



SOLOMON ISLANDS GOVERNMENT

Performance Audit Report

Climate Change Adaptation and Disaster Risk Reduction Management

by the

**Ministry of Environment, Climate Change, Disaster
Management and Meteorology; and
Ministry of Agriculture and Livestock Development**

Auditor General

Office of the Auditor General
PO Box G18 Honiara

National Parliament Paper No. 26 OF 2018



Managing Climate Change Adaptation Strategy

The Office of the Auditor-General has conducted a Performance Audit on Climate Change Adaptation and Disaster Risk Reduction Strategies. This was in recognition of the impact that Climate Change has and will have on Islands in the Solomon Islands. It examines the Management of the Pacific Adaptation on Climate Change project (PACC). This is a national audit mandated under the Solomon Islands Constitution. This audit has been part of a joint Asian Development Bank (ADB)/INTOSAI Development Initiative (IDI)/Pacific Association of Supreme Audit Institutions (PASAI) co-operative Performance Audit facilitated jointly by the Pacific Islands Auditors.

Table of Contents

Acronyms	5
1. Executive Summary	7
1.1 Introduction.....	7
1.2 Audit Objective and Scope	7
1.3 Audit Mandate	8
1.4 Auditing Standards.....	8
1.5 Entities and Agencies Audited.....	8
1.6 Summary of Findings and Recommendations	8
- Key Aspects of Food Security are Identified and Planned	8
- Pacific Adaptation on Climate Change (PACC) Implementation.....	9
- Community Awareness	10
1.7 Overall Conclusion	11
2. Introduction.....	12
2.1 Background.....	12
2.2 Food Security	12
2.3 Low Soil Fertility.....	12
2.4 Low Agricultural Productivity	13
2.5 Food Security Policy.....	14
2.6 Pacific Adaptation on Climate Change (PACC) Project.....	14
3. Audit Focus, Objectives, Scope and Methodology.....	16
3.1 Audit Focus.....	16
3.2 Audit Objectives	16
3.3 Audit Scope.....	16
3.4 Audit Methodology	17
3.5 Prior Audit Coverage	17
4. Audit Findings and Recommendations	18
4.1 Policy Framework of the Solomon Island Government Food Security	18
4.2 Are Key Aspects of Food Security Identified and Planned?.....	19
- The role of PACC in SIG strategic Plans for Food Security.....	19
4.3 PACC Project Implementation.....	22
- PACC Strategic and Action Plans.....	22
- Clearly Defined Goals and Objectives.....	22

-	Linkages to Local Communities	23
-	Performance Indicators and Monitoring	23
-	Reporting Arrangements	25
-	Roll Out Plans to remaining “At Risk” communities in SI.....	27
-	Insufficient After-Phase Support Arrangements/Long Term Plans	27
-	Funding Arrangements.....	29
4.4	Community Awareness	31
-	Adequacy of Training Materials	31
-	Methods of Training and Content	31
-	Support to Trainers and Community Recipients	32
-	Adequacy of Training	33
-	Availability and Skill of Community Trainers.....	33
-	Shortage of Training Personnel and Community Trainers.....	34
-	Frequency of Training or Travel to the Pilot Site	35
-	Breadth of Training to all Community Households	36
-	Community Awareness	38
-	Community Households are aware of purpose of PACC.....	38
-	Community Households have received Training in Food Security	40
-	Community Households are practicing what they have been taught	41
5.	Summary of Audit Conclusions	43
6.	Summary of Audit Recommendations	44
7.	Addendum.....	49
7.1	Introduction.....	49
7.2	Final Report of the Pacific Adaptation to Climate Change Project	49
7.3	Government Response to the Recommendations.....	50
7.4	Government Policies	50
7.5	Summary	50

Acronyms

ACOM	Anglican Church of Melanesia
ADB	Asian Development Bank
AFS	Agriculture and Food Security
ARD	Agriculture Research Division
AWP	Annual Work Plan
BCA	Benefit Cost Analysis
CC	Climate Change
CCD	Climate Change Division
CSO	Civil Society Organisation
ENSO	El Nino - Southern Oscillation
FSP	Food Security Programme
GEF	Global Environment Facilities
GIS	Geographic Information System
IDI	INTOSAI Development Initiative
INTOSAI	International Organisation of Supreme Audit Institutions
ISSAI	International Standards of Supreme Audit Institutions
MALD	Ministry of Agriculture and Livestock Development
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MHMS	Ministry of Health and Medical Services
MoU	Memorandum of Understanding
MYWP	Multi-Year Work Plan
NAPA	National Adaptation Programme of Action
NARI	National Agriculture Research Institute
NFSP	National Food Security Programme
NGO	Non -Governmental Organisation
NSC	National Steering Committee
OAG	Office of the Auditor General
PACC	Pacific Adaptation to Climate Change
PACC PMU	Pacific Adaptation to Climate Change Project Management Unit
PASAI	Pacific Association of Supreme Audit Institutions
PMU	PACC Management Unit
QWP	Quarterly Work Plan
RPMU	Regional PACC Management Unit
SI	Solomon Islands
SIG	Solomon Islands Government
SPREP	Secretariat of the Pacific Regional Environment Programme
SWOCK	Strongem woka long community for kakai
UNDP	United Nation Development Programme
UN FAO	United Nation Food Agriculture Organization

UNWFS	United Nation World Food Summit
USD	United States Dollar
V/A	Vulnerability and Adaptation Assessment Report

1. Executive Summary

1.1 Introduction

Readers may wonder the purpose of issuing an audit report which was completed over four years ago but not finalised until now. Before explaining my reasoning, I would like to apologise for the delay in producing the report this was due in part to the sheer bulk of the work undertaken and in part to the staffing difficulties in my Office.

The reasoning behind the issue of this report now is:

- 1) I think it important not to waste the considerable resources which were utilised in undertaking the work to produce the report. A considerable amount of audit time was invested in the work and I am reluctant to waste this effort by merely shelving the report;
- 2) Whilst, the specific recommendations made in this report may have been superceded by time, the overall findings, especially in terms of the lack of planning and control over major projects, is still important today;
- 3) To provide a concrete example of the quality of work that goes into a Performance Audit Report. Performance Auditing will be forming an increasing part of the output of my office in future years as skills develop. This work provide users of the reports with a much greater insight into the economy, efficiency and effectiveness of government expenditure than does financial and compliance auditing; and
- 4) The likely devastating effects of Climate Change (CC) on the coastal and, especially, the low atolls of the Solomon Islands remain a clear threat to the country and one which the government must be prepared for and be trying to mitigate. For this reason, I have decided to issue this report despite the time delay in its production.

To ensure the relevance of the work to the current situation, a brief follow-up audit has been undertaken and its findings have been added to the original report by way of an Addendum.

Agriculture and Food Security (AFS) is one of the most important areas within the Solomon Islands for sustainable livelihood and economic income. The AFS strategies, such as Pacific Adaptation to Climate Change (PACC) project together with the development of existing National Policies and National Food Security Programmes or plans will have a great impact on the people living around the low-lying atolls and community that are at risk from AFS.

This audit conducted by Solomon Islands Office of the Auditor-General (OAG) in conjunction with other Pacific countries who are members of the Pacific Association of Supreme Audit Institutions (PASAI).

1.2 Audit Objective and Scope

The objective of this Performance Audit was to assess the readiness and effectiveness of these strategies, plans and financing to address the impact of climate change on AFS in Solomon Islands (especially with regards root crops).

The audit focused on the implementation of the PACC project in the Solomon Islands Atolls by examining the roles of the Ministry of Environment, Climate Change, Disaster Management

and Meteorology (MECDM); the Ministry of Agriculture and Livestock Development (MALD) and Local Communities to address potential food shortage, by examining that:

- Key aspects of Food Security have been identified and planned;
- Pacific Adaptation on Climate Change (PACC) project has been implemented; and
- Community Awareness exists.

The audit also reviewed the relevant national regulations and PACC Project Management in implementing the programme and the Ministries support for the sustainability of the work that the project introduced within the Atolls. The yearly and quarterly work plan activities were also reviewed.

1.3 Audit Mandate

The Auditor General, pursuant to the provision of section 108 of the constitution, as read with sections 35(1)(d), 35(1)(e) and 39(3) of the Public Finance and Audit Act, has authorised the staff of the OAG to conduct this Performance Audit.

1.4 Auditing Standards

As required by the audit mandate requirements, the International Standard for Supreme Audit Institutions (ISSAI) 3000¹, 5.2 was followed.

1.5 Entities and Agencies Audited

The audit scope covers the period 2009 to 2012. The MECDM and the MALD were the primary stakeholders for this audit. The PACC project is co-ordinated by the Climate Change Division (CCD) of the MECDM. However, the Implementing Agency is the MALD given the focus on AFS. This Ministry is responsible for implementing the policies and the implementation of the Project work plan activities within this audit. Other important stakeholders that are relevant for the purposes of this audit include: Anglican Church of Melanesia (ACOM)²; Community Leaders; Lead Farmers and the Secretariat of the Pacific Regional Environment Programme (SPREP).

1.6 Summary of Findings and Recommendations

- Key Aspects of Food Security are Identified and Planned

The audit found that the National Food Security lacks the action plans to implement the strategies detailed in the National Food Security Programme (NFSP). As a result there is no assurance that the strategies within the NFSP 2010-2015 would be achieved by 2015.

OAG **recommends** that the responsible Ministries:

- Devise and Implement the Action Plan
- Finalise the draft NFSP; and
- Fix and put in place Active Controls, Management, and Evaluation over the Policy Framework for the PACC project.

¹ Source: International Standards of Supreme Audit Institutions (ISSAI), endorsed at the INTOSAI Congress, South Africa, 2010.

² https://sgp.undp.org/index.php?option=com_sgpprojects&view=projectdetail&id=23797&Itemid=272

- Pacific Adaptation on Climate Change (PACC) Implementation

The audit findings indicate that there is a lack of timely and accurate arrangements for reporting of the Project's Activities between project's piloted sites and the PACC Management Unit (PMU) of the MALD.

OAG recommends:

- Linkages to Local Communities:

Develop an active linkage between Anglican Church of Melanesia (ACOM) by the PMU in order to develop a supportive arrangement and follow up on the work that has established within the community. This should be sufficient to provide conducive learning environment for farmers and the community on basic agriculture practices.

- Performance Indicators and Monitoring

The Ministry/PMU officers should provide Monitoring and Assessment on the work that contractors have done, to assess whether or not they are carrying out the work effectively and according to the Terms of Reference.

Work plan activities be revised and monitored on a monthly and quarterly basis to assess progress and identify gaps in under or over utilisation of resources.

- Longer Term Planning

There should be a planned programme for future support for communities at risk set prior to the last phase of PACC programme.

MALD should:

- Now be looking at preparing or arrangement on budgets if adaptation to impact of climate change as initiated by PACC is an ongoing programme for the risk communities in the atolls in Solomon Islands;
- Plans to deliver developed guidelines produce by PACC to other vulnerable communities at risk in Solomon islands should be underway and developed; and
- Seek donor fund available to further implement what PACC has not completed.

Furthermore, to support the development of a planned programme, OAG also recommends the MALD/PACC to:

- Ensure that Guidelines on Crop Suitability, best farming practice and food preservation are completed and distributed to communities at risk with regard the impact of Climate Change;
- Continually monitor community at risk from impacts of climate change on their yearly or monthly schedule for results of activities implemented; and
- Develop long term plans to incorporate these in work plans and action plans and should be one of its ongoing priority for addressing low lying atolls.

- **Community Awareness**

Audit findings revealed that following the introduction of the project at the project's piloted sites, for sustainability and enforcement, the PMU has failed to provide the basic onsite training materials to which the Lead Farmers and the Communities require.

They have also been unable to carry on the knowledge of the demonstrations carried out because of the lack of sufficient knowledge on farming techniques introduced and that the kind of documentation (training manuals) that they should have had and the support expected that they unable to receive following the short paced demonstrations.

OAG recommends that:

- The Working Group develop an Action Plan to actively and effectively detail how each Ministry should address each of the strategies, determined how it can achieve its short and long term goals, and identify financial and human resources to implement the strategies;
- The Ministry give high priority to the finalisation of the National Food Security Programme. To ensure the objectives of the programme are achieved by 2015, efforts need to be made to approve and endorse the draft programme. This is required so that there is clear strategic and operational direction in addressing food security issues for the nation and those international and regional obligations can be fulfilled;
- Proper reporting channels should be provided for the Lead Farmers and Communities by the PMU so that they can identify and discuss the issues faced at the demonstration sites. This should enable a sound reporting and accurate and timely communicating arrangements for the issues raised by the lead farmers and communities to whom the PMU can take before the Project's Steering Committee for consideration, approval, and work plan actions;
- An active link arrangement with the ACOM should be provided for by the PMU to develop a supportive arrangement and follow up on the work that has been established through the ACOM Water and Food Security with the community;
- The Ministry/PMU officers should provide Monitoring and Assessment on the work that contractors has done, to assess whether or not they are carrying out the work effectively and according to the contract agreement;
- PACC Management should revisit the planned activities, on the Work Plan and provide coordination of the day to day basis of the demonstration site;
- There should be a planned programme for future support for community at risk set prior to the last phase of PACC programme;
- The Ministry/PMU:
 - * Produces set of materials to assist officers or train officers involve in carrying out the demonstration so that lead farmers are able to learn and apply the demonstration skills on planting crops; and
 - * Train lead farmers and provide them with sufficient materials/presentation and workshop on management of introduce crops and farming systems on the atoll.

- The MAL/PACC should:
 - * Provide training at the community level on aspects of farming methods suitable for their environment;
 - * That ARD of MALD to continually have detail study on farming system appropriate for all atoll islands to be able to have training at the community level; and
 - * To recruit any relevant officers to train farmers, community household and regular monitor and provide them with gardening skills or farming methods.

1.7 Overall Conclusion

There is a lack of Action Plan for the implementation of the National Food Security Policy [NFSP] 2010-2015 to effectively address the strategies detail in the NFSP. It requires Working Group to establish a specific prioritised action plan to ensure that the policy objectives are met and adequate planning of addressing the impacts of climate change on AFS within the communities and atolls that at risk.

It is not clear that the Ministry has focused on finalising the draft National Food Security Programme as it is still waiting for review and little consultation.

The structure outlined in the component reports to the PACC project Director via the Steering Committee. However there is no reporting mechanism between Lead Farmers and PMU to assess the demonstration activities status update.

There is lack of linking mechanism developed for Local Communities, PMU and assisting agency to discuss what was happening on the demonstration site. This is required to ensure proper monitoring for planning purposes.

Moreover OAG noted that there is no documented long term plan developed to support and budgeted for its roll out activities after PACC programme is complete. The plan will enable the sustainability of PACC established activities for atolls and those at risk Islands.

There is no proper awareness and training to introduce PACC and its community-based activities, as a result there is no community support towards the programme, as objectives are not achieved as planned.

2. Introduction

2.1 Background

This Performance Audit examines climate change and how some of the Solomon Islands most vulnerable Islands are adapting to challenges such as ensuring food security. It also focuses on the management of the Pacific Adaptation on Climate Change Project (PACC) for Solomon Islands. This is an audit conducted by the Solomon Islands Office of the Auditor General (OAG) in conjunction with other Pacific countries who are members of the Pacific Association of Supreme Audit Institutions (PASAI). PASAI members were assisted by the Asian Development Bank (ADB) and the INTOSAI Development Initiative (IDI). INTOSAI is the International Organisation of Supreme Audit Institutions of which the OAG is a member.

2.2 Food Security

Food Security has been defined as a condition:

where all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996).

It is generally seen as having four distinct dimensions which need to be fulfilled simultaneously and in a stable manner over time sustainably.

- Food availability;
- Food access at household level, both physical and economic;
- Food use at individual level (nutrition); and
- Resilience- food supply must be acceptable to change and have the ability to recover from shocks such as natural disasters.

In 1996 the United Nation World Food Summit (UNWFS), examined methods to not only ensure there is sufficient food production to feed not only the world population, but also find ways to guarantee that everyone has access to the food they need for an active and healthy life. This has been the challenge for the UNWFS when examining efforts and determination to reinforce national actions to implement sustainable food security policies.

Food security has been, and still is, a problem for all the people living in the Solomon Islands. Remote islands, especially the low-lying atolls are most vulnerable where they experience frequent changes in the weather patterns and fluctuations in sea levels. This may be attributed to impacts from climate change.

Climate Change and its impact on food security is a challenge for Solomon Islands archipelago. People are struggling to maintain their food supply through applied cultural knowledge on agriculture and depend on wild food. Climate change has an impact on the food security of the densely populated low lying atolls in the Solomon Islands. The three most common problems identified from the Vulnerability and Adaptation Assessment Report (V/A Report), affecting the households is food shortage, lack of good drinking water and increasing pressure on land for settlement and agricultural purposes.

2.3 Low Soil Fertility

Surface and underground salt water intrusion means that suitable food crops available for planting are very limited due to sandy soil and crops are not able to survive in this condition.

2.4 Low Agricultural Productivity

These problems are caused by the impacts of climate change; including drought, intense cyclone and storm surges, coastal inundation and erosion, sea level rises, and surface and underground salt water intrusion. Some rural populations are dependent upon subsistence agriculture to survive. The incidence of climate change on agriculture land can result in reduced productivity.

According to the Islanders recently salt water intrusion has increased, contaminating the swamp. Creeks have been subject to overflowing due to increase in sea level which and occasional sea surges during bad weather. Taro contamination now occurs in areas which have not experienced this in the past. Productivity is getting low and the availability of food crops to support a growing population will not be sustainable.

These areas are highly vulnerable to sea level rise and the on-going climate extremes due to the El Nino Southern Oscillation (ENSO) Event. Such events contribute to declining food production and have occurred at a time when populations have been increasing and income earning opportunities decreasing (Benefit Cost Analysis (BCA) Report 2012).

The consequences of a changing natural environment are not the only adverse impacts of climate change. There are also societal impacts including shifts in the social behaviour, mentality and psychology of the Islands' inhabitants. People are resilient, but are also unconsciously reactive to the need for them to also change and make adjustments to unpredictable shifts of weather patterns and forces of nature (V/A Report).

The Solomon Islands atoll communities are facing increasing food security stress across all stress pillars, and according to the 2011 PACC V/A Assessment Report, food security in the low lying atolls is also linked with the following factors:

- Land availability to produce sufficient quantities of nutritional food for the family;
- Availability of giant swamp taro to sustain families during drought periods and disaster seasons;
- Accessibility of marine resources to exploit and earn income to buy imported foods regularly to supplement locally available food;
- Market access to enable trade to earn income;
- Transport availability to sell goods and access food; and
- Efficient communications to enable contact with relatives in urban centres for provision of goods and other items.

Changes in temperature and extreme events can adversely affect crops. The crops most at risk lie along the coastal lowlands where food shortages on the island were reported to the National Disaster Office. Decline in root crops particularly in taro due to higher water temperatures and salt-water inundation have significantly reduced yields in the past several years.

The MALD is the responsible authority that ensures that food security strategies are being properly managed in accordance with policies and the plan of action program.

The National Food Security, Food Safety and Nutrition Policy 2010-2015 is the main policy that guides the Ministry in carrying out its operations to promote and use sustainable agricultural and fisheries production as core elements for ensuring both food security and economic development and increase capacity to strengthen emergency response capabilities in the Solomon Islands. This policy explained the government's aim to address all aspect of Food security, food safety that includes the export and import foods and nutrition and to ensure long term food security. The primary objective is to improve the livelihoods of food producers, consumers and the rural and urban communities within the Solomon Islands.

2.5 Food Security Policy

The National Food Security Policy established in 2010 by three Ministries via a partnership between MALD, Ministry of Fisheries and Ministry of Health and Medical Services (MHMS). Its aim was to promote and use sustainable agricultural and fisheries production to encourage food security, economic development and strengthen emergency response capabilities within the Solomon Islands.

The National Food Security Policy highlights the different strategies that the three Ministries identify to be used to achieve the policy goal which is to ensure long term food security and to improve the livelihoods of food producers, consumers and Solomon Islander communities. The Action Plan will be overseen by a Working Group comprising representatives from the three Ministries and other key stakeholders. The plan of action will address each strategies outlined in the National Food Security Policy 2010-2015 and will describe who is responsible for each particular action and how the desired outcome can be achieved and monitored.

The Solomon Islands Government has established different donor funded projects that examine food security on the Islands which are vulnerable to the impact of climate change. These Projects include:

- **“Strongem Woka long community for kakai” Project (SWOCK);**
- **Adaptation Fund:** Enhancing resilience of community in SI to the adverse effects of climate change in agriculture and food security, where UNDP is the implementing entity and the executing entity is the Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM);
- **Action Framework:** PACC Funded Action Framework; and
- **Action Framework:** Venezuela Funded Action Framework; National Agriculture Research Institute (NARI), KASTOM Garden and other Non-Governmental Organisations (NGO) like World Vision and Live and Learn.

2.6 Pacific Adaptation on Climate Change (PACC) Project

The PACC project is a Regional project and funded by the Global Environment Facility (GEF), in partnership with United Nations Development Programme (UNDP) as its implementing agency and the Secretariat of the Pacific Regional Environment Programme (SPREP) as implementing agency.

PACC project is aimed to promote climate change adaptation and for sustainable development in the participating Pacific countries, based on the objective:

“to enhance the capacity of the participating countries to adapt to the impact of climate change, in the three key development sectors of Food Security and Food Production, Coastal Management and Water Resource Management”

In the Solomon Islands, the PACC programme is focused on improving community resilience and adaptation to the effects of climate change and sea level rise in the Food security and Food Production sector on the Atolls.

The Solomon Islands Government’s participation in this programme enhances its understanding of environmental issues and encourages the SIG to develop responses to mitigating against climate change issues

At the National level the Focal Point for PACC project is Ministry of Environment, Climate Change Disaster Management and Meteorology (MECDM). They will be co-ordinated it

through PACC Project Management Unit (PMU) with representatives from various government ministries/agencies and non-government organizations. Through PACC PMU, it will be responsible for the overall coordination and Monitoring and Evaluation of the overall project administration at the national level.

The Research Division of the MALD is the implementing agency since it is focused on Climate Change and Food Security. The Ministry stated that, officers from the Agriculture Research Division (ARD) provide most of the technical support and implementers of PACC activities when it comes to Agriculture demonstrations.

The Memorandum of Understanding (MoU) between SPREP and the Solomon Islands Government is a five years Project (2009-2013). The project expected to end December 2013; however, any variation to that will be in writing and signed by both SPREP and the Government of Solomon Islands, represented herein by MECDM. The MoU outlines project goals, expected outcome, funding arrangement which include the Solomon Islands input and their commitments. This was signed on the 27 August 2009.

Table #1: Duration and Allocated Budget for PACC Project

PACC Project	Composition
Duration	5 Years (2009-2013)
Budget	USD 750,000.00
SIG Co-Finance	USD 4.8m (In-Kind)

With partnered financial support and resources received at international, regional and local levels, the MALD is the accountable Ministry for successful delivery of the programme. The Ministry is responsible for ensuring the goals of the food security strategy are properly planned, managed and monitored, and that the strategy is carried out in accordance with the work plan, rules and regulations.

3. Audit Focus, Objectives, Scope and Methodology

3.1 Audit Focus

The Audit Focus is to assess the progress made by SIG in addressing food security issues under the PACC project. The PACC project is an important strategy adopted by the Ministry to address food security in some of SI's most vulnerable Atoll Islands. This is a priority that the National Adaptation Programmes of Action (NAPA) has identified. The highest areas at risk are the lowland atolls where they have experienced food shortages due to the impact of climate change that affect their root crops.

PACC was selected as it will have a great improvement that rural people can address the impacts of climate change. The project seeks to address food security within some most vulnerable Atoll Islands in the country. Apart from other strategies that are undertaken by the Ministry to achieve its National Food Security Policy, the PACC funded Action Framework that work in line with its objective to implement integrated food security programme.

According to the Ministry's Corporate Plan 2011-2014, the PACC project is part of the Ministry's Action Framework to address food security to some of the most vulnerable Atoll Islands of the Country. The PACC project complements the SIG's existing food security policy.

Various corporations and other stakeholders are also partnering the SIG to deliver the Work Plan. This Work Plan monitors the progress made on achieving planned activities on a quarterly and annual basis. The PACC management unit provide progress reports through the steering committee for endorsement by the Project Director.

The PACC will assist the MALD and key stakeholders including communities to build their capacity to design and implement an integrated food security programme that would reduce their vulnerability to the effects of climate change on Food Security.

3.2 Audit Objectives

The objective of the audit was to assess the effectiveness of implementing climate change adaptation strategies, plans and financing to address the impact of climate change on the root crop of the Solomon Islands (Food Security).

The audit focused on the implementation of the PACC project in the Solomon Islands Atolls by examining the roles of the MECDM, MALD and Local Communities to address food shortage, by examining that:

- Key aspects of Food Security have been identified and planned;
- Pacific Adaptation on Climate Change (PACC) project has been implemented; and
- Community Awareness exists.

The audit also reviewed the relevant national regulations and PACC Project Management in implementing the programme and the Ministry's support for the sustainability of the work that the project introduced within the Atolls. The yearly and quarterly work plan activities were also reviewed.

3.3 Audit Scope

The audit scope covered the period 2009 to 2012. The MECDM and the MALD were the primary stakeholders for this audit. At the national level the Ministry to contact for PACC project is the MECDM. The audit focused on the Implementing Agency of the PACC Project, which is the MALD as it focuses on Climate Change and Food Security. This Ministry is responsible for implementing the PACC Project Policies and Work Plan activities for this audit.

Other important stake holders that are relevant for the purposes of this audit include the Anglican Church of Melanesia (ACOM), Community Leaders/Lead Farmers and the Secretariat of the Pacific Regional Environment Programme (SPREP).

3.4 Audit Methodology

The objective of this performance audit was to ensure the effectiveness of the MALD, via the PACC Project Management Unit (PMU), in the management of the PACC project and in achieving the planned project outcomes. Fieldwork for the audit was performed over the period January 2013 to July 2013.

The audit work involved:

- A Review of the SIG National Policy Framework; Management tools such as work plans, programmes, for the Project Coordinator, Research Officers from the Agriculture Research Division, ACOM Coordinator for the project of Food and Water Security;
- A Review of the PACC Project's quarterly/yearly work planned activities; Memorandum of Understanding agreement documentation between the Secretariat of the Pacific Environment Programme;
- Visited two demonstration sites where the AFS pilot projects were established under the PACC project intervention. During those visits, auditors interviewed farmers on the two Islands of Ontong Java, Lead Farmers at the PACC demonstration site, representatives of the Community, other long time established farmers in the community and several villagers. Auditors also interviewed four ACOM Lead Farmers to assess the extent to which they were relevant to the PACC beneficiaries' needs and priority.
- Reviewed Vulnerable Assessment Reports from Demonstrations Projects Pilot Sites; Written observation and assessments from Lead Farmers/Community Leaders; The Projects: PACC and ACOM Food and Water Security evidential documentations and supportive observances notes;
- A Review of various existing Ministry's Documents and relevant strategies and Corporate Plan; and
- The MALD's existing Corporate Plans.

3.5 Prior Audit Coverage

There has been no prior audit of managing climate change adaptation and disaster risk deduction strategies by the Office of the Auditor-General (OAG). The current audited Ministries are part of the OAG ministerial audits for the assurance audits. As such there was no specific audit comment that has any relevance to the audit objectives of our current audit.

4. Audit Findings and Recommendations

4.1 Policy Framework of the Solomon Island Government Food Security

The Ministry of Agriculture and Livestock Development (MALD) of the PACC Project Management Unit (PMU) uses the National Food Security, Food Safety and Nutrition Policy 2010-2015 (herein referred to as the National Food Security Policy) as its main policy framework to carry out its operations in promoting and ensuring Food Security strategies are being properly managed in accordance with policies and the plan of action programme. This is very important because it improves livelihood of food producers and consumers in rural and urban communities.

This National Food Security, Food Safety and Nutrition Policy 2010-2015 is aligned with the objectives of United Nations Food and Agriculture Organisation (UN FAO) 2009 World Food Summit:

“when all people at all times have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.

The three important components to which the National Food Security Policy (NFSP) aimed at to achieve include the following questions:

- whether the National Food Security is aligned with the UN FAO 2009 World Food Summit objectives;
- whether the NFSP coverage of the climate risk to food security ensured food is available, adequate, and resilient and that these areas are being implemented effectively; and
- whether the Food Security Programme (FSP) to which carries out the planned activities and work plan of the NFSP is appropriate and effective.

This important framework policy and its supplementary govern the PACC Project Management Unit for the effective implementation of the Pacific Adaption to Climate Change (PACC) project. The effective implementation of the policy itself and its food security programme should ensure the meeting of goals and objectives of PACC Project.

The pages that will follow will look at whether or not these three main components to NFSP 2010-2015 will meet the PACC Project objectives and the successful outcome of the project.

4.2 Are Key Aspects of Food Security Identified and Planned?

- *The role of PACC in SIG strategic Plans for Food Security*

Ministry of Agriculture and Livestock Development (MALD) Departmental Framework to the Corporate Plan 2011-2014, noted that PACC programme is within the Action Framework of the Ministry's Corporate Plan.

Further; its objective is "*To implement integrated Food Security Programme*".

PACC's role is to address food security to the most vulnerable atoll Islands of the Country.

PACC Programme involves Consultations (Locally/Internationally) by establishing the Solomon Islands National Climate Change Policy, which was launched in 2012, the Vulnerability and Adaptation Assessment Report (Ontong Java), PACC Ontong Java Pilot Food Security Project: Benefit Cost Analysis, and Solomon Islands Communication Plan.

Moreover it involves community based activities to establishing demonstration plots in Ontong Java, Fenualoa and Sikaiana for crop demonstration. The PACC integrated programme has played a major role in identifying climatic conditions encountered at the atoll, and determining the appropriate measures to take to ensure long term food security.

The OAG acknowledges the responsible Ministry, including other important stakeholders that involved and participated successfully with an established Policy Framework of Food Security; however certain key aspects with that Policy Framework have been identified by audit to be **less effective in achieving the policy framework goals and objectives**.

With the unidentified and planned key aspects of the Food Security, there is less assurance by the atoll islanders for the responsible Ministries over achieving goals and objects of the policy framework for Food Security. Overall such result would **put the islands vulnerable to climate change adaptation at high risk of starvation and death** if those important areas are not effectively adhere to and monitored.

The key aspects of food security are very important and should be identified and planned. This is to ensure the successful accomplishment of the policy framework goals and objective. Through these effective means and efforts, the guidelines can be made better and improve the key aspects that may require effectiveness and efficiency. However, the audit found that the Policy Framework has identified the following instances that are weak and may be vulnerable to ineffectiveness of implementing the policy framework successfully. These are:

- **Lack of Action Plan:** to implement the strategies detailed within the Solomon Islands National Food Security, Food Safety and Nutrition Policy 2010-2015 (The National Food Security Policy); and
- **National Food Security Programme (NFSP):** only developed in draft.

OAG examined the Solomon Islands Government Policy best plan to address food security issues as a result of the impacts of climate change within the Islands that are vulnerable and at risk. Such policy should give effect to the Solomon Islands Governments international, national and regional responsibilities to be addressed by providing strategies and action plans to implement and execute the food security policy goals and objectives.

The National Food Security policy provides for addressing all aspect of food security. The 2010 National Food security policy objective is aligned with the UN FAO World Food Summit objectives. Both state that the goal of the policy is to ensure long term food security and to improve the livelihoods of food producers, consumers, rural and urban communities in the Solomon Islands. This is to ensure that all people have food at all times and sufficient quantities.

The National Food Security Policy was established in 2010 via the cooperating of three SIG Ministries. The three ministries were the MALD, Ministry of Fisheries and Marine Resources and the Ministry of Health and Medical Services. Its aim was to promote and use sustainable agriculture and fisheries production as core elements for ensuring both food security and economic development. The desired outcome was to increase capacity to strengthen emergency response capabilities in the Solomon Islands. This policy stressed the government's intention to address all aspect of food security, food safety that includes export and import foods and nutrition within the Solomon Islands. The strategy outlined within the policy is to ensure there is food security within the country by 2015.

OAG identified that the Policy only contains broad strategies. It **lacks specific prioritised guidelines or action plans** to ensure that it is achieving its goals and objectives. Its success depends on the existence of the working group derived from the three ministries to develop and implement the action plans.

Although the objectives are clear and strategies are identified, to address the remote and vulnerable islands, it lacks the action plan to implement the strategies in order to achieve its objectives. In addition to that performance measures to evaluate and monitor the success of its implementation is necessary.

As a result there is no assurance that the strategies within the National Food Security Policy will be achieved. The absence of an effective action plan could affect the ability of agencies to implement identified strategies in addressing climate change issues and managing food security plans.

Recommendation #1:

It is **recommended** that as a priority to support the SIG to achieve its stated objectives of ensuring food security by 2015 the Working Group develop an Action Plan to actively and effectively detail how each Ministry should address each of the strategies, determined how it can achieve its short and long term goals, and identify financial and human resources to implement the strategies.

The National Food Security Programme (NFSP) is a key programme for the implementation of the strategies required by the National Food Security, Food safety and Nutrition Policy 2010-2015. The goal of the NFSP is to improve the food security and nutrition status of SI targeted communities, especially for poor and vulnerable populations, located in "Agriculture Food Insecurity Hotspots".

Proposed outcomes of the NFSP include:

- Strengthening Governance and National Food Security;

- Sustainably increasing local food production and encouraging diversification amongst targeted “agriculture food security hotspots”. This is aimed at enhancing production under both normal conditions and during times of natural disaster;
- Enhancing the food supply chain and marketing of domestic food products; and
- Improving food safety, health and nutrition.

It is noted that in order for this outcome to be achieved, NFSP have to be finalised and approved accordingly. Thereby, it can be implemented by the leading agency to address food security issues under the impact of climate changes.

OAG found that the NFSP Plan **was still in draft format** as at June 2013 and OAG acknowledging that the document is within its final stages of completion. During the interview it was not clear that the draft was in the process of finalising as it still waiting for some small consultation and approval to be made.

In addition to that there is no assurance that the draft programme is being implemented as it was not yet documented and there is no time-scale for its completion. Thus, by not having a finalised and approved plan, two and a half years into the National Food Policy 2010-2015, there is **a high probability that the objectives may not be achieved** by 2015.

Recommendation #2:

It is **recommended** that the Ministry give high priority to the finalisation of the National Food Security Programme. To ensure the objectives of the programme are achieved by 2015, efforts need to be made to approve and endorse the draft programme. This is required so that there is clear strategic and operational direction in addressing food security issues for the nation and those international and regional obligations can be fulfilled.

Without these important aspects, there would be lack of assurance, showing poor management and control by implementers of the policy framework. The lack of proper management and control in place can lead misappropriation of important resources that have deployed for the better and greater good of such limited resources.

4.3 PACC Project Implementation

This part of the audit report covers OAG findings on the following areas:

- **PACC Strategic and Action Plans:**
 - Are there clearly defined Goals and Objectives;
 - The extent of Linkages to Local Communities (Community Representatives, House of Chiefs and Anglican Church of Melanesia (ACOM));
 - Support Arrangements;
 - Performance Indicators; and
 - Reporting Arrangements.
- **Roll Out Plans to remaining “At Risk” communities in SI:**
 - Long term plan to identify and reach all communities at risk in Solomon Islands; and
 - Funding arrangements.
- **PACC Strategic and Action Plans**
 - *Clearly Defined Goals and Objectives*

The goals and objectives of PACC defined in the MoU clearly state that the PACC goal is to assist Solomon Islands to **integrate climate change risks into key development sectors**; it focuses on programme adaptation. PACC project is managed by the National Project coordinator, Project Assistant and the Permanent Secretary of MALD as the Project Director.

The daily administration and Planning of the Project is carried out by PACC Management Unit. PACC PMU, MALD Research Officers and the Project Director meet on ad hoc basis to discuss urgent issues pertaining to the project when need arises. PACC programme is operated under the PACC work plan where it was stated the set of activities that will be carried out within each four quarter in the yearly PACC work plan. There are three outcomes or goals that PACC for Solomon Islands is focused on, this includes:

- **Policy Changes to Deliver Immediate Vulnerability Reduction:** The **first goal** of the PACC programme is to develop a Climate Change Policy. Developing methodology and tools to assist Solomon Islands mainstream climate change into their current national Development Plans and Priority. OAG noted that there is a Climate change Policy which was documented and launched last year;
- **Demonstration Measures to Reduce Vulnerability in Crop Production for Solomon Islands Implemented:** This is the **second main goal** of the PACC programme that is to develop guidelines for reducing vulnerability of small isolated islands communities such as Sikaiana, Ontong Java and Reef Islands to the effects of climate change in the food production and food security sector. Also, demonstrating community-base management of climate change risks in agriculture; and
- **Capacity to Plan For and Respond to Changes in Climate-related Risks Improved:** This is to have technical advice for implementation of National adaptation. This is to design to ensure that technical assistance is available to the leading agency to support the direct implementation of the PACC project.

- *Linkages to Local Communities*

PACC outline goal includes undertaking demonstration activities of suitable farming systems and assessment links the project to local communities. It is one of the outcomes of PACC to deliver a pilot project on vulnerable communities, especially the Island atolls that have encounter risk and impacts of climate change. Through this pilot project intervention a community representative has been appointed from Lord Howe community in Honiara. Lead Farmers were selected from the community. Activities were also implemented at the community level through House of Chiefs or senior leaders. MALD/PACC activities are then managed by the Lead Farmers who clear and own plots for agriculture demonstrations.

OAG noted that PMU signed an agreement with ACOM Coordinator under the following ToR:

- **Providing Leadership and On-site Support to implement PACC demonstrations in Ontong Java:** PMU link the on the ground demonstration activities with the community through Anglican Church of Melanesian (ACOM) on contract basis, as ACOM has an existing Project focusing on similar activities in Luanua. For example, preparing of plots for demonstration of composition farming system, installing water catchment and introduction of salt resistant crops including taro, potato and bananas. Work also includes preparing seedlings and shipping of farming tools, tanks and crops to the demonstration site. Thus, ACOM provide leadership on the site to implement PACC demonstration in Pelau (Ontong Java); and
- **Quality and Strong Support to Community people on a day to day basis and Co-ordination of the Demonstration Activities:** Quality and strong support for the communities and farmers on the demonstration activities can result in effective outcome on agriculture practices that will have a strong impact on securing food for the atolls in a long run. As data collected can be used to establish farming system, guideline or practice in the atoll and can be utilized by communities.

OAG found during the audit that there is insufficient support provided to farmers at the community level by the PACC contractor to ensure best practice is achieved. It was not clear that the contractors carrying out the demonstration were providing quality and strong support to community on a day to day basis. That is because Lead Farmers confirmed that after the demonstration there has never been any activity carried out to help farmers maintain the plots which results in problems maintaining crops.

Recommendation #3:

It is **recommended** that an active linkage with ACOM by the PMU be established to develop a supportive arrangement and follow up on the work that has established within the community. This should be sufficient to provide a conducive learning environment for farmers and the community on basic agriculture practices.

- *Performance Indicators and Monitoring*

PACC project under the PMU within the MALD operated according to its quarterly work plan from 2009 to 2013. The work plan states the planned activities, outcome, output and time frame for a given year and was specified quarterly. The purpose of the Work Plan was to guide the PMU officers on the activities that they will be undertaking on each quarter of each program year. The work plan contains number of **performance indicators** that should have been

achieved while implementing outputs according to their annual work plans. These were the indicators noted according to AWP:

- Development of Climate Change Policy;
- Demonstration reports and Guidelines for agricultural activities;
- Communication and Awareness Plan; and
- Monitoring of Identified Demonstration Farms.

OAG noted that the development of Climate Change Policy has been achieved, and demonstration reports were developed and a Communication and Awareness Plan was also developed. However, the report of demonstration was completed for one pilot site only and the remaining pilot sites are yet to be completed. This means that a complete document is not available to guide on-going activities planned for the long term and roll out to other at risk communities.

OAG identified that there has been **no monitoring by PACC contractors** and PMU of the demonstration site, to ensure that crops are coping with the standard of soils at the atoll, and assessing the need for improvement, by monitoring the colour, growth or fertility of the soil and condition.

The Lead Farmer at the demonstration site, ACOM coordinator and the Ministry also confirms that to date there was no monitoring team sent to the site to monitor the crops at the field and to recommend areas of improvement. The Lead Farmer also advised that there has been no communication either. In the absence of monitoring and reporting framework, there is less assurance provided that actions taken are yielding positive results. Equally, there is less assurance that actions taken are proving successful.

Interpretation of data from the demonstration site is critical for planning for successful project outcome. Such data can be used to establish farming system guidelines or procedures in the atolls and to inform Ministry planners well in preparation towards after the project is phase out.

Activities were not effectively co-ordinated. Implementers of PACC pilot project continue to identify areas to cover for its activities and budget. However it is behind schedule. OAG identified that PACC project activities are well budgeted for but not fully implemented.

It was noted that only one plot in Pelau is being used; the other three plots are yet to be implemented. The Agricultural facilities are already at the site, to be used for the remaining plots, but crops are yet to be provided to the three farmers. During the OAG visit, crops had not been distributed to households due to a shortage of surviving crops from plot number #1.

This implies activities are behind schedule according to work plan developed and there is no proper coordination of the demonstration activities to fully implement what was planned. There is limited effort by PMU to ensure that the activities are logical and achievable. The ongoing result of the incapability to complete work planned with no clear time line will further result in duplication of planned activities and lack of progress.

Recommendation #4:

It is **recommended** that the Ministry/PMU officers should provide Monitoring and Assessment on the work that contractors has done, to assess whether or not they are carrying out the work effectively and according to the ToR.

OAG recommends that work plan activities be revised and monitored on a monthly and quarterly basis to assess progress and identify gaps in under or over utilisation of resources.

- *Reporting Arrangements*

The Ministry stated that the reporting structure of this project is based on the coordination structure of PACC that involves reporting at different levels:

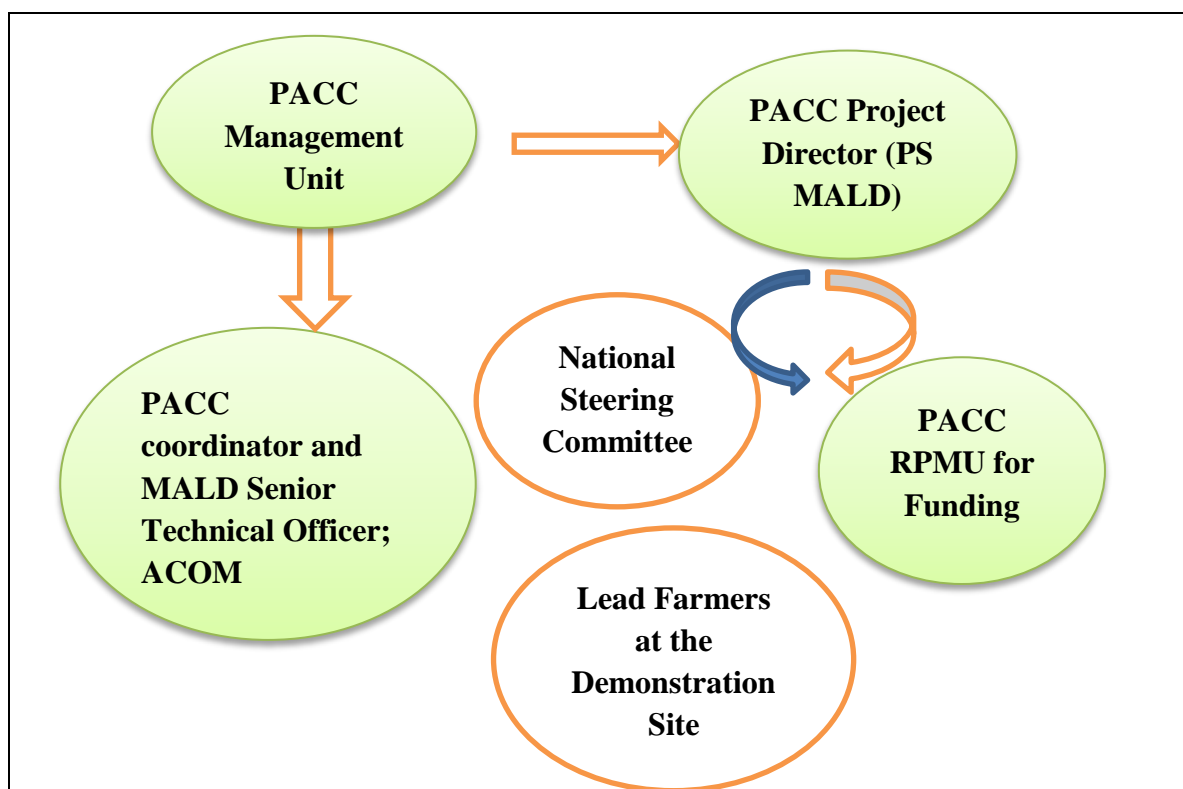
- **International:** at the International Level, PACC Regional PACC Management Unit (RPMU) at SPREP reports (combination of all PACC coordination bodies) directly to UNDP (Samoa) and UNDP report to Global Environment Facility (GEF) regarding all PACC regional projects and reports;
- **Regional:** at the regional level, the PACC PMU reports directly to the PACC RPMU at SPREP. The RPMU will develop a combine report of the PACC Project according to the three different thematic areas;
- **National:** at the national level, the PACC PMU reports directly to PACC Project Director (PS MAL). PACC PMU reports on quarterly basis on the progress of the project as per developed Quarterly Work Plans (QWP) to RPMU/SPREP. All their reports and correspondence must be approved by the PACC Project Director before they are submitted.

There is a reporting template which all PACC Projects throughout the region uses. The templates include PACC Multi-Year Work plan (MYWP), Annual Work Plan (AWP) and Quarterly Work Plan (QWP).

All PACC work plans are developed by PACC Project Coordinator in consultations with MAL Senior Research Officers and discussed with the National Steering Committee which includes the MECDM, for endorsement and approval before submitting to PACC RPMU for funding purposes.

- **National Steering Committee:** the National Steering Committee (NSC) oversees the overall implementation of the PACC Project at the National Level. The NSC consist of government related ministry's (MALD, MECDM, Ministry of Fisheries, POs), NGO, CSO, Church Based Organization, PACC PMU and community representatives from the project site. The PACC NSC meets quarterly to discuss project issues and develop work plan for endorsement before the PMU submits to PACC RPMU for funding purposes.

Figure 1: Summary of the reporting arrangement for PACC Project to MALD at the Community



The diagram above summarises the reporting arrangement for PACC and the responsible department that work along with PACC PMU. All day to day administration and planning of the project is carried out by PACC PMU and its consultancy with the Project Director and MALD research officers by providing technical support for the implementation of the project activities. The Steering Committee oversees the overall implementation of the project at the national. The focal point for any intervention at the community level is the chiefs. The demonstration plots were managed by Lead farmers.

OAG noted that within that structure outlined above all the component reports to the PACC project Director via the Steering Committee. In addition, the Lead Farmers should have given an opportunity to report feedback on the demonstration activities. However, there is no reporting taken from the Lead farmers by the PMU to assess the demonstration activities status update.

As a result farmers are being isolated from the key bodies as identified on the diagram above. This has been an issue for the Lead Farmers at the pilot site soon after the demonstration. If such reporting is lacking within the overall structure of the PACC implementing project, Lead Farmers will continue to face difficulties in getting assistance and in maintaining the introduced crops. Decision makers will be over-looked on some of the very important issues to be addressed. Thus, effective demonstrating community-based management of climate change risks in agriculture and to food security will still be a problem.

Recommendation #5:

It is **recommended** that proper reporting channels should be provided so that Lead Farmers and PMU can identify and discuss issues faced at the demonstration site. Sound reporting and communication arrangements would enable PMU to discuss issues raised by Lead Farmers for approval with the steering committees

- Roll Out Plans to remaining “At Risk” communities in SI

A roll out plans for the purposes of reaching the risk communities in the Solomon Islands should be in place while preparing for the completion of PACC project. That is, responsible ministries should be preparing and developing a plan to cater for transition into government ministries on activities not completed by PACC. Further discussion on long term plans and the availability of funding to ensure that they are enacted appears below.

- Insufficient After-Phase Support Arrangements/Long Term Plans

Regionally, the PACC project has an overall operations and administrative procedures through UNDP implementing partners participating countries and including the national coordinators. The MALD plan outlined how different National Development and Bilateral projects including the PACC project operate and how they can achieve the Ministry’s National Strategies during the PACC’s intervention and after it is phased out. At the national level and the pilot site level, PACC has a developed guideline for implementing its plan of actions or adaptation intervention in the identified communities. This includes establishing different farming systems tailored to different environment conditions and growing different varieties of crops suitable to their environment.

To achieve the stated policy objectives, it is important for the lead agency to budget and continue support the programmes after the development phase until such time they become financially viable.

In general there is a strong support and ownership by the government to continue PACC activities SIG have a clear vision and willingness to continue in implementing the programme when PACC funding under UNDP/GEF ceases. From the written responses of questionnaires submitted by PACC Coordinator, OAG noted that to continue the work of PACC, he confirms that the provincial government in Malaita province will take full responsibility after PACC project term ends. OAG also noted according to their response that they are in a process of recruiting full time officer for the pilot site (Ontong Java) to provide ongoing technical and on the ground support to the local farmers to assist implementation of such activities.

However OAG noted during the audit that there is **no planned programme document** set prior to PACC last phase, thus there is **no clear indication that the project will be supported and continued beyond the life of PACC.**

As there is no developed plan to continually implement remaining activities of PACC program or continually address CC at vulnerable communities, the impact of climate change to low lying atoll on food security will be a continuing issue for SIG. The support on the implementation period of PACC project is necessary to ensure that the beneficiaries have acquired the capacity to use the new agricultural practices introduced.

In the absence of a defined plan after the PACC project finishes, including an exit strategy on how the programme can be sustainably continue after the pilot phase.

Thus without a well-defined plan from the Ministry, the PACC project activities would depend on the donor funding and its allocated timeframe. Thus, securing of root crops for atolls will be a continuing challenge for the communities at large instead of a reducing one.

A **Long Term Plan** for continuing the work of PACC for communities at risk should be developed by the ministry (MALD). As the PACC Pilot programme is designed to reduce vulnerability to climate change and sea level rise for low lying atolls in food security and production, there is a need for the MALD to prepare for an ongoing programme. This programme should be based on effective results of implemented activities, especially capacity building, demonstrated results and guidelines produced.

Further, the guidelines, action plans or assessments should have been completed after activities or assessments done at the community level. From our audit findings it is not clear **whether prepared guidelines** for various farming systems, salt resistant crops or food preservation methods **have been completed**. While interviewing with the national coordinator, OAG noted that a guideline is to be developed and documented from the demonstration results introduced, V/A Assessments and BCA analysis and when the programme (PACC) completes.

Further, we note from their report on, “PACC Solomon Islands MTE, October 2012 of lessons outline were:

- Baseline work had not been done and issues relating to capacity to do the work need to be identified;
- Performance of the project to date relates to the respective achievements of PACC and ACOM within the same time frame. That is ACOM has already done most of the demonstration activities. PACC on the other hand is to extend what ACOM has already completed; and
- ACOM had been successful in introducing Food and Water Security projects with the contribution of its Coordinator with 20+ years’ experience on farming techniques, and PACC.

From the discussion outline, long term planning on the lessons to be address is not happening.

GIS mapping is yet to be done on baseline work of the island atolls, no further intervention done to the atoll since its first, and lack coordination with experts on agricultural experiences or appropriate donor funds, to further address results of assessments and demonstrations in order to be able to share to various communities at risk in Solomon Islands.

The implications for various Communities at Risk are:

- Lack the capability to adapt to the increasing effects and condition of climate change;
- Lack the capacity to learn and identify option available to them in terms of food security;
- Lack the knowledge on new farming system introduce , salt resistant crops and the ability to apply them at their livelihood; and
- Will be unable to build on the pilot work in the long run.

These consequences will continue to persist if the MALD produces results but does not communicate planning for sustainability in the long term basis to the various communities at risk.

Recommendation #6:

It is **recommended** that there should be a planned programme for future support for community at risk set prior to the last phase of PACC programme covering;

- Ensuring that guidelines on crop suitability, best farming practice and food preservation are completed and documented for communities at risk due to impacts of CC;
- Continually monitoring community at risk from impacts of climate change on their yearly or monthly schedule for results of activities implemented; and
- Develop long term plan to incorporate them in work plans and action plans and should be one of its ongoing priority for addressing low lying atolls.

- *Funding Arrangements*

Funding arrangements should be prepared for the transition period of uncompleted tasks of PACC in order to further implement related activities and be able to reach communities at risk in the Solomon Islands. While reviewing relevant document and carrying out interview with individuals who are directly involved the following were noted:

- Solomon Islands Government (SIG) agrees where possible to continue work of PACC PMU after programme ends;
- SIG will provide necessary staff and logistic (MoU); and
- At the time of audit no funding arrangements and plan being made or developed.

The MALD was unable to confirm any further arrangement to prepare for further demonstration of PACC activities when the project term ends. Further such arrangements have not been initiated or planned as the time frame for the project nearly lapsed. If such arrangements for budget of long term adaptation program for vulnerable communities has not existed it may lead to:

- Further delays in addressing communities at risk;
- Communities at risk within the Solomon Islands have not been reached with the efficient developed guideline produced and demonstration activities as planned;
- Lack of knowledge to adapt and stay resilient still exists within communities at risk; and
- Rural-urban shift will result as risk communities will move to town looking for opportunities/place to settle in order to secure food.

It further indicates that the responsible authority rely on donor funded projects to cater for issues like this, the impacts of climate change on vulnerable communities of the atoll. For incorporating plans on relevant budget to be able to continue donor support programs seems lacking.

Recommendation #7:

OAG therefore **recommends** that the MALD should:

- Now be looking at preparing or arrangement on budgets if adaptation to impact of climate change as initiated by PACC is an ongoing program for the risk communities in the atolls in Solomon Islands;
- Plans to deliver developed guidelines produce by PACC to other vulnerable communities at risk in Solomon Islands should be underway and developed; and
- Seek donor fund available to further implement what PACC has not completed.

4.4 Community Awareness

This part of the audit report covers OAG findings on the following areas:

- Adequacy of Training Materials:
 - Methods of Training and Content; and
 - Support to Trainers and Community Recipients
- Adequacy of Training:
 - Availability and Skill of Community Trainers;
 - Frequency of Training in the Communities; and
 - Breadth of Training to all Community Households [everyone included]
- Community Awareness:
 - Community households are aware of purpose of PACC;
 - Community households have received training in food security; and
 - Community households are practicing what they have been taught.

- Adequacy of Training Materials

OAG examined the adequacy of training material during the implementation of the project. Training material should be developed by MAL/PACC for specific training on soil improvement, introduction of tolerant crop varieties and food preservation for Ontong Java, Sikaiana and Fenualoa (low lying atolls). The training material should contain the basic farming method appropriate for low lying atolls, easy for community lead farmers to understand or participating individuals from the community to learn from.

- *Methods of Training and Content*

PACC project Action Plan, according to MoU outline, provides community based strategies that involve specific activities, for example, training technical staff of MALD and other relevant institutions to apply the guidelines in a pilot situation. In addition to that, the MAL/PACC had an agreement with a contractor and participating officer from the ministry to carry out training and awareness at the pilot site. After reviewing the necessary document received from the MAL/PACC, OAG noted according to a demonstration report (Demonstration Team Leader) that a short training was developed to facilitate for Lead Farmers and their assistants.

The training involves design of plots and crops used and reasons for their use. Moreover, demonstrations were made to farmers on how to handle the plants in the plots and look after them in order for the plants to grow. This is one of the stated training needs according to their report on “*Climate Change Adaptation Intervention in Pelau Island in the Ontong Java Atoll*” (Jasper. B, pg. 15)

However during audit visit and interview to the pilot site, Lead Farmers **were not able to provide any training and demonstration documents** to the audit team. The co-ordinating individuals **could not specify any training involved** for the executing officer before doing the demonstration. Field practical demonstration was performed **without providing pamphlets and booklets** so that all have a better idea in planting and nurturing the planted crops or trees. In this way Lead Farmers may convey sufficient information to care for their crops in the long run.

As the ministry (MALD/PACC) was **unable to provide the supporting documentation in relation to training** before carrying out the demonstration it indicates that:

- Participating officers are not given any training before carrying out the demonstration activities;
- No document had been develop to use as guide in their demonstration activities; and
- Lead Farmers were not able to learn from them with no basic guideline documented before demonstrating the trial plants and crops.

The ministry (PACC) fails to prepare and develop copies of related guidelines, booklets, and pamphlet to be shared to lead farmers and community level.

Recommendation #8:

To ensure that technical officers involved have sufficient training materials to provide for introducing initiated activities at the pilot site, OAG recommends that the ministry (MAL/PACC) should-:

- Produce set of materials to assist officers or train officers involve in carrying out the demonstration so that lead farmers are able to learn and apply the demonstration skills on planting crops;
- Train Lead Farmers and provide them with sufficient materials/presentation and workshop on management of introduce crops and farming systems on the atoll; and
- Recruit at least two local community members to be trained or involved in producing materials for community participation during community awareness or training at the site.

- Support to Trainers and Community Recipients

Training materials should be sufficient to provide to community representatives/leaders, Lead Farmers and people at the community level with more knowledge about climatic issues in the atoll and measures to be aware of in terms of food security

OAG noted that there was training done at Luaniua on Ontong Java Islands which was facilitated by the Demonstration Team Leader of ACOM Food and Water Security Project. At the community level there were no training materials provided, neither the Lead Farmers nor community members were aware of any training documentation supplied or received. The four Lead Farmers in Luaniua confirm that they receive materials of training from ACOM but not MALD/PACC. Furthermore, there was no evidence of any training materials from community members during the site visit.

With no basic training materials received and obtained from the coordinating officer, community representative, the Lead Farmers and the community as whole will not have sufficient knowledge to equip them with basic local skills on improving crops/plants at such harsh environment.

OAG therefore concludes that:

- There is a **lack of materials developed or supplied for purpose of training** for Lead Farmers and communities in order to conduct viable productive document to assist Lead Farmers;
- Lead Farmers **do not have supporting materials and documents** to add on to their skills in improving soil fertility; and

- **Skills are not shared with the community** as a whole because of lack of proper training material provided.

The failure will continue to exist if MALD/PACC does not have the preparation time in producing or developing certain guides or document for use at the community level. **Thereby wasting resources as the planned PACC programme is not fully implemented.**

Recommendation #9:

To ensure that participating officers and demonstrating team fully complete their task on carrying out demonstration, OAG **recommends** that:

- Participating officers have sufficient material, with relevant supporting documents and material developed, before carrying out their tasks;
- Even trial tasks require guidelines while doing the demonstration of farming on the pilot site; and
- Workable material (documentation) should be developed to enable farmers to supply and share to the communities at risk.

- Adequacy of Training

The ministry is looking at training or recruiting officers or community trainers who will be available to coordinate work of PACC and train community at the pilot site. That is there should be sufficient training officer or availability of train lead farmers at the community level to be able for farming system to be introduced and learned by people at the community level.

- Availability and Skill of Community Trainers

There should be sufficient training officers or the availability of trained and skillful Lead Farmers at the community level to be able for farming system to be introduced and learned by people at the community level. To achieve this, PACC management unit should consider recruiting Lead Farmers on site. There are skillful farmers at the site as confirmed by eight Lead Farmers from both island atolls in Ontong Java. These farmers were selected according to agreements on various houses of chiefs in the islands. They were chosen on bases of land titles and head of households.

OAG visited the site and interviewed the Lead Farmers who were involved in the project; they confirmed that it is their daily activities and routine in making gardens to ensure they have sufficient root crops to supplement their consumption on sea foods. They have the local skills for most of their gardening. However, due to impacts of climate change, and that is variation in weather conditions and salt water intrusion they have limited knowledge in further nurturing their own crops. Thus, that is the gap which the MALD/PACC should respond to by training the Lead Farmers to be able to adapt to changes that occur.

OAG conclusions were:

- Skillful farmers were available at the community level;
- Community representative does not have an agricultural background (Nurse, MHMS); and
- There were expert local farmers at the pilot site that were overlooked in appointing a Team Leader for training purpose

The Demonstration Team Leader for ACOM Food and Water Security Project was recruited for activities implemented at the project site for three months. According to his ToR one of his functions is to provide:

“quality and strong support to community people and day to day basis and coordination of the demonstration activities”.

His contract has a three month schedule planning activities at the demonstration pilot sites.

However, there is:

- Poor consultation at the community level to identify the existence of experienced farmers;
- The lack of appointment of a Community Representative; and
- The demonstration coordination officers only travel once a year to the pilot site.

Due to lack of proper consultation at the community level, and no additional skillful trainer available, the recruiting of expertise from other entities or province eventually leave the demonstration site with no regular support done to community. **Co-ordination of PACC activities is poorly implemented at the pilot site therefore community as a whole do not benefit from poor demonstration activities carried out.**

Recommendation #10:

OAG **recommends** that the ministry (MALD/PACC) should:

- Have done proper consultation at the community level for a Community Representative with some basic agricultural back ground to represent the community and not someone who visit his home island once a year;
- Have recruited local farmer familiar with their environment from the pilot site to coordinate demonstration activities of farming methods suitable and to regular support local farmers and household of their changing environment; and
- Motivate the recruited expert to be permanently employed at the site to oversee climatic impacts and changes that may impact the atolls livelihood and report it back to the ministry for support.

- Shortage of Training Personnel and Community Trainers

According to the quarterly meeting minutes and update, one of the project obstacles is the shortage of officers or the slow of processes of recruiting officers for coordinating project at the pilot site. The risks that describe according to their risk analysis in quarter ended 30th September 2012 contain the following:

- Delaying of engaging the local Demonstration Team Leader due to his engagement with other climate change projects slows down most of the planned activities to be carried out at the pilot site; and
- Resignation of the project assistant to be effective with the timely producing of quarterly reports and activities.

The risks outlined show that the adequacy of training is not appropriate. This is due to the unavailability of skillful person to get training or be trained and the delaying of recruited officers to implement training for the community trainer in preparation for the MALD/PACC intervention.

Thus, the OAG has acknowledged shortage of training personal or delaying of processes during recruiting is the viable reason for not facilitating the adequacy of training (the capacity to train community trainers). OAG noted that the only group of community leaders who were directly involved within the intervention of PACC project in Pelau were the Lead Farmers. At the time of audit, there was no skill community trainer to train the lead farmers. This resulted in:

- Lead Farmers being unable to perform in further gardening or acquired skills to planting of crops in the remaining plots;
- No available community trainer that was well trained by MALD/PACC team to train community members on how to improve soils, mulching techniques or even pest management when crops are eaten by certain pests that can destroy plants; and
- Most of the plants died soon after the demonstration takes place due to lack of mulching techniques.

Identified individuals at the community level lacked training and adequate skills for the introduction of suitable farming systems at the atoll. Thus, the adaptive skills for gardening purpose due to salt-water intrusion or salt resistant crop were not sufficiently learned for daily basis.

Recommendation #11:

In such an atoll environment, OAG **recommends** that the MALD/PACC should provide:

- Adequate training to be conducted for Community Trainers and for the community Lead Farmers to enable them to develop skills in different agriculture areas, including soil, so that they can well equipped to managed their garden crops and when distribution of crops done, community trainer can train each household on basic skills to manage their garden crops;
- Proper consultation at the community level for skill farmers to engage them in facilitating work of PACC at the pilot site; and
- Essential materials to equip farmers manage their plots and shared amongst community.

- Frequency of Training or Travel to the Pilot Site

During the reviewing of relevant document and reports produced since its inception period in 2009, the PACC team and its stakeholders or partnership agency, who were carrying out activities at the pilot site, visited the site three times for approximately 10 days per trip.

OAG has acknowledged the results that involve:

- Consultation with the communities;
- Vulnerability and adaptation assessment; and
- Demonstration activities and cost and benefit analysis.

These results were some of the MALD/PACC best achievements during its progress from 2009 till the time of the audit. As already discussed, there are difficulties such as shortage of recruited personal to coordinate task at the site, a change of officers and, also, the remoteness of the site thereby transport accessibility and change of government which was noted on their quarterly meetings and slow the projects progress. These lead to the variability to travel and the incapability to provide more training for the demonstration at the pilot site.

On the other hand the pilot site was deliberately chosen due to its remoteness and vulnerability to impact of climate change on food security despite the difficulties encounter. Furthermore, a one-time training on Pelau during the demonstration period in late 2012 was done but no further onsite training was provided to Lead Farmers. There's no training programme or time frame provided during the audit to note if training was provided, when and the content.

As the MALD/PACC was unable to provide the relevant documents pertaining to program of training at the pilot site OAG concludes that:

- No training programme was proposed for training Lead Farmers;
- Occasional travelling to the sites further indicate lack of training and monitoring at the pilot site; and
- Failure to liaise with appropriate shipping company to make trip twice a month to cater for implementing activities at the pilot site for the purpose of ongoing demonstration.

With these possible reasons that may arise, it further **delays coverage of implementation of essential activities according to their AWP.**

Recommendation #12:

Thus to properly progress in delivering onsite activities OAG **recommends** that the MAL/PACC should ensure:

- Proper discussion and collaboration between stakeholders and participating private organisations to properly outline set programmes and schedule and document them accordingly;
- Deliver training as proposed in accordance with the planned budget;
- Properly arrange frequent visits to the pilot site in order to oversee the progress of the demonstration and its output;
- Use the available funds appropriately in accordance with the allocated budgets; and
- Make a proper Benefit-Cost Analysis (BCA) prior to selecting the pilot site and, likewise; proper consultation must be prudently done on the remoteness of the site so that all factors are incorporated in the budget.

- Breadth of Training to all Community Households

According to the work plan (AWP Jan-Dec 2012), reports and assessments produced the PACC demonstration activities should cover the three atoll islands that are most likely to be affected by the impact of climate change. These are: Ontong Java, Sikaiana and Fenualoa.

The onsite activities involve the following:

- Transport hiring to the three project pilot sites for implementation of planned activities was budgeted for according to AWP 2012;
- Trial demonstrations in Ontong Java, Fenualoa Temotu province (Crops, Pests and Diseases) with onsite monitoring of the demonstrations;
- Implementation of proposed agriculture methods in Ontong Java (Crops, Pests and Diseases) including on site monitoring of trials;
- Assessment of soil conditions and farming practices on the three pilot sites;
- Assessment on local food preservation methods on the three sites;
- Geographic Information System (GIS) mapping of Ontong Java, Sikaiana and Fenualoa;
- Implementation of selected crops that can withstand climatic conditions at the pilot sites including mass propagation of suitable crops, materials and equipment for the demonstration;
- Conduct training workshops on guidelines on best farming practice to be applied on the demonstration site; and
- Demonstration workshops on food preservation methods.

These outline activities are just an example of some planned out activities according to their AWP in 2012. There were others that were also done which contribute to their achievements so far while implementing them at the community level.

However during the time of the audit, only one community of the Ontong Java island had received one-time training from PACC team during the demonstration period. That is they train by observing the demonstration on planting of introduced crops and techniques orally from the team who carried out the demonstration. For other areas or islands according to the AWP were not covered. Also, the workshops and trainings were only attended by selective group of people.

Thus, the training and the demonstration activities were unable to cover the three selected pilot sites which the PACC commits to intervene in assessing adaptive option of impact to climate change according to the five year project duration. **Households were not reached at the three pilot sites as planned to during the time of the audit** (April, 2013).

The effects that may cause the delay of covering the three pilot sites are:

- Budgets were not fully utilised for the approved purposes;
- Project was behind its scheduled time frame; and
- Community household not aware of impacts of climate change and unable to adapt to changes.

Thus, training or demonstration activities were not fully utilised to be able to cover vulnerable communities on the pilot site. Community household do not have sufficient information to help them become resilient to the impacts of climate change in their environment

Recommendation #13:

OAG therefore **recommends** that MALD and PACC:

- Establish proper and achievable budgets to cater for all expenses related to the planned activities;
- Be mindful of the project time frame and work progressively by delivering task according to Annual Work Plan; and
- Try to cover the most habitant vulnerable communities at the three pilot sites.

- **Community Awareness**

Community awareness should cover the planned pilot sites for duration of PACC project implementation. Below are the discussions of how well PACC has been introduced to the community by responsible ministries and agencies.

- *Community Households are aware of purpose of PACC*

From an interview with PACC National Co-ordinator, awareness and introduction of the PACC Projects was carried out in early 2011 when a team undertook the Vulnerability and Adaptation Assessment (V/A). The Pelau and Luaniua House of Chiefs were consulted and was also part of the process. He also further discussed the following community involvement during the implementation of PACC at the community level:

- **Elders:** The Luaniua House of Chiefs and Pelau were consulted prior to the introduction of the project to get their approval and as focal points in the communities. These two communities from Ontong Java are hierarchically and strategically organised in that any programmes and activities, whether government or NGO's must be consulted with their House of Chiefs before moving on or carried out in their communities;
- **Committees:** The Honiara Based Lord Howe Settlement Community Chairperson and a community representative is part of PACC National Steering Committee which meets quarterly to discuss issues related to PACC project and its implementation. Just recently at the community level, lead farmers to oversee PACC/MAL Demonstrations are identified to monitor the activities at the pilot sites;
- **Church:** PACC/MALD is working closely with a Church Based Project which implements similar climate change and Food Security related activities on the pilot site. The Ministry of Agriculture Research Officers provides technical support to the work of the church based project on the pilot sites.

A further interview was also held with the Team Leader about community awareness. The Team Leader's role is outsourced by PACC to ACOM Climate Change Co-ordinator. He confirms that the project awareness was held in Luaniua and Pelau, 2010. The Team Leader had also carried out an awareness programme which covered areas such as:

- Climate Change and its impacts on Atoll Islands;
- Atoll Permaculture;
- Alley Cropping System;
- Effects of Climate Change on Subsistence Agriculture;
- Food plants of Solomon Islands;

- Improved Temotu Traditional Agriculture;
- Introduction to Agro-forestry; and
- The Role of Agro-forestry in Subsistence Agriculture.

While carrying out an interview with personnel involve in this case as discussed above, their response confirmed that awareness was conducted to educate people on the purpose of PACC.

However, audit team had discovered that the **community of Luanhua on Ontong Java had never heard of PACC intervention**, or had any awareness of training done in the community. The four Lead Farmers interviewed have stated that they work under ACOM Climate Change Project and their Team Leader had never had any help from PACC. There was one workshop done, which was co-ordinated by Team Leader but only selected people were able to participate. The four Lead Farmers also attended but did not hear about the purpose of PACC and demonstration activities. The areas covered in the workshop were the ones outline above. Thus it seems that no awareness was carried out at the beginning to introduce PACC to the community, to get the community representative introduced and, therefore, to present PACC's objective, goals and targets at the community level.

On the other hand, in Pelau, the second largest community on the Atoll of Ontong Java, they confirmed that PACC was introduced during one of their first visit and following activities were carried out in 2012:

- Established one plot at Pelau;
- Supplied planting materials to Pelau community members;
- Supplied four water tanks; and
- Supplied garden tools for Pelau community.

As from the findings above at the **community level awareness was never carried out** to introduce the purpose of PACC and only one of the communities was directly involved in its intervention. Awareness was carried out to do Vulnerability and Adaptation Assessment Report in early 2011. The biggest island of the atoll (Luanhua) never heard of PACC being introduced and its purpose into doing a pilot project at the community level.

The implications here are:

- Local Team Leaders have not clearly distinguished purpose and work of PACC from ACOM project;
- Community therefore not aware of what PACC is doing and what ACOM is doing;
- Remaining plots are yet to be planted; and
- Duplication of work may result.

From the finding as outlined on PACC activities at Pelau, compared to ACOM's, much has already been done in Luanhua community by ACOM climate change project coordinator. PACC as a result extend very limited activities with inadequate information understand by communities.

Recommendation #14:

OAG therefore **recommends** the MALD and PACC:

- Ensure that outline of service for PACC project to be clearly defined at the community level;

- Properly introduced two projects at the same time who focusing at the same issue. In this case people at the community level have a better idea on the existence of the two projects and their benefit; and
- Should aim to cover at least two atoll islands while doing demonstrations rather than one as a bench mark for annual work plan. These will result in cost incurred accordingly.

- ***Community Households have received Training in Food Security***

Community households were part of the process during the operation of the project at the community level. They were to participate or get trained to have the knowledge about their environment and how to survive in it due to the impact of climate change.

According to the PACC/MALD/ACOM programme of action the following were established:

- Four plots for ITTA-ALLEY farming system;
- Four Backyard gardens;
- Four Intercropping under coconut;
- Four ALLEY farming system; and
- Four Pit mulching.

The farm sites were established in order for the Lead Farmers to be able to have on-farm training and shared to community household. OAG had discovered that their aim of establishing plots and on farm demonstrations is due to the following set of activities contained in “*Demonstrating Sustainable Food and Water Management Practices in Ontong Java, Bonnie, J*”:

- To educate the community about sustainable soil management;
- To train the community so that they understand the practical aspects of soil management;
- The approaches outlined take time to yield the expected outcomes therefore continuous assessment and monitoring are important;
- A soil analysis kit will be procured by the Soils/Farming System section. This will be used to establish realistic pH results; and
- A detail study on the pilot site’s farming system is highly recommended to establish a benchmark for all atoll and coastal farming systems for the country.

These outline activities had the intention to carry out demonstration activities at community level. However, according to the findings identified while visiting sites, interviewing community households at the sites and directly interviewing the Lead Farmers, there were one time on farm training for Pelau community, and Luaniua community unable to acknowledge if the demonstration activities carried out were from PACC as they only aware of ACOM’s activities and programs, and MALD/PACC unable to provide any training material for their training so far.

As a result of no actual training to educate community the implication will be:

- Continuing lack of knowledge of being resilience to climate change impact;
- Community households unable to fully capture adequate information within one time training; and

- Community households lacking the ability to produce their own gardens.

With these impacts the community as a whole and across the atoll island will continue to face difficulties when the impacts of climate change has significant effect on their environment and livelihood.

Recommendation #15:

Therefore OAG recommends that the MALD/PACC should:

- Provide training at the community level on aspects of farming methods suitable for their environment;
- That ARD of MALD to continually have detail study on farming system appropriate for all atoll islands to be able to have training at the community level; and
- To recruit any relevant officers to train farmers, community household and regular monitor their gardening skills or farming method introduce.

- *Community Households are practicing what they have been taught*

Community households should be able to practice what they had been taught during their training and participations on demonstration activities and suitable farming methods introduce. Community households should able to clear plots of their own and plant varieties of crops and fruit trees according to guidelines developed in farming systems, food production and security. Further, the adaptation option for climate change risk communities is one of the ideas behind PACC intervention of pilot project. This is to enable various communities to understand, learn and practice these options were applicable.

During carrying out an interview with various personnel who are directly involved and at the community level, the following were our findings:

- Community households were not adequately trained or attend any training but use their own local knowledge where feasible;
- Community households in Luaniua learned from ACOM project demonstration activities by work of Demonstration Team Leader;
- ACOM trained Lead Farmers in Luaniua supply seeds or crops from the demonstration plots to community household to grow in their various gardens;
- There is no documentation provided to communities for training involving then in the application of available options for their adaptation to changes in climate conditions for growing of crops or food preservation; and
- Demonstration Team Leader able to provide a demonstration guide from working in collaboration with MALD/PACC for the pilot site.

From our findings a demonstration guide for the demonstration activities has been provided entitle "Demonstrating Sustainable Food and Water Management Practices in Ontong Java", compiled by Jasper M. Bonie, Ontong Java Food and Water Security Project Team. In addition to that, according to the ToR (for Quarter #3 2012), a detailed Programme of Action in delivering demonstration activities and assessments were also attached to the report. These are some of the additional achievement by PACC confirm by ACOM contract officer.

However, from findings above communities who directly involve with PACC intervention, especially Pelau community, a one-time presentation on farm training, as previously discussed, is inadequate to supplement their local knowledge of crop production and practice to be applied at the community level.

There had been no follow-up since the time of intervention Quarter #4 2012, and, during the time of the audit, Quarter #1 2013, and it is obvious that communities were:

- Still practicing their own local knowledge on growing of crops that can be easily damaged if not properly managing soils or nurturing;
- Using a common diet dried fish and coconut;
- Still dependent on families and relatives in Honiara for food and refined products and goods; and
- Shortages of food often occur.

These are to be expected result if the Programme of Action does not address the key issues appropriately and if progress is not monitored during demonstration activities at the pilot site.

Recommendation #16:

OAG therefore **recommends** that MALD/PACC to adequately deliver related tasks by:

- Providing training to enable the community to participate enthusiastically and grasps the idea of practicing the demonstration activities being provided;
- Regular site visits to monitor the progress of assignments provided to farmers or community households regarding the practical farming system being introduced; and
- Motivating community household by supplying more introduce crops, farming tools and water tanks. Thus helping them to be self-reliant and produce their own crops for their daily consumption in the long run.

5. Summary of Audit Conclusions

We conclude that there was an **absence of an effective Action Plan** for the implementation of the National Food Security Policy 2010-2015 to effectively address the strategies detail in the NFSP.

There was **no Working Group** established to ensure that the policy objectives were met and that adequate planning for addressing the impacts of climate change on AFS within the communities and atolls at risk.

The Ministry **did not focus on finalising the draft National Food Security Programme** which was still waiting review and consultation at the time of audit.

OAG noted that the structure outlined that all the component reports were delivered to the PACC Project Director via the Steering Committee. However, there was **no reporting mechanism between Lead Farmers and the PMU** to assess the demonstration activities status update.

OAG also noted that there is **lack of linking mechanism** developed for local communities, PMU and assisting agency to discuss what was happening on the demonstration site. This is essential for ensuring proper monitoring for planning purposes.

Moreover, OAG noted that there is **no documented long term plan** developed to support and budgeted for its roll out activities after the PACC programme is completed. Such a plan would enable the sustainability of PACC established activities for atolls and those at risk Islands.

OAG concluded that there is **no proper awareness and broad training** to introduce PACC and its community-based activities, for farmers and the communities which resulted in less knowledge about the programme and skills to maintain the activities that PACC introduce. This includes the community enhancing food security to reduce the impact of climate change and sea level rise on the Atolls.

Based on our audit, we concluded that the Pacific Adaptation to Climate Change Management Unit (PMU) of the Ministry of Agriculture and Livestock Development (MALD) responsible persons **do not provide adequate oversight** over the operational duties in carrying out their key activities of enhancing and enforcing the main SI Food Security Policy.

The following weaknesses were identified:

- Unidentified and unplanned key aspects of Food Security and Climate Change,
- Unclear and unachievable PMU goals and objectives for food security and climate change;
- Undeveloped Internal Policy Framework by PMU, Unclear direction and guidance to manage day-to-day operations;
- Inactive Climate Change and Food Security Working Group;
- No assurance over the sustainability for the PACC project and *ad hoc* piloted sites developments; and
- Unreliable project assessment and reporting with potential devastating consequences for the future of food security.

6. Summary of Audit Recommendations

This section of the report summarises the recommendations contained in the main body of the report.

Recommendation #1

It is **recommended** that as a priority to support the SIG to achieve its stated objectives of ensuring food security by 2015 the Working Group develop an Action Plan to actively and effectively detail how each Ministry should address each of the strategies, determined how it can achieve its short and long term goals, and identify financial and human resources to implement the strategies.

Recommendation #2

It is **recommended** that the Ministry give high priority to the finalisation of the National Food Security Programme. To ensure the objectives of the programme are achieved by 2015, efforts need to be made to approve and endorse the draft programme. This is required so that there is clear strategic and operational direction in addressing food security issues for the nation and those international and regional obligations can be fulfilled.

Recommendation #3

It is **recommended** that an active linkage with ACOM by the PMU be established to develop a supportive arrangement and follow up on the work that has established within the community. This should be sufficient to provide a conducive learning environment for farmers and the community on basic agriculture practices.

Recommendation #4

It is **recommended** that the Ministry/PMU officers should provide Monitoring and Assessment on the work that contractors has done, to assess whether or not they are carrying out the work effectively and according to the ToR.

OAG recommends that work plan activities be revised and monitored on a monthly and quarterly basis to assess progress and identify gaps in under or over utilisation of resources.

Recommendation #5

It is **recommended** that proper reporting channels should be provided so that Lead Farmers and PMU can identify and discuss issues faced at the demonstration site. Sound reporting and communication arrangements would enable PMU to discuss issues raised by Lead Farmers for approval with the steering committees

Recommendation #6

It is **recommended** that there should be a planned programme for future support for community at risk set prior to the last phase of PACC programme covering;

- Ensuring that guidelines on crop suitability, best farming practice and food preservation are completed and documented for communities at risk due to impacts of CC;
- Continually monitoring community at risk from impacts of climate change on their yearly or monthly schedule for results of activities implemented; and
- Develop long term plan to incorporate them in work plans and action plans and should be one of its ongoing priority for addressing low lying atolls.

Recommendation #7

OAG therefore **recommends** that the MALD should:

- Now be looking at preparing or arrangement on budgets if adaptation to impact of climate change as initiated by PACC is an ongoing program for the risk communities in the atolls in Solomon Islands;
- Plans to deliver developed guidelines produce by PACC to other vulnerable communities at risk in Solomon Islands should be underway and developed; and
- Seek donor fund available to further implement what PACC has not completed.

Recommendation #8

To ensure that technical officers involved have sufficient training materials to provide for introducing initiated activities at the pilot site, OAG recommends that the ministry (MAL/PACC) should-:

- Produce set of materials to assist officers or train officers involve in carrying out the demonstration so that lead farmers are able to learn and apply the demonstration skills on planting crops;
- Train Lead Farmers and provide them with sufficient materials/presentation and workshop on management of introduce crops and farming systems on the atoll; and
- Recruit at least two local community members to be trained or involved in producing materials for community participation during community awareness or training at the site.

Recommendation #9

To ensure that participating officers and demonstrating team fully complete their task on carrying out demonstration, OAG **recommends** that:

- Participating officers have sufficient material, with relevant supporting documents and material developed, before carrying out their tasks;
- Even trial tasks require guidelines while doing the demonstration of farming on the pilot site; and
- Workable material (documentation) should be developed to enable farmers to supply and share to the communities at risk.

Recommendation #10

OAG **recommends** that the ministry (MALD/PACC) should:

- Have done proper consultation at the community level for a Community Representative with some basic agricultural background to represent the community and not someone who visits his home island once a year;
- Have recruited local farmer familiar with their environment from the pilot site to coordinate demonstration activities of farming methods suitable and to regularly support local farmers and households of their changing environment; and
- Motivate the recruited expert to be permanently employed at the site to oversee climatic impacts and changes that may impact the atolls' livelihood and report it back to the ministry for support.

Recommendation #11

In such an atoll environment, OAG **recommends** that the MALD/PACC should provide:

- Adequate training to be conducted for Community Trainers and for the community Lead Farmers to enable them to develop skills in different agriculture areas, including soil, so that they can be well equipped to manage their garden crops and when distribution of crops is done, community trainer can train each household on basic skills to manage their garden crops;
- Proper consultation at the community level for skill farmers to engage them in facilitating work of PACC at the pilot site; and
- Essential materials to equip farmers manage their plots and shared amongst community.

Recommendation #12

Thus to properly progress in delivering onsite activities OAG **recommends** that the MAL/PACC should ensure:

- Proper discussion and collaboration between stakeholders and participating private organisations to properly outline set programmes and schedule and document them accordingly;
- Deliver training as proposed in accordance with the planned budget;
- Properly arrange frequent visits to the pilot site in order to oversee the progress of the demonstration and its output;
- Use the available funds appropriately in accordance with the allocated budgets; and
- Make a proper Cost-Benefit Analysis (CBA) prior to selecting the pilot site and, likewise; proper consultation must be prudently done on the remoteness of the site so that all factors are incorporated in the budget.

Recommendation #13

OAG **recommends** that MALD and PACC:

- Establish proper and achievable budgets to cater for all expenses related to the planned activities;
- Be mindful of the project time frame and work progressively by delivering task according to Annual Work Plan; and
- Try to cover the most habitant vulnerable communities at the three pilot sites.

Recommendation #14

OAG **recommends** the MALD and PACC:

- Ensure that outline of service for PACC project to be clearly defined at the community level;
- Properly introduced two projects at the same time who focusing at the same issue. In this case people at the community level have a better idea on the existence of the two projects and their benefit; and
- Should aim to cover at least two atoll islands while doing demonstrations rather than one as a bench mark for annual work plan. These will results in cost incurred accordingly.

Recommendation #15

OAG recommends that the MALD/PACC should:

- Provide training at the community level on aspects of farming methods suitable for their environment;
- That ARD of MALD to continually have detail study on farming system appropriate for all atoll islands to be able to have training at the community level; and
- To recruit any relevant officers to train farmers, community household and regular monitor their gardening skills or farming method introduction.

Recommendation #16

OAG **recommends** that MALD/PACC to adequately deliver related tasks by:

- Providing training to enable the community to participate enthusiastically and grasps the idea of practicing the demonstration activities being provided;
- Regular site visits to monitor the progress of assignments provided to farmers or community households regarding the practical farming system being introduced; and
- Motivating community household by supplying more introduce crops, farming tools and water tanks. Thus helping them to be self-reliant and produce their own crops for their daily consumption in the long run.

7. Addendum

7.1 Introduction

The Performance Audit Report on “*Climate Change Adaption and Disaster Reduction Management*” was completed over four years ago.

For the reason identified in the Executive Summary, it was felt useful to finalise and issue the report. This work was undertaken in July and August 2018.

The report was undertaken initially as a result of the likely catastrophic consequences of climate change and rising sea levels to both the inhabitants of both low lying atolls and the coastal fringes of the higher islands.

These potential consequences remain as serious today, if not more so, as when the initial report was undertaken. Thus, it remains imperative that the government has effective plans in place to minimise the effects of climate change.

This section of the report provides the up to date situation with regards Disaster Reduction Management.

7.2 Final Report of the Pacific Adaptation to Climate Change Project

The 2014 film “Vital Garden” provides an excellent summary of the project and it is recommended that it be viewed by any reader of this report.

The project finished in 2015 and there was no extension or follow up project undertaken.

The Handover and Closing Report prepared by the PACC Regional Project Management Unit, SPREP, in 2015 recommends:

“Mainstreaming:

Support should be provided to the (MoE/MECDM – Ministry of Environment Climate Change Disaster Management and Meteorology) so that future interventions that are linked to CC are analysed a priori before formulation takes place to enable them to be fully integrated and in accordance to CC policy and action plans.

Communication:

Technical guidelines should be shared with other organisations and relevant ministries working within the area of food security and climate change at the national, provincial and community level or exported to other atoll countries as soon as they are produced.

Impact

Future interventions must take into account Governments’ capacity to institutionalise success stories and allocate technical and material resources to the implementing departments ensure continuity.

Dialogue should be engaged with Agriculture Extension Offices and established provincial climate change offices in the provinces to which PACC Projects sites are located within their jurisdictions, this includes, NGOs and Faith Based Organisations who have long term programs on the ground for taking over PACC success stories and divulge them to other atoll communities in the Solomon Islands.

Sustainability

Changing mind-sets, from communities who relied heavily on marine resources for food sources and income generating opportunities to look at agriculture, should focus on younger generations.

To enhance sustainability, lead farmers should receive on the main land an extensive training and hands on field demonstrations so that they can advise farmers on isolated atolls. Future projects should facilitate short-term agriculture scholarship/trainings for interested young peoples from the atolls at various institutions, NGOs and Rural Training Centres/Vocational Schools (e.g. SINU, Don Bosco RTC etc.) This should be negotiated with Government (e.g. possible remuneration / function as an extension officer... as on Temotu).

PACC should link up with Provincial Agriculture Extension Offices and Research Stations Offices as an exit strategy; The Extension Offices is being funded on a regular basis for activities focussing on DRR, food security, climate change resilience; they are also active on isolated atolls and their primary CC expert consultant is the same as for PACC. (Note: ACoM CC programmes are not regular funded, they also access donor funding support: Except for Agriculture Extension Offices which received regular government funding or even donors)."

7.3 Government Response to the Recommendations.

Unfortunately, none of the recommendations seem to have been implemented. Indeed, there seems to be no "institutional memory" of the project whatsoever in the relevant ministries due to staff turnover and lack of adequate handover procedures.

7.4 Government Policies

The project helped the government develop a National Climate Change Policy 2012 to 2017. This needs updating.

The government has no Food Security Policy as such. This is covered by the National Agriculture and Livestock Sector Policy 2009 – 2014. It is **recommended**, that a separate Food Security Policy is developed for the country.

7.5 Summary

Whilst not wishing to be alarmist, climate change and the resultant rise in sea level poses a severe threat to the existence of Solomon Islands as a viable country.

This is not just a threat to the low-lying atolls but to the whole country as, even in the high islands, the vast majority of people live around the coast.

This is not something which will happen a long time in the future but is happening now. As this addendum was being drafted an article appeared in the Sunday Star (26 August 2018) indicating the problems currently being posed by coastal erosion at Visale. The author, Lesley Sanga states:

*"I have decided to write about the effects of the sea level rise ... **which is happening now** (my emphasis) ... coastal erosion is moving further into the station, near the clinic and church building."*

Honiara, where the bulk of the country's infrastructure is located was once under the sea and, even now, is barely above sea level. The sort of rises in sea level predicted will see our capital under water once more unless the government takes long term action.

The **National Climate Change Policy** needs to be updated.

There needs to be a **Food Security Policy** developed.

There needs to be sufficient budget provision from Parliament to ensure effective policies exist and to ensure that ministries have sufficient resources to implement them effectively and in full.

Solomon Islands cannot stop the rise in seas level but it can become one of the best prepared countries in the world to deal with its consequences and ensure that its people can not only survive but prosper in the post-climate change world.