

## Mid Term Review

## Final Report

# Mangrove Ecosystems for Climate Change Adaptation & Livelihoods (MESCAL)



**11 March 2013**

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## LIST OF ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
EU	European Union
GEF	Global Environment Facility
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
IUCN	International Union for Conservation of Nature
MARSH	Mangrove Rehabilitation for Sustainably-Managed, Healthy Forests
MESCAL	Mangrove Ecosystems for Climate Change Adaptations and Livelihoods
MFF	Mangroves for the Future
MOU	Memorandum of Understanding
MTR	Mid-Term Review
NCC	National Country Coordinators
ORO	Oceania Regional Office
PIC	Pacific Island Country
PMI	Pacific Mangrove Initiative
PMU	Program Management Unit
SPC	Secretariat of the Pacific Community
SOPAC	Pacific Islands Applied GeoScience Commission
SPREP	Secretariat of the Pacific Regional Environment Programme
SWOT	Strength Weakness Opportunity and Threats
ToR	Terms of Reference
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

## EXECUTIVE SUMMARY

**Background:** The Project, Mangrove Ecosystems for Climate Change Adaptations and Livelihoods (MESCAL), coordinated by the International Union for Conservation of Nature (IUCN) Oceania Regional Office (ORO) is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). MESCAL involves five countries: Fiji, Samoa, Solomon Islands, Tonga and Vanuatu. The project is based at the IUCN ORO in Suva, Fiji within the Water and Wetlands Programme. It is managed by a Project Management Unit (PMU) currently consisting of one coordinator and three support staff. MESCAL started in December 2009 with the country component ending December 2013, although the IUCN component is extended to December 2014.

A mid-term review (MTR) was carried out from 22 January to 11 March, 2013 by Dr Kenneth T MacKay, an environmental consultant with considerable experience and familiarity with the Pacific Islands, mangrove projects, monitoring and evaluation, , and.

The review consisted of a desktop survey of key documents, travel to Fiji for discussions with IUCN Oceania staff and the Programme Management Unit (PMU), followed by field visits to MESCAL country teams and sites in Vanuatu, Samoa and Fiji. The consultant then attended the MESCAL Annual Planning Meeting at IUCN ORO where he discussed preliminary findings and received feedback, administered a questionnaire and sent a questionnaire via email to other partners, consultants and stakeholders.

Limitations' of the review included: visits to only three of the five countries; a low response rate to the emailed questionnaires; and a paucity of available reports.

MESCAL is an interdisciplinary applied research and development project aimed at helping countries invest in the management of mangroves and associated ecosystems for improved livelihoods and adaptation to climate change. The goal is to increase resilience to climate change for the peoples of the Pacific Island Countries (PIC) through adaptive co-management of mangroves and associated ecosystems in each of the five selected countries. The MESCAL activities include collection of national baseline data, preparation of national maps, identification of demonstration sites, collection of biodiversity and social data at these sites, governance, mangrove valuation, carbon sequestration, and awareness, communication and learning.

MESCAL has worked directly with governments: a Memorandum of Understanding (MOU) was signed with each Ministry responsible for Environment in the five countries; funds were transferred directly to the national financial department or ministry. In each country there is a

National Country Coordinator (NCC) based with the host Environment Department. The NCCs were hired in consultation with government officials and their compensation level was determined by discussion with the host departments.

A number of international or regional consultants have been engaged to backstop the national programs in biodiversity assessment (floristics and fauna); Geographic Information System (GIS) and mapping; communication; and socio-economics and valuation. They have assisted in in-country training, data collection and analysis, and report preparation. There are current discussions on potential consultancies for measurement of carbon in the mangrove ecosystem in one country (Fiji or Solomon islands) and socio-economic valuation in Solomon Islands.

**Issues:** The project suffered from early PMU staffing issues, an overambitious and confusing work plan, and delays in negotiating the country arrangements. There was also misunderstanding among countries and the consultants over methodology and preparation of reports. There were also issues related to the NCCs who had a number of challenging tasks to perform including collaboration within government, collaboration with communities, and coordinating and reporting. These tasks were not clearly identified at the project onset and were not considered in NCC hiring and capacity building.

All of these have delayed the achievement and reporting of results. Recent improvements in project management and work in progress suggest many of the results will be achieved, however, there will need to be continuing priority setting and a strict adherence to established timetables to achieve these goals.

**Achievements:** MESCAL has deliberately chosen to work closely with and through governments. This was identified as a project strength as it increased ownership and allowed a focus on a national agenda. The strength of the involvement varied by country and there were constraints due to the government pace and infrastructure, staff changes, delays in financial payments and accounting, separate agendas by other government agencies, and community suspicion of government staff. However, this would seem to be outweighed by the positives that included: increased potential for inter-departmental and inter-ministry cooperation; increased commitment of government staff; internal capacity building; close access to staff involved in policy and legislation (this may be the only way to implement changes in policy and legislation); and increased potential for sustainability and mainstreaming.

The major project achievements that have been achieved or are expected to be achieved by the project end are indicated below.

Mangroves areas in Samoa and Tonga have been mapped and indicate a substantial greater mangrove area than previously reported. There is also potential to complete the mapping for Fiji and Solomon Islands, and possibly Vanuatu through collaboration with SPC-SOPAC. There has also been an increased number of mangrove species reported for each country.

One mangrove demonstrates site (Vanuatu has two) has been established in each country. Biodiversity surveys for flora and fauna have been carried out using similar methods that will allow for cross country comparisons, although there have been issues of the appropriateness of the methods for local conditions, data ownership, and Fiji's use of different methods. Additional site surveys for traditional users and socio-economics are ongoing or about to be initiated.

The legislative and policy reviews are being carried out by IUCN ORO and there is considerable concern that the reports are well behind schedule. The data has been gathered and there is a timetable for presenting the drafts to the countries for their comment that must be adhered to.

Fiji has made major advances in mangrove governance that include; reactivation of the Mangrove Management Committee, achieving strong support from the Ministry of Lands (the ministry that gives permits to release mangrove land for development/conversion), and ongoing revisions to the National Mangrove Management Plan.

Solomon Islands have implemented a community co-management plan at the demonstration site that is currently being finetuned. Additional management plans are expected for the other country demonstration sites.

Mangrove awareness activities have been initiated in all countries. The activities include posters, school and community awareness, media events, preparation of a DVD on traditional use in Solomon Islands, and a Fiji countrywide awareness campaign in conjunction with WWF (launched in early March 2013). In the next few months the completion of reports and ongoing communication planning in line with the communication strategy will increase the amount and the effectiveness of the awareness.

**Future:** At the start of this MTR there was no mention of a possible Phase 2. As the review progressed a number of partners and stakeholders queried the possibility of follow up. This along, with successes and potential, indicates the need for a follow up phase and the need to integrate follow up activities with current and planned conservation and mangrove projects. The review makes some suggestions for a possible Phase 2.

## **Recommendations**

### *Model:*

1. The approach of working through government systems has worked in spite of difficulties of the PIC government system. This approach could be continued in future projects and would be complimentary to the USAID MARSH Project.

### *Work Plan (Regional & National)*

2. The PMU and NCCs need to continue to focus on what can be achieved, what are the priorities and outputs, establish deadlines, and who are responsible.

### *Reporting*

3. It is essential that the PMU and NCCs clearly define what reports can be achieved, what are the priorities and outputs, who are responsible, and establish deadlines. The PMU will need to closely monitor the completion schedule. Additionally once a report has been produced the PMU and NCCs need to ensure there is awareness raising around the report.

### *NCC Capacity building*

4. Future projects should anticipate the needs of the in-country coordinators and considered these in hiring and capacity building.

### *Finances*

5. The PMU must put in place a process to track remaining country funds and reallocate funds if necessary to countries that can utilize the funds.
6. The PMU needs to decide what are priority activities to be carried out during the IUCN Extension post December 31, 2013.

### *National Mapping*

7. The PMU must give high priority to follow up on with countries and SPC-SOPAC (Dr Wolf Forstreuter) to complete mangrove mapping of at least two more countries.

### *Legislation and Policy*

8. IUCN Management must ensure priority is given to completing the legislation and policy country reports and the PMU needs to closely monitor the completion schedule and in-country consultation.

9. The PMU needs to determine the priority for which countries will have national policies or laws drafted and a timetable.

#### *Socio-Economics*

10. The PMU should encourage the socio-economic consultants to simplify the methodology and keep in close touch with other technical experts who could assist with potential valuation data. Additionally they should ensure that gender issues are addressed in their reports.

#### *Demonstration Site Reports*

11. The paucity of results from the demonstration site must be improved as indicated in recommendation 3. Additionally there need to be greater communication between the NCCs and country teams and the consultants backstopping those activities.

#### *Awareness*

12. The PMU and NCCs needs to continue the efforts to publicize the project outcomes and increase awareness to a wide but targeted audience.
13. The PMU and external consultants are encouraged to continue their efforts to involve MESCAL outputs in the upcoming Pacific Science Congress.
14. Case studies of approaches used by Fiji in targeting National and Provincial governments, and Solomon Islands in target communities could be documented to indicate different approaches to the top-down versus bottom up approaches in MESCAL.

#### *Phase 2*

15. IUCN could consider ways of assisting countries in the end of project transition to ensure some MESCAL activities continue.
16. IUCN should consider the possibility of a Phase II project to follow up MESCAL including possible components as mentioned in the MTR Report.
17. IUCN should continue to expand and strengthen the Pacific Mangrove Initiative as an umbrella for Pacific mangrove projects thus joining a number of linked projects into a Mangrove Programme.

#### *Future Projects*

18. IUCN needs to ensure clarity on data ownership in contracts when consultants are assisting with country data.

19. IUCN needs to ensure there is sufficient training or capacity building of the in country staff to meet the coordination challenges.
20. IUCN needs to ensure there is transparency about the process of fund allocation to countries.
21. IUCN needs to ensure in future projects and contracts that the disbursement of funds is clearly tied to deliverables.

# 1. INTRODUCTION

## 1.1. Terms of Reference for the mid-term review

This mid-term review (MTR) is to provide guidance to the International Union for Conservation of Nature (IUCN) in the implementation of the project until completion. A detailed Terms of Reference (ToR) is given in Appendix 1. The objectives of the review were to:

- Review the project implementation structure (both Program Management Unit (PMU) and in-country) – strengths, weakness and identify opportunities for strengthening;
- Assess the projects' progress and achievements against the agreed project outcomes;
- Provide recommendations on how best to proceed into the final stages of the project implementation.

The work of the Review Mission included the following tasks:

Reviewing the management structure and implementation arrangements including: i) IUCN Oceania Regional Office (ORO), ii) Project Management Team (PMU), iii) Country Teams, v) consultants, and vi) others;

Assessing and evaluating major developments related to the country projects impacts on national mangrove management policies, institutional and management structure and the mechanisms for implementation at the national level;

Assessing whether the different project components and activities proposed to achieve the objectives seem to be appropriate, viable and responsive to the conceptual institutional, legal and regulatory settings;

Assessing project progress and monitoring;

Reviewing financial planning and expenditure;

Reviewing expenditure at national level including recommendations on enhancing disbursement; and

Assessing the sustainability of the project including identification of key actions to enhance sustainability.

## 1.2. The approach

The review was carried out from 22 January to 11 March, 2013 (see Appendix 2 for review program) by Dr Kenneth T MacKay, an environmental consultant with considerable experience and familiarity with monitoring and evaluation, the Pacific Islands, and mangrove projects,

The review consisted of an initial desktop survey of key documents, travel to Fiji for preliminary discussions with IUCN Oceania staff and the PMU, followed by field visits to MESCAL country teams and sites in Vanuatu, Samoa and Fiji. A list of partners and stakeholders was assembled (Appendix 3) based on input from the PMU and National Community Coordination (NCCs). This list served as the basis for determining who to interview and whom to send questionnaires. The consultant then attended the MESCAL Annual Planning Meeting at IUCN ORO where he gave two power point presentations on preliminary findings and received feedback, and discussed with partners, technical consultants, NCC's and other national staff. A Strength Weakness Opportunities and Threats (SWOT) questionnaire was administered to the meeting attendees and a separate questionnaire was sent via email to partners, consultants and stakeholders. Copies of the questionnaires are given in Appendix 4. The results of the questionnaires are incorporated into the relevant sections while the complete results of the SWOT Analysis are given in Appendix 5.

Interviews in person (one person was interviewed via Skype) were conducted using a semi-structured interview approach with key points being feedback to the interviewee. The response rate was low to the questionnaire sent via email to key partners and stakeholders in spite of two reminders being sent. However, the questionnaire data was used to supplement, reinforce or challenge information obtained from the interviews. The information gathered was synthesized and a draft report presented to IUCN, 28 February with comments being received at the meeting and subsequently, and a final report prepared and presented to IUCN 11 March 2013.

A total of 53 IUCN and MESCAL staff, partners and stakeholders were contacted (Appendix 3), 39 were interviewed in person. Questionnaires were sent to 45 people with nine replies (and three additional comments) received and the SWOT questionnaire was administered to 12 people.

## 1.3. Limitations

Due to time constraints it was only possible to visit three of the five countries. Tonga and Solomon Islands were not visited. There was a low response rate to the emailed questionnaires in spite of additional follow up. There was a zero response rate from Tonga that was unfortunate

as Tonga had not been visited as such the appraisal of the Tonga work is not complete. Additionally as detailed in 3.1.6 there was a paucity of available reports so it was not possible to determine completeness or quality of many activities.

## **2. Mangrove Ecosystems for Climate Change Adaptations and Livelihoods (MESCAL)**

### **2.1. Background**

MESCAL coordinated by IUCN ORO is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under a resolution of the German Bundestag in Bonn. The project involves five countries: Fiji, Samoa, Solomon Islands, Tonga and Vanuatu. The MESCAL project was signed by the German Government and IUCN in December 2009, launching a \$3.1 million (US) project with 40% for country activities and 60% for PMU and regional activities. The country component is to be completed at the end of 2013 while the IUCN component has received a no cost extension to December 2014.

MESCAL is an interdisciplinary applied research and development project aimed at helping countries invest in the management of mangroves and associated ecosystems for improved livelihoods and adaptation to climate change. The project goal is to increase resilience to climate change for the peoples of the Pacific Island Countries (PIC) through adaptive co-management of mangroves and associated ecosystems in each of the five selected countries.

The MESCAL activities include demonstration projects, governance, economics, carbon sequestration, knowledge and information, communication and learning. The specific goals are:

1. Collection of national baseline information about climate change scenarios, use and values of mangroves and associated ecosystems;
2. Development of co-management plans of mangroves for adaptation to climate change governance;
3. Improved conservation and/or restoration of mangroves at selected demonstration sites;
4. Increased awareness, advocacy and capacity development

## 2.2. Project management structure:

### 2.2.1. IUCN Oceania Regional Office & Project Management Team;

MESCAL is based in the IUCN ORO, Suva, Fiji and is located within the Water and Wetlands Programme. Within IUCN MESCAL is managed by the PMU currently consisting of one coordinator and three support staff. The list of current and past staff is given in Table 1. It is obvious from this table that there has been substantial senior staff turnover in the project with the implications being discussed in 3.1.1.

**Table1: MESCAL Staff 2009-2013**

Name	Staff Position	Role	Dates
Padma Lal	Chief Technical Advisor, ORO	Developed proposal, ongoing technical assistance & coordination	2009-March 2011
Tim Nolan	MESCAL Project Manager	Initiated implementation	April 2010-April 2011
Etika Rupeni	Round Table Consultant	Acting MESCAL Coordinator	April 2011- Aug 2011
Milika Sobey	Water & Wetlands Programme Coordinator	MESCAL Coordinator	August 2011-to present
Sani Valati Navuku	MESCAL Coastal Ecosystem Management Officer	Developing MESCAL country policy	April 2010-Jan 2012
Ruci Lumelume	MESCAL Coastal Ecosystem Management Officer	Developing MESCAL country policy	June 2012 to present
Neehal Khatri	MESCAL Project Support Officer	Project management assistance	Aug 2009- Dec 2010
Martina Lee	MESCAL Project Support Officer	Project management assistance	Jan 2011-Dec 2012
Vilame Waqalevu	MESCAL Technical Officer		June 2012 to present
Epeli Nakautoga	Programme Assistant		January 2013

### 2.2.2. Country Teams;

MESCAL has used a model of working directly with governments. Memorandum of Understanding (MOU) have been signed with each Ministry responsible for Environment in the five countries. The funds have been transferred directly to the national financial department or to the National Finance Ministry. In each country there is a National Country Coordinator (NCC) based with the host government Department responsible for Environment. A list of the coordinators and their host Department is given in Table 2. The NCCs were hired in consultation with government officials and their compensation levels were determined by discussion with the host departments. There has been no change in the NCCs to date although two or three may be changing positions in the near future. The NCCs are supported by other government staff (often not paid by the project) and occasional short term consultants (paid from country funds).

**Table 2:** List of National Country Coordinators

Name	Country	Agency
Neema Nand	Fiji	Department of Environment, Ministry of Local Government, Urban Housing & Environment
Malama Momoemausu	Samoa	Ministry of Natural Resources & Environment
Sione Tukia	Tonga	Ministry of Environment & Climate Change
Hugo Tafea	Solomon Islands	Ministry Environment, Climate Change, Disaster Management, & Meteorology
Rolenas Baereleo	Vanuatu	Department of Environmental Protection & Conservation

### 2.2.3. Consultants:

A number of international or regional consultants have been engaged by the PMU to backstop the national programs in biodiversity assessment (floristics and fauna); Geographic Information Systems (GIS) and mapping; communication and awareness, and socio-economics and valuation. They have assisted in in-country training, data collection and analysis, and report preparation. Table 3 gives a list of these consultants. There are current discussions on potential

consultancies for measurement of carbon in the mangrove ecosystem in one country (Fiji or Solomon Islands) and socio-economic valuation in Solomon Islands.

**Table 3: List of MESCAL Regional Consultants**

<b>Organisation</b>	<b>Name</b>	<b>Task</b>	<b>Country</b>
James Cook University	Prof Norm Duke	Technical back stopper for floristics work	All
James Cook University	Prof Marcus Sheaves	Technical back stopper for Fisheries work	Fiji
James Cook University	Ross Johnston	Filled in for Marcus Sheaves on field visits to countries	Other 4 countries
SPREP	Paul Anderson	GIS & Mangrove mapping back stopper	Samoa and Tonga
USP	Dr Vina Ram-Beddesi	Consultant socio-economic	Samoa
CRIOBE	Nicolas Pascal	Resource economist consultant	Vanuatu
	Ashwini Prabha	Prepared Communication & Awareness Strategy	All

### 3. FINDINGS

#### 3.1. Project management structure:

##### 3.1.1. PMU

In the first 18 months of the project there was a high turnover of staff responsible for IUCN coordination and implementation of the project with four people being involved (Table 1). Additionally there were indications of internal conflict as to the focus of the project. Delays also occurred due to the need for in-country consultation on MOUs, the selection of the NCCs and their salaries. The delays were further exacerbated by a PMUs request to countries to use project management software that was not available to them.

The end result was: conflicting advice to the country teams; some commitments being made or perceived and then not being honoured; confusion in focus; a confusing work plan at both regional and national level; delays in signing the country agreements; delays in the in-country start-ups; and subsequent delays in achievement of results.

These issues were clearly articulate by a wide range of staff, partners, stakeholders and consultants. It clearly has delayed the achievement of results, added confusion, and a loss of early momentum. It is also a reminder to IUCN ORO senior management that proper staffing and staffing decisions need to be made to ensure that projects are managed effectively.

There have also been issues that will be discussed in 3.2.2 on the delayed delivery of the legislation and policy results that are related to IUCN and PMU staff changes and decisions.

The questionnaires explored issues of project planning, communication, collaboration and capacity building with those most closely associated with the projects. The results presented in Figure 1 reinforce the weakness of Project Planning (over 50% of respondents indicating it was inadequate or fair), while over 75% indicated that internal communication, collaboration and capacity building were good to excellent.

However, responses from a limited sample of partners (Figure 2) indicated there was some lack of clarity in roles and tasks of partners and financial administration (with about 50% indicating fair or inadequate), and that communication with partners was weak (70% fair or inadequate).

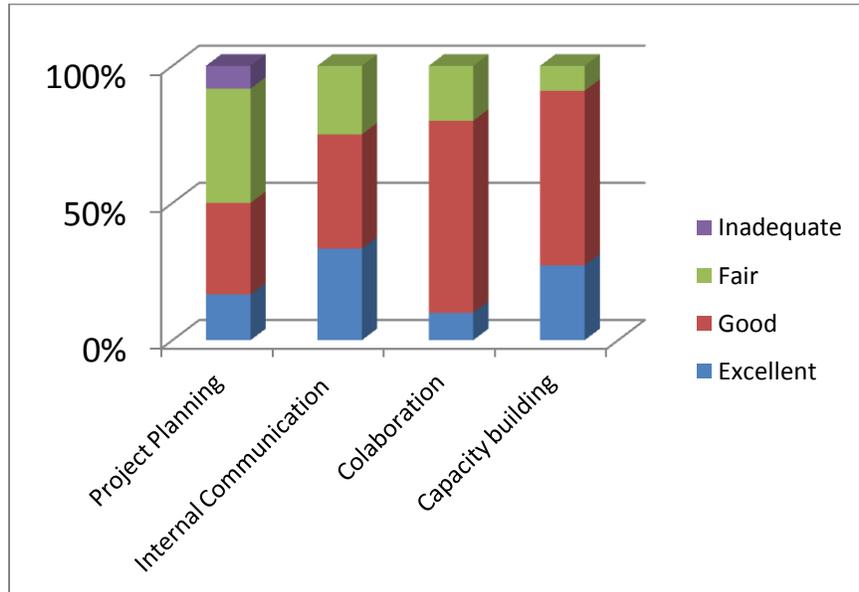
There, however, are clear suggestions that the changes made in 2011 to appoint the Water and Wetlands Programme Coordinator to also coordinate MESCAL have resolved many of the previous issues and put the project back on course.

#### **Quotes from Partners & Stakeholders**

- *The project has been plagued by staff turnover at the leadership level, which has hampered the ability to achieve.*
- *Lack of project implementation - many delays at the beginning of the project resulted in late on-ground implementation of activities.*
- *Poor project planning – vague objective that was not likely to produce consistent or reliable outcomes.*

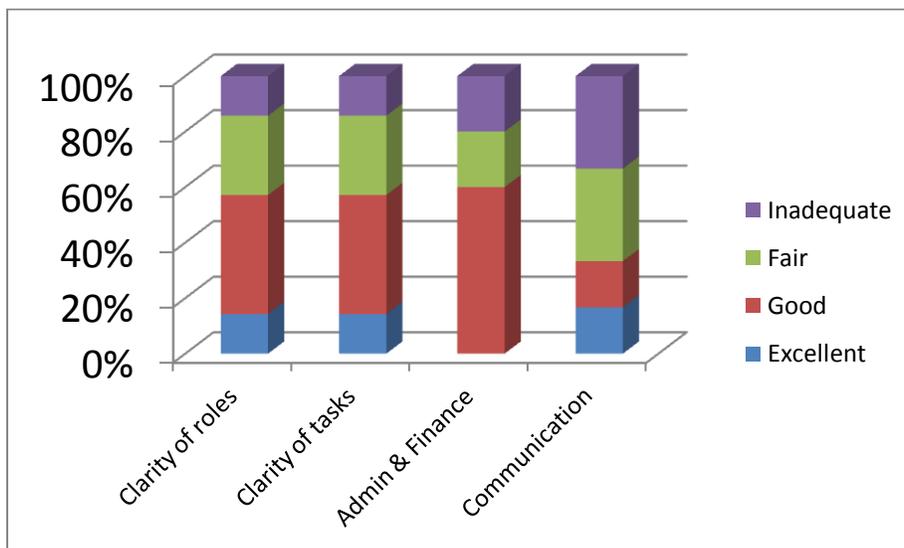
**Figure 1:**

**Response of Attendees at MESCAL Work Plan Meeting February 2013 (N=12 except for collaboration where N=20 as partners & stakeholders response combined)**



**Figure 2:**

**Response of Partners & Stakeholder to Questionnaires on Project Management Issues (N=7)**



### 3.1.2. Country Teams;

As indicated in 2.2.2 MESCAL has deliberately chosen to work closely with and through governments. Most respondents to the SWOT questionnaire (Appendix 5) indicated this as strength as it increased ownership and allowed a focus on a national agenda; however, this is not without its problems. The strength of the involvement varied by country: Fiji had a very strong and supportive involvement; whereas Samoa and Solomon Islands indicated some weaknesses in this relationship. In all countries there were constraints due to the government pace, infrastructure, staff changes, delays in payments and accounting, and other government agencies had their own agenda's and work plans and were reluctant to collaborate. In addition in most countries government is not viewed favourably by communities and in four cases in two countries project field works were chased away while carrying out mangrove assessment.

However, this weakness would seem to be outweighed by the positives that included:

- Increased potential for inter departmental and inter ministry cooperation allowing leverage of staff and equipment from other departments;
- Increased commitment of government staff;
- Increased internal capacity building;
- Close contact with policy and legal staff (that may be the only way to implement policy and legislative changes); and
- Increased potential for sustainability and mainstreaming.

In the case of Fiji, Departments of Fisheries and Forestry have included mangrove activities at the demonstration site in their 2013 work plans, and the Ministry of Land Management has included mangrove management in their 2013 Corporate Plan. In these cases the mangrove work is thus involved in work plans, eligible for internal funding and results have to be reported to senior management, which strongly enhancing sustainability of project results.

### 3.1.3. National Country Coordinator (NCC)

The NCCs were hired in consultation with the National Environment Departments and based in these departments. The NCCs have some unique challenges that are not normally required of other government staff. These challenges include:

- need to collaborate with other government agencies to obtain buy in and commitment to participate in MESCAL activities;
- need to be sensitive to and negotiate with communities;
- need to coordinate activities; and

- need to coordinate, facilitate or write project reports.

One NCC was very good in the multi roles while others appeared weaker in coordinating activities and coordinating within government and community. It was not clear if these challenges were anticipated and considered in recruitment of the NCCs, but there was little training or capacity building of the NCCs to meet these challenges.

*Capacity building and mentoring for the co-ordinator from the regional management of MESCAL was patchy and consequently gaps appeared, despite best intentions.*

#### 3.1.4. Consultants

The consultants brought international expertise, new methodologies and sampling techniques, and supplied or complimented in-country expertise (especially in GIS and mapping). They also proposed a common cross country methodology and cross country analysis in the floristic and fauna analysis and supplied for each country a useful survey protocol.

The weaknesses included limited in country field time partially determined by the budget (some respondents indicate the budget was too low) and a few cases of non familiarity with local conditions. There was misunderstanding on who was responsible for reporting on the data, and considerable delay in analysing the data partially as a result of ownership issues and protracted correspondence on data quality.

Capacity building was unequal. There was very little in the valuation-socio-economic methodology. In the biodiversity area in some countries it was not possible to have field practice in a mangrove environment, additional there was confusion on whether the training was intended for only those to do the field work or more broadly to increase capacity within the relevant departments. There was difficulty in three countries (Samoa, Solomon Islands and Tonga) in getting fisheries involvement in the training and monitoring.

*Improved in country capacity building could have been improved by getting more buy in from the right people in some sectors (i.e. fisheries) rather than using external consultants unfamiliar with the environment*

The standardised methodology was intended to allow cross country analysis and also equip the countries with new methodologies. However, there were issues of adaptation to local conditions, the lack of ability to build on previous monitoring (Vanuatu and Tonga), while Fiji decided to use different approaches. For mangrove assessment Fiji opted for previously used forestry approaches that were not compatible with the recommended standard methods used in other countries. In fisheries they used two approaches and two teams one using the MESCAL

recommended methods and the other Fiji specific methods and gear. There is a suggestion that the Fiji fisheries methods were more appropriate to the site. There is, however, the opportunity to compare the two methods although for mangrove measurements, cross site comparisons may be difficult.

There was also disagreement among the international experts on which mangrove assessment method is the most appropriate to meet future requirements of measuring carbon content and carbon sequestration.

Additional concern was expressed on the socio-economic and valuation methodology by both respondents and the MTR reviewer; the methodology may be too complex and the data is being collected too late in the project.

#### 3.1.5. Work plan

The relevance of the work plan was assessed through questionnaires and through the face to face interviews. In general at the country level there was a strong indication that the legislative and policy review had the highest priority. Issues around climate change had much lower priorities with most respondents indicating these were being addressed by other climate change projects. Most of the partners (85%) who completed the questionnaires (Figure 3) indicated that MESCAL was not addressing the priority issues related to mangroves. This would appear to be due to a lack of feedback, reporting and awareness raising as in most cases the partners and stakeholders identified priorities that are being addressed by MESCAL.

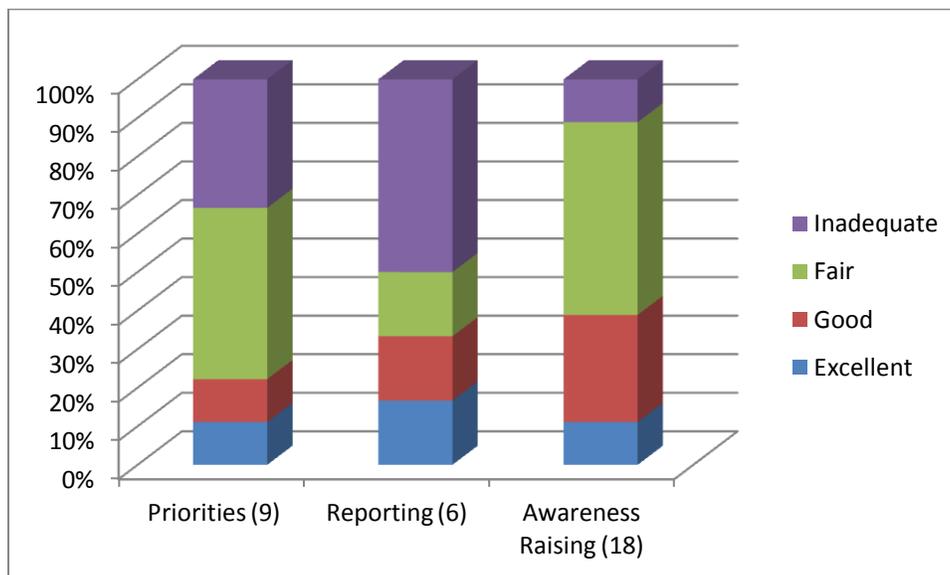
The Regional work plan was initially designed during the proposal development and then subsequently used as a template by most countries to develop their own country specific work plan. The MTR reviewer assesses the original regional work plan as overambitious, complicated, and repetitive, with poorly formulated indicators that measure activities rather than results.

The Country level work plans as a result are confusing. Some countries chose not to do some activities related to the national level (Fiji and Vanuatu) and most countries have confused national and demonstration site activities. In the analysis of the results (3.2.3) I have tried to simplify the work plan.

Figure 3:

**Response of Partners & Stakeholders to questions of relevance to mangrove priorities, reporting of results and awareness raising.**

(N in parenthesis and for awareness raising includes PMU & NCC respondents)



### 3.1.6. Reporting

A major frustration of the reviewer has been the lack of completed reports. This was echoed by comments from MESCAL participants, partners and stakeholders. Lack of achieving outputs was identified as the greatest threat to achieving the MESCAL objectives (Appendix 5), while 75% of partners identified the lack of reporting and awareness raising as weak (Figure 3).

This lack of reporting appears to be the result of early delays in completing country agreements, confusion on who is reporting the results (consultants, NCCs, or PMU), and delay in feedback between consultants and countries on the biodiversity studies. Nevertheless it has been impossible to assess the quality of the results or the degree of completion. It is very clear that there needs to be an immediate improvement in reporting.

- *In all honesty, we have not received any report on the update of any activities for the project, based on the lack of update information for us, then it is **INADEQUATE**.*
- *MESCAL should identify the 2 or 3 most likely to be achieved outcomes for the rest of the project, that are already underway; ensure these are achieved effectively and not scatter resources too widely. The coordinator should be well supported by the regional team and government to do this.*

There was also concern particularly in Fiji in terms of ownership of the data and reluctance to make it available to the external consultants. In many countries there is an agreement with the community that the data be shared with them and the release of the data be subject to their approval. This has to be respected by external consultants. However, once this is achieved the Country MOUs clearly indicate joint ownership.

*8.2 the rights to and use of intellectual property created under this contract shall be jointly owned by the parties.*

*8.4 Where a third party sub-contractor is involved in implementation of the project activities, its rights over outputs from its activities shall be agreed during the sub-contract negotiation and this shall be done in consultation with IUCN.*

However, the MOU with the consultants is not as clear. It states IUCN is *the inherent copyright owner* and that publishing the data requires *the specific approval of the Regional Director* but does not specify any agreement with countries where they are the co-holder of the data. This confusion did result in a delay in sharing biodiversity data between countries (at least for Fiji) and the consultants. The issue did appear to be partially solved during the February Planning Meeting but in future IUCN should ensure the issue of sharing and ownership of data is clear.

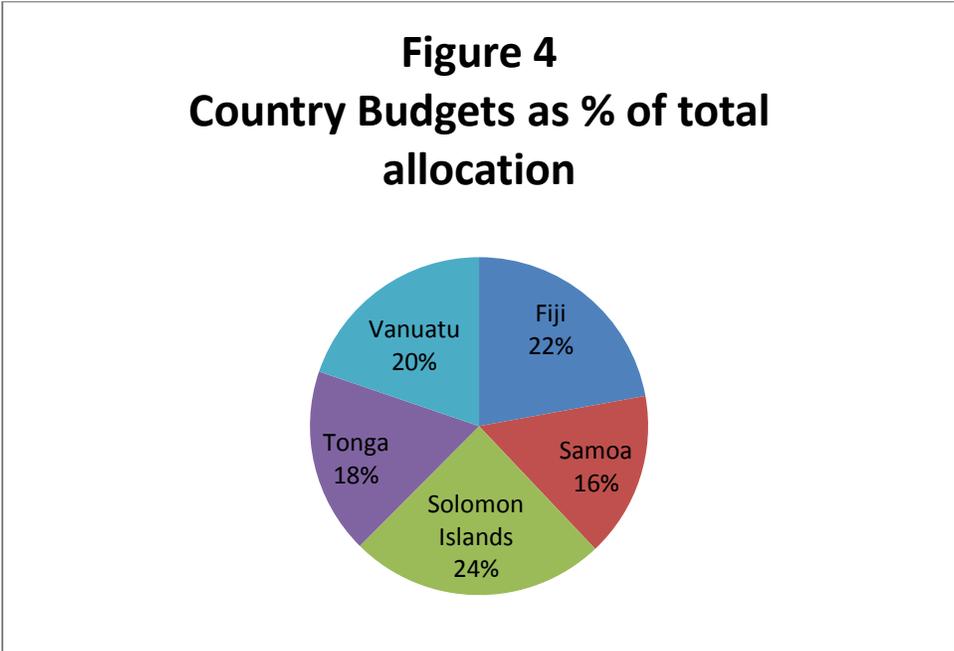
#### 3.1.7. Financial Management

The MESCAL budget was \$3.1 Million (US) with 60% for PMU and regional activities, and 40% for Country activities. IUCN also charges a 10% cost recovery on the country funds. The PMU budget covered PMU staff, regional and IUCN consultants who backstopped national activities, capacity building and planning meetings, and IUCN overheads.

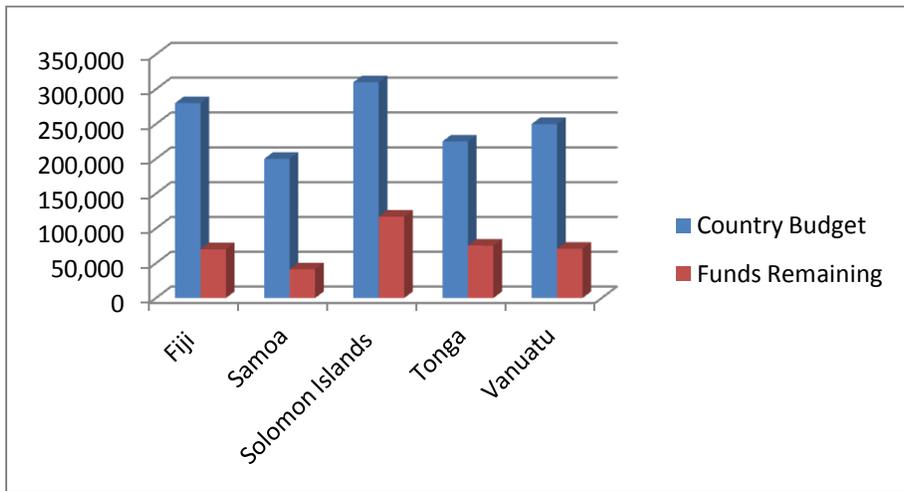
All country funds were transferred to the central Finance Ministry or Department and then transferred to the relevant Environment Departments. Funds were then reimbursed to the countries based on financial reporting submitted by the Environment Department. Apart from occasional bureaucratic delay these procedures appear to work well. A minor point from a country finance department official indicate they could not execute their audit functions as the financial reports to IUCN were not copied to them, in addition the normal departmental financial report was every three months whereas MESCAL required two monthly reporting.

The country budgets are indicated in Figures 4 and 5. There was some concern expressed on the transparency of the country allocations. This is a generic issue of regional projects, in terms of how to divide the pie. Should there be an equal sharing or should the allocations be based on

area, need, capacity, achievement of results? Whatever the decisions there is a need to be transparent about the process, which appears not to have been the case for MESCAL.



**Figure 5: Country budgets and funds remaining (February 2013)**



There is considerable concern that substantial amounts have been paid out for consultants (both external and IUCN) that have not yet produced their reports (see also Section 3.2.2) (this is now being addressed). There is also serious concern that some countries may not spend their allocation by December 2013. The amounts remaining (Figure 5) vary from \$41,000 (21%) to \$75,000 (33%) for Tonga and \$117,000 (38%) for Solomon Islands. Project management

experience indicates it is very difficult to spend more than 25% of a project budget in the ten months remaining. It is essential that the PMU put a process in place to track remaining funds and reallocate funds if necessary to countries that can utilize the funds.

### 3.2. Progress Towards Achievement of Results

Based on the project goals there are four separate major deliverables. A detailed analysis of achievement versus results is presented in Appendix 6 and a summary is presented here.

- 1) Improve baseline knowledge about biological, economic, social and cultural aspects of mangrove resources and uses in each country and the link between healthy mangroves and disaster risk reductions, for informed adaptation to climate change at national and community level. (**National Baseline**).
- 2) Empower communities to make informed decisions related to mangrove management; increase institutional and technical capacity for improved environmental governance at all levels of government and communities (**Legislation and Policy**).
- 3) Promote community based actions on the ground in mangrove management for improved resilience to climate change; improve livelihoods and conserve biodiversity; investigate the feasibility for obtaining carbon credits for mangrove protection and reforestation, in the context of REDD and REDD+, and participating in the global carbon market (**National Demonstration Site**).
- 4) Increase awareness at all levels of the role of mangroves and the associated ecosystems in providing resilience to the impacts of climate change (**Awareness Raising**).

#### 3.2.1. National Baseline:

This outcome was to be accomplished by national level maps, national resource inventories, national socio-economic studies and national c-sequestration study in all five countries. These objectives were overly ambitious, with the exception of mapping mangrove areas most of these outcomes will not be accomplished at the national level (although some will be achieved at the demonstration site level).

**Maps:** Only two countries (Samoa and Tonga) are on track to produce a National Mangrove Area Map and these maps have now shown a substantially greater mangrove area than

previously reported. Fiji and Solomon Islands identified National Mapping as an output in their work plan but have concentrate their data gathering on the *The Demonstration Site* and have no work in progress towards national mapping. Vanuatu decided to concentrated data gathering on the demonstration site but have recently acquired additional country level data. This lack of National maps is unfortunate as most partners and stakeholders have indicated that the maps are a high priority for all countries and a starting point for other mangrove initiatives.

During the February 2013 MESCAL Planning Meeting SPC-SOPAC presented new information that suggested they could assist in carrying out this activity in three of the countries.

**Fiji:** SPC-SOPAC has mapped the 2007 1-50,000 satellite imagery for Fiji mangroves. There is a possibility of a 3% error that needs to be checked and would take about three weeks work for a student supervised by SOPAC. They also have historic 1991 and 2001 data for comparison. Higher resolution 1-10,000 data is currently being collected for Fiji and would be available later to update the 2007 imagery.

**Vanuatu:** SPC-SOPAC supplied some older Vanuatu data to the GIS MESCAL support staff during the February 2013 meeting, data that he had not been able to obtain in Vanuatu. A current GIZ funded project has supplied high resolution data for Espiritu Santo Island and additional imagery is being collected for a forestry conservation project. It may be possible for the mangroves to be mapped within a year.

**Solomon Islands:** A USAID food security project is supporting SPC-SOPAC to obtain 1-50,000 imagery for the Solomon's and an additional EU project is supporting collection of higher resolution data for Choiseul Island. They are working with four departments Forestry, Agriculture, Lands, and Environment to build capacity for mapping the departments area of interest. Unfortunately Environment appears the weakest department and is doing little follow up. It might be possible by working with SOPAC/Solomon Island forestry to obtain a mangrove map for Solomon's by the end of the year.

The MESCAL PMU must give high priority to follow up on with countries and SPC-SOPAC (Dr Wolf Forstreuter) to attempt to complete mangrove mapping for at least two more countries.

**National Resource Inventory:** All countries have concentrated their efforts on the demonstration sites rather than nationally. In Samoa and Tonga due to the smaller area of mangroves they have been able to ground truth most of the national mangrove areas. In spite of the limited effort there has been an increase in reported mangrove species and hybrids for each

country (Table 4). Inventory of other flora and fauna has not occurred outside the demonstration sites.

**Table 4 : Number of Mangrove species in the MESCAL countries**

(Numbers in parenthesis identifications are yet to be confirmed)

Country	Species # reported before MESCAL	Species # reported February 2013
Fiji	9	9 (+3)
Samoa	3	4(+1)
Solomon Islands	28	29 (+2)
Tonga	8	10
Vanuatu	15	18(+2)

**Climate Change Scenarios:** Most countries have considered that there is already sufficient data available from other climate change projects to address this and as such have given it low priority or addressed this issue only for the demonstrations site. A USP recent graduate is currently carrying out a regional desk study to collate the available data.

**Socio-Economic Status:** The work plan proposed national level studies including values, status, traditional and cultural uses, and contribution to sustainable livelihoods. These will not be done at the national level but work is being initiated to obtain data at the demonstration sites.

**Assessing C-Sequestration and countries REDD- REDD + readiness:** This is a highly technical area. The PMU is currently examining a proposal to carry out a study in one country (Fiji or Solomon islands) that could offer future information and guidance to other countries. It is anticipated that this work would be completed by the end of 2013.

### 3.2.2. Strengthening Mangrove Governance;

The activities for this outcome were to review national and community policy and legislation related to mangrove management and then make specific recommendation to countries culminating in changes in policy and legislation. This component was identified by countries as high priority. Additionally in some countries new laws or acts that could involve mangrove management have been prepared and are in the process of being approved, thus is important that the policy and legislative recommendations and reports are made available soon.

The activities are being carried out by IUCN. Early on in the planning the legislation and policy studies were split with the Environmental Law Program carrying out the legal review and the MESCAL Coastal Ecosystem Management Officer doing the policy work. It is not clear to the reviewer or to a number of partners and stakeholders why this split was made but as well as staff changes both in MESCAL and Environmental Law Programme there is a seriously delay in the delivery of reports that are now well behind schedule.

*Low hanging fruit*

*Why does it take so long?*

Data has been collected and in-country consultations have been held, although some in-country consultations were not well coordinated and critical agencies were not involved necessitating additional follow-up. Early results suggest that in all countries mangrove management is split between various ministries and departments and there are currently no focus mangrove management policies or legislation. Given this commonality there may be some generic recommendations that can be made or lessons learned from country to country. The major current issue is that reports have not yet been prepared while countries are eagerly awaiting them. A schedule for preparation of the reports was presented at the February 2013 MESCAL meeting so that the reports would be sent via the NCCs to countries in April -May. It is essential that IUCN gives priority to completion these reports and PMU closely monitors the completion schedule and in-country consultation.

Once the reports have been reviewed in country there is a plan to draft national policies, laws, etc for 2 countries. Given the short time remaining this may not be accomplished by December 2013 but could be completed within the timeframe of the IUCN extension. There is a need to decide on what countries will be focused on and determine a practical timeframe.

In spite of the delays, Fiji proceeded on their own with a strategy to move towards increased mangrove management that could be a possible example for other countries. The first step was to reactivate the defunct Mangrove Management Committee. The committee now involves key government stakeholders and is chaired by the Permanent Secretary for the Ministry of Lands and Mineral Resources, who have key permitting responsibilities for mangrove land. The reporting of the committee was also changed from the more informal Integrated Coastal Management Committee to the more formal National Environment Council. This along with a fortuitous change in the Permanent Secretary for Lands, and adverse publicity over some recent decisions on permitting mangrove land for development has increase substantially the commitment of the Ministry of Lands to future issues of sustainable mangrove management.

The Ministry has recently included the formulation of a mangrove policy framework and the review of the Crown Lands Act in the Ministries 2013 Corporate Plan.

Fiji was also fortunate in having an approved Mangrove Management Plan prepared in 1985-86 but that had not been used recently. The Mangrove Management Committee has approved revision of the plan by the consultant who prepared the original plan. As such Fiji is much further ahead in making substantive changes to national mangroves management. It is important that the Fiji component of the IUCN legislative and policy recommendations be completed and compliments the Fiji activities.

### 3.2.3. National Demonstration Site

The activities related to this outcome were the initial establishment of criteria for national demonstration sites, the selection of the sites, the mapping of the site, biodiversity inventory using standardized methodology, identifying resource owners and local management systems, socio-economic and valuation studies, restoration and rehabilitation plans, site specific mangrove management plans and sharing of lessons learned.

The major achievements of MESCAL will be related to this outcome. Each country has identified and established a demonstrations site (Vanuatu selected two sites). Mapping has been carried out and nearing completion at all sites except Solomon Islands. Although Fiji has not ntegrated their mapping with satellite imagery thus making it difficult to integrate with the national GIS data base and a national mangrove map.

Biodiversity data has been collected at all sites using the common methodology suggested by the Australian consultants. Except as indicated in Section 3.1.4 Fiji used a separate methodology for mangrove assessment and used the recommended and a local approach for the fish surveys. While much of the data is yet to be analysed or reported there are some preliminary important findings. In addition to an increase in mangrove species (Table 4) in all countries, Vanuatu has identified a rare endemic gecko in one demonstrations site. Fiji recorded 6 endemic plants and 2 endemic butterfly species, and a number of invasive plants and animals.

The identification of resource owners and local management was done in Fiji, Solomon Islands and Vanuatu as part of the site identification and biodiversity surveys while studies are ongoing in Tonga and just starting in Samoa.

The socio-economic and valuation studies have been completed for Vanuatu, underway in Tonga and just starting in Fiji and Samoa, and discussion are under way in Solomon's but there may be difficulties in completing this by December 2013. The major concern of the reviewer and

some resource people is the complexity of the methodology and the limited time to complete these studies. The PMU should encourage the socio-economic consultants to simplify the methodology, and keep in close touch with other technical experts who could assist with potential valuation data.

The proposal initially stressed issues of community, participation, gender and livelihoods. Apart from the Solomon Island work by carried out in collaboration with the WorldFish Center these issues have been absent from what the reviewer has seen and heard. These issues may be better articulated in the forth coming socio-economic studies but it is very important that they are included in any follow up work.

Some countries have proposed replanting and rehabilitation plans for either the demonstration sites or elsewhere. However, given what appears to be limited regional experience in mangrove replanting and rehabilitation and the need for long term monitoring, the reviewer suggests this activity should receive low priority and be considered in a possible Phase 2 or other follow-up projects. If this is the case issues of capacity building linking with national and community experience in PNG and Asia (Mangroves for the Future (MFF)) and long term monitoring plans could be considered.

Only Solomon Islands would appear to be well under way in developing a management plan for the demonstration site. WorldFish has worked closely with the communities at the demonstration site and have developed a draft management plan with indicators and carried out community capacity building to implement it. They will assist the community over the next few months in monitoring the implementation of the plan and suggesting any adaptive management approaches. The process of implementation and the plan could be a possible case study and project lesson learned.

The major issue related to demonstration site is the lack of reporting of the results as documented in 3.2.2. This must be improved as stated in Recommendation 3.

#### 3.2.4. Increased Awareness and Capacity Building

The original work plan had four specific activities related to awareness raising. A number of communication events and products have been done in the five countries. They included posters (although they appeared to have not been widely posted), a very promising DVD from Solomon Islands, filming in the Vanuatu site by a German TV crew, community theatre, various news stories and radio shows, school and community awareness events, conservation awareness messages on a bus (Samoa), and special events around World Wetlands and World

Environment Day. Fiji has developed an awareness campaign jointly with WWF with close involvement of government stakeholders that will be launched in March 2013.

MESCAL prepared a communication strategy in 2012. The reviewer praises the project for developing a communication strategy, although the NCCs appear to have made little use of it, it was prepared late in the project, there are no indicators for measuring success of the communication efforts, and no list of communication products already prepared. A number of respondents indicate that MESCAL awareness was poor (Figure 3).

There appears to be recent improvement as considerable discussion did take place with the MESCAL communication consultant at the February Planning meeting and a number of communication products were planned. The most notably will be a major presentation at the Pacific Science Congress to be held in Suva in July 2013, preceded by assistance in preparing abstracts and a writing workshop. Additionally as the project reports are completed there are greater opportunities for dissemination of those results. However, MESCAL needs to continue the efforts to publicize the project outcomes and increase awareness to a wide range but targeted audience.

## **4. Future**

### **4.1. Exit Strategy**

As the project winds down and the NCC positions end on 31 December 2013, there is suddenly concern about what will happen next. Only Samoa had a formal exit strategy but as the CEO of the Ministry of Natural Resources and Environment indicated it is now too late to start developing it. In Fiji the Departments of Forestry and Fisheries have obtained government funds to continue work at the demonstration site. While in Tonga there is a possibility that a new ADB project will continue funding of mangrove activities. Similarly in Vanuatu and Solomon Islands there are discussions about the Mangrove Rehabilitation for Sustainably-Managed, Healthy Forests Project (MARSH) continuing some of the MESCAL work although this project is working outside government primarily with NGOs and may not start in these countries for one to two years. In order to avoid a cessation of country activities IUCN could consider ways of assisting countries in the transition to ensure some MESCAL activities continue.

### **4.2. MESCAL-IUCN Extension**

As the project winds down there will be a need to determine a mechanism for reallocating unspent country funds (Figure 5) to countries that could successfully use the funds. Additionally

the PMU will need to decide the priorities for activities to be carried out during the 2014 extension.

### 4.3. Phase 2

At the start of this MTR there was no mention of a possible Phase 2. As the review progressed some partners and stakeholders queried the possibility of follow up, this along, with project successes and potential, strongly indicates the need for a follow up phase including integrating with other current and planned conservation and mangrove projects (see 4.4).

The following are some suggestions for a possible Phase 2.

#### **Model:**

- Embed with government
- NCC very important
- Small grants are a good idea but experience from MFF-Asia and GEF suggests a number of questions:
  - How small? (MFF Experience 5,000-25,000, GEF 50,000)
  - Will there be capacity building in writing & project management?
  - Is there geographic concentrated?
  - How will they be monitor and managed (can be time consuming)?

#### **Components:**

From Existing:

- National Mapping (should complete mapping for all countries)
- Continue legislation and policy review, and legal drafting
- Management Plans (national/community)
- Demonstration sites (need to become real sites for demonstrating management, rehabilitation, sustainable approaches, and education and training)
- Biodiversity (need to expand surveys to other sites using common methodology)
- Climate change & REDD+ rediness (expand form planned one country study)

- Community alternative livelihoods (absent in current project)

#### Missing Pieces

- Urban mangroves (requires creative thinking and different approaches—urban planning & landscape)
- Mangrove as Ecosystem based adaptations to climate change vs. sea walls (currently large number of sea walls being installed without exploring eco-based solutions).

#### Countries:

- Could be current 5 but Samoa should be able to obtain in country funding;
- Vanuatu & Solomon's could be involved to ensure a government link to MARSH.

#### Other countries:

- Kiribati (SOPAC has been mapping mangroves)
- Northern Micronesian Countries? (expensive & not as close linkages)

#### Donor:

- BMU tends not to fund future phases but could be interested in new activities linked to mangroves.
- GIZ currently funding a number of linked projects
- All countries have Climate Change or conservation projects that could be linked to mangroves
- Currently a number of new projects (see 4.4) in the relevant countries could involve mangroves (ADB-Tonga, GIZ/IUCN Marine Protected Area Project).

### **4.4. Project to Programme --Linkages**

The MESCAL Project was organised under the umbrella of the Pacific Mangrove Initiative (PMI) that is chaired by IUCN and SPREP. In fact the project was original title the Pacific Mangrove Initiative. However, MESCAL is viewed by most as an IUCN project but not part of a wider initiative. There are a number of new projects under development (MARSH, Regional Protected Area Project, ADB Project in Tonga) all of which may involve mangroves, involve some of the MESCAL countries and where IUCN is a key player. SOPAC is an additional key player in the mapping area and are funded by similar donors to those funding the mangrove activities.

Additional there are a number of country and regional climate change initiatives that also do or could have a mangrove component.

The challenge is how to evolve from Mangrove projects to a Mangrove Programme with closer links between the various Pacific Island projects. IUCN ORO could play a key role in this but it will need to have PMI evolve into a more central information sharing forum with IUCN playing a proactive role.

## 5. Recommendations

### *Model:*

1. The approach of working through government systems has worked in spite of difficulties of the PIC government system. This approach could be continued in future projects and would be complimentary to the USAID MARSH Project.

### *Work Plan (Regional & National)*

2. The PMU and NCCs need to continue to focus on what can be achieved, what are the priorities and outputs, establish deadlines, and who are responsible.

### *Reporting*

3. It is essential that the PMU and NCCs clearly define what reports can be achieved, what are the priorities and outputs, who are responsible, and establish deadlines. The PMU will need to closely monitor the completion schedule. Additionally once a report has been produced the PMU and NCCs need to ensure there is awareness raising around the report.

### *NCC Capacity building*

4. Future projects should anticipate the needs of the in-country coordinators and considered these in hiring and capacity building.

### *Finances*

5. The PMU must put in place a process to track remaining country funds and reallocate funds if necessary to countries that can utilize the funds.
6. The PMU needs to decide what are priority activities to be carried out during the IUCN Extension post December 31, 2013.

### *National Mapping*

7. The PMU must give high priority to follow up on with countries and SPC-SOPAC (Dr Wolf Forstreuter) to complete mangrove mapping of at least two more countries.

#### *Legislation and Policy*

8. IUCN Management must ensure priority is given to completing the legislation and policy country reports and the PMU needs to closely monitor the completion schedule and in-country consultation.
9. The PMU needs to determine the priority for which countries will have national policies or laws drafted and a timetable.

#### *Socio-Economics*

10. The PMU should encourage the socio-economic consultants to simplify the methodology and keep in close touch with other technical experts who could assist with potential valuation data. Additionally they should ensure that gender issues are addressed in their reports.

#### *Demonstration Site Reports*

11. The paucity of results from the demonstration site must be improved as indicated in recommendation 3. Additionally there need to be greater communication between the NCCs and country teams and the consultants backstopping those activities.

#### *Awareness*

12. The PMU and NCCs needs to continue the efforts to publicize the project outcomes and increase awareness to a wide but targeted audience.
13. The PMU and external consultants are encouraged to continue their efforts to involve MESCAL outputs in the upcoming Pacific Science Congress.
14. Case studies of approaches used by Fiji in targeting National and Provincial governments, and Solomon Islands in target communities could be documented to indicate different approaches to the top-down versus bottom up approaches in MESCAL.

#### *Phase 2*

15. IUCN could consider ways of assisting countries in the end of project transition to ensure some MESCAL activities continue.
16. IUCN should consider the possibility of a Phase II project to follow up MESCAL including possible components as mentioned in the MTR Report.

17. IUCN should continue to expand and strengthen the Pacific Mangrove Initiative as an umbrella for Pacific mangrove projects thus joining a number of linked projects into a Mangrove Programme.

*Future Projects*

18. IUCN needs to ensure clarity on data ownership in contracts when consultants are assisting with country data.
19. IUCN needs to ensure there is sufficient training or capacity building of the in country staff to meet the coordination challenges.
20. IUCN needs to ensure there is transparency about the process of fund allocation to countries.
21. IUCN needs to ensure in future projects and contracts that the disbursement of funds is clearly tied to deliverables.

## APPENDIX 1: Terms of Reference

### Mid Term Review – Mangrove Ecosystems for Climate Change Adaptation and Livelihood (MESCAL)

#### Terms of Reference

##### Background

Given the importance of mangrove ecosystems for local livelihoods and as natural insurance against climate change, a Pacific Mangrove Initiative (PMI) was developed. Under this initiative, IUCN developed the Mangrove EcoSystems for Climate Change and Livelihood (MESCAL) project. MESCAL is a country-specific, country-driven, multi-dimensional partnership project. MESCAL is funded by the German government through the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under a resolution of the German Bundestag in Bonn. This is an interdisciplinary applied research and development project aimed at helping countries invest in the management of mangroves and associated ecosystems for improved livelihoods and adaptation to climate change. MESCAL activities include demonstration projects, governance, economics, carbon sequestration, knowledge and information, communication and learning. The primary goal of this project is “*to increase the climate change resilience of Pacific Islanders as well as improve their livelihoods through selected capacity support in adaptive co-management and restoration of mangroves and associated ecosystems in five countries: Fiji, Samoa, Solomon Islands, Tonga and Vanuatu*”. The projects expected outcomes are:

1. Collection of National Baseline Information about Climate Change Scenarios, use and values of Mangroves and Associated Ecosystems
2. Development co-management plans of mangroves for adaptation to Climate Change Governance
3. Improved conservation and/or restoration of mangroves at selected demonstration sites
4. Increased Awareness, Advocacy and Capacity development

This review will provide an opportunity to evaluate the effectiveness of the project in producing the desired outcomes and lessons learnt thus far.

#### 1. Status of Implementation of MESCAL

Key points in the implementation of MESCAL:

- The project began in January 2010 and is due to end in December 2013
- Project has a no-cost extension until December 2014
- Implemented in 5 countries through a national execution mode with funds being passed through government systems
- Key activities conducted to date include:
  - Baseline surveys including floral, fisheries, social and cultural importance of mangrove resources at demonstration sites

## APPENDIX 1: Terms of Reference

- Mangrove mapping
- Policy and legislation reviews for five countries
- Awareness raising through production of printed matter

### 2. Objective of the Review

This review will serve as a mid-term review and provide guidance to IUCN in the implementation of the project until completion.

The objectives of the review are to:

- assess the projects' progress and achievements against the agreed project outcomes
- Review the project implementation structure(both PMU and in-country) – strengths, weakness and identify opportunities for strengthening
- Provide recommendations on how best to proceed into the final stages of the project implementation.

### 3. Scope of Work

The work will require three phases:

#### **Phase 1: Desktop study**

The consultant will undertake a desk study of the project by consulting relevant documents including the project documents, inception reports, work plans, bi-monthly progress reports from NCC's, reports from technical back-stoppers, web-page, annual reports, results notes and financial reports.

#### **Phase 2: Preliminary discussions – the review mission**

Aside from Fiji, the consultant is expected to travel to Samoa and Vanuatu from Jan 26th – Feb 2nd 2013 and hold discussion with key stakeholders in these countries. IUCN Oceania staff and the national partners will support the mission.

The consultant will meet with the Project Management Unit to discuss the current status of project implementation and the future of the project.

A Mid-Term Review report will be prepared by the consultant based on the findings and will also include recommendations as appropriate on operational changes to implementation plan, proposed work plans and budgets, follow up to sustain the project's results and outcome etc.

The work of the Review Mission will include, but will not be limited to:

- Review the project management structure within the IUCN Oceania Regional Office;
- Assess and evaluate major developments related to the country projects –impacts on national mangrove management policies, institutional and management structure and the mechanisms for implementation at the national level;
- Assess whether the different project components and activities proposed to achieve the objectives seem to be appropriate, viable and responsive to the conceptual institutional, legal and regulatory settings.

## **APPENDIX 1: Terms of Reference**

- Assess project progress and monitoring
- Review financial planning and expenditure
- Review expenditure at national level including recommendations on enhancing disbursement
- Review the management structure and implementation arrangements including: i) IUCN Oceania Regional Office; ii) Project Management Team (PMU) iii) Country Teams; v) consultants; and vi) others;
- Assess the sustainability of the project including identification of key actions to enhance sustainability.

### **Phase 3: Review Workshop**

The workshop will be held February 18th -22nd February 2013 and it will be a forum to meet project staff and stakeholders, hear presentations, and discuss the project. Time will be allocated for meetings with country coordinators, particularly for those countries that were not visited. The consultant will present the draft report using power point during the workshop.

### **4. Outputs**

A full detailed report is to be provided to IUCN three weeks after the completion of phase 3. The report amongst other things will include but not be limited to the following:

- Project implementation and status,
- The project monitoring system and indicators, The projects capacity development and training strategy, The strategy for use of Technical Assistance/Consultants
- The management structure of the project, including procedures for financial management and the daily management of the project,
- Recommendations on operational changes to the implementation plan,
- The programme reporting and procurement procedures and the work plans and budgets; and
- Proposed work plans and budgets moving forward to the end of the project.

The report will, amongst others, include lessons learnt and recommendations on relevant project adjustments, such as modifications of budgets and activities, as well as recommendations concerning work plans and budgets and a Process Action Plan for deciding and implementing the recommendations.

## Appendix 2: Itinerary for Mid Term Review MESCAL

Day	Date	Time	Duties	Location
Tuesday	Jan 22	13:00	Depart Victoria	
Thursday	Jan 24	7:00	Arrive Suva	Suva
		10:00-4:00	Meeting @ IUCN with PMU	Suva
Friday	Jan 25	9:00-18:00	Meeting with Fiji team	
Saturday	Jan 26	6:30	Depart Suva	Port Vila
		12:05	Arrive Port Vila	
		13:30-16:30	Review & summarise background documentation	
Sunday	Jan 27		Meet Vanuatu team, field visit	Port Vila
Monday	Jan 28	9:00-17:00	Meet with key partners & stakeholders	Port Vila
Tuesday	Jan 29	9:00- 12:00	Meet with key partners & stakeholders	Port Vila
Tuesday	Jan 29	14:55	Depart for Nadi	
Tuesday	Jan 29	17:25	Depart for Apia	
Wednesday	Jan 30	0:40	Arrive Apia	Apia
		10:00-16:30	Meet Samoa Team	
Thursday	Jan 31		Meet Samoan Partners	Apia
Friday	Feb 1		Meet SPREP & debriefing with Samoan NCC	Apia
Saturday	Feb 3	15:10	Depart for Nadi	
		15:05	Arrive Nadi	Nadi
Thursday	Feb 14	05:15	Arrive Nadi	
		07:00	Arrive Suva	
		12:30-16:30	Meet with Milika IUCN debriefing and to follow up any issues	Suva
Friday	Feb 15	10:00-17:00	Meeting with Fiji team & Field visit Rewa	Suva
Saturday-	Feb		Drafting presentation and report	Suva

## Appendix 2: Itinerary for Mid Term Review MESCAL

Sunday	16-17			
Monday	Feb 18		Initial presentation to MESCAL Meeting Side meetings with technical backstoppers & MESCAL country coordinators etc	Suva
Tuesday	Feb 19		Side meetings with technical backstoppers & MESCAL country coordinators etc	Suva
Wednesday	Feb 20		Presentation to MESCAL meeting & feedback	Suva
Thursday	Feb 21		Follow up meetings with NCCs	Suva
	Feb 21-27		Preparation of draft report	Suva
Thursday	Feb 28		Presentation of draft report to IUCN & MESCAL staff and receipt of feedback	Suva
	4-8 March		Report Finalisation	Canada
	11 March		Submission of final report	

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed commented/ completed questionnaire	Question -naire NR=No Reply
IUCN Oceania Regional Office	Taholo Kami	Regional Director	Y	
	Bernard O'Callaghan	Regional Programme Coordinator	Y	
	Dr Jan Steffen	Marine Programme Coordinator	Y	
	Dr Milika Sobey	Water & Wetlands Programme Coordinator & MESCAL Coordinator	Y	
	Vilame Waqalevu	MESCAL Technical Officer	Y	
	Ruci Lumelume	MESCAL Coastal Ecosystem Management Officer		
	Patricia Parkinson	Senior Environmental Legal Officer	Y	
	Christine Trenorden	Former Environmental Law Programme Coordinator	Y	
<b>Regional</b>				
BMU	Felix Ries	Programme Officer MESCAL at BMU	Y	
	Victoria Hesse	Finance person at BMU		NR
James Cook University	Prof Norm Duke	Technical backstopper for floristics work	Y	NR
James Cook University	Prof Marcus Sheaves	Technical backstopper for Fisheries work	Y	
James Cook University	Ross Johnston	Filled in for Marcus Sheaves on field visits to countries	Y	
SPREP	Paul Anderson	Mangrove mapping backstopper for Samoa and Tonga	Y	NR
SPREP	Stuart Chape	SPREP rep on Pacific Mangroves Initiative		NR
USP	Dr Vina Ram-Beddesi	Consultant socio-economic Samoa		NR
	Ashwini Prabha	Communication consultant	Y	
CRIOBE	Dr Nicolas Pascal	Resource economist consultant	Y	
SPC-SOPAC	Dr Wolf Forestreuter	GIS & Mapping Regional Expert	Y	
<b>Stakeholders</b>				
USAID	Kerry Reeves	Agreement Officer MARSH project		NR
IUCN	James Hardcastle	Principal writer of USAID-MARSH proposal		NR
University of Tasmania	Dr Joanna Ellison	Regional Mangrove expert	Y	

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed /commented or completed questionnaire	Question -naire NR=No Reply
<b>Fiji</b>				
<b>Partners</b>				
Department of Environment, Ministry of Local Government, Urban Housing & Environment	Neema Nand	MESCAL NCCi	Y	
	Eleni Tokoduadua	Principle Environment Officer	Y	
	Sarah Tawaka	Senior Environment Officer (previous acting principle)	Y	
Nature Fiji	Dick Watling	consultant to revise Fiji Mangrove Management Plan	Y	
USP/IAS	Marika Tuiwawa	Led the Rewa delta biodiversity survey	Y	
Fisheries Department	Aisaki Batibasaga	Led fisheries study	Y	
<b>Stakeholders</b>				
Ministry of Lands	Tevita Boseiwaqa	Permanent Secretary Min of Lands & Chair, Mangrove Management Committee	Y	
WCS	Dr. Stacy Jupiter,	Director WCS South Pacific Country Program	Y	
USP/IAS	Dr William Aalbersburg	Director IAS-USP		NR
Marine Ecology Fiji	Helen Sykes	EIA's & Coastal Ecology Assessments	Y	

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed /commented or completed questionnaire	Questionnaire NR=No Reply
<b>Samoa</b>				
<b>Partners</b>				
Resource Management Unit, Ministry of Natural Resources & Environment (MNRE)	Malama Momoemausu	MESCAL NCC	Y	
	Faleafaga	Head Resource Management Unit	Y	
MNRE	Taulealeausumai Laavasa Malua	CEO MNRE	Y	
SPREP	Vainuupo Jungblut	Ramsar Officer	Y	
Fisheries Division	Ueta Faasili/Joyce Samuelu	Supports project implementation	Y	
			Y	
Ministry of Finance	Lita Lui-l'amafana	Principle Aid Officer-Aid & Loan Division	Y	
Forestry Division	Moafanua Tolusina Pouli	Supports/participates project implementation		NR
Technical (Mapping) Division	Muaausa Pau Ioane	Supports/participates project implementation		NR
<b>Stakeholders</b>				
Safata Mangroves Committee	Pauli Patolo		Participate in implementation of field activities	Y

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed /commented or completed questionnaire	Questionnaire NR=No Reply
<b>Solomon Island</b>				
<b>Partners</b>				
Environment Division Ministry Environment Climate Change, Disaster Management, & Meteorology (MECDM)	Hugo Tafea	MESCAL NCC	<b>Y</b>	
	Tia Masolo	National Baseline Climate Change Scenarios, Use & Values of Mangroves ; GIS mapping		<b>NR</b>
WorldFish Center	Joelle Albert	Document Human Trends & Traditional Use Develop & Implement Site Specific Mangrove Management Plan Share Lessons Learnt & Capacity Development	<b>Y</b>	
	Dr Ana-Marie Schwarz	Involvement in early project development	<b>Y</b>	
Ministry of Forests	Myknee Sirikolo	National Baseline data: Distribution of Mangrove Habitats & Ground Truthing; Assess C-sequestering Potential; & Improve Conservation & Restoration at Selected Sites		<b>NR</b>
Solomon Island Development Trust	Joseph Majo	Awareness Raising & Advocacy		<b>NR</b>
Independent Photographer	Wade Fairly	Production of a Mangrove DVD		<b>NR</b>
<b>Stakeholders</b>				
SICHE	Kris Teva	Awareness raising & Steering committee	<b>Y</b>	
Ministry of Lands Housing and Surveys	Jimmy Ikina Dalton Home	Boundaries & GIS mapping & Steering committee		<b>NR</b>
Attorney Generals Chambers & Law Reform Commission	Anthony Makabo Philip Kanairara	Legislation & Steering committee		<b>NR</b>
Ministry of Culture & Tourism	Joan Sautehi Mark Ligo	Awareness Raising & Steering committee		<b>NR</b>
Ministry Development Planning and Aid Coordination	Barnabas Bago Matthew Walekoro	Awareness Raising & Steering committee		<b>NR</b>

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed /commented or completed questionnaire	Question -naire NR=No Reply
<b>Tonga</b>				
<b>Partners</b>				
Ministry of Environment & Climate Change	Sione Tukia	MESCAL NCC	Y	
Tonga Community Development Trust	Sione Fakaosi	Member Technical Working Group		NR
Fishery Department	Sione Mailau	“		NR
Forestry Division	Tevita Faka'osi	“		NR
.Ministry of Lands & Environment	Seini Fotu	“		NR
Ministry of Lands and Environment	Hoifua Aholahi	“		NR
<b>Stakeholders</b>	<i>Could not contact as no email address given</i>			
Nukuhetulu town officer				
Parliament change committee CC standing				
Cabinet committee CC				
National Environment Coordination Committee				

### Appendix 3 List of MESCAL Partners and Stakeholders contacted during the MID Term review

Organisation	Name	Role	Interviewed /commented or completed questionnaire	Questionnaire NR=No Reply
<b>Vanuatu</b>				
<b>Partners</b>				
Department of Environmental Protection & Conservation	Rolenas Baereleo	MESCAL NCC	Y	
	Albert Williams	Director (on leave)	Y	
	Trinnison Tari	OIC	Y	
Fisheries Department	Jay ven Ham	Fisheries surveys	Y	
	Jeremi Kaltevara			NR
Forestry Department	Presly Dovo	Forestry survey	Y	
Lands Survey Department	Tony Kanas	GIS Mapping	Y	
Environment department	Donna Kalfatak,	NCC supervisor & Senior Biodiversity Officer	Y	
Water resources department	Erickson Sammy			NR
Ministry of Lands	Rinah Japheth		Y	
<b>Stakeholders</b>				
SPC-GIZ Coping with Climate Change in the PI Region Programme.	Dr. Christopher Bartlet	Project manager	Y	
Vanuatu Cultural Centre	Francis Hickey	Involved in Crab Bay	Y	
Fisheries Department	Kevin Mores	Fisheries Extension Officer, Crab Bay		
Coordinator Maritime Boundary Delimitations Project	Toney Tevi	Developing a blue carbon Project focusing on Mangroves and Sea Grass		NR
	Bob Makin	Journalist	Y	
Eratap Beach Resort	Tony Pittar	Resort owner/ manager		NR

## Appendix 4: Questionnaire

### **SWOT Questionnaire Mid Term Review of Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL)**

In order to assist in the Mid Term review of MESCAL I would appreciate if you could complete the following SWOT (Strengths, Weaknesses, Opportunities and Threats) Questionnaire.

Keeping in line with IUCN guidelines and my own philosophy all inputs are considered confidential, the data when presented will not be ascribed to individuals although it may be disaggregated by logical groupings.

Thank you very much for your assistance.

Kenneth T MacKay

**Your principal focus**

**Country:** \_\_\_\_\_

**Regional:** -----

1. List up to 3 Strengths of the MESCAL Project.
2. List up to 3 Weaknesses of the MESCAL Project.
3. List up to 3 Future Opportunities for MESCAL or Future Mangrove Initiatives
4. List up to 3 Threats facing MESCAL or Future Mangrove Initiatives
5. List up to 3 significant results MESCAL will achieve in your country or the Pacific Region

## Appendix 4: Questionnaire

**PMU & National Country Coordinators complete this section only.**

1. How would you rate the MESCAL project in project planning (i.e. assistance in developing & implementing work plans, reporting and timetable)

Excellent                      Good                      Fair                      Inadequate

2. How would you rate the MESCAL project in communication between the PMU and the countries

Excellent                      Good                      Fair                      Inadequate

3. How would you rate the MESCAL project in working with partners and stakeholders

Excellent                      Good                      Fair                      Inadequate

4. How would you rate the MESCAL project in publicizing or providing information on Mangroves

Excellent                      Good                      Fair                      Inadequate

5. How would you rate the MESCAL project in capacity building of in-country expertise

Excellent                      Good                      Fair                      Inadequate

6. List up to 3 Significant Results that MESCAL will achieve in your country or the region.

## Appendix 4: Questionnaire

### General Questionnaire Mid Term Review of Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL)

IUCN has contracted me to carry out a Mid Term Review of the MESCAL project. You have been identified as either a partner/ consultant (i.e. working directly with IUCN or the country projects) or a stakeholder (someone with an interest in mangrove conservation and the associated climate change issues). Unfortunately there is limited field time and I will either not be able to contact you directly or our time for discussion when I recently visited Fiji, Samoa and Vanuatu was too limited. In order to assist the review I would appreciate if you or colleagues could complete the following questionnaire and email it back to me by 18 February. If you can't answer a question please indicate with NI (no information).

Keeping in line with IUCN guidelines and my own philosophy all inputs are considered confidential, the data when presented will not be ascribed to individuals although it may be disaggregated by logical groupings.

Thank you very much for your assistance.

Kenneth T MacKay

**Country: (if your interest is primarily regional please indicate regional) -----**

#### 1. Involvement with MESCAL

**Are you or your organisation a:** (Please check or circle one)

Partner-----

Consultant---  
to Mescal

Stakeholder -----

#### 2. Mangrove Relevance

*i) List the two major important issues that are needed to be addressed in your country (or Pacific Region) related to Mangrove Ecosystems conservation and management.*

*ii) How would you rate the MESCAL project in addressing these priority issues ?* (Please check or circle one)

**Excellent**

**Good**

**Fair**

**Inadequate**

## Appendix 4: Questionnaire

iii) List any major issues that you feel that MESCAL is not addressing

7. How would you rate the MESCAL project in working with partners and stakeholders to address these issues

Excellent                      Good                      Fair                      Inadequate

8. How would you rate the MESCAL project in publicizing or providing information on Mangroves

Excellent                      Good                      Fair                      Inadequate

9. List (maximum of three) significant results either achieved or about to be achieved from the MESCAL Project

10. Suggestions any changes that may increase the ability of MESCAL to achieve the relevant issues or will address these by the end of the project

## Appendix 4: Questionnaire

11. If you are a partner or consultant who has worked closely with the project could you please answer the following? (add additional comments if necessary to clarify the answer)

*i) Clarity of roles*

Excellent                      Good                      Fair                      Inadequate

*ii) Clarity of implementation of tasks*

Excellent                      Good                      Fair                      Inadequate

*iii) Administrative & Financial management*

Excellent                      Good                      Fair                      Inadequate

*iv) Communications*

Excellent                      Good                      Fair                      Inadequate

*v) Reporting*

Excellent                      Good                      Fair                      Inadequate

12. Major strengths and weaknesses

*i) List two Major strengths*

*ii) List two Major weaknesses*

*Indicate any additional issues including lessons learned and problems*

## Appendix 5: Analysis of SWOT

### MESCAL Strengths

**Numbers represent the number of mentions of that topic**

Involvement with government (8)

- Ownership
- National agenda focused

Capacity Building (7)

- NCCs
- Govt staff
- resulted in team work, close cross agency working & motivated workers

Focus & Awareness (8)

- mangrove(first project in many cases) & ecosystem focus
- coastal management leadership
- Paves way for future projects
- Addressing gaps & producing new knowledge

Science focus (11)

- external experts & regional networking
- common & new methodology
- incorporates climate change
- national biodiversity inventory & baseline data
- strengthen mapping & mangrove areas for some countries
- strengthens mangrove management
- combine science and traditional knowledge

Strength of PMU (3)

Funding (3)

- Focused on mangroves
- Funding mechanism clear & clear budget compared to other regional projects where proposals have to be prepared for activities

## Appendix 5: Analysis of SWOT

### Mescal Weaknesses

#### Project Management (13)

- Work Planning
  - Unclear objectives
  - Lack of technical assistance & guidance in national work planning
  - Lack of consultation
  - Disjointed plans & delays
  - too much time planning & too many planning meetings
  - proposal overly ambitious
- Lack communication strategy

#### Science Input (10)

- Methodology unclear
- Not all project countries covered & need to involve other countries
- Local technical expertise varies—lack of local capacity in mapping (some countries)
- Limited mangrove replanting & rehabilitation expertise
- International consultants too short time in the field
- Economic valuation too late
- Carbon valuation expectations too high

#### Finance (5)

- Funding not enough
- Financial transfers uneven
- Country underspending partially due to bureaucracy

#### Staffing (5)

- PMU high staff turn over
- NCC work over load

## Appendix 5: Analysis of SWOT

### MESCAL Opportunities

#### Linkages (9)

- Regional
  - Pacific Mangrove Initiative
  - Wetlands Action Plan
  - SPREP
  - Ramsar
  - MARSH
  - Other Initiatives –GIZ Mapping
- National
  - Other projects initiatives
    - Vanuatu Resource Monitors Network
    - WORLDFISH-Vanuatu

#### Implementation Plans (5)

- National Mangrove Management & Action Plans
- Community management
- Community livelihoods

#### Science (11)

- Standard methodology
- Ability to replicate
- Increased mapping
- Mangrove database & sharing web site
- Baseline for Climate Change monitoring
- Mangrove & coastal ecosystem restoration & rehabilitation potential

#### Future Phase (4)

- May be able to lever new funding
- New funding mechanism
- Small grants

## Appendix 5: Analysis of SWOT

### MESCAL Threats

#### Outcomes (14)

- Non deliverables
- Lack knowledge products
- Regional outcomes not achieved
- Loss of trust & credibility by stakeholders
- Methodology not followed
- Data lost
- Lack of regional cooperation

#### Funding (5)

- Too little for outcomes
- No funding for follow up or monitoring
- Follow up not incorporated in govt plans

#### Staff Loss (3)

- NCC staff turn over
- No replacement at project end
- Loss of local expertise

#### External threats (4)

- Lack of community or government support in follow up on Demonstration Sites
- Threatened by development
- Climate change

## Appendix 5: Analysis of SWOT

### MESCAL Significant Results

#### Legislation & Plans (11)

- Policy & Legislation Recommendations
- National and Community Management Plans (3 countries)
- Parliament & senior civil servant support
- Mangrove Monitoring network (national & regional)

#### Awareness of mangroves & their ecological services (10)

- National Campaign –Fiji
- Increased community, national & regional awareness
- Increased media attention

#### Increased Scientific Knowledge (17)

- Biodiversity
- National & Regional Spatial data & distribution maps
- Carbon Content
- Vulnerability Assessment
- Economic valuation including traditional & cultural values

#### Capacity Building (7)

- In country in new methodologies, data collection, analysis, & report writing

#### New Linkages (3)

- Intragovernmental
- Community
- Regional

## Appendix 6: Work Plan & Country Results

INDICATORS	Regional	Fiji	Samoa	Solomon Islands	Tonga	Vanuatu
1.1 Report prepared on climate change scenarios and effects and responses of mangroves and associated coastal ecosystems identified for each participating country.	20% Complete	Demo site only, awaiting PMU report (USP student)	Demo site only, awaiting PMU report (USP student)			National Climate Change Committee already has data SIMCLIM workshop carried out--USP students work not useful
1.2 Discussion paper prepared for each of the five countries describing ecological, economic, social and cultural status of mangroves	70% Complete	Only being done for the Demonstration sites and combined with 1.4 (1.2.2)				

## Appendix 6: Work Plan & Country Results

<p>1.3 GIS database established and populated with data by July 2013</p>	<p>50% Complete.</p>	<p>National integrated map is a country objective but have data collection only for baseline site. SOPAC has maps based on older imagery, need to error check 2008 data to get completed map. Could be completed FLMMMA has maps for Ra Province</p>	<p>Data collected and ground truthing 85% completed will be reported with 3.1.7 &amp;8 (demonstration site) (60%) SPREP assisted with mapping, in country training &amp; supplied software</p>	<p>Interdepartmental disagreements on who should do mapping now MECDM. Recent SOPAC training. SOPAC suggests new imagery should be available soon.</p>	<p>100% completed, first mangrove area mapped for Vava'u Significant increase in mangrove area SPREP assisted with mapping, in country training &amp; supplied software Awaiting official GOT approval to submit report</p>	<p>Additional national data recently supplied by SPREP &amp; new imagery may be available within 6 months. National mapping may need to be completed in subsequent phase or via MARSH</p>
<p>1.4 National resource inventories by July 2013</p>	<p>75% complete</p>	<p>some documentation of flora in conjunction with 1.3 but most countries only documented for the demo sites.</p>				
<p>1.5 Country reports on economic valuation of mangrove-based ecosystem services supporting direct and indirect use, cultural and other non-uses, produced by July 2013</p>	<p>60% complete</p>	<p>see 1.2</p>				

## Appendix 6: Work Plan & Country Results

<p>1.6 Technical report on C-sequestration capacity of different categories of mangrove habitats, the potential for the country participating in REDD and REDD+, &amp; the pre-requisites for the countries' REDD readiness</p>	<p>Identifying partners 5%</p>	<p>will be done in detail in one country (Fiji or Solomon Islands) via consultancy</p>				
<p>1.7 Report prepared on climate change scenarios &amp; effects and responses of mangroves and associated coastal ecosystems identified for each participating country.</p>	<p>10% Complete</p>	<p>Much of information has been collected by other climate change projects (at least that is perception). A USP graduate consultant currently doing a desk review.</p>				
<p>Legislative &amp; Policy Reviews</p>		<p>This component being done by IUCN Environmental Law Program (Legal) and MESCAL ( Coastal Ecosystem Management Officer). Data has been collected and most in-country consultations held. Countries are eagerly awaiting the reports. Behind schedule</p>				
<p>2.1, 2.2 &amp; 2.3 A series of country reports reviewing policies and legislation that impact on management of mangroves and associated ecosystems, identifying strengths and weaknesses that need addressing same as for Activities 2.2-2.3 below.</p>	<p>60% Complete.</p>	<p>Fiji has proceeded to reactivating the Mangrove Management Committee including involvement of the Ministry of Lands. Draft report from IUCN prepared &amp; presented to Mangrove Management Committee Dec 2012 high priority</p>				

## Appendix 6: Work Plan & Country Results

		given to drafting legislation for the Ministry of Lands.				
2.4 A series of country reports that review traditional management systems for mangrove governance and identify areas that need strengthening and how these traditional management practices could be integrated into the formal mangrove management system by June 2013.	National ICs currently identifying local consultants 10%					

## Appendix 6: Work Plan & Country Results

2.5 Draft national policies, plans, legal and other institutional rules related to the conservation and restoration of mangroves for at least two countries by December 2013.	Still reviewing current policies; 5% complete	Consultant redrafting the 1985 Managrove Mnagement Plan	Eagerly awaited from PMU			
2.6 Draft policy framework developed to facilitate community/local level management of mangroves, in partnership with key government and non-government agencies and community groups.	Still reviewing current policies; 5% complete			WorldFish assisting developing a community management plan for the Demo site		
2.7 Trial and adapt the CRiSTAL toolkit in at least two countries by December 2012. <b>Vanuatu &amp; Fiji</b>	CRiSTAL trialled in Vanuatu and Fiji. 100% complete. Report ??	Trialed need to see report				Trialed need to see report

## Appendix 6: Work Plan & Country Results

<p>2.8 Draft national policies, plans, legal and other institutional rules related to the conservation and restoration of mangroves for at least two countries by December 2013 same as for Activity 2.5</p>	<p>Still reviewing current policies; 5% complete</p>	<p>see 2.3 &amp; 2.5</p>	<p>see 2.5 &amp; 2.6</p>			
<p>2.9 Draft policy framework developed to facilitate community/local level management of mangroves, in partnership with key government and non-government agencies and community groups same as for Activity 2.6</p>	<p>Still reviewing current policies; 5% complete</p>		<p>?</p>			

## Appendix 6: Work Plan & Country Results

INDICATORS	Regional	Fiji	Samoa	Solomon Islands	Tonga	Vanuatu
3.1 Demonstration sites selected in each country based on objective ecological, economic and social criteria and detailed site specific situation analysis completed describing ecological, economic, social and cultural status of mangroves by June 2013.	100% complete MTR--sites selected but baseline not yet compiled (80%)	Site established per criteria in 2012; Detailed biodiversity & habitat survey carried out, all sub reports except forestry are completed data being assembled (90%)	Site established per criteria in 2011; Baseline data collected, sent to JCU awaiting analysis & synthesis(70%)	Site established per criteria, community involved (WorldFish), baseline data collected awaiting flora analysis & report from local consultant	Site established per criteria in 2011; Baseline data collected, sent to JCU awaiting analysis & synthesis(70%)	Two sites established, baseline data collected, some analysis being done, awaiting reports from field team & external consultants
Sub-Activity 3.1.2 Identify local resource owners/ custodians, and in collaboration with them document existing governance arrangements, including customary and or formal decision-making processes\ and customary rules, related to mangroves.	in-county consultant s have been identified to do this exercise with support from PMU. 10% complete	Completed along with biodiversity study Awaiting report	3.1.5 Survey Design & Methodology under development; scoping visit by regional consultant completed, Actual surveys to be done in mid-March 13 (20%)	Initial discussion initiated by consultant	Tonga Community Development Trust has done survey & produced draft report	

## Appendix 6: Work Plan & Country Results

<p>Sub-Activity 3.1.3 Develop geo-referenced resource inventory and GIS-based resource mapping of key mangrove and associated species, habitats and interconnected ecosystems.</p>	<p>In-country mapping expertise has been identified. 50% complete</p>	<p>Map of vegetation done but not sure of georeferencing &amp; link to GIS system</p>	<p>3.1.7 Ground truthing currently undertaken GIS local consultant hired 3.1.8 GIS local consultant hired Will also assist in report including 1.2.3 &amp; 1.2.4 SPREP consultant already supplied layers Database is in place now (45%)</p>	<p>Mapping may not have been done</p>	<p>SPREP assisted in completion as part of National Map</p>	<p>Mapping been completed 90%</p>
<p>3.2 Site specific assessments on the economic values of the direct and indirect use, traditional/cultural and other non-uses of mangroves including C-sequestration and protection against disasters to be completed by June 2013.</p>	<p>50% complete</p>	<p>Initial discussion initiated by Fiji based consultant</p>	<p>3.1.4 Survey Questionnaire under development; survey will be done end of Feb 13 or early March 13 (NCC)</p>	<p>Initial discussion initiated by Fiji based consultant</p>	<p>Tonga Community Development Trust has done survey &amp; produced draft report</p>	<p>Survey completed analysis being done</p>

## Appendix 6: Work Plan & Country Results

<p>3.3 Specific community-based activities implemented at each demonstration site, including restoration and replanting of mangroves in each of the sites by June 2013.</p>	<p>25% Complete</p>	<p>Replanting planned</p>	<p>3.1.10 Assessment &amp; Report completed MTR did not see report Cleanup after cyclone ongoing</p>	<p>Plans for boardwalk</p>		<p>NCC &amp; Meterology (NAC) to carryout</p>
<p>3.4 An integrated GIS-based mangrove information system linked to national GIS in each of the countries by December 2013.</p>	<p>30% Completed</p>	<p>Same as 3.1.3 Map of vegetation done but not sure of georeferencing &amp; link to GIS system</p>	<p>3.1..7 Ground truthing currently undertaken: 3.1.8 GIS local consultant hired Will also assist in report including 1.2.3 &amp; 1.2 4 SPREP consultant already supplied layers Database is in place now. (45%)</p>	<p>Not yet done</p>	<p>Completed by SPREP see 1.3</p>	

## Appendix 6: Work Plan & Country Results

<p>3.5 Specific co-management plan developed and costed for the demonstration site that clearly identifies key objectives, specific strategies and initiatives, time bound targets and M&amp;E indicators, indicative cost of implementing the plan as well as the sustainable financing strategy by completion of project.</p>	<p>Still reviewing current management systems; 5% complete</p>	<p>Plans in place for replanting 20 ha mangroves &amp; establish a mangrove nursery</p>	<p>3.1.12.Guidelines drafted &amp; undergoing refinement through community consultations 3.2.1 Conservation will depend on the plan Limited mangrove replanting experience may need technical training &amp; linking with MFF</p>	<p>WorldFish working on community management plan</p>	<p>may not be done</p>	<p>On going</p>
<p>3.6 Cross-country exchange visits of Mangrove Country Coordinators, members of implementation teams and /or community leaders.</p>	<p>10% complete</p>		<p>3.2.2 Some local visits within demonstration site occurring; Should be planned along with awareness strategy (10%)</p>			

## Appendix 6: Work Plan & Country Results

Communication strategy completed 2012 but not all countries aware. MESCAL Feb 2013 meeting countries developed awareness priorities and planed						
4.1 Effective implementation of MESCAL Communications Strategy	Awaiting review on strategy (10%)	Awareness carried out in demonstration site at village & province level. Capacity building carried out with government staff, national awareness campaign just initiated in conjunction with WWF & GOF partners	Some information & awareness completed, DVD planned, complete list not available but could be compiled from bimonthly progress reports & MESCAL Project NEWSFLASHES	good quality DVD prepared on mangrove traditional uses at Demo Site		
4.1.1 Number of countries that adopt adaptive co-management in policy briefs	Still reviewing current management		May not have anything on ground to report by end of project			

## Appendix 6: Work Plan & Country Results

<p>4.1.2 Production of posters for village halls, churches and schools; training of local champions to become MESCAL messengers (at least one per demonstration site); use of theatre groups to deliver key messages</p>	<p>25% Complete</p>		<p>Some produced see 4.1 But large need awaits preparation of reports as noted above</p>	<p>Posters prepared but distribution unclear.</p>		
<p>4.1.3 Wide dissemination of national and local reports, case studies, information briefs within the country and between countries in the region and internationally through electronic means and oral presentations at key regional and international fora.</p>	<p style="text-align: center;">Plans underway for Pacific Science Congress (July 2013) special sessions, preparation of abstracts and a write workshop</p>					

## Appendix 6: Work Plan & Country Results

<p>4.1.4 Wide dissemination of findings as per Activity 4.1.3 using the IUCN global communications reach.</p>	<p>What is planned ? Still reviewing current management systems; 5% complete</p>		<p>only Newsflash</p>			
<p><b>Activity 4.2.1</b> Conduct in-country technical training workshops on adaptive co-management of mangrove ecosystem for climate change adaptation targeting middle management intersectoral government officials, non-government organizations and community leaders. (Government officials to include middle managers from departments that deal with fisheries, forestry, environment, and climate change).</p>	<p>should revise indicators for all 4.2 ; Still reviewing current management systems; 5% complete</p>	<p>well appreciated by Fisheries gained considerable knowledge &amp; skills</p>	<p>In country training done (highly appreciated)</p>			

## Appendix 6: Work Plan & Country Results

<p>4.2.2 Conduct a regional training workshop on adaptive co-management of mangrove and associated coastal ecosystems using material generated in this project. If additional co-financing can be found, additional workshops will be held</p>	<p>Still reviewing current management systems; 5% complete MTR Need to be decided whether can be accomplished in time frame?</p>					
<p><b>4.2.3</b> Develop and implement high level “Leadership training” in climate change, ecosystem based adaptation and the role healthy mangroves play in adaptation to, and mitigation of, climate change.(4.1.3)</p>	<p>Developing TOR</p>					

## Appendix 6: Work Plan & Country Results

<p><b>4.2.4</b> Conduct a regional training workshop on selected tools, such as benefit cost analysis, CRISTAL, PAY, RiVAMP, and wetland assessment tool. If additional co-financing can be found, additional workshops will be held.(4.2.3)</p>	<p>10% complete</p>					
<p><b>Exit Strategy</b></p>		<p>Forestry &amp; Fisheries have obtained Departmental funding for Demonstration Site follow up</p>	<p>CEO suggests needs to be done soon Discussions initiated source of budget problematic UNDP identified will need to await more successful results &amp; reports</p>			