do it on their own!
- They need extension and NGOs and church groups and policy-makers and youth groups and private sector people all the way along the value chain.
- They need to be doing different kinds of research at different levels of an organisation (more about that later).

They need you but a transformed you:

- Extension is too homogenous in the Pacific.
- Other models have been trialled and experimented with – e.g. participatory approaches; Smallholder Support Services Pilot Project in PNG; private sector-led – but the old Ag Extension model still prevails.

The challenge

- In PNG, the NARS organisations have taken the very courageous step of looking hard at themselves.
- They were found wanting by their own assessment.
- They are organising for change.
- They are now challenging their partners, including extension …
- Using the AR4D methodology, a nation's agricultural advisory services can be assessed, based on:
  - goals of the advisory services;
  - available resources;
  - types of farming systems;
  - complexity of technologies needed; and
  - characteristics of communities to be served.
- A pluralistic service can be realised.

Some questions remain:

- Could SPC play a role in facilitating an assessment of agricultural advisory services in PICTs with a view to considering what is needed to face the challenges in the agricultural sector of the Pacific?
- To what extent could SPC figure out how to assemble the various national actors for collective regional action?
- To what extent could SPC facilitate the bringing together of the PICTs with different competencies to deal with issues they realise are common/regional for efficient action? Bringing expertise allocated in different countries to address common problems would allow the region to move towards solutions faster.

1.4 EXTENSION POLICY DEVELOPMENT: Extension and outreach – where should governments focus?

Marita Manley, SPC

The need to prioritise

Getting agriculture and extension into policy documents does not necessarily lead to an increase in support for the sector or extension services. Many national and sectoral development strategies make bold statements about the importance of agriculture to the national economy and have specific goals for the development of extension services. For example: 'Agriculture remains the backbone of the Samoan economy'; 'Agriculture is the principal sector of the economy' in Tonga; 'Various programmes supporting agriculture extension and research will be strengthened, including through improved coordination' in the PNG Medium Term Development Strategy (MTDS).

While many governments recognise under-resourcing of extension services as a constraint to development, strategies are often very general. For example: 'Improve and expand agricultural extension services' in Tuvalu; 'Strengthen MOA Extension Services to work together with the farming community' in Samoa; 'Providing on-farm advisory service including technical advisory services, farm management and introduction of new and improved crop varieties and new technologies' in Tonga; 'Review existing agriculture extension systems in each province and propose innovative ways of improving the current extension organisational structure' in PNG MTDS.

Despite recognition that budgets are inadequate, this awareness does not seem to have translated into additional resources through these national level planning processes. Consequently the budgets seem wholly inadequate to meet the ambitious development goals set for the sector in most strategic planning documents.

Role of government in extension service delivery

Extension services are provided by a multitude of actors: private sector, non-governmental organisations, church groups and educational institutions. Government extension services need to work collaboratively to ensure focus on existing gaps.

Extension systems play a vital role in facilitating income generation opportunities and accessing trade opportunities but the government's role within this needs careful consideration. There are incentives for the private sector to provide extension support services where there are clear market opportunities. Fiji provides some good examples of this: exporters in the Sigatoka Valley provide extension services to the farmers they source from. There are also good examples of NGOs and civil society providing these functions. Government needs to play a role in facilitating the development of these systems – putting farmers in touch with exporters, NGOs and financial institutions – but needs to be careful not to take the easy route of capitalising on these existing systems to get easy wins. It is also the role of government to address the market failures: to reach the people that others lack the incentive to reach, and build capacity and empower communities so people can access existing and available services.

Some governments have chosen to contract out extension services. For example, FSM has the goal that 75 per cent of agriculture extension services are

undertaken by civil society and community groups on contract basis by 2007. There is a need for a balance of private sector involvement and support for traditional systems to address challenges of vulnerability reduction, food security, environmental degradation, sustainable land management and climate change.

Budgets are tight and we need to be able to do more with less

We need innovative ways to reach communities with less resources – use of farmer-to-farmer approaches, radio, ICT etc. We need to recognise what the government can do and what it should not be doing. There is also a need for policies and strategies to guide resource allocation.

Policy development

The process of developing the policy is more important than the resulting document. The starting point should be a review of existing services and it should involve all stakeholders engaged in extension service delivery to improve understanding of roles of different agents. Policy development needs to be demand driven and involve clients (farmers) in setting priorities.

The development of an explicit policy represents an opportunity to bring all stakeholders together to discuss their various roles in extension service delivery. It is also essential that the ultimate clients – farmers – should be involved in the process. These inputs are more important than the resulting document. There is no point in developing a nice document to sit on a shelf and gather dust so consultations also need to include discussion of implementation plans including timeframes for achievement of outputs and crucially a budget.

Key policy questions to consider when developing a policy brief

The following questions help to provide guidance on the development of policies and prioritisation process:

1. What should the policy development process look like?
2. Where should the government focus with limited resources?
3. What case studies of best practice can we learn from?
4. What opportunities exist for public–private partnership?
5. Where are the market failures?
6. What are the success stories in use of ICT and media?
7. How can accountability to clients be increased?

2. LESSONS LEARNT FROM EXTENSION MODELS IN THE REGION

2.1 KIRIBATI IMMERSION APPROACH

Bakineti Tokintekai, DSAP Kiribati

There are critical issues that extension officers should be asking themselves and on which extension programmes should be based. Immersion is an effective methodology, particularly for Kiribati.

The design of immersion approaches was described in the following steps: PRA/PLA > Planning > Consultation > Implementation > Scaling up > Participatory monitoring and evaluation.

Lessons learnt from implementing the Immersion approach in Kiribati include that:

- models must be context-specific;
- multi-disciplinary approach harnesses scarce resources for optimal effectiveness (involving agriculture, health, NGOs etc.);
- care must be taken to prevent over-burdening of communities; and
- responsiveness is critical for success.

2.2 NORTHEN PACIFIC EXTENSION SYSTEMS

Mereseini Seniloli, SPC

Northern Pacific Extension Systems are unique as they function under USDA Land Grant System which means extension lies with both the national government service and the land grant colleges (Cooperative Research and Extension) and the research arm of agriculture lies 100 per cent with the colleges. A case study from Pohnpei State is provided as typical of this system in the Northern Pacific

countries and territories incorporating: crop production (black pepper for niche cash markets, yam, rare bananas, coconut, vegetables, taro, sweet potato), livestock production (health, reproduction and management, environment), human nutrition, research and externally funded projects.

Sources of funding include:

- hatch grant funding for research
- Smith/Lever funding for extension
- state funding
- federal matching funds (state matches federal funds)

Pohnpei is involved in a wide variety of research and extension on important food crops, food nutrition and processing and livestock. In order to undertake these activities with limited resources, the following principles are useful:

1. capitalise on existing extension systems in concerned institutions;
2. collaborate with relevant partners and key stakeholders;
3. identify roles in partnership (complement vs competition);
4. identify entry points;
5. share resources: capacity building (extension agents/farmer);
6. work as a team (not 'I');
7. give credit where credit is due;
8. be client-oriented (PRA, gender, households, holistic);
9. be culturally sensitive;
10. be ready to take the extra step;
11. have a thick skin, forgive, move on;
12. do not make any assumptions;
13. do not take your target group for granted; and
14. keep your word, earn trust.

Recommendations

- SPC, USDA and Land Grant Colleges need to clarify working arrangements through an MOU:
- Cooperative Research and Extension Agriculture Experiment Stations (CRE AES) (common project activities, federal matching funds);
- campuses – USP agriculture courses at Certificate level (student attachment, AusAID scholarships);
- RMI, FSM and Palau Joint Country Strategies (JCS) with SPC provide entry points (policy development, curriculum, etc.).
- Take a community-based approach.
- Use appropriate technologies that are:
- economically viable;
- physically feasible;
- biologically renewable;
- environmentally friendly;
- socially acceptable; and
- client-oriented.
- Human resources for extension need to be developed with a focus on:
- farmer-to-farmer approaches;
- unemployed youth – vocational training for high school dropouts;
- CETC graduates;
- capitalising on existing traditional structures e.g. Women United Together Marshall Islands (WUTMI)
- church youth leaders
- Address financial resources for extension:
- Share resources with partners and stakeholders.
- Heads of Agriculture Departments lobby for allocation from national budgets.
- Bridge the digital divide – connectivity.

2.3 INTEGRATED PEST AND DISEASE MANAGEMENT OF COCOA

Dr John Konam, SPC

Background

The best technology for cocoa exists within Coconut and Cocoa Institute but there was very low adoption of it by cocoa farmers. Only planting materials and dryer/fermentary were being taken up.

Integrated Pest and Disease Management (IPDM) aims to disrupt the pest and disease cycle at the weakest link; make the environment discriminately favourable for cocoa; build plant health through removal of stress factors; enable cocoa trees both in time and space to withstand pest and disease pressure to enhance realisation of maximum potential.

Components of IPDM input options

Option	IPDM level	Activity
1	Low	Current practice, start with good planting materials
2	Medium	Weekly harvest, pest and disease sanitation, manual weed management, shade and cocoa pruning related to crop cycle. Cocoa height maintained to below 4 m
3	High	As for option 2 plus: herbicides: Glyphosate (100 ml) plus 80 ml sticker and Gramoxone (100 ml) plus 80 ml sticker Fertiliser application twice a year: 50 g urea/mature tree and 120 g/mature tree
4	Very High	As for option 3 plus: insecticide and fungicide application twice a year: 2 g/mature tree: Ridomil + 6 g copper oxide/tree and 3 ml Dichlorvos/mature tree
5	Maximum CPB	As for Option 4 + Insect Vector Control (CPB), Chloropyrifos 1.6% ai @ 10 ml/15 L of water (to be used wherever CPB is reported)

Some requirements for success were:

1. a good and reliable scientific understanding of the pests and diseases and crop cycling; and
2. a good package and good knowledge of management.

But extension was not working so these criteria were not enough. A community charter was developed – not dealing with individual farmers but working through community structures.

To effect change, the following principles apply:

- Don't try to force change on individual farmers.
- If a farmer wants to change, find out to what extent and provide alternative options.
- On station, establish that the various options work as predicted.
- Meet the farmer in their most familiar environment.
- Participatory action research – let the farmer's environment teach them.
- Provide them information and let them decide.
- Raise awareness via mass media and use of existing community leadership structures to inform farmers about applying the IPDM inputs.
- Via participatory action research (PAR) and the case study method, convert PAR farmers to become scientists/extensionists for their own communities.

In the discipleship method:

- 12 IPDM model farmers become disciples from the villages; and
- each model farmer signs an agreement to train 12 'disciples' who are mentored – apostles.

To enhance delivery and rate of adoption, first the extensionist must transform in terms of their own mindset and attitude. They must have hands-on experience and convince themselves that they can do it. Then they must be out there:

- with the people;
- for the people; and
- working through the people.

2.4 FORESTRY EXTENSION APPROACHES

Jalesi Mateboto, SPC

The Butmas area in Vanuatu has been approached in a holistic manner to deal with all of the community's renewable biological needs and income-generating desires. There is an intention to ensure the wealth generated is utilised in a way that develops the community. The community's priority was to develop its school and to improve its living conditions.

This farming system was initiated with the intention of utilising degraded areas by fighting the aggressive Merremia peltata vine on a small scale using cattle and then using agroforestry to encourage crop and woodlot plantings.

Livestock

The project area consisted of 10 blocks of 1 ha each, with another 2 ha block added one year later. It started with nine cows and a bull and now has a total of 15 cattle. Three calves were sold to landowners. The selling price now stands at VUV 10,000 for calves up to 9 months, VUV 12–20,000 from 9 months – 2 years, and VUV 20–30,000 for the bigger ones.

The idea is to keep the maximum number at 10 and there are plans to build a milking shed and stockyard.

Crop production/agroforestry

Four blocks (4 ha) have been planted with short-term crops like cabbages, peanuts and cucumbers followed by taro, kava and then trees like sandalwood (Santalum austrocaledonicum), Canarium indicum and whitewood (Endospermum Medollosum). Gliricidia sepium has been planted as live fence posts and fodder.

No figure was obtained on the income generated from the crops but farmers have experienced an increase in their income. The rough calculation is that within 1 ha, a total of 10,000 kava plants could be planted from which, with 90 per cent survival and an income of VUV 5000 per plant at five years, a farmer could be expecting to earn up to VUV 5,000,000 (FJD 500,000). All production is organic. The Vanuatu Agriculture College is willing to continue with the advisory and monitoring work and also use the area as a practical site for its students.

2.5 TALOMUA EXTENSION APPROACH

Saipele Komiti, Ministry of Agriculture, Forestry and Fisheries, Samoa

Talomua or 'First taro' is an important part of Samoan custom and tradition. It refers to the first best harvest from a family farm. It must be offered to the village church minister or the village elders for use and consumption; in return, they bless the giver, and the giver's farm and family. That blessing remains in their land thus the land remains fertile and productive.

Talomua is still practised today. The tradition has translated into innovative field days run by the farmers. Objectives of these field days are: promoting food security; and achieving greater coverage by working at the district level rather than holding one national field day/agriculture show. This initiative resulted from innovative ideas introduced by the Extension Division in 1995. Savaia Lefaga village farmers were the first to coordinate and implement the idea under the leadership of some influential people in the village, with the assistance of the Extension Division. From there, the Ministry of Agriculture, Forestry and Fisheries started a campaign targeting all farmers of Samoa.

In 2008 nine Talomua were implemented: five on Upolu and four on Savaii. All divisions of the Ministry were represented, as indicated by the inclusion of many varieties of crops, livestock – pigs and poultry, and fisheries –village fishery projects. All were funded under the local budget of the Government of Samoa, which allocated an estimated ST$300,000 in total for these Talomua.

Prizes were given based on certain criteria. Those places first, second and third received monetary prizes while the rest were entitled to consolation prizes. The more you brought in, the more you received in prizes.

As an extension approach all Ministry divisions had their own display area for:

- information dissemination, e.g. posters, pamphlets
- selling planting materials at a minimum price, e.g. cocoa, new taro planting material.

At the end of the day, all farmers participated and gained the opportunity to address farming problems. These field days have proved very effective as an extension approach as all farming materials, management and staff were present at the same time to find solutions to farmers' problems.

2.6 EXTENSION APPROACHES – livestock

Dr Workneh Ayalew, National Agricultural Research Institute, PNG

The National Agricultural Research Institute (NARI) is addressing the need for local feed alternatives to expensive imported livestock feeds.

Background

- Raising broilers commercially is a source of food and income to about 55,000 smallholder farmers.
- The key constraint is the rising cost of commercial stock feed.
- NARI consulted stakeholders widely.
- The Australian Centre for International Agricultural Research (ACIAR) recognised the strategic importance of this industry to the PNG economy.
- Baseline data were generated through an extensive survey.

Project design

- The project was to develop lower-cost feeding options by substituting imported grains in commercial broiler feed with local energy sources: sweet potato; cassava; sago.
- Commercial feed mills would produce concentrate mix.
- Farmers would make the diet (bulk up concentrate mix with their local feeds) using household labour.
- NGOs would undertake on-farm testing of any promising test diets.
- Joint planning and capacity building would involve:
  - annual planning and review meetings
  - communication
  - training and capacity building: extension staff, farmers

The project was developed through a farmers' needs assessment; extensive evaluation of local feeds; candidate feed formulations being tested on-station by NARI; support to participating NGOs to test the candidate feeds under controlled experimentation; training of extension staff and farmers; and piloting the technology in selected representative villages.

Piloting links research to extension: there is no cut-off point where research ends and extension takes off.

Lessons learnt

- Groundwork for extension starts from a needs assessment.
- Research and extension are on a continuum.
- Piloting bridges research and extension.
- Research institutes can run effective outreach services.
- The range of stakeholders can be involved in the research and extension process.
- Technologies evolve over time – the research process is dynamic.

2.7 EFFECTIVE FARMER TRAINING APPROACHES

Dr Lin, Taiwan Technical Mission, Fiji Islands

The Taiwan Technical Mission (TTM) Fiji papaya production system is working to ensure that supply will meet the market demand and that farmers have the knowledge they need to successfully produce papaya.

Project over view

Problems were identified as:

1. low papaya production; and
2. lack of systematic guides for papaya production

The solution was seen to involve the following:

- Organise farmer groups.
- TTM and the Sigatoka Research Station (SRS) will offer cultivation technical training and agro-input to farmers.
- Farmers will pay for input by instalments.
- Improving papaya farming will increase farmers' skills and reduce the pressure on their production costs

Expected results

- The quantity and quality of papaya fruits will increase by 50 per cent.
- Fruits will be harvested early (seven months after planting).
- Eight groups and a planting area of 36 ha will be established within three years.
- About 100–110 tons/ha/year will be harvested.

Targets

- Increase farmer income.
- Promote rural area economic development.
- Papaya group will supply sufficient quantities of high-quality papaya fruits for the export market.
- Increase Fiji's agro-production export income.

Project activities

1. TTM supplies health papaya seedlings to farmer group members.
2. TTM trains all group members in a variety of ways such as through workshops and field practice. TTM trains members in how to undertake appropriate field management and meet phytosanitary requirements.
3. TTM asks all group members to attend a monthly meeting, where members can share their field experiences and pay their instalments.
4. TTM and SRS extension staff regularly visit farmers and give advice and suggestions in regard to papaya cultivation.

Farmer groups

Each farmer group should include: a President (leader), Vice President and Chairman/Secretary. The group should establish its norms/rules, assisted by TTM and Extension.

TTM will provide for farming inputs which will include the planting material agro-inputs but the farmers need to pay 50 per cent of total inputs costs. The balance will be paid in instalments, such as at harvesting.

The extension technical staff and TTM staff will provide for technology for land preparation, cultivating practices, post-harvest handling, harvesting.

The Ministry of Primary Industries supports the project and communicates with the exporter.

The members of papaya farmer groups receive training from TTM, SRS extension and Quarantine staff. The training programmes are related to:

- field management and disease control for papaya exports;
- guidelines of quarantine;
- post-harvest technology; and
- the quality control of papaya.

2.8 REGIONAL SUCCESS FOR DEVELOPMENT OF SUSTAINABLE AGRICULTURE IN THE PACIFIC

Dr Siosiua Halavatau, SPC

What follows is an overview of the Development of Sustainable Agriculture in the Pacific (DSAP) project, including its goal, purpose and lessons learnt.

Goal

Increase sustainable agricultural production.

Purpose

Build capacity of the National Agricultural Research and Extension Services (NARES), NGOs and farmer groups for identification and promotion of sustainable agricultural technologies with farm families.

Results

1. Farmer specific production problems and solutions are identified.
2. Appropriate technologies are developed through on-farm demonstrations.
3. Skills in participatory methods and technical skills of NARES, NGO staff and farmers are upgraded.
4. Appropriate technologies are promoted and capacity to produce and use promotional materials enhanced.
5. DSAP is properly monitored at national and regional levels.

Technologies that have been proven to be successful already include mucuna, use of charcoal for improvement of atoll soils, drip irrigation, and gliricidia.

Technologies that save the farmer time or add income have a good chance of being taken up. It is critical to support technology development through capacity development and on-farm trials.

Lessons learnt

Design

- Gaps in the design of objective verifiable indicators (OVIs)
- Commitment, time and sharing of common aims are needed.

Implementation

- Process is important.
- Focus on people (not resources).
- Broad-based participation is needed.
- Men are also gender.
- Develop human resources.
- Work with civil societies/partnership

Withdrawal

A well-planned exit strategy is essential.

Overall

Never conduct a stand-alone project: linkages with other activities and programmes are vital.

2.9 PARTICIPATORY ACTION RESEARCH IN THE PACIFIC

Dr John Konam, SPC

This paper summarises the activities SPC is undertaking to extend the cocoa IPDM model out to Fiji and Samoa.

Background

- Pest and disease information is now available at SPC's Pacific Islands Pest List Database.
- Some crops/plants do not have significant impact control strategies in place yet.
- Adoption of recommendations is low/nil in some of Pacific Island countries and territories.
- Capacity for crop protection activities in the region is limited.
- Background socio-cultural knowledge is limited.

Activities

Activities were designed to use the cocoa management and delivery strategies to develop Sustainable Integrated Crop Protection Strategies for the Pacific:

- Identify a few significant crops to develop the model.
- Package and pilot trial management packages (papaya, next taro mitimit and kava, yam etc., breadfruit).
- Learn and develop appropriate skills and management strategies and their delivery via participatory action research (PAR) strategies.
- Develop a strategy for programme sustainability: training of a farmer/extensionist to postgraduate level; hands-on pseudo-pathologist/extensionist; and community to adopt and build the programme into the community programmes.

Farmer agreement

The agreement with farmer participants includes that each model farmer must:

- have their own disciples, better still they are to be appointed by community with 20 to 200 disciples (family team/wife and husband);
- have over 1000 mature cocoa trees at bearing stage or older;
- promise to keep records of receipts, data etc. safe for collection;
- influence all disciples to do the same thing as that done in the model garden and during the training, which they must pass on within 48 hours after attending training
- follow the cropping cycle;
- with their disciples, do a tree census every three months.

The model farmer is not expect anything more than the training only.

Progress to date in Fiji

Three option trials have been established by farmers via PAR, involving 22 families (60 people):

- six replicate plots among the families;
- only 25 trees treated /treatment/plot;
- farmer given input application/programme already; and
- extension officer to be trained and mentored through the project as para-pathologist/ extensionist to postgraduate or Masters level, , youth are blended into the community programme.

Progress to date in Solomon Islands

The same model was replicated in Solomon Islands:

- 15 model farmers were trained, with three replicate demonstration plots set up;
- each farmer now has from 20 farmers to 300 farmers to whom they pass on the training;
- Sophie (female farmer) is already training 78 farmers who have 68,000 trees within one month of being 'brainwashed'; and
- David is now training 300 farmer disciples, each with over 500 tree.

Lessons learnt

- To change, people need motivation. For example, to implement good breadfruit recommendations in Kiribati there has to be motivation; if farmers have no motivation, they will not change their practices.
- Para-professionals (pathologists, extensionists, etc.) are needed.
- Outscaling must be intentionally built into the design of the activity/project from the very start.
- Farmers must have their own disciples (ranging from 20 to 200) disciples before they can participate – it is an indication of their personal commitment.
- Namau PAR farmers in action involved an initial investment of FJD 9000; return on investment predicted to be FJD 41,000.
- Early indications from Fiji and Solomon Islands indicate that the concept trialled in PNG has broader applicability.

2.10 NETWORK PERSPECTIVE IN EXTENSION PROJECTS

Salend Kumar, SPC/University of Queensland

This paper covers a method of network analysis, demonstrating its usefulness for future planning, current decision-making and assessment of sustainability.

The research project was developed based on the following justification:

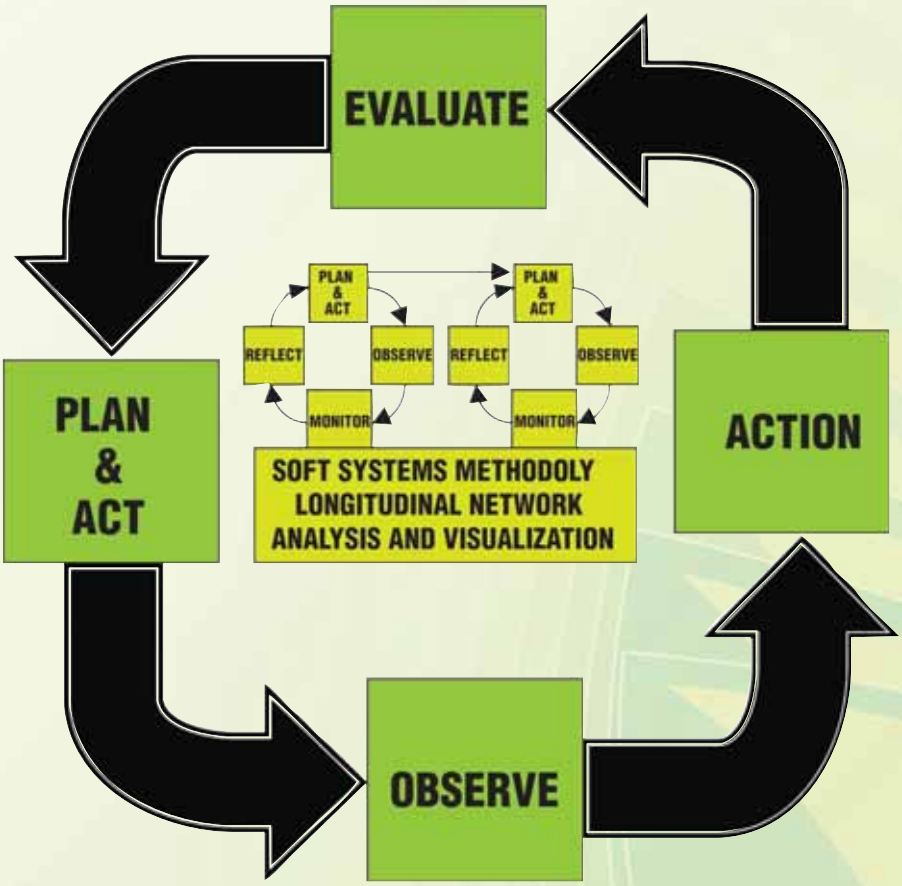
- dependence of Pacific agricultural sector on development projects – which represent 20 per cent of GDP; and
- unsatisfactory engagement of stakeholders in development projects – despite the region utilising the participatory approach.

Traditional tools are still used in managing projects of growing complexity. Development project management tools to monitor changes in participation level are therefore limited.

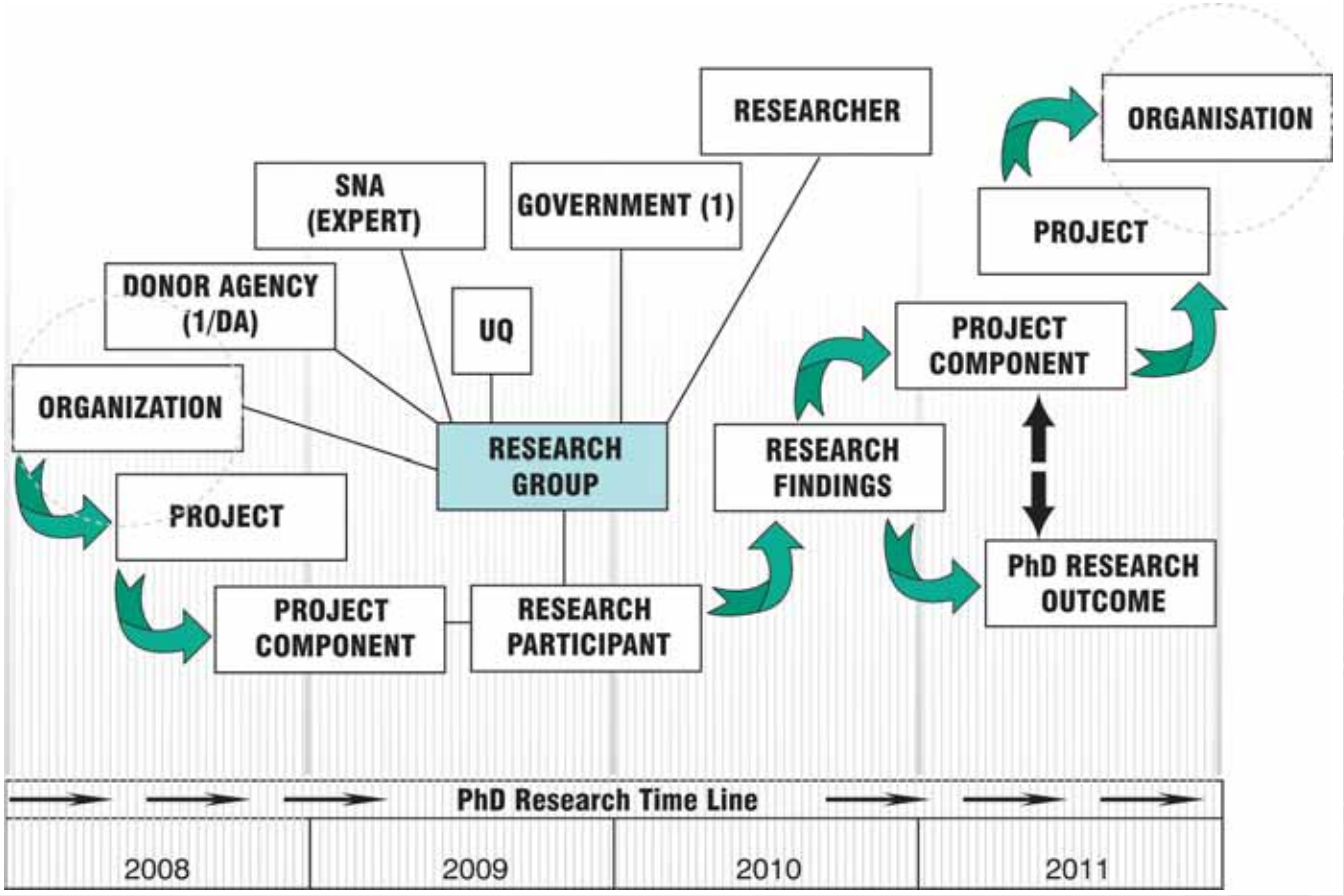
Monitoring and evaluation approaches lack effective analysis of participation in projects. Participatory monitoring and evaluation group members (internal and external) are selected without analysing their level of participation in the project.

The sets of cycles guiding the research process are illustrated in the following diagram. The next diagram then illustrates the research structure or participation and progress framework that is proposed to complement and assist this process.

CYCLES OF THE RESEARCH PROCESS



PROPOSED RESEARCH STRUCTURE OR PARTICIPATION AND PROGRESS FRAMEWORK



The package developed in the study will:

- enable organisational shortfalls and strengths to be assessed systematically;
- enable delivery of assistance and resources to be visualised – timely visualisation of the trends can avoid waste of resources;
- provide a better tool for project planning and implementation;
- provide a better tool to distinguish between consultation and participation;
- set the foundation for and strengthen the use of relational data to complement attribute data in development projects; and
- enable the project manager to visualise the changing level of participation and changing relationships of project participation over the project life.

2.11 Vinesh Prasad and Sanfred Smith, SPC

FACT Team, LRD

The purpose of the FACT project is to: 'Sustainably increase quality and range of exports of agricultural and forestry products.'

The objective is to: 'Promote and increase trade in agricultural and forestry products from Pacific ACP countries.'

The concept is to increase competiveness of potential export products through:

- sustainable production systems, organic certification, farm management etc.;
- post-harvest technology, storage and transportation;
- packaging, biosecurity, quality assurance programmes etc.;
- trade shows, marketing studies;
- food safety and quality standards, Hazard Analysis and Critical Control Points (HACCP), International Organization for Standardization (ISO); and
- value adding, packaging and labelling, bar coding, product development etc.

In the long term FACT will work with stakeholders to address institutional constraints to trade, for example through a papaya market study. It will also disseminate information on best practice production systems to farming communities and resource owners through demonstration (integrated pest disease management (IPDM) on cocoa with Direct Management Ltd, Solomon Islands).
FACT will initially focus on selected representative export enterprise products and growers who already have reasonable skills and experience in commercial production, marketing and exporting.

The case studies generated will be used by SPC and others to disseminate information to the wider community and encourage other producers and exporters to adopt best practice techniques.

The approach includes participatory surveys, studies, planning, implementation, business planning, and increasing competitiveness of potential exports by addressing and upgrading substandard components of the supply chain through:

- detailed systems analysis of selected businesses to identify vulnerable and weak areas of the current supply chain, areas of potential and possibilities for new product development;
- advice, training and demonstrations on sustainable commercial production techniques, certification (organics), pest and disease management, biosecurity issues, and food safety and quality standards;
- training of operators (producers, carriers, processors) of necessary post-harvest processing equipment and storage facilities;
- evaluation and supply of germplasm of new species and varieties; and
- uplifting marketing competencies such as pricing through improved production and processing systems, promotion, packaging and designs, product placement, certification, fair trade, product distribution and negotiation.

FACT ENTERPRISES	ENTERPRISE	AREA OF BUSINESS
Fiji Islands	Balthan Western Ltd	Plantain, kumala, breadfruit, taro and cassava
	Kai Ming Agro	Frozen cassava, taro and ginger
	FRIEND of Fiji	Chutneys, pickles, and dried tropical fruits
	Origins Pacific Ltd	Value added coconut products
	Agrana Fruit Ltd	Fruit purees
Solomon Islands	Direct Management Ltd	Cocoa
	Village Eco Timber Enterprise	Sawn timber
	Value Added Timber Products	Sawn timber and handicraft
	Maraghoto Holdings Company Ltd	Indigenous nuts
PNG	The PNG Balsa Company	Balsa wood
	Pacific Spices Ltd	Spices and essential oils
Samoa	TH Plantations	Taro, breadfruit and banana chips
Vanuatu	Lapita Cafe Ltd	Cassava chips and flour
Marshall Islands	Robert Reimer Enterprises	Pandanus juice and baby foods

2.12 FOUNDATION FOR RURAL INTEGRATED ENTERPRISES 'N' DEVELOPMENT

FRIEND

Overview

FRIEND:

- is a non-governmental organisation founded in 2001 and is registered under Fiji's Charitable Trust Act;
- established an office in Lautoka in 2002;
- has an office in Labasa and a shop in Suva;
- has programmes running mainly in the Northern and Western Divisions of Fiji;
- serves more than 5000 individuals through social and economic empowerment programmes in a year; and
- serves more than 50 communities including villages, squatter settlements, Housing Assistance Relief Trust (HART) homes, and farming communities.

FRIEND is committed to serving the underserved. It makes the effort to ensure that following special target groups benefit from the programmes:

- people with special needs including Deaf youth
- unemployed youth
- youth at risk
- inmates and ex-offenders
- farmers
- women

Programmes

Major programmes are: Food Security, Promotion of Healthy Lifestyle, Developing Enterprises for Sustainable Income (DESI), Financial Literacy/ FRIEND Save Scheme, and Youth Development Programme.

All programmes have the underlying theme of good governance and economic empowerment. In light of the current economic crisis FRIEND is also actively working with farmers on home gardening with an emphasis on sustainable use of land and water resources. This programme is also focuses on commercial farming, checking that a market exists before asking farmers to plant. For example, Balthan Limited is working with identified farmers on planting of paw paw for the international market.

Challenges include:

- lack of support from department of agriculture
- farmers' need for seeds and markets;
- encouraging bio pest management;
- encouraging strengthening of soils through bio controls;
- trying to set up seedling centres;
- securing markets before commercial farming; and
- funding – this is an unfunded programme.

The objective of the DESI programme is to provide opportunities for marginalised communities and individuals to earn income and beat poverty. Communities identify locally available resources to make potential products; FRIEND assists in the packaging and marketing of these products and conducts training on occupational health and safety (OHS) and quality systems for items produced. DESI goes hand in hand with financial literacy, which includes costing, budgeting, saving, and setting goals as well as understanding national budgets and budget processes.

Each programme employs governance tools for communities to identify their collective needs, resources and strengths using participatory methods. Each one also assists communities in developing their action plans and monitors the execution of those action plans.

FRIEND reaches out through development agents who have been trained to work with farmers, and who are supported by staff with regular visits. Training is provided in rural areas as per a needs assessment and trust is built with producers through ensuring markets exist.

Lessons learnt

FRIEND recognises that corporates hesitate to deal with local suppliers because of concerns about consistency, quality and supply constraints . Therefore when FRIEND breaks into a market it takes full responsibility and guarantees the market requirements.

FRIEND works with a variety of donors and also has developed corporate partnerships to achieve outcomes.

2.13 ROLE OF FORESTRY EXTENSION IN NATIONAL AND INTERNATIONAL TRADE

Sefanaia Tawake, Fiji Islands

Forestry is important to many Pacific Island economies, and effective extension in the sector can vastly improve delivery of products.

Extension Forestry provides the following services:

- community projects such as:
  - o assisting in sustainable forest management (SFM) in native forests through promoting selective logging and a portable sawmilling operation;
  - o establishing exotic woodlots for pine and mahogany, teak and etc., thereby ensuring a wood supply to static sawmill mills and chip mills; and
- assistance to private companies (landowners, family business) with logging, sawmilling and value adding (furniture, artifacts, handicrafts etc.).

National trade in Fiji

Logging companies deal with:

- native – 5 companies
- mahogany – 10 companies
- pine – 15 companies

Portable mills (average output 1000 m3 per year) deal with:

- native – 2 mills (av. 2000 m3 @ FD$450/m3 = $0.9 million)
- mahogany – 10 mills (av. 10,000 m3 @ $550/m3 = $5.5 million)
- pine – 5 mills (av. 5000 m3 @ $300/m3 = $1.5 million)

Other potential wood products are:

- furniture – nil
- wood turnery – small scale and family base
- handicraft – data not captured

Contribution to international trade

Indirect contributions to international trade come from:

- sawn timber
- export – 1000 m3 (av. $1,200/m3) = $1.2 million
- value adding (wood chips)= $5.5million (47,000 mt)
- other forest products:
  - cocoawood – furniture, flooring, handicraft etc.
  - sandalwood – 306 MT ($6 million)
  - pine resin – factory closed
  - kura (noni) – data not captured

2.14 NGO-BASED EXTENSION APPROACHES IN TRADE

Karen Mapusua, Women in Business Development Inc., Samoa

The following components are at the basis of the extension model of Women in Business Development Inc. (WIBDI):

- Technology: Work with simple things that can be taken to the village and used easily without too much reliance upon things not readily available, e.g. organic certification.
- Tradition: Capitalise on the value but also realise that it can burden the families. For example, hospitality is a very special part of the culture but WIBDI realises that with the constant visits of its staff, the money earned may be at risk in that a lot gets spent on WIBDI visitors, so there is constant negotiation to reduce that stress on the families.
- Trade: Aim to capitalise on fair trade, identify markets on behalf of village producers with WIBDI as a conduit to facilitate direct relationships between the village producer and the buyer, and focus on relationship-based markets as we can't compete on commodity-based markets.

Trust is the modus operandi. WIBDI takes family-based extension approaches. The model was developed over the years through trial and error but based on adult education principles. We learn and innovate when motivated, i.e. 'I want a better life for my family'. WIBDI was formed by a group of women who realised that they needed to be where the real needs were at the same time, i.e. in the village. Donors were becoming increasingly dissatisfied with the way aid funds were being used also.

WIBDI had to identify what could be changed and what couldn't be. It built on the strengths that do exist in Samoa:

- agriculture
- cultural frameworks
- family strength

Lessons learnt

- Take the path of least resistance – if it doesn't work, adapt rather than force things.
- Empower staff to deal with problems as they occur in the field.
- Critical reflection and learning are valuable.
- Be honest with donors based on organisational learning.
- Field staff are able to deal with whatever is happening in the family at the time so the approach must be flexible and multi-disciplinary.
- Because there is so much need, we need agricultural extension services to work properly.
- Interventions work best if they work around something they know (e.g. fine mat intervention).
- People will not change basic lifestyle patterns, so these must be accommodated in the business model (i.e. take on more producers so that normally they only work a few days on the product and if some people have to go offline, the others only have to work a little harder to meet order commitments).

'If you don't hear the voice of the farmer in everything you do then what you are doing is wrong.'
(Dame Anita Roddick, founder of the Body Shop)

3. ROLE OF ICT IN TRANSFORMING EXTENSION

3.1 MEDIA EXPERIENCES FROM MINISTRY FOR PRIMARY INDUSTRIES, FIJI – the Agriculture Help Desk

Nacanieli Takele, Ministry for Primary Industries, Fiji Islands

The information section of the Ministry of Primary Industries has three core roles:

- publicity of Ministry activities, policies and services;
- provision of agriculture information; and
- faster customer services through the Help Desk.

Newspaper publicity is provided in English, Fijian and Hindi. TV is utilised and on radio there are five 15-minute programmes per week and five 2-minute farming tips per week. The Ministry also has a website and produces print media such as farmers' leaflets, crop farmers' guide, technical bulletins, Fiji farmer magazine and Market Watch.

Constraints

Constraints for extension activities were:

- limited funds;
- reduced staff numbers;
- information hoarding;
- lack of staff mobility; and
- limitations on information accessibility and availability.

The situation was turned around by:

- section analysis;
- staff analysis (individual work plans, weekly work programmes);
- empowering staff (monitoring and guidance);
- staff recognition (staff of the month/year);
- partnerships (with staff, with stakeholders); and
- finding alternatives to constraints.

Where sections have delivered under constraints and worked smarter, the Ministry has increased their budget allocation. Media Publicity jumped from FJD 50,622 in 2006, to FJD 160,700 in 2007, to FJD 304,500 in 2008, while 24 leaflets have been updated and staff have been recognised for their contribution. In 2009 there is a capital budget of FJD 50,000, with an additional budget of FJD 94,000 and an additional vehicle.

Agriculture Help Desk

The Agriculture Help Desk is an innovation to help clients access agriculture information faster. The aim is to provide a direct link between Ministry customers and decision-makers.

The Help Desk has three working days to provide a response to customer queries or requests to services; in practice its average turnaround time has been three hours. It provides a single point of contact for Ministry customers. Information on the requesting customer is retained. Help Desk staff have established a chain of action so that no request is missed.

There are multiple ways of contacting the Help Desk: phone, fax, email, post and person-to-person. Three staff are required to operate the desk. Help Desk is used for both requests and complaints.

The constraints concern:

- the availability and accessibility of information;
- the level of public awareness of the service;
- manual logging of requests and complaints; and
- prohibitive costs of phone calls and Internet access.

Future directions

There are plans for:

- a one-stop-shop information centre;
- appropriate information technology to disseminate and receive information quickly;
- increased use of the Ministry website for frequently asked questions (FAQs); and
- harnessing mobile phone capabilities for calls, texts and receiving market information.

There is a huge demand for agricultural information. It is necessary to increase public awareness of how they can access that information. The Help Desk needs to be linked to the established information centre.

3.2 TONGAN EXPERIENCE

Taniela Hoponoa, Ministry of Agriculture, Food, Forestry and Fisheries, Tonga

Background

The work of extension officers has been restricted due to:

- geography – two days on a boat or a 5000 Tongan pa'anga flight from the research centre to Vava'u group;
- high cost of supplies and services;
- less money;
- fewer extension officers;
- an increase in responsibilities and in farmers' demands for technical information;
- lack of coordinated information base; and
- limited fuel allocations so that the extension officers are unable to leave office. However, in this area alternatives have been offered through enhanced use of ICT.

Why ICT?

ICT offers:

- a chance for experts to get serious;
- a way to collate, organise and publish technical information;
- timeliness of information sharing amongst stakeholders;
- improved networking and information sharing amongst extension officers using mobile phones;
- improved communication which gets help to farmers quickly;
- cost-effectiveness when used appropriately; and
- an increased scope of work for extension services.

Digicel groups have opened the way for cost-effective communication between extension officers and coverage is so much improved that the most remote areas can be reached. SPC also assisted with publication of materials, purchase of computers for three extension centres, purchase of seven mobile phones for TBU extension and information staff and establishment of information database (Farmer Profile).

3.3 OPPORTUNITIES FOR RURAL EXTENSION WITH PACIFIC RURAL INTERNET CONNECTIVITY (PACRICS) AND ONE LAPTOP PER CHILD (OLPC)

Laurie Fooks, SPC

OLPC

The OLPC project is relevant to extension because it can facilitate disease reporting from rural areas and the paravet training programme. Extension filters information to the community, but this system allows the community to do the filtering and decide how to assimilate into its own context. OLPC only goes into a community that is fully supportive and has significant international support.

OLPC core principles are:

- child ownership
- low ages
- saturation
- connection
- free and open source

With a strong focus on community involvement and support, there is a challenge of adhering to all the principles. A constructivist approach is used – children decide how to assimilate information they receive.

The Pacific Islands Forum (PIF) Leaders' Meeting in 2007 supported OLPC as a tool for education and disseminating information to remote rural communities. In 2009–2010 OLPC is being scaled up to 13 PIF nations and urgent resources are needed to do so. The Forum suggests that the whole family should have access, not just the child.

PACRICS

PACRICS (*http://www.pacrics.org*) provides low-cost Internet access for rural and remote areas.

Is there a role for a partnership with PACRICS or OLPC?

3.4 EMPOWERING FARMERS THROUGH INFORMATION

Anju Mangal, SPC

Definition of IT and ICT

Information technology (IT) comprises electronic devices used to perform day-to-day tasks, such as laptops, computers, USBs and printers. Information and communication technology (ICT) includes interconnection links between cables, routers, computers, mobiles, satellite devices and networks that share information via email, Internet, Short Message Service (SMS) and social networking tools. Radio is one of the most effective ICT tools that farmers use to assist in agricultural information exchange.

ICT plays a role in the dissemination of information, such as through email mailing lists to disseminate information on the recent pandemic of H1N1 Influenza A. Digicel Fiji offers a text service to provide early warning to key stakeholders and the people of Fiji.

ICT has the potential to increase agricultural productivity through communicating knowledge and information to farmers, provide improved market information and facilitate the distribution of extension materials.

Examples of use of ICT

- Mobile phones in a rural community can be used to inform extension officers about the existence of taro disease in a specific location, facilitating informed decisions on interventions and helping farmers in the Pacific to control actions.
- A Help Desk system has been introduced in Fiji.
- Tonga has used ICT to publish technical information (publications), and made use of mobile phones.
- PNG has used Resource Learning Centres.
- In Kenya, representatives of farmers' groups call extension agents to ask questions in advance, so that the agents can prepare possible solutions to farmers' problems before they visit.
- As part of a project in the western part of China, farmers can request and receive extension and market information by television, computer and phone.
- In Indonesia, mobiles are being programmed with Java applications developed by the Ministry of Agriculture so that officials can store and send data, and farmers can request market prices.
- In Bangladesh, private sector actors are providing many rural services such as private extension using community centres and mobile technologies.

Linking it to the Digital Strategy

The Pacific Regional Digital Strategy, which Forum Leaders endorsed in October 2005 at the Pacific Islands Forum Leaders' Meeting, talks about the digital divide between rural and urban areas of the Pacific.

To overcome this divide, SPC implemented Pacific VSAT technology to demonstrate the opportunity to provide low-cost high-speed Internet access to rural and remote communities. This technology can be aimed at improving agriculture extension and outreach services in rural and remote communities to gain access to global exchange and information sharing.

Issues that need to be addressed are:

- lack of trained extension and outreach services providers;
- delay in or lack of quick response in providing farmers with technical assistance on pests and diseases, proper management practices, and proper post-harvest handling and packaging;
- determining the most appropriate, cheap and quickest methods of receiving and circulating information to farmers;
- lack of awareness on the use of ICT, including the potential use of mobile technologies;
- farmers' inability to read and write which hinders them from reading extension materials such as leaflets/newsletters on pests and diseases;
- reduction in budgets for extension services in Ministries of Agriculture; and
- broadcasting agricultural information by radio can help farmers to receive information but does not allow them to send questions related to farming practices.

Initiative by SPC's LRD to tackle problems

SPC's Land Resources Division developed a proposal to test the combination of modern and traditional ICT in improving market information and

agricultural-based technical assistance to farmers. Its aims were to:

- address the need to deliver information to farmer using low cost technologies;
- ensure gender sensitivity to meet the needs of both women and men in the Pacific Island countries and territories; and
- ensure youth participation during the implementation phase.

The pilot project concept involved:

- implementing knowledge and learning community centre (KLCs);
- creating a knowledge and learning community with a combination of traditional and modern ICT;
- using mobile phones/SMS database system;
- using help desk systems;
- using publications material (electronic and paper based);
- using a library information system; and
- using radio and television.

Project outputs are:

- establishment of pilot sites – knowledge and community centres in the Pacific – based on a CTA needs assessment and country needs assessment;
- compilation and production of relevant agriculture information in multiple formats to be used in KLCs;
- information compiled and designed in multiple formats;
- information systems established;
- extension officer, field officers and farmers trained;
- awareness of KLCs raised through TV broadcast, radio, emails and mailing lists;
- simplified messaging, translated into local languages for farmers to cater for differing literacy levels.

The following are the expected results:

- Farmers and exporters are made aware of improved and effective ways of communicating market information.
- Farmers have reliable, immediate and up-to-date information on agricultural practices.
- Extension officers are trained to answer farmer queries.
- Farmers have timely and reliable market information to allow them to decide which market to target or send their produce to.
- Exporters and consumers have improved prices in markets.
- Farmers have a direct link to exporters and extension officers.

3.5 PANEL DISCUSSION: How can the media contribute to agriculture and forestry developments and climate change?

The panel recognises the role of media in facilitating agricultural development. It notes that extension's capacity with and access to media varies from country to country and that in general agriculture is not a 'sexy' topic. It also noted that extension officers are sources of information and agents of change. In view of these factors, the following approaches are posited to increase media access for extension transformation and to raise the profile of extension:

- Link round-table media capacity training to major agriculture and forestry events such as MOAFs and HOAFs to increase reporting on agriculture and forestry in local media.
- Identify opportunities for capacity training of extension in media production skills to enrich their box of tools. Many PICTs have non-functional information units – they need communication skills in writing press releases for newspaper and radio, interviewing, publication and video production, and new media formats.
- Develop strategies on media convergence and explore cost-effective ICT to increase intensity of media coverage of extension activities.
- Broaden media formats – free air time with radio talk shows, use of local celebrities/champions, items on local TV and newspaper, agricultural column, partnering with other relevant sectors such as health and education, DVDs on agricultural practices, explore use of mobile phones, establish help desk service, HF radio to reach outer islands, the Internet and email groups, OLPC.
- Engage media groups at the national and regional level, such as JAWS, PINA and PACNEWS, in local agricultural activities to raise the profile of

agriculture and promote the formation of media focus group specifically for agriculture and rural development to address the lack of specialised agricultural reporting.

- Establish media awards for local agricultural reporting.
- Incorporate a media component when developing agriculture and forestry development strategies.
- Develop partnerships with regional organisations and local funding agencies, business houses, NGOs, etc. to co-fund newspaper supplements, TV programmes, video documentaries, and radio broadcasts of field days.

MEDIA SUPPORT AND PROGRAMMES FOR AGRICULTURAL EXTENSION

Mika Loga, Regional Media Centre, SPC

There is poor understanding of rural media and a potentially massive impact on rural people. How do we use media outlets? You need to do a lot of convincing, you need to provide more than just 'plain information': it needs to be changing people's lives.

Be smart – know your target audience. Make your message simple and understandable and work to a timeframe. There are different levels of audience; speak a common language understood by all.

Diverse ways to get information out include:

- Q & A sessions on radio;
- 'feeding' announcers issues to talk about during their shows;
- news – journalists need fresh stories every day;
- establishing particular times to talk about agricultural issues.

Extension officers should make an effort to find out what is available in your country and utilise it to the full.

Recommendations

- Communication skills of extension officers need to be developed.
- Extension officers need to undergo training to understand the role of the media.

Effective low-cost media alternatives for extension officers in the rural areas.

Shammi Lochan, Radio Michi, FBCL

You need to know your radio stations: AM stations have more talk, less music and FM stations are commercial, all about the money.

There are various programmes that deal with agricultural issues with specific groups targeted. Government funds programmes on AM stations. Extension officers need to be more articulate and more skilled with media. There are two-minute programmes, spot advertising, talk interspersed with music. You could also have a media personality do programmes with you.

Strategies to promote agriculture and forest information throughout the region using the media

Rita Narayan, Regional Media Centre, SPC

Radio, newspapers and TV are still very useful and popular. You need to aim for the right information, at the right time, on the right channels, with the right person to deliver to the right target audience.

There is a lack of specialised reporters so you need to identify a reporter with an interest in agriculture.

A good strategy is putting technical experts face-to-face with the journalists, who then attend meetings, etc. on the technical subjects. This enables the journalists to vastly improve the information they provide – it is capacity building of media personnel.

There is a need for agricultural personnel to be trained in media skills and opportunities. Radio is valuable.

There are community radio stations for telling success stories; and suitcase radio stations which can be taken to a farming community and specialists could broadcast live or in another community at other times answering farmers' concerns, etc.

It is important to use the vernacular. Good network mechanisms are essential such as mailing/distribution lists, developing relevant content and managing it and networking with media. Training and developing communication strategies should underpin all efforts.

Samisoni Pareti, Islands Business International

An effective strategy is to hold side events at major events to pick up on topics that you feel are not being sufficiently addressed by the media. Information officers in the ministries are not being successful because they don't effectively market the message. When the editor looks at what needs to go from news coverage for that day, press releases have more chances of being left out. That is why personalising the professional relationship is critical. Don't just 'throw' information at the journalist: package it to draw their attention. Learn to write how the media writes.

Chair summary

- In regard to language that will reach a wide audience, use the vernacular.
- FM radio stations can target young people to enter agriculture.
- Pre-arrange interviews.
- There are free ways of using the media.
- Specialised reporters are lacking.
- Farming success stories are valuable.
- Information comes in different ways.
- It is essential to have a media strategy.
- Networking is critical.
- Training for media specialists and extension officers is needed.
- There are opportunities to 'make agriculture sexy' especially in current global conditions.
- Journalists need to be briefed on the importance of agriculture.

Recommendations from the Panel

The summit was asked to consider and endorse these recommendations:

- Hold a round-table to discuss media capacity building strategies related and essential to issues of agriculture and rural development in the Pacific; preferably in conjunction with MOAFs and HOAFs.
- Seek funding for training activities for extension officers in relation to media capacity building, e.g. 'How to deal with the media' or 'How to maximise media support'.
- Develop strategies to promote information exchange throughout media networks on successful media practices and experiences in dealing with major agricultural and rural development themes. For example, keep communication line open all the time: use your information office, invite media when you go on field visits, agro shows or open days, involve media in important conferences like this; don't just think/stick to English!
- Engage media groups at the national and regional levels like PINA in workshops and with the development of a media focus group.
- Develop strategies to involve the media more closely in the process of formulating a development strategy.
- Develop guidelines for media support programmes and the identification of media capacity development needs.
- Undertake activities to increase awareness amongst funding agencies about the support needed to develop action plans to strengthen the media working in the agricultural sector.
- In consultations to develop communication and information strategies in agriculture, forestry and climate change, include representatives of the media in the region.

4. THE ROLE OF EXTENSION IN ENGAGING YOUTH IN AGRICULTURE AND FORESTRY

4.1 MOAFS RECOMMENDATIONS

Steve Hazelman, SPC

The Communiqué from the Second Regional Conference of Ministers of Agriculture and Forestry, held in Apia in September 2008 noted 'the potential benefits of greater involvement of Pacific youth and women in the agriculture sector, and endorse[d] the development and implementation of a Pacific Youth Strategy to support this engagement'.

4.2 CHALLENGES AND OPPORTUNITIES FOR RURAL YOUTH IN THE PACIFIC: What role for extension?

Dr Malcolm Hazelman, Food and Agriculture Organization of the United Nations

The perception of who is 'youth' in the Pacific is quite different from the perception in other regions. The current situation of Pacific youth may be summarised as follows:

- The vast majority live in the developing world, many in rural areas where the problem of poverty exists.
- Many lack adequate and appropriate education.
- Youth unemployment is high.
- Youth are exploited in unsafe and unfair occupations and are victims of sexual exploitation.
- Youth out-migrate to cities which causes severe social, economic, political and environmental problems in cities; fewer people to grow food; and lower status of the agricultural and rural life among youth.
- Youth face other social and health problems (HIV, drug use etc.).

Opportunities in addressing this situation are:

- greying populations: we need replacement farmers, and replacement workers including extension workers;
- interest and commitment from governments;
- regional/national efforts initiated; and
- NGO efforts.

Experiences from the Asia–Pacific have the following commonalities:

- high unemployment rates in rural areas;
- uninformed about opportunities – information gap;
- gaps re education and training for rural youth; and
- employment and income generation needed.

Youth organisation success elements

- Sustaining opportunities are needed through:
  - recruitment of competent leaders
  - effective organisational structure
  - regular meetings
  - generation of funding to support activities
  - input of ministries
  - commitment of adult advisors (church support, etc.)
  - sports and social activities and events
- Education and training programmes must reflect needs and realities of rural communities and farm youth, with:
  - enhanced self-esteem
  - commitment of members
- Capacity building and mobilisation of members are important components, including:
  - needs-based activities
  - effective education and training approaches
- Coordination and strengthening of linkages is a priority concern.

Surrounding factors are:

- favourable environment – environmentally-friendly approaches; and
- favourable infrastructure – markets, marketing and support.

Lessons learnt from projects

- Undertake proper partner/leader selection.
- Clarity of roles is important.
- Use local consultants, languages and networks.
- Target to client capabilities.
- Build on their strengths.
- Include focus on youth-related aspects, not only agribusiness.

- Use study tours for learning and sharing.
- Produce support materials in local languages.

The overall challenge

The challenge is to rethink the future by investing in youth, which will involve investment in:

- skills training;
- appropriate technology and micro-finance programmes; and
- capacity building for youth-led and youth-serving organisations.

Keys to successful involvement of rural youth

- Strong national youth policy: Every country should be committed to developing national youth policy.
- Youth policy should consider special needs and interests of rural young.
- Revitalising rural education and training: Encourage improvement in school systems; targeting the barriers to education could also be a means of revitalising education; Ministries/Departments of Agriculture can play a role in supporting and influencing.
- Enhancing rural youth employability through better education: There are two barriers to overcome: lack of investment in rural areas and lack of effective institutions. Education curricula need to be relevant to labour market needs and to the goals and needs of rural youth. Rural youth need to implement the skills to be productive members of the community and contribute to rural development.
- Mobilising youth through community-based organisations: Rural youth peer group organisations with effective leadership can:
  - promote learning to build employment skills
  - create cooperative enterprises
  - inspire, empower and motivate youth
  - channel youth energies and talents
  - encourage stable rural communities
  - add enjoyment of life and positive forms of recreation
  - ensure systematic transfer of livelihood skills

Conclusion

The great majority of rural people in the Pacific are youth and they face many challenges. Rural youth organisations have an important role and investing in youth is needed. 'Best/innovative practices' should be used as a guide and for success and replication strategies, and existing networks should be utilised and linked with.

4.3 FORESTRY YOUTH ENGAGEMENT

Jalesi Mateboto, SPC

The Drawa Project experience is presented here as a case study. The project addresses Millennium Development Goals (MDGs) 1, 3 and 7. Working with the structures already in place, the aim was to enhance youth and landowner participation in sustainable land management and sustainable forest management to raise living standards. The following criteria of sustainability were used:

- Environmental/ecological sustainability
  Development or utilisation type must be designed to ensure that the use of forest resources corresponds to its natural potential.
- Economic viability
  Utilisation of the forest resources should be designed to contribute to the long-term security of the economic basis of the people's living. It should contribute to the improvement of the living conditions of the rural population and to the overall economic development of the country.
- Social justice/social acceptability
  Resources, benefits and costs should be distributed equally among the human population of the present generation (intra-generational equity) and between the present and future generations (inter-generational equity).

Two organisations were involved in implementing this project: Drawa Landowners Forest Management Co-operative Ltd (DraFCo), a business entity, and Landowners Association of Drawa (LOAD), with responsibilities for the community and development. DraFCo channels a percentage of profits into LOAD community activities and projects.

Important issues

- The authority of LOAD is endorsed by all mataqali members.

- Income from DraFCo does not replace agriculture, the main income source in Drawa.
- The main mandate for LOAD is community development and promotion of sustainable land use practice in the model area.
- LOAD monitors all land use activities (including business operations) in the model area.
- LOAD is endorsed as an enforcement authority through traditional structures.
- LOAD bylaws are institutionalised through their inclusion in the concession agreement.
- An action learning approach was adopted, as outlined below:

Step 1: Plan
Build on the experiences and ideas of all partners because learning is enhanced when it is derived from day-to-day work and experience.
Step 2: Act
Put into practice what you plan using timeframes.
Step 3: Observe and reflect
Observe the results of the action and reflect on the impact. Reflection is very important; it enables the next steps in the cycle to benefit from the explicit learning that has resulted from the previous action.
Step 4: Draw lessons
Draw from the previous steps of action and reflect experiences to date, linking them back to the concepts and ideas that were used in the initial planning, in order to plan for the next cycle.

Lessons learnt
- In projects involving community-based enterprise development as a strategy for conservation and sustainability, the duration, scope and pilot sites should be carefully selected to establish direct and straightforward links between enterprise and conservation.
- Multi-stakeholder participation is critical in all phases, from project formulation to implementation and monitoring
- Expertise on socio-economic aspects, business development and marketing is needed.
- People on the ground are needed.

In regard to the relationship between forestry and agriculture in particular, the following lessons apply:
- A multi-sectoral approach is essential.
- The 'agriculture development vs deforestation' mentality needs to be defeated.
- 'No one shoe fits all' but the brand does matter too.
- Sustainable land management is key.

4.4 EXPERIENCES FROM THE PACIFIC

Kamilo Ali, Ministry of Agriculture, Food, Forestry and Fisheries, Tonga

Within the DSAP Youth Engagement Strategy facilitators play a critical role in the cycle of participatory planning, participatory implementation, and participatory monitoring and evaluation.

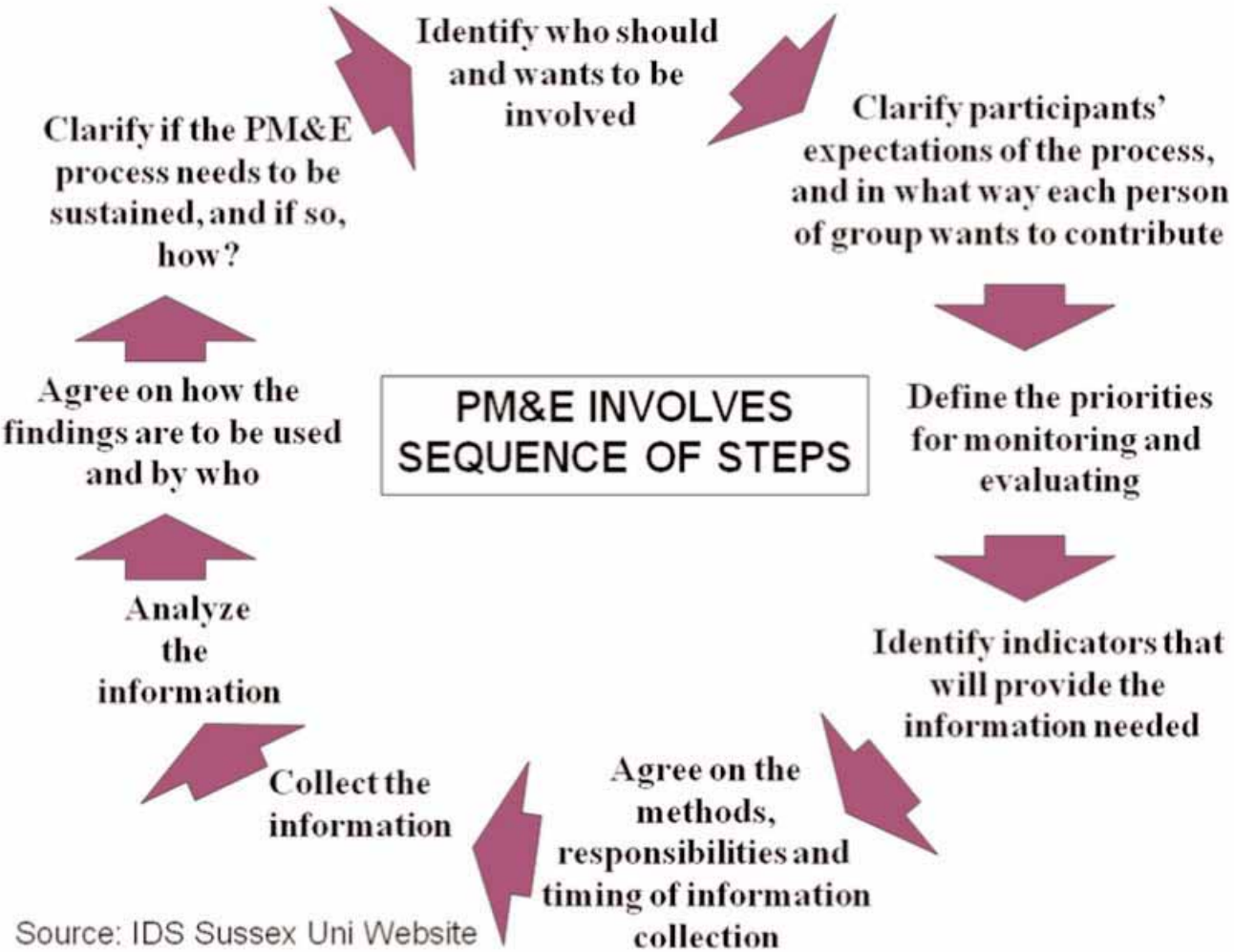
As the critical first step before starting the participatory planning workshop, the facilitators come together. Facilitators including the youth group leader must have common understanding of the long-term objective. The following are key questions for building common understanding:
- Are there some youth in the youth group need our initiative more than others?
- Can we, facilitators together with the youth group, seek them (those in need) out?
- Can we together actively listen to them?
- Which crop has the fastest rate of return and high profit to inspire them?
- Which effective agritechnologies are required for a successful crop – to keep them inspired?
- Which safe agritechnologies should be taken to where they play and live?

The steps of the cycle can be summarised under the three main headings below. The participatory nature of the process is emphasised for sustainability.

Step 1: Participatory planning
- Set the group norm – together seek out and listen to those who are in need.
- Identify and rank youth problems.

Step 2: Participatory implementation
- Establish youth play day and hang out space.
- On farm visits, youth visit youth.

Step 3: Participatory monitoring and evaluation
The steps in participatory monitoring and evaluation are summarised in the diagram below.



Lessons learnt

Participatory process contributions

- Improvising with participatory tools creates dialogue, probes data, builds consensus and improves the group social norm and values.
- The participatory process grounds transparent decision-making.
- The participatory process gives the opportunity for marginal groups to participate in decision-making.
- The participatory process provides responsive, context-fit and best-bet agritechnologies.

Elements of success

- A youth group leader with endless dedication for others is an invaluable asset.
- A youth group that clearly defines how individuals will benefit is successful at working together.
- Young families committed to the welfare of their children commit more to agriculture.
- Mothers are better than fathers at convincing their children to work on the garden.
- Quickly attend to youth agritechnical problems with best-bet, context-fit agritechnologies.
- Select agritechnologies that can be taken to where youth play, meet, eat, drink kava, sleep and live – for instance, organic agritechnologies.
- Select crops with a fast rate of return and high profit, for newcomers to agriculture – for example, vegetables.
- Take agritechnologies that ensure a successful crop. For example, for vegetable crops water (drip irrigation) is a must. Success inspires youth more!
- Youth should experience a complete project – i.e. from plantation to market inputs.

Challenges to moving forward

- Unless there is a change from a 'cultural obligation' mindset to a business mindset, we will miss out on sustainable business opportunities.

- Youth are quickly growing in numbers, therefore we can't reach every one of them even with all our initiatives put together.
- We can't do away with our social lenses to see social intangible lines/fences.
- Is the participatory process skin-deep or heart-deep? We need to position ourselves.
- Always be careful to avoid participatory fatigue.
- We can't do away with partnership, especially partnering with organisations that traditionally have social lenses.
- Train youth with agritechnologies that stress the values and principles of sustaining their future natural habitat, land and the Pacific.
- With the rapid increase in the youth population, what mechanisms are in place to inform villages that they may be entering a population crisis?

4.5 INTEGRATED WATER RESOURCES MANAGEMENT

Ruth Urben , Secretariat of the Pacific Islands Applied Geoscience Commission

Integrated water resources management (IWRM) is a process that promotes the coordinated development and management of water, land and related resources in order to maximise the returns to the economy and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

The Millennium Development Goals (MDGs) directly address the water issues by aiming to:

- halve, by the year 2015, the proportion of people without access to safe drinking water (reaffirmation of Millennium Development Goal);
- halve, by the year 2015, the proportion of people who do not have access to basic sanitation; and
- develop integrated water resources management and water efficiency plans by 2005.

In the Pacific Island region typically there are:

- limited water sources – water scarcity; and
- water pollution threats.

IWRM aims to coordinate development of:

- land and water;
- surface water and groundwater;
- the river basin and coastal and marine environment; and
- upstream and downstream interests.

It is a process that promotes the coordinated development and management of water, land and related resources, for equitable economic and social welfare without compromising the sustainability of vital ecosystems. It is ridge to reef (watershed) management: manage water resources, water catchment, recharge, supply, (waste) discharge and minimise pollutants into water supply and sea.

IWRM demonstration projects

IWRM main intervention	Countries and territories	Location
Watershed management	Palau	Ngerikiil
	Papua New Guinea	Laloki River
	Samoa	Apia Catchment (Vaisigano, Fulu)
	Vanuatu	Sarakata Watershed
Wastewater management and sanitation	Marshall Islands	Laura Lens, Majuro
	Nauru	Nauru
	Tuvalu	Tuvalu
Water resources assessment and protection	Cook Islands	Rarotonga
	Fiji	Nadi River Basin
	Niue	Alofi Town and Reef

Water use efficiency and safety	Solomon Islands	Honiara (Panatina, Rove)
	Tonga	Vava'u, Nieafu Aquifer
Project resources	5 years: 2009–13 @ USD 500,000/demo	Project Management Unit Project Steering Committee

4.6 RESPONDING TO EDUCATION AND TRAINING NEEDS OF THE FORESTRY SECTOR:

Viliame Rabici, The Fiji Institute Of Technology - Forestry Studies Programme

The Fiji Institute of Technology has a framework for forestry training and education that covers lower-level training right through to degree-level training. The FAO Forest Sector Review (1989) and the International Tropical Timber Organization (ITTO) training needs analysis exercise in Fiji (2002) identified the need to develop a formal training programme that specifically targets the needs of the forestry industry in Fiji.

A follow-up exercise was undertaken in 2003 to obtain a clear overview of the training gaps and needs, and the opportunities for the forest industry sector in Fiji and to recommend training strategies to address these needs and opportunities. Issues identified were:

- fragmentation of training delivery;
- lack of a training regulatory body;
- need for on-site training;
- need for improved processing practice and knowledge;
- lack of a competency-based approach to skill development and qualification framework; and
- lack of supervisor and management training.

The Timber Industry Training Centre (TITC) was set up in 2003 in response to FAO's forest review and ITTO's training needs analysis. In 2005 the Fiji Institute of Technology (FIT) facilitated the design and development of a Forestry Technician Curriculum. All training officers undergo a teacher training programme at FIT and training of trainers from the Training Productivity Authority of Fiji (TPAF). The Centre also offers short courses in logging operations and in 2006 offered a two-year Forestry Technician Certificate.

The Timber Industry Training Centre commissioned new facilities at Nasinu in 2005 and offers short courses in all aspects of timber processing. In 2005 FIT was hired to design and develop a curriculum on value-added products. Two certificates were established as a result: a one-year Certificate in Woodcraft Technology (CWT) (target: resource owners, cottage industry) – low tech; and a two-year Trade Certificate in Applied Woodcraft Technology (target: manufacturing companies) – high tech. In 2006 FIT facilitated the introduction of CWT as a franchised programme into Ratu Mara Vocational College on the island of Lakeba.

FIT decided to expand into forestry because of an obligation to support government initiatives and development programmes; to complement and articulate training by FTC and TITC into higher programmes of learning. Other reasons were to increase accessibility to higher education programmes (more can train locally which is not possible overseas) and to localise content of the Forestry Studies programme.

From July 2009 the following programmes will be offered:

- Diploma in Tropical Forestry
- Diploma in Forest Engineering and Technology
- Diploma in Agroforestry and Landscaping

The Diploma in Tropical Forestry will provide students with the basic knowledge and skills required for the scientific management of forest resources, products and services. Graduates can become managers of forestlands, technical specialists or professionals in other areas of natural resources.

The Diploma in Forest Engineering and Technology will cover: timber harvesting, primary processing, timber procurement, forest products marketing and management, exporting forest products, and production of wood products (e.g. processing, sawmilling, pulp and paper technology, wood finishing, machining of forest products, preservation gluing, and adhesives, glued wood products – veneer, plywoods, laminated woods and related products).

4.7 PACIFIC CAPACITY BUILDING NEEDS ASSESSMENT FOR EXTENSION PERSONNEL IN THE PACIFIC

Salend Kumar, SPC / University of Queensland

The ACIAR Pacific Capacity Building Needs Assessment identified 10 priorities to address regionally. Capacity building needs to be undertaken at all levels or organisations within an extension system. The challenge now is to apply the study in a correct manner.

Capacity building occurs at two main levels.

Individual capacity building involves:

- equipping individuals with knowledge, skills; and
- providing access to information and training to enable them to perform effectively.

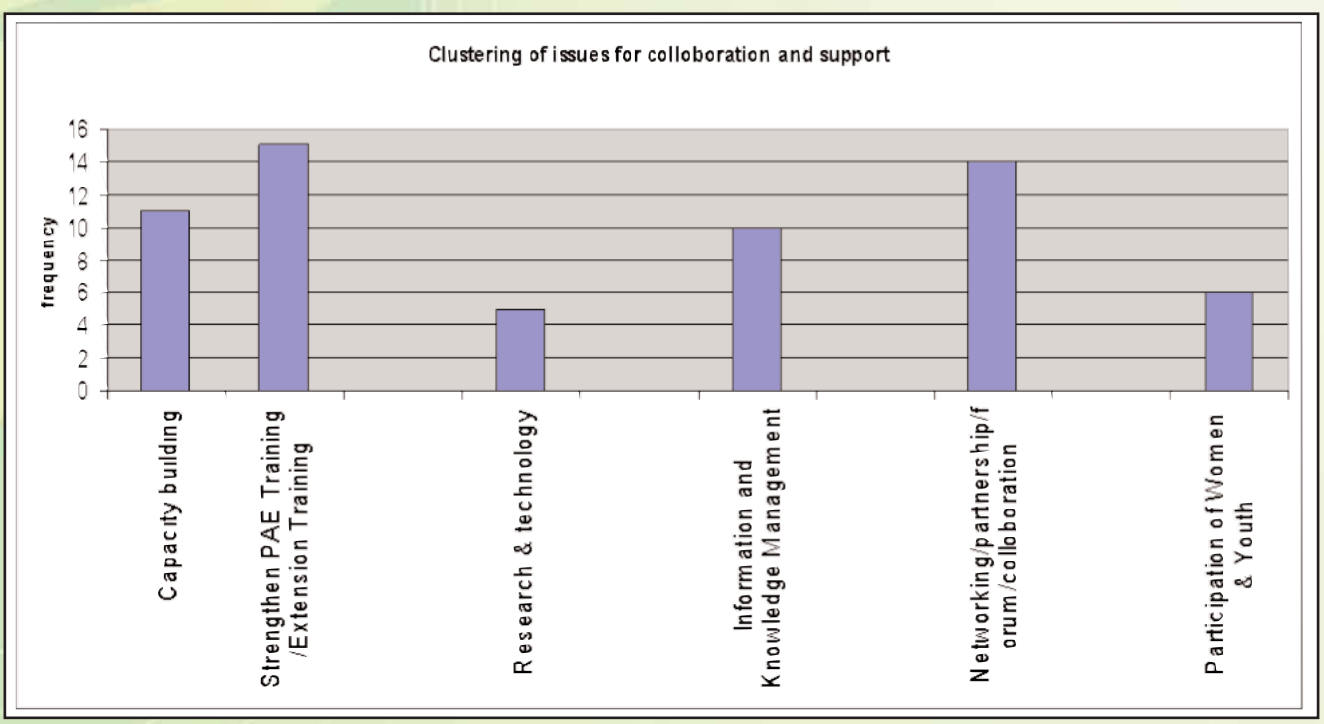
An individual capacity building needs assessment finds out an individual's gaps in required skills and knowledge level, and training must fill the gaps identified.

Organisational/institutional capacity building involves:

- improving management structures, policy framework and management of relationships at different levels; and
- enhancing the capability of an organisation or institution to provide the service expected of it.

The ACIAR Pacific needs assessment of organisational capacity building was undertaken in the context of the capability of an organisation/institution to implement individual capacity building initiatives.

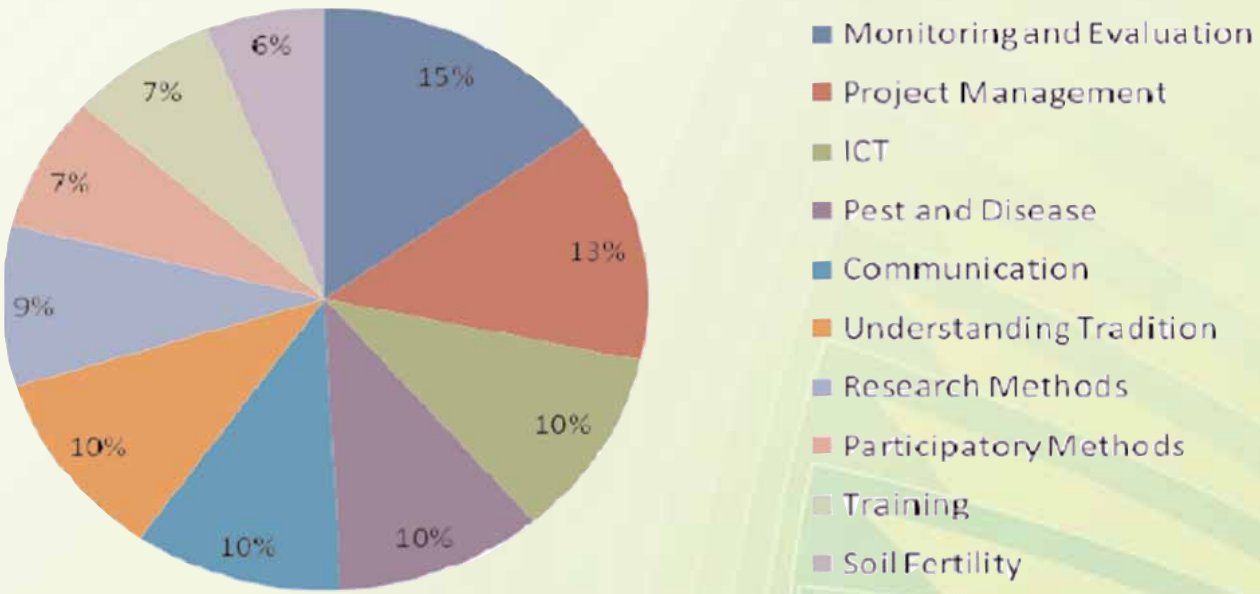
Issues identified from the 2005 Pacific Extension Summit



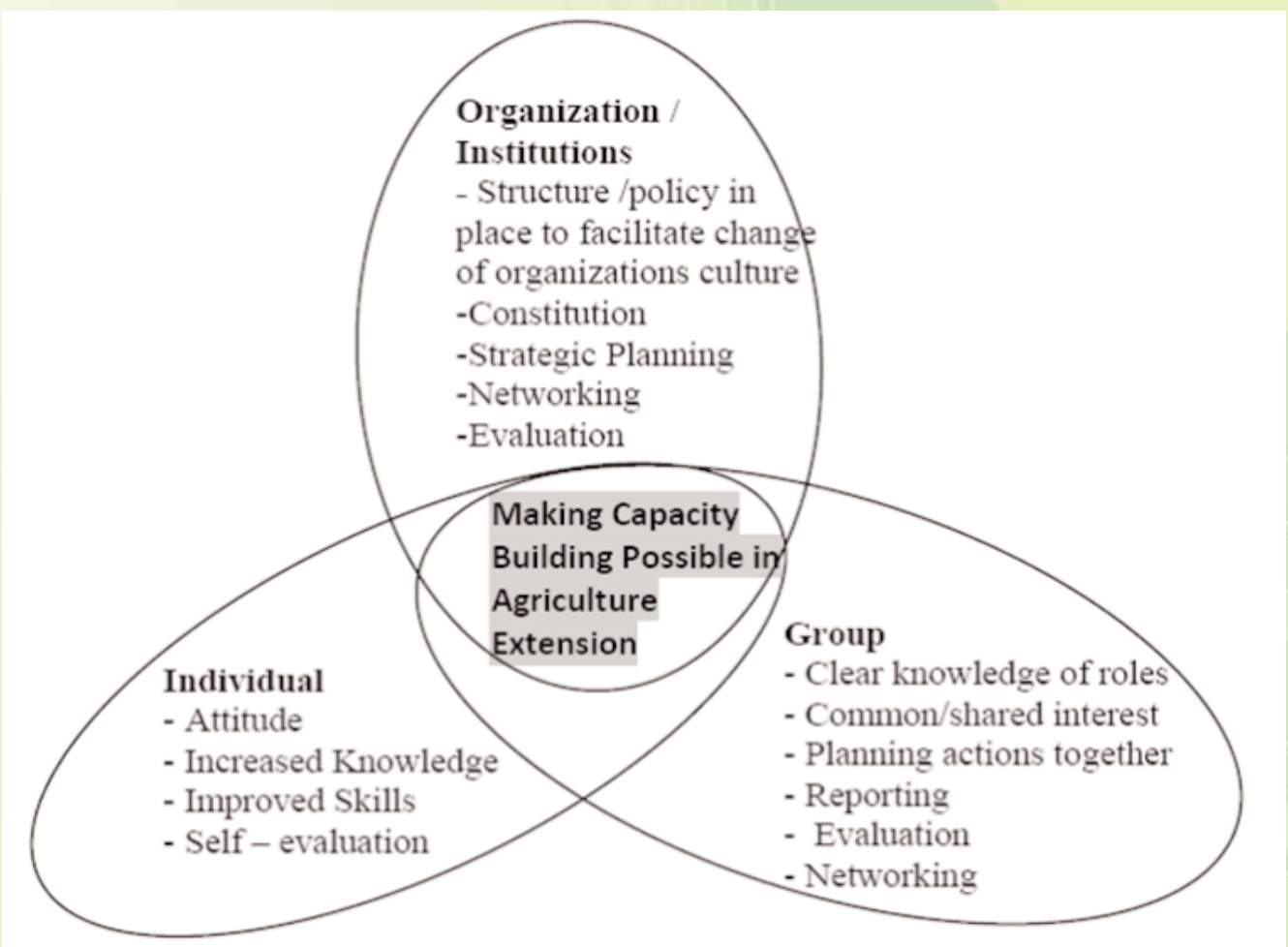
Data collection methods in each country varied. They included: semi-structured interview booklets, individual profiles, a variety of participatory methods, training activities with stakeholders, informal discussions, interviews personnel communication and experience, and documentation review.

Of those participating, 51 per cent of participants were Agriculture Ministry staff, 10 per cent NGO staff, 11 per cent from the farming community, 5 per cent from institutions, and 7 per cent from other government ministries, and 16 per cent were students.

There was great diversity in the needs identified across countries. The 10 most common needs are identified in the diagram below.



To make capacity building possible in agriculture extension, an interplay of organisational, individual and group needs must be addressed, as set out in the next diagram.



4.8 CAPACITY BUILDING IN FORESTRY EXTENSION

Tolusina Pouli, Ministry of Natural Resources and Environment, Samoa

Priority areas for capacity building are:

- germplasm supply, exchange and networking;
- food security, nutrition and health;
- reforestation and forest rehabilitation;
- climate change;
- traditional knowledge;
- environmental services provided by forests;
- invasive species, pests and diseases;
- forest and tree products and market development;
- community and agroforestry management;
- endangered species, populations and habitats;
- sustainable forest management (SFM).

Important considerations in forestry extension services are:

- understanding the value of forest resources;
- changing attitudes and behaviour;
- packaging and delivering training;
- following up;
- monitoring and evaluation; and
- developing a way forward.

4.9 CAPACITY BUILDING IN ATOLL AGRICULTURE

Dr Siosiua Halavatau, SPC

Due to the fragile nature of atolls, poor soil, brackish soil, genetic erosion and very fragile food security are all significant issues. SPC in partnership with the International Fund for Agricultural Development (IFAD) has established the Centre of Excellence for Atoll Research and Development. The objectives and outputs are identified below.

Objective 1: Establish a knowledge base on atoll agriculture at the Centre of Excellence with participation of farmers.

Output 1.1 Documentation of available/traditional atoll food production/preparation and preservation technologies from the Pacific regional and elsewhere.

Output 1.2 Appropriate new technologies for atoll agriculture developed through action research with farmers' participation.

Output 1.3 On-farm testing of new technologies for future improvement.

Objective 2: Develop and implement an improved knowledge management and dissemination approach for the Centre.

Output 2.1 Capacity developed among stakeholders on participatory approaches and knowledge management.

Output 2.2 The result of research effectively documented and extension materials developed.

Output 2.3 Appropriate and sustainable outreach approach for engaging farmers, including ICT, identified.

Objective 3: Undertake capacity and institution building of the Centre's function for sustainability.

Output 3.1 Sustainable institutional arrangement for atoll agriculture research and extension established.

Other activities include development of curricula for atoll agriculture – at high school and tertiary levels – and a planned atoll agriculture conference in 2010.

5. CAPACITY BUILDING IN EXTENSION

5.1 ROLE OF USP IN CAPACITY BUILDING

Aaron Kama, University of the South Pacific

The School of Agriculture and Food Technology (SAFT) has the mission of assisting the University of the South Pacific's 12 member countries in meeting their agricultural and related needs and improving the welfare and livelihood of their communities by:

- providing agricultural education to a wide range of people directly through its teaching and learning programmes;
- undertaking agricultural and related research to develop and adapt new technologies to improve food production and extend opportunities through balanced rural development that is sensitive to community needs for food security, resource conservation and sustainable development; and
- disseminating information throughout the region by face-to-face contact, as well as by extensive use of print and electronic media.

SAFT'S academic objectives are to:

1. produce graduates who will:
   - effectively engage in agricultural production, research, education and extension services;
   - put their acquired knowledge and skills into practice by establishing and gainfully managing their own farms and other agro-allied enterprises;
   - pursue postgraduate studies in their chosen field of agriculture anywhere in the world;
2. produce middle-level agricultural staff; and
3. localise training.

SAFT provides a range of academic programmes, including:

- a two-year Diploma in Tropical Agriculture (DTA) which will be phased in from 2008;
- a revised three-year nested Bachelor of Agriculture degree (BAgr) programme;
- a one-year Postgraduate Diploma in Agriculture;
- a two-year Master of Agriculture (MAgr) or Master of Science (MSc) in Agriculture for the science-based disciplines; and
- a doctorate (PhD) programme in various areas of agriculture – with effect from 2003.

In cooperation with the faculties of Arts and Law (FAL) and Business and Economics (FBE), SAFT continues to provide training programmes for high school agriculture teachers and economics students through:

- the Bachelor of Education (BEd) programme with agriculture major;
- the Postgraduate Certificate in Education (PGCE) for BAgr graduates; and
- the Bachelor of Commerce (BCom) with agricultural economics major

SAFT offers agricultural courses from its school and country campuses through a multi-mode delivery system, covering face-to-face teaching and distance and flexible learning. As a regional School, its services, teachings, consultancy and research are based on regional agricultural needs:

- In the undergraduate programme, SAFT has two extension courses:
  - o AG251 Communications in Agricultural Extension
  - o AG351 Agricultural Extension Programme Planning and Design
- Approximately 100 student research projects in agricultural extension have been supervised from 1992–2009.
- In the postgraduate programme the SAFT Agricultural Extension and Education has proposed four extension courses which need to be approved:
  - o AG452 Participatory Agricultural Extension in the Pacific
  - o AG453 Adoption and Diffusion of Agricultural Innovations
  - o AG454 Extension Approaches and Strategies to Community Development
  - o AG456 Adult Education in Agricultural and Rural Extension.

The Demand Study and reshaping SAFT

in a study conducted in August 2006, a total of 92 agricultural leaders and 6 SAFT students were consulted from seven member countries. Other studies included a tracer study of USP graduates and diploma students of Samoa, and a student survey in August 2008. From these studies, a number of observations can be drawn:

- The focus for tertiary education should be on post-diploma degree and post-graduate studies offered at Alafua.
- A focused programme should incorporate agribusiness and management, animal health services, biosecurity and trade facilitation, sustainable development and food security, and extension and research.

- There is considerable regional interest in the development of a forestry degree programme.
- Research in agriculture should concentrate on a selected number of areas of high priority to the region.
- There is a need to strengthen existing national agriculture training institutions.
- On the basis of these studies, a revised three-year nested BAgr programme was developed.
- Move away from the diploma programme and focus on degree and postgraduate programmes.
- Work with national agriculture training institutions to realign and strengthen their programmes with a view to making USP accreditation equivalent to Year 1 and Year 2 currently offered at Alafua Campus.

Key messages and recommendations deriving from the Heads of Regional Agricultural Institutions Workshop included the following:

- The emerging challenges facing the Pacific are increasing and the Pacific is struggling to keep up.
- Expertise, resources and capacity are needed in the Pacific.
- Agricultural research has responded to problems reactively rather than proactively.
- Universities and colleges should accept some responsibility for addressing problems the Pacific region is experiencing in achieving food and/or nutritional security.
- National governments, donor agencies and in particular the private sector in the region should provide more funding in the form of scholarships.
- Farming seems to be no longer attractive to the youth of today.
- There needs to be a strengthening of coordination in education, training and research in agriculture amongst the tertiary institutions.
- There is a need to reshape Pacific tertiary education, training and research in agriculture and science to meet the current challenges.
- Academic staff of the various tertiary institutions in the Pacific region should have good research skills and relate their research to what is required in the real world.

5.2 THE ROLE OF THE MICRONESIA LAND GRANT PROGRAMME IN EXTENSION

Dr Murukesan V. Krishnapillai, College of Micronesia, FSM

This paper covers the history of the Land Grant system and the College of Micronesia (COM) and how COM has evolved to meet current needs and programme development works based on a logical framework model.

COM's Land Grant programmes include:

- extension programmes (Cooperative Extension Service)
- research programmes
- residential instruction programme
- Expanded Food and Nutrition Education Programme (EFNEP)
- integrated pest management (IPM)

The Smith-Lever Act of 1914, amended in 1953, established a partnership between the United States Department of Agriculture (USDA) and the Land Grant colleges by establishing the Cooperative Extension Service (CES) to:

- develop practical application of research knowledge developed by the agriculture experiment stations at the Land Grant universities; and
- provide instruction and demonstrations of existing or improved practices or technologies in agriculture.

It also mandated that the federal government provide each state with funds based on a population-related formula annually (formula funds): USD 200,000 are available but each state must match this amount to be eligible for an allocation from this fund.

Cooperative Extension Service

Yesterday CES was:

- a major player in the Agricultural Revolution;
- focused on agricultural production and rural life; and
- very successful in increasing the agricultural productivity of American farms.

Today CES has changed considerably to stay current. It covers a broad area, including:

- agriculture, natural resources and environment
- home economics
- 4-H and youth development
- food, nutrition and health

CES offices are situated in: Palau, Federated States of Micronesia (Yap, Chuuk, Pohnpei, Kosrae), and the Marshall Islands.

CES has about 52 full-time employees, including: VPs/Dean, State Coordinators (FSM), researchers/extension specialists, and extension agents/aides. Extension agents are the most common (and often only) link between the communities and the College – they are the 'eyes and ears' of the College in the communities.

Programmes are developed through developing a Plan of Work (AREERA Act 1998), gathering stakeholder input and developing a logic model that illustrates a sequence of cause-and-effect relationships – a systems approach to communicate the path towards the desired result and link the problem (situation) to the intervention (inputs and outputs) and the impact (outcome).

6. REGIONAL FRAMEWORK DEVELOPMENT

6.1 RESPONDING TO CLIMATE CHANGE: The Regional SPC–GTZ Programme

Inoke Ratukalou, SPC

Components of the political context of the new SPC–GTZ programme are:

- regional policies for the Pacific focusing on climate change – Pacific Plan, Pacific Islands Framework for Action on Climate Change (PIFACC), Niue Declaration on Climate Change 2008,
- PICT initiatives and strategies on climate change – National Adaptation Programme of Action (NAPA), national communications, specific policies on climate change;
- specific strategies and projects led by regional institutions – SPC, SPREP, USP, SOPAC;
- German policy for official development assistance (ODA) focusing on climate change through Ministry for Economic Cooperation and Development (BMS) and Ministry for Environment, Nature Conservation and Nuclear Safety (BMU);
- Germany's 2008 commitment of approximately USD 1.5 billion for activities related to climate change in developing countries, and GTZ's implementation of more than 80 programmes on climate change with a budget of approximately USD 400 million; and
- growing donor engagement in PICTs regarding climate change – AusAID, NZAid, EU, UN, FAO, ADB, JICA.

Strategic framework of the new SPC–GTZ-programme

Objective (2012)

The capacities of SPC's member countries and territories to cope with the adverse effects of climate change and to avoid deforestation are strengthened, as a fundamental element for sustainable management of land-based natural resources.

Indicators

- The sector programmes and working teams of SPC's Land Resources Division systematically integrate climate change adaptation and mitigation concerns into their strategic approach and advisory services.

Verification: LRD Strategy, advisory service offer, documentation of mainstreaming process.

- At least three member countries/territories access and utilise the new services and knowledge provided by SPC-LRD as a regional knowledge hub to develop and subsequently implement (at least one member country/territory) efficient and effective national adaptation strategies.

Verification: Strategy documents in member countries, survey, and documentation of pilot projects.

- Existing strategies, planning documents and related processes on land use planning in Tonga and Vanuatu integrate climate change issues, with gender aspects taken into consideration, and the

subsequent first steps in implementing these land use plans are carried out.

Verification: Land use plans (LUP), reports on implementation of LUP, gender analysis of LUP.

- Fiji signs at least one contract using international carbon market instruments on certificates for avoided deforestation.

Verification: Contract document (voluntary market, CDM, international fund).

Implementation

Conduct:

- a strategic planning workshop at regional level to debate and elaborate result chains and monitoring systems: February 2009;
- national planning workshops in Tonga and Vanuatu to elaborate operational plans: March 2009;
- a planning workshop at SPC-LRD to further elaborate operational plan for SPC-LRD: April 2009; and
- a national planning workshop in Fiji to further elaborate operational plan: May 2009.

6.2LANDCARE CONCEPT FOR THE PACIFIC – Strengthening partnerships for sustainable land management

Inoke Ratukalou, SPC

Landcare is a concept based on a participatory community, sustainable land management approach. Emphasis is placed on institutional strengthening, local decision-making, community empowerment and building self-reliance of local communities. Landcare translates to Qaravi ni Qele in Fijian and resource management is based on 'solesolevaki' concept, meaning working together as a group. Landcare in essence is looking after the land (natural resources) so that our land (natural resources) can look after us.

The overall goal of Landcare is to optimise productivity and sustainability of land (natural resources), leading to food and income security and better quality of life for all.

SPC LRD's goal is to improve food security, increase trade and assist the Pacific Community to be more prosperous and healthy and to manage their agricultural and forest resources in a sustainable way.

The following components are included in the Landcare approach:

1. practising community-based land (natural resources) management with:
   - formation of groups based on the same or different background;
   - discussion of mutual problems and its solutions;
   - grassroots approach as the motivating force;
   - voluntary implementation;
2. building partnerships involving individuals, communities, NGOs, government and businesses, as a vital way of moving this process forward;
3. encouraging people to take local action – think globally and act locally;
4. working for food security and poverty alleviation – socio-economic benefits add value to Landcare; and
5. promoting integrated and innovative approaches to land (natural resources) management.

Landcare groups in the Pacific would: minimise or reduce land degradation; and establish partnerships among individuals, communities, government, NGOs and businesses to move the process of sustainable land (resources) management forward and mobilise resources at national, provincial, district and local levels to enhance the process of SLM. They would also provide a delivery framework that combines and strengthens the 'top down' and 'bottom up' equation of SLM processes and would organise and empower communities groups to plan and manage their resources to provide the 'bottom up' input of the SLM equation.

In addition, Landcare groups could be used as a vehicle to reduce land conflict. An example of a situation in which they could have performed this role in Fiji is in relation to the expiry of land leases that began in 1997. The displacement of farmers could have been minimised if the landowners and tenants had known each other, discussed issues together, formed local Landcare groups, implemented projects together such as work on the local rehabilitation of stream bank erosion, polluted river systems etc. Through these discussions, working together as a Landcare group and building lasting relationship, Landcare could resolve issues, such as land conflict, at the local level.

The six Landcare principles are:

- integrated sustainable natural resource management addressing primary causes of natural resource decline;
- community-based and led natural resource management within a participatory framework
- the development of sustainable livelihoods for individuals, groups and communities utilising empowerment strategies;
- government, community and individual capacity building through targeted training, education and support mechanisms;
- the development of active and true partnerships among governments, Landcare groups and communities, non-governmental organisations, and industry; and
- the blending together of appropriate upper-level policy processes with bottom-up feedback mechanisms.

Lessons learnt

There are lessons to be learnt from Landcare experiences in South Africa, the Philippines and Australia. The way forward involves:

- strengthening the Land Management Resources and Policy Support Team;
- providing a Landcare Masterclass Workshop to build capacity;
- putting forward a proposal for a Pacific Regional Landcare Facilitator;
- undertaking a new initiative in land management and conflict minimisation;
- implementing the GTZ Pacific Adaptation to Climate Change project; and
- working in partnership with the AusAID Pacific Land project .

6.3 PRIVATE AND PUBLIC SECTOR PARTNERSHIPS

Sant Kumar, Nature's Ways Cooperative, Fiji

Nature's Way Cooperative is an NGO that provides quarantine services to fresh produce growers and exporters who comprise the membership. Nature's Way is operated by a Board, secretary and manager, and has 130 members. It provides quarantine services through high temperature forced air treatment for four crops being exported to New Zealand (papaya, mango, eggplant and breadfruit) and one to Australia (papaya).

A field support service was established in 2007. Nature's Way aims to meet the needs of the members across the supply chain through:

- technical assistance to comply with the bilateral quarantine agreement (BQA);
- improving the quality and quantity of fresh produce exports;
- supply of field crates; and
- supply of good quality seeds.

Fiji papaya project

The Fiji papaya project provides an example of a public–private partnership approach to extension. The Government provides the building and undertakes the market access certification, AusAID provides the funding, and private sector/NGO runs the business. It is an organised effort to develop the Fiji papaya industry by leveraging all stakeholders and partners. Driven by Nature's Way Cooperative the project aims to bring together local and international partners to meet the needs of the industry, which include:

- expanded treatment capacity;
- market access;
- market study;
- farmer–market linkage activity;
- applied research (field trials, sea freight trials etc.); and
- information dissemination.

The industry currently has

- nine exporters;
- 11 larger papaya farmers (producing > 1 tonne/week);
- some 100 small farmers;
- one industry-owned and operated quarantine treatment facility (Nature's Way Cooperative); and
- export markets in New Zealand, Australia, Japan and soon the United States.

As part of the project a training of trainers has been held for the private sector (exporters, farmer groups), Ministry of Primary Industries extension, Quarantine, National Centre for Small and Micro Enterprise

Development (NCSMED), Taiwan Technical Mission (TTM), Fiji AgTrade and Fiji College of Agriculture.

The goal of the workshop was to obtain input into the project from all extension partners, to give all trainers access to the same information about the whole papaya supply chain, and to coordinate and leverage all extension work on papaya for a common goal.

6.4 THE PACIFIC ISLAND EXTENSION NETWORK

Stephen Hazelman, SPC

The formation of the Pacific Island Extension Network (PIEN) was an outcome of the 1st Pacific Extension Summit. It is an informal network of experts tasked with sharing extension experiences and information, and seeking ways to improve and support the delivery of extension services of government and non-governmental organisations in the Pacific.

Its role is to provide a platform for networking, professional development and representation of members. HOAFs and MOAFs have endorsed and support the Pacific Islands Extension Network.

PIEN will:

- lobby governments to support extension services of the state and NGOs;
- foster the voice of extension in the region;
- identify and obtain relevant information and distribute it to extension agents in the region;
- identify and secure funding assistance for training opportunities for members;
- identify and link to appropriate partners internationally, regionally and nationally;
- engage educational institutions providing training in the region and internationally;
- transfer successful LRD projects such as DSAP, the SPC–GTZ project, Regional Germplasm Centre (RGC) and Plant Health; foster the transfer of successful approaches within the region;
- have a vibrant and effective network;
- foster professional development opportunities for members;
- represent members and their professional interests;
- explore linkages with other relevant and reputable extension networks;
- lobby the donor communities;
- initiate policies relating to extension, delivery services and meeting farmers and landowner needs; and
- secure funding to enable the network to meet regularly.

Membership is open to all including:

- heads of extension services;
- interested extension agents of government and non-governmental organisations working in the fields of agriculture, forestry, rural and community development in the Pacific;
- farmers;
- tertiary institutions providing training in agriculture, forestry, rural and community development;
- vocational and secondary schools teaching agriculture;
- interested professionals at national, regional and international levels; and
- interested organisations with similar goals.

Activities to date include:

- participatory needs assessment for capacity building in extension in the Pacific;
- Pacific Excellence in Extension Service Award 2006;
- funding for teaching of participatory approaches at USP and FCA;
- student projects in extension;
- extension meeting in-country;
- youth projects; and
- cross-country visits.

Proposal to formulate a representative Board was approved, with membership as follows:

- one representative from Micronesia
- one representative from Melanesia
- one representative from Polynesia
- one representative from NGOs
- one representative from learning institutions
- SPC representatives

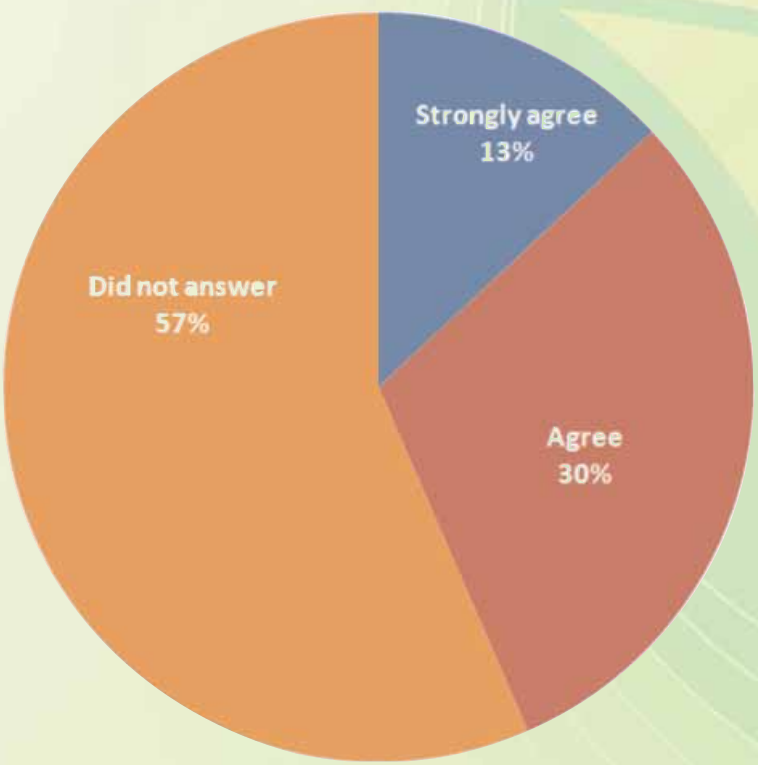
The first meeting of the Board is proposed for November 2009.

ANNEX 4: Evaluation of the 2nd Pacific Extension Summit

At the end of the summit the participants were asked to complete a summit evaluation form. In completing the form participants: rated overall achievement of the summit, stated their opinion in regard to the extent to which the specific objective of the summit was met; shared their views on the planning and organisation of the summit; stated what they found most useful and what they found least useful; and finally suggested improvements in summit process and organisation.

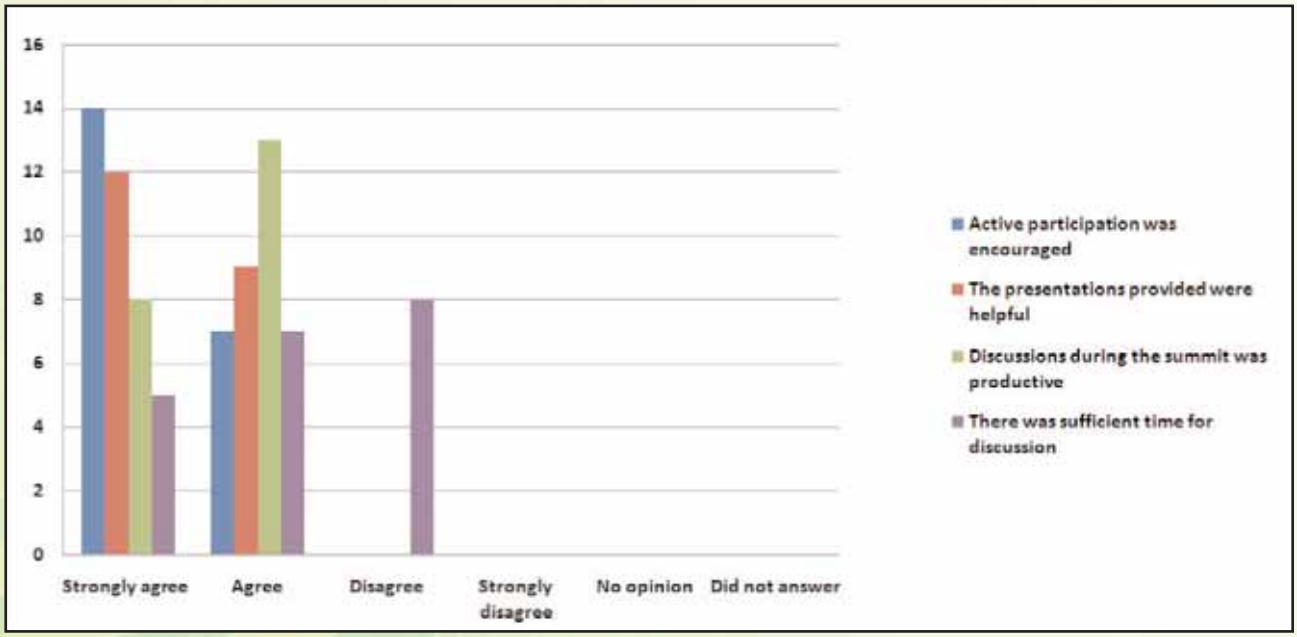
As Figure 1 shows, 43 per cent of the participants were in agreement that the summit achieved its objective of proving feasible and practical guidelines to improve the delivery of services by extension and outreach providers in the Pacific. However as 57 per cent for some reason did not answer this question, the majority view cannot be determined.

Figure 1: Participants' ratings of whether the summit objective was achieved



Participants judged the summit process in terms of active participation, quality of presentation, productive discussion and timing. The majority agreed that the summit had encouraged active participation, the presentation provided useful information and discussion during the summit was very productive. However, many participants shared that view that the time allocated for discussion was not sufficient (Figure 2).

Figure 2: Participants' judgements on the summit process and conduct



The majority of the participants agreed that the summit had contributed to their personal development and fulfilled the personal objective they had for attending the summit. They also stated that the summit had provided them with new ideas and improved their personal networks in the region (Figure 3).

Figure 3: Summit's contribution to personal development of the participants

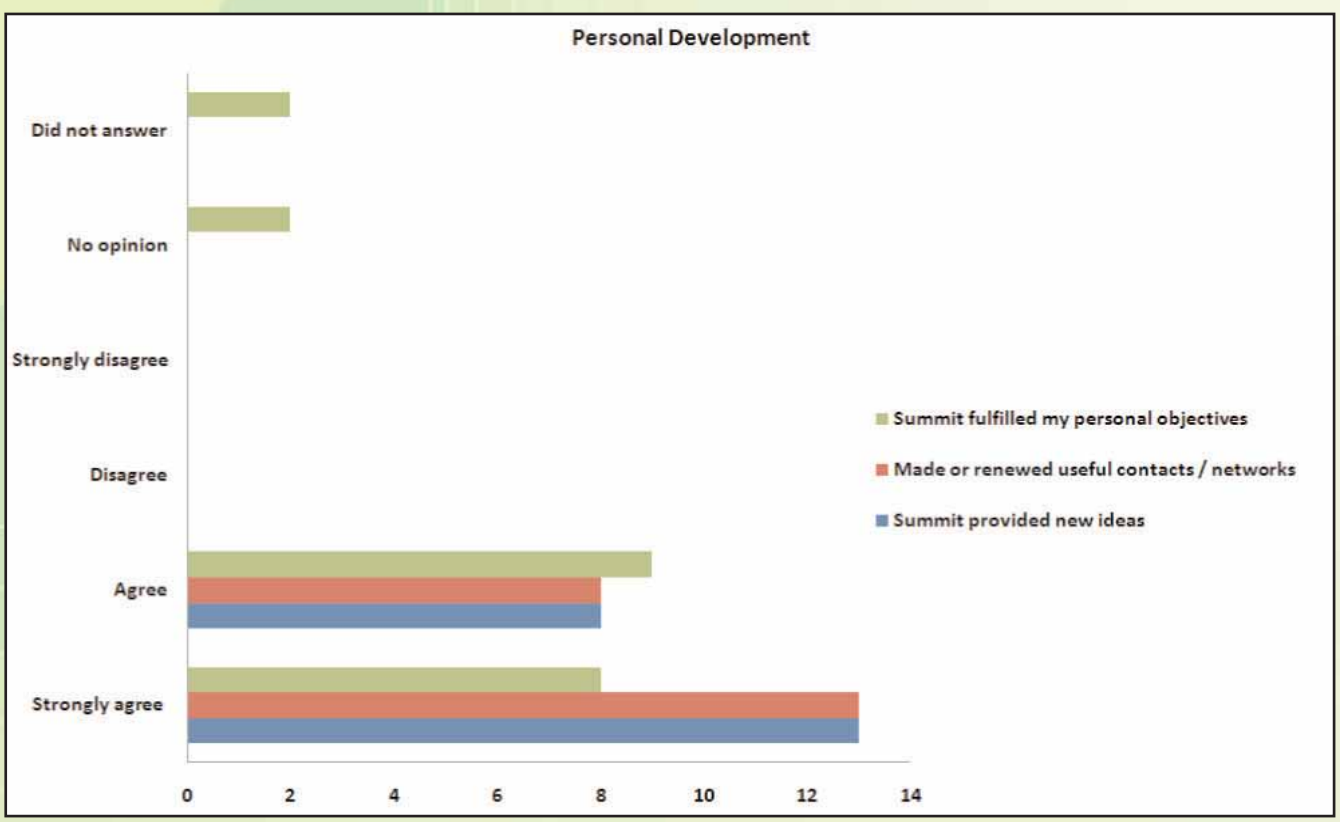
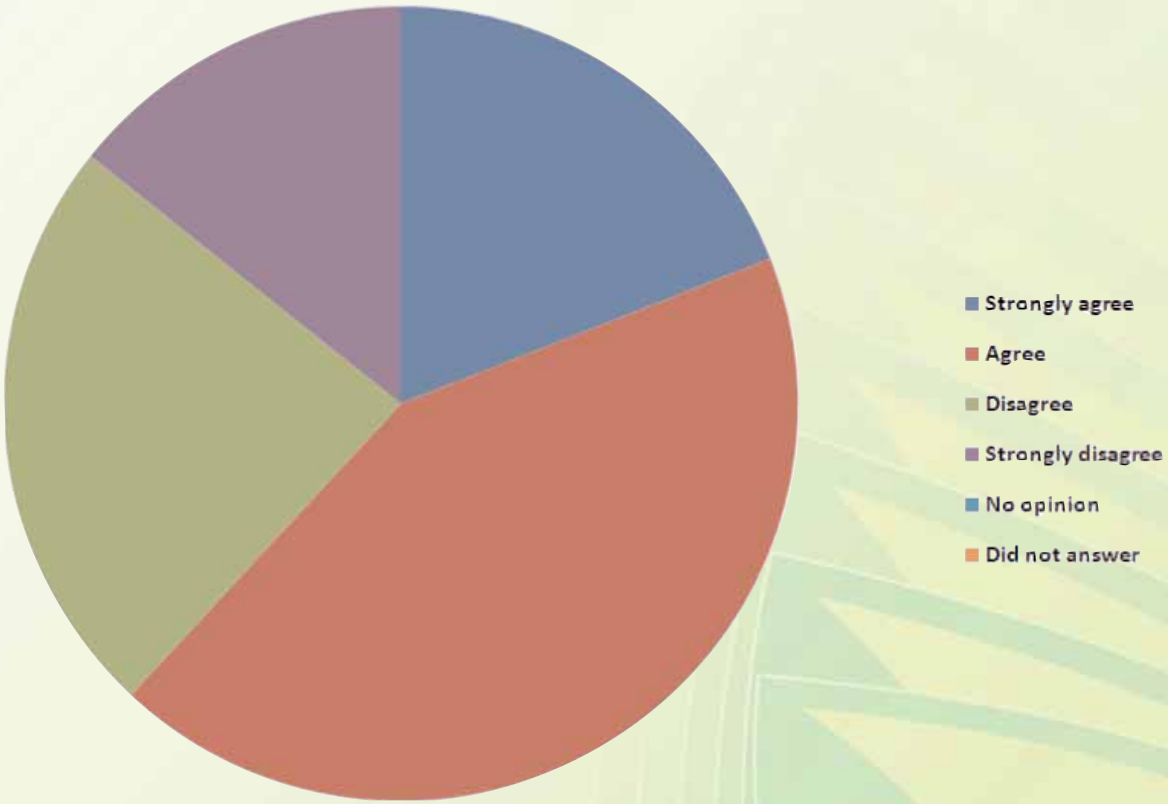
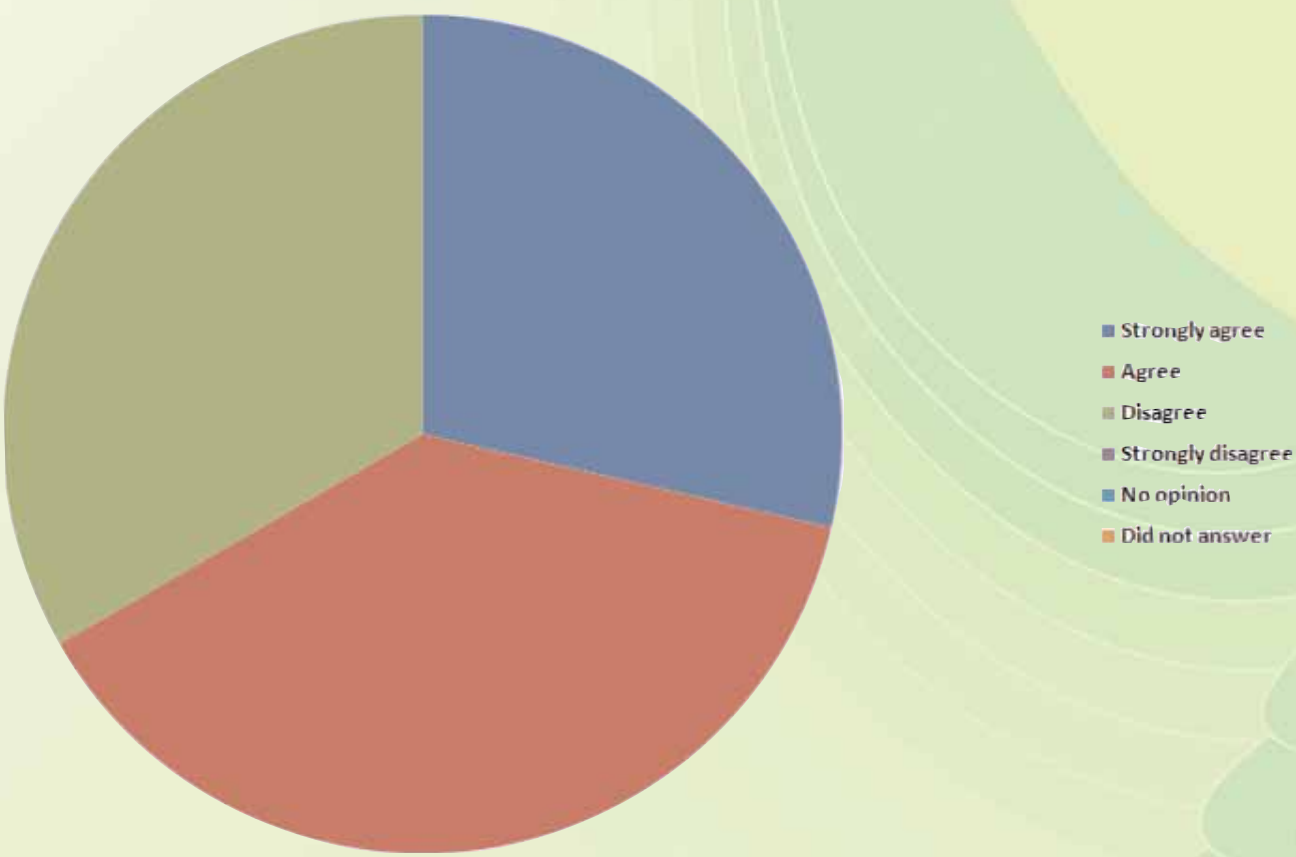


Figure 4 presents the views of participants in regard to pre-summit organisation. Although many were satisfied with the logistics and timing of the invitation sent to them, some indicated dissatisfaction in these areas. Similarly, about one-third of the participants were not satisfied with the communication of programme information and indicated that expectations of participants were not sufficiently communicated in the pre-summit arrangements.

Figure 4: Participants' views on pre-summit arrangements



Appropriate communication of program information and expectation of participants



The majority of participants were very satisfied with the venue and the services provided by the hotel where the summit was held (Figure 5).

Figure 5: Participants' satisfaction with the summit venue

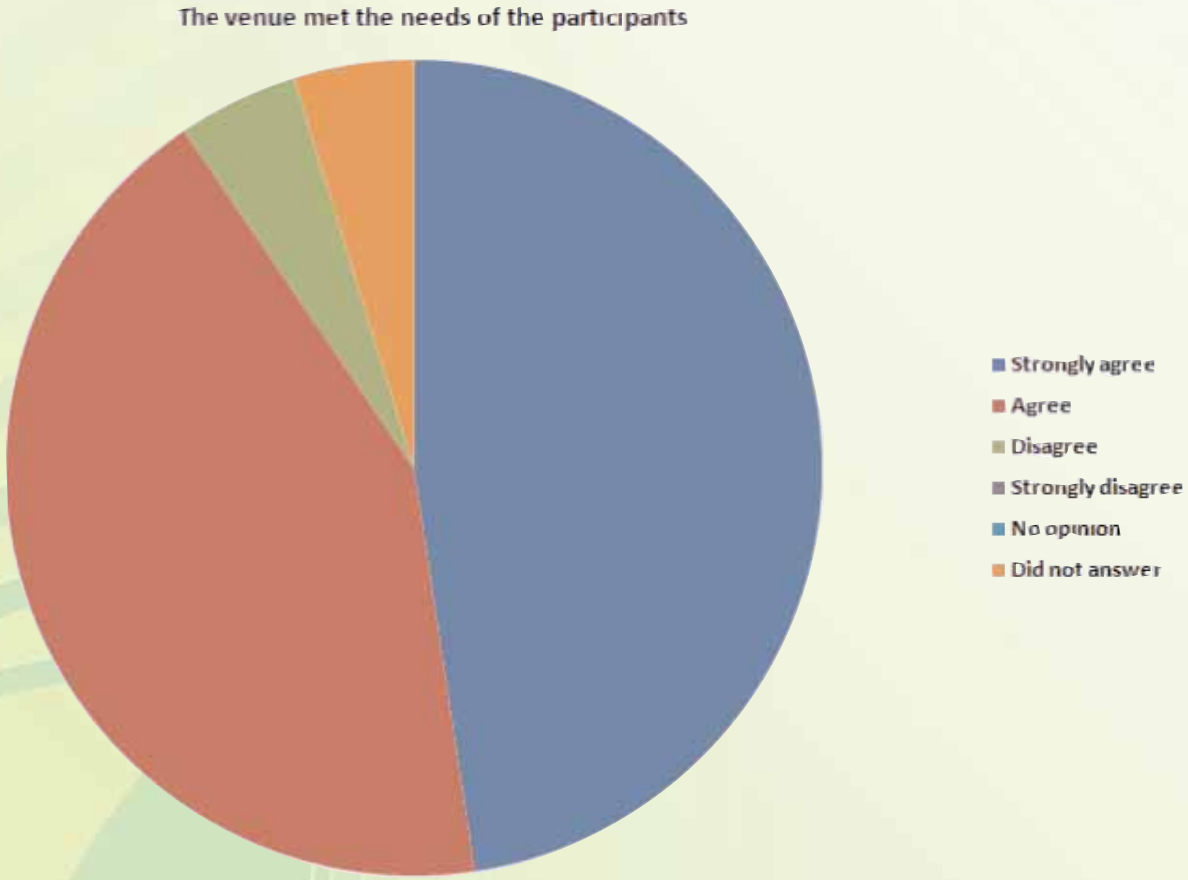


Table 1 presents the views and comments of the participants regarding the usefulness of areas and topics covered during the summit. The participants ranked the group discussion and group work as the most useful part of the summit. In general, the participants agreed that most of the presentations were very informative and covered interesting areas such as extension approaches and models, public–private partnership and operation of NGOs. Nevertheless, there was some concern that some presentations were too long, lacked new ideas and did not meet summit objectives.

Table 1: Participants' views on the usefulness of areas and topics during the summit

What part of the meeting did you find most useful?	
Area highlighted	***Score (12 highest)***
Group discussion and group work	8
Informative presentations	6
Presentation of success stories	5
Presentation of extension approaches and models	4
Issues of private and public sector partnership as this is the way forward	3
Presentation by NGOs	3
Networking	2
Report of follow-up from the first summit	2
Learning about development and extension in the Pacific	1
Issue of extension role at national, regional and international levels	1

What was least useful?	***Score (12 highest)***
Area highlighted	***Score***
Presentation too long	4
Some presentations had no new ideas – 'old copra in new bags'	2
Some country presentations not meeting the summit objectives	2

Table 2 presents how participants rated the suggestions for improving future workshops and summits organised by the Secretariat of the Pacific Community. Key areas in which the participants suggested improvement were: first, improvement of speaker presentation, mainly concerning the structure and timing many speakers in this summit went over time in their presentation; and secondly, dealing with the distraction caused by some people who used laptops for emailing during the workshop despite the Secretariat's request that people not do so.

Overall the participants indicated that the summit was very fruitful and hoped that the momentum from this summit is maintained with the follow-up of the activities identified.

Table 2: Participants' suggestions for improvement

Area highlighted	**Score**
Improve on presentation structure and timing	5
Have field trips	4
More reporting on follow-up actions	4
Increase time for group discussions	3
Inform participants well in advance	2
Do not allow participants to use laptops for emailing during the workshops	2
Present more case studies and success stories and actual impact of the work	2
Reduce presentations	2
Present more new ideas	2
Extend to two weeks duration	2
Improve group discussion structure	2
Encourage more women participants (gender balance)	1
Invite winners of extension excellence awards	1
Include some research heads	1
Reduce/remove group work at the end of each session	1
More local fruits and vegetables on the menu	1

ANNEX 5: List of participants

Cook Islands
Mr Edwin Apera
Graduate Research Extension Assistant
Ministry of Agriculture
P O Box 96
Rarotonga, Cook Islands
Tel: (682) 28 711
Fax: (682) 21 881
Email: eapera@agriculture.gov.ck

Federated States of Micronesia (FSM)
Ms Marlyter P. Silbanuz
FSM GREA
Department of Resources & Development
P O Box PS 12
Palikir, Pohnpei FM 96941
Tel: (691) 320 6174/ 1421/ 5133
Fax: (691) 320 6290/ 5854
Email: dsapfsm@mail.fm

SPC
Ms Mereseini Seniloli
DSAP PEO Micronesia
SPC Regional Office Northern Pacific
P O Box Q
Kolonia, Pohnpei
FSM 96941
Tel: (691) 320 7523
Fax:(691) 320 2725
Email: mereseinis@spc.int or dsapmicronesia@mail.fm

FSM
Dr Vazhaveli K. Murukesan
Researcher
Agriculture Experiment Station,
College of Micronesia – FSM, Yap Campus Colonia, Yap
FM 96943
Tel: (691) 350 5752/4319
Fax: (691) 350 2325/5150
Email: muru@comfsm.fm or vazhaveli@hotmail.com

Fiji Islands
Mr Sant Kumar
General Manager
Nature's Way Co Fiji Ltd
P O Box 9825
Nadi Airport
Fiji Islands
Tel: (679) 6724566
Fax: (679) 6724569
Mob: (679) 9963303
Email: nwc@connect.com.fj

Fiji
Dr Richard Beyer
Permanent Secretary for Agriculture
Ministry of Primary Industries
Private Mail Bag
Raiwaqa
Fiji
Fax: (679) 330 1679
Email: beyer@connect.com.fj

Fiji
Mr Suliasi Tawake
Acting Director of Extension
Ministry of Primary Industries
Private Mail Bag
Raiwaqa
Fiji
Fax: (679) 330 1679
Email: s-tawake@yahoo.com

Fiji
Mr Sefanaia Tawake
Acting Principal Research Officer
Timber Utilisation Research Division
P O Box 2218
Suva
Tel: (679) 3393611
Fax: (679) 3397611
Email: sevanaiat@hotmail.com

Fiji
Mr Nacanieli Takele
Senior Information Officer
Ministry of Primary Industries
Private Mail Bag
Raiwaqa
Fiji
Fax: (679) 3387157
Email: ntakele@govnet.gov.fj

FRIENDS
Ms Sandhya Narayan
Program officer
Foundation for Rural Integrated Enterprises & Development
P O Box D623
Lautoka
Tel: (679) 6663181
Fax: (679) 6669181
Email: admin@fijifriend.com

Fiji
Mr Apisai Ucuboi
Deputy Permanent Secretary of Agriculture
Ministry of Primary Industries
Private Mail Bag
Raiwaqa
Fiji
Tel: (679) 330 1611
Fax: (679) 330 1679
Email: apisai.ucuboi@govnet.gov.fj

Fiji
Mr Uraia Waibuta
Principal Agriculture Office
Ministry of Primary Industries
Private Mail Bag
Raiwaqa
Fiji
Fax: (679) 330 1679
Email: uraia.waibuta@govnet.gov.fj

FRIENDS
Ms Sashi Kiran
Director
Foundation for Rural Integrated Enterprises & Development
P O Box D623
Lautoka
Tel: (679) 6663181
Fax: (679) 6669181
Email: friend@connect.com.fj

FIT
Mr Viliame Rabici
Fiji Institute of Technology
Forestry Studies programme
Tel: (679) 3389347
Email: rabici_vi@fit.ac.fj

FIJI
Mr Sikeli Turaga
Farmer, Namau (Tailevu)

KIRIBATI
Kiribati Mr Tokintekai Bakineti
Principal Agricultural Officer
Ministry of Environment, Land & Agriculture Development
P O Box 267
Bikenibeu Tarawa
Tel: (686) 29419
Fax: (686) 28121
Email: tokintekai@yahoo.com

KIRIBATI
Ms Rota Tetaake
Head of Information, Training & Extension
Department of Agriculture
P O Box 267
Tanaea, Tarawa
Tel: (686) 28108
Fax: (686) 28121
Email: rootamanako@gmail.com

Marshall Islands
Mr Billy Edmond
Agriculture Counsellor
Ministry of Resources & Development
P O Box 1727
Majuro
Marshall Islands 96960
Tel: (692) 625 3206
Email: brdbedmond@yahoo.com

Marshall Islands
Mr Jabukja Aikne
Chief Livestock
Ministry of Resources & Development
P O Box 1727
Majuro
Marshall Islands 96960
Tel: (692) 625 3206
Fax: (692) 625 7471
Email: jabukja@yahoo.com

Palau
Mr Fernando Sengebau
Director
Ministry of Natural Resources, Environment & Tourism/ Bureau Of Agriculture
P O Box 460 Koror
Palau 96940
Tel: (680) 488 2504
Fax: (680) 488 8171
Email: ffms@palaunet.com or fsengebau@gmail.com

Palau
Mr Trebkul Tellei
Agriculture Extension Agent
Ministry of Natural Resources, Environment & Tourism /Bureau Of Agriculture
P O Box 460 Koror
Palau 96940
Tel: (680) 488 2504
Fax: (680) 488 8171
Email: palaudsap@palaunet.com

Papua New Guinea
Dr Workneh Ayalew Kebede
Research Program Leader
National Agriculture Research Institute of PNG
NARI Labu , P O BOX 1639
LAE 411 MP
Tel: (675) 6947998
Fax: (675) 475 1248
Email: workneh.ayalew@nari.org.pg

Mr Leka Mou
Regional Director
Department of Agriculture and Livestock
P O Box 2033
PORT MORESBY
Tel: (675) 320 0485
Fax: (675) 321 1387
Email: abenjamin@datec.net.pg

Samoa
Mr Sala Sagato Tuiafiso
Committee Member
Samoa Farmers Association
P O Box 1270
Apia
Samoa
Tel: (685) 7772456
Fax: (685)
Email: sagato.tuiafiso@mnre.gov.ws

Samoa
Mr Saipele Komiti
Senior Crops Advisory Officer- Savaii
Ministry of Agriculture, Forestry & Fisheries
P O Box 1874
Apia
Tel: (685) 23416
Fax: (685) 20707
Email: komiti-sai@lesamoa.net

Samoa
Mr Toulusina Pouli
Principal Forestry Research Officer
Ministry of Natural Resources and Environment (Samoa)
PO Box 1874
Apia
Tel: (685) 21054
Fax: (685) 22565
Email: Sprig@samoa.ws or tolusina.pouli@mnre.gov.ws

Solomon Islands
Ms Roselyn Kabu
Program Support Officer
Kastom Gardens Association
P O Box 742
Honiara
Tel: 677 39551
Fax: 677 39133
Email: roselynk@kastomgarden.org

Solomon Islands
Mr John Harunari
Director Of Extension
Ministry Of Agriculture & Livestock
P O Box G13
Honiara
Tel: 677 25031/ 28116/ 22143
Fax: 677 28563
Email: harunari@solomon.com.sb

Tonga
Mr Taniela Hoponoa
Deputy Director & Head Of Extension
Ministry of Agriculture Food, Forestry & Fisheries
P O Box 14,
Nukualofa
Tonga
Tel: (676) 8885186
Fax: (676) 23 093
Mob: (676) 37479
Email: taniela_hone@yahoo.com.au

Tonga
Mr Lamipeti Havea
Board Director
The Growers Federation of Tonga
P O BOX 1312
Nuku'alofa
Tonga
Tel: (676) 24434 / 7717218
Email: lamipeti_havea@hotmail.com

Tonga
Mr Kamilo Leli Ali
Senior Agriculture Officer
Ministry Of Agriculture & Food, Forestry & Fisheries
P O Box 14,
Nukualofa
Tonga
Tel: (676) 46 605/ 37 474
Fax: (676) 23 093
Email: kamilo_ali@yahoo.com.au

Technical Centre for Agricultural and Rural Cooperation (CTA)
Dr John Woodend
Programme Co-ordinator
Promotion Of Information Exchange Communication Channels and Services Department
CTA
The Netherlands
Tel: +31 317 467164
Email: woodend@cta.int

SECRETARIAT OF THE PACIFIC COMMUNITY

Mr Aleki Sisifa
Director, Land Resources Division
E-mail: alekis@spc.int

Dr Siosiua Halavatau
Coordinator Crop Production Team
Email: SiosiuaH@spc.int

Mr Stephen Hazelman
Coordinator Information, Communication and Extension
E-mail: stephenh@spc.int

Dr Kenneth Cokanisiga
Animal Health and Production Adviser
E-mail: kenc@spc.int

Mr Emil Adams
Information Officer
E-mail: emila@spc.int

Dr John Konam
Plant Pathologist
E-mail: johnk@spc.int

Ms Sushil Narayan
Divisional Administrative Officer
E-mail: sushiln@spc.int

Mr. Jalesi Mateboto
Technician – Forestry
Email: Jalesim@spc.int

Mr Vinesh Prasad
Information, Communication and Technology Assistant
Email: VineshP@spc.int

Mr Inoke Ratukalou
Land Policy Adviser
Email: Inoker@spc.int

Mr Sanfred Smith
Agriculture-Forestry Production Technician
Email: SanfredS@spc.int

Ms Anju Mangal
Information Assistant (AHWM Publication)
Email: Anjum@spc.int

Mr Laurence Fooks
Training Officer - PRIPPP
Email: laurenceF@spc.int

Ms Bindi Borg
Human Development Officer, Human Development Program
Email: Bindib@spc.int

Ms Marita Manley
Agriculture & Forestry Policy Adviser
Email: MaritaM@spc.int

Ms Rose Maebiru
Youth Adviser, Human Development Program
Email: Rosem@spc.int

Mr Eliki Lesione
Technician (CEPACT)
Email: elikil@spc.int

Mr Ilagi Puana
Animal Health
Email: ilagip@spc.int

Mr Joeli Uluinayau
Publication Assistant
E-mail: JoeliU@spc.int

Mr Nitesh Prasad
Assistant Accountant
Email: niteshp@spc.int

Ms Caress Whippy
Project Assistant
Email: Caressw@spc.int

Ms Jenita Prakash
Project Assistant
Email: Jenitaj@spc.int

RESOURCE PERSONNEL

Dr S. Malcolm P. Hazelman
Senior Extension, Education and Communications Officer
FAO Regional Office for Asia and the Pacific
Maliwan Mansion
39 Phra atit Road
Bangkok 10200
Thailand
Tel: (66-2) 697 4145
Fax: (66-2) 697 4445
Email: Malcolm.Hazelman@fao.org

Mr Aaron Kama
Lecturer in Agricultural Extension
USP – School of Agriculture & Food Technology
Alafua Campus
Private Mail Bag
Apia Samoa
Tel: (685) 21671/ 7589422
Fax: (685) 22347
Email: kama_a@samoa.usp.ac.fj

Dr Jacqui Wright
Facility Director
Agricultural Research and Development Support Facility
P O box 1177 Port Moresby
NCD, Papua New Guinea
Ph: (675) 325 4488
Fax: (675) 325 0271
Email: Jacqui.Wright@ardsf.grm.com.pg

Ms Karen Mapusua
Associate Director
Women in Business Development Inc.
P O Box 6591
Apia, SAMOA
Telephone: (685) 21959
Fax.: (685) 25246
Email: Karen@womeninbusiness.ws

Mr Salend Kumar
SPC-LRD PhD Student
The University of Queensland
School of Natural and Rural Systems Management Gatton Campus. QLD 4343. Australia
Email: Salend.Kumar@uqconnect.edu.au

ANNEX 6: Summit Programme

Monday 18 May, 2009

Official Opening

08:30	Guest and Participants Seated
08:45	Arrival of Chief Guest - Honorable Minister for Primary Industries Mr.Joketani Cokanasiga
08:55	Garlanding
09:00	Welcome and Begin Programme – Stephen Hazelman (SPC)
09:02 – 09:10	Opening Prayer
09:10 – 09:25	SPC Welcome Address Mr 'Aleki Sisifa (Director of Land Resource Division, SPC, Suva, Fiji)
09:25 – 09:40	Opening Address Hon. Joketani Cokanasiga (Minister for Primary Industries – Fiji)
09:40 – 10:00	CTA Address - Dr John Woodend (CTA Representative)
10:00 – 10:30	Morning Tea and Official photo

Monday 18 May, 2009 …

Plenary Session 1Extension Policy
Chairperson: Dr Malcolm Hazelman (FAO)

10:30 – 10:50	Overview of 2nd Extension Summit 2009 – Dr Siosiua Halavatau (SPC)
10:50 – 11:10	Regional Extension Policy Perspective - Mr 'Aleki Sisifa, (Director of Land Resource Division, SPC, Suva, Fiji)
11:10 – 11:30	National Policy Perspective – Dr Richard Beyer (Permanent Secretary, Agriculture – Ministry for Primary Industries – Fiji)
11:30 – 11:50	Transformative Change in the PNG National Agricultural Innovation System Dr Jacqui Wright – (PNG-Agriculture Research & Development Support Facility GRM – International)
11:50 – 12:10	Extension Policy Development – Ms Marita Manley (SPC)
12:10 – 12:30	Panel Discussion – Extension and Policy
12:30 – 13:30	Lunch

Plenary Session 2Country Reports
Chairperson: Dr Jacqui Wright (PNG)

13:30 – 13:40	American Samoa
13:40 – 13:50	Cook Islands
13:50 – 14:00	Fiji
14:00 – 14:10	FSM
14:10 – 14:20	Kiribati
14:20 – 14:30	Marshall Islands
14:30 – 14:40	Nauru
14:40 – 14:50	Niue
14:50 – 15:00	Palau
15:00 – 15:30	Afternoon Tea
15:30 – 15:40	Papua New Guinea
15:40 – 15:50	Samoa
15:50 – 16:00	Solomon Islands
16:00 – 16:10	Tokelau
16:10 – 16:20	Tonga
16:20 – 16:30	Tuvalu
16:30 – 16:40	Vanuatu
16:40 – 17:30	General Discussions – Country Reports

Tuesday 19th May 2009

Plenary Session 1 Lessons Learnt from Extension Models in the Region
Chairperson: Mr Taniela Hoponoa (Tonga)

08:30 – 08:40	Recap of Day 1
08:40 – 09:00	Kiribati Immersion Approach - Mr Bakineti Tokintekai (DSAP- Kiribati)
09:00 – 09:20	Northern Pacific Extension Systems - Ms Mereseini Seniloli (SPC)
09:20 – 09:40	Integrated Pest and Disease Management of Cocoa - Dr John Konan (SPC)
09:40 – 10:00	Forestry Extension Approaches – Mr Dick Tomker (Vanuatu) & Mr Jalesi Mateboto (SPC)
10:00 – 10:30	Morning Tea
10:30 – 10:50	Talomua Extension Approach - Ms Emele Ainuu (Samoa)
10:50 – 11:10	Extension Approaches – Livestock – Dr. Workneh Ayalew (NARI PNG)
11:10 – 11:30	Effective Farmer Training Approaches – Dr Lin (Taiwan Technical Mission - Fiji)
11:30 – 12:30	Group Discussion – Lesson from Extension Model
12:30 – 13:30	Lunch

Plenary Session 2. Improving Participation in Extension Projects
Chairperson: Mr Peter Garin (PNG)

13:30 – 13:50	Regional DSAP Success – Dr Halavatau (SPC)
13:50 – 14:10	Participatory Agriculture Research in the Pacific – Dr John Konan (SPC)

14:10 – 14:30	Network Perspective in Extension Projects – Mr Salend Kumar (SPC/UQ)
14:30 – 15:30	Group Discussion – Address issues to improve extension project delivery and outcome
15:30 – 16:00	Afternoon Tea

Plenary Session 3. Role of Extension in Regional and International Trade
Chairperson: Mr William Wicgmore (Cook Islands)

16:00 – 16:20	FACT Project – Mr Vinesh Prasad (SPC) & Mr Sanfred Smith (SPC)
16:20 – 16:40	Role of Forestry Extension in National & International Trade - Mr Sefanaia Tawake (Fiji) & Mr Taniela Hoponoa (Tonga)
16:40 – 17:30	Group Discussion – Enhancing extension role in regional & international trade

Wednesday 20th May 2009

Plenary Session 1 Role of ICT in Transforming Extension
Chairperson: Apisai Ucoboi (Fiji)

08:30 – 08:40	Recap of Day 2
08:40 – 09:00	Digicel Fiji
09:00 – 09:20	Fiji Agriculture Help Desk for Customers Assistance - Mr Nacanieli Takele (Ministry for Primary Industries – Fiji)
09:20 – 09:40	Tonga Experience - Mr Taniela Hoponoa (Tonga)
09:40 – 10:00	ICT Initiatives in Rural Extension – Mr Laurie Fooks (SPC)
10:00 – 10:30	General Discussion – Role of ICT in Extension
10:30 – 11:00	Morning Tea

Plenary Session 2 Role of Media in Extension
Chairperson: Mr James Selwyn Wasi (Vanuatu)

11:00 – 12:30	How Can the Media Contribute to Agriculture and Forestry developments and Climate Change? Panel Discussion – Facilitator – Ms Ruci Mafi (SPC-RMC). Panelists: / Mr Samisoni Pareti (Island Business) Mika Loga (RMC), Shammi Lochan, Radio Michi, (FBCL)
12:30 – 13:30	Lunch

Plenary Session 3 Role of Extension in engaging youth in agriculture and forestry
Chairperson: Mr Thomas Taro (Palau)

13:30 – 13:40	MOAFS Recommendations - Mr Stephen Hazleman (SPC)
13:40 – 14:00	FAO Youth Experiences - Dr Malcolm Hazelman (FAO)
14:00 – 14:20	Forestry Youth Engagement - Mr Jalesi Mateboto (SPC)
14:20 – 14:40	Experiences From the Pacific - Mr Kamilo Ali (DSAP Tonga)
14:40 – 15:30	Group Discussion – Develop youth engagement strategy for extension
15:30 – 16:00	Afternoon Tea

Plenary Session 4 Capacity Building in Extension
Chairperson: Mr Manu Tuionoula (American Samoa)

16:00 – 16:20	Pacific Capacity Building Needs Assessment – Mr Salend Kumar (SPC/UQ)
16:20 – 16:40	Capacity Building in Forestry Extension - Mr Peter Garin (PNG) & Mr Tolusina Pouli (Samoa)
16:40 – 17:00	Capacity Building in Atoll Agriculture – Dr Siosiua Halavatau (SPC)
17:00 – 17:30	General Discussion – Capacity building in extension

Thursday 21st May 2009

08:00 – 12:00	Participate in the Fiji Arbour Week Opening Ceremony - Nadi
12:00 – 13:00	Lunch

Plenary Session 1 Role of institutions in Capacity Building for Extension Chairperson: Ms Emele Ainuu (Samoa)

13:00 – 13:15	Role of USP in Capacity Building – Mr Aaron Kama (USP)
13:15 – 13:30	Role of Micronesia Land Grant Programme in Extension – Dr Vazhaveli K. Murukesan (FSM)

Plenary Session 2Summit Outputs, Identified Gaps and Issues
Chairperson Mr Suliasi Tawake (Fiji)

13:30 – 15:30	Working Group Session
15:30 – 16:30	Afternoon Tea
16:30 – 17:30	Working Group Presentations

Friday 22nd May 2009

Plenary Session 1 Regional Framework Development
Chairperson: Mr John Harunari (Solomon Islands)

08:30 – 08:50	Responding to Climate Change - GTZ
08:50 – 09:00	Role of extension in germplasm distribution in response to climate change - Eliki Lesione (SPC)
9:00 – 09:20	Private and Public Sector Partnership – Mr Sant Kumar (Natures Ways Cooperative)
09:20 – 10:00	Group Work
10:00 – 10:30	Morning Tea
10:30 – 12:30	Group Work

12:30 – 13:00	Group Presentations
13:00 – 14:00	Lunch
14:00 – 15:00	Closing Plenary Discussion
15:00 – 15:30	Closing Remarks

List of Acronyms

CTA - Technical Centre for Agricultural and Rural Cooperation
DSAP - Development of Sustainable Agriculture in the Pacific project funded by the EU
FAO - Food and Agricultural Organization of the United Nations
FBCL - Fiji Broadcasting Commission Limited
FSM - Federated States of Micronesia
GTZ - Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (German Technical Cooperation)
IBI - Island Business International
ICT - Information Communication Technology
PINA - Pacific Island News Associations
PNG - Papua New Guinea
SPC - Secretariat of the Pacific Community
USP - The University of the South Pacific
UQ -The University of Queensland – Australia