OM 4.5.4 (Rev)

CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	***Secretariat of the Pacific Regional Environment Programme***
Project Title:	***Enhancing Knowledge and Understanding of the Biodiversity of Upland Central Savaii***
Date of Report:	***26/09/2013***
Report Author and Contact Information	***Bruce Jefferies*** ***C/ SPREP*** ***PO Box 240 – Apia – Samoa*** ***brucej@sprep.org***

CEPF Region: Polynesia-Micronesia

Strategic Direction: 2: Strengthen the conservation status and management of 60 key biodiversity areas (KBA)

Grant Amount: $169,400.00

Project Dates: January 1, 2012-August 30, 2013

Implementation Partners for this Project (please explain the level of involvement for each partner):

Birdlife Pacific Partnership

Dr Mark O'Brien from BirdLife Fiji participated in the survey and contributed to the development of methodologies, identification of experts.

Conservation International Pacific Islands Program

Provided support for one member of the avifauna team from the CI Fiji Office. Collaboration throughout with survey planning and implementation.

Island Conservation

In-kind support through the provision of one expert for the avifauna team.

Ministry of Natural Resources and Environment (MNRE)

The Ministry of Natural Resources and Environment was the primary partner for this intervention. Significant in-kind support to the provision of skilled technical field staff, access to facilities at Asau and general logistical support.

New Zealand Department of Conservation (DOC)

In-kind support through provision of the leader of the terrestrial entomology team.

NZ Ministry of Defence

Significant logistical support - transport of personnel, equipment and supplies, placing of field teams and evacuations.

United States Geological Survey (USGS)

Significant in-kind technical support through the provision of a team leader for the terrestrial reptile survey.

Chiefs and people of Aopo and all those villages who were consulted during the project.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

CEPF STRATEGIC DIRECTIONS	CEPF INVESTMENT PRIORITIES	Savaii BIORAP Project contributions and comments
1. Prevent, control, and eradicate invasive species in key biodiversity areas.	1.1 Strengthen defences against the introduction and spread of invasive species and pathogens that threaten biodiversity. 1.2 Control or eradicate invasive species in key biodiversity areas, particularly where they threaten native species with extinction. 1.3 Perform research, provide training in management techniques, and develop rapid response capacity against particularly serious invasive species.	Prevention control and eradication were not priorities for this survey. All scientific survey teams did, however, observe the impact's from invasive plants and animals and formulated recommendations that were integrated into the final report.
2. Strengthen the conservation status and management of 60 key biodiversity areas.	2.1 Develop and manage conservation areas that conserve currently unprotected priority sites, especially critical refugia such as large forest blocks and alien-free habitats. 2.2 Improve the management of existing protected areas that are priority site outcomes.	Although the Savaii upland forest areas are described on some maps as protected areas there are no legal designations of the area at present. The recommendations to the Government of Samoa that are embodied in the BIORAP report place significant emphasis on the need for this area to be formally designated and actively managed.

3. Build awareness and participation of local leaders and community members in the implementation of protection and recovery plans for threatened species.	*3.1 Develop and implement species recovery plans for highly threatened species requiring species-focused action, especially those that have received little effort to date.* *3.2 Strengthen leadership and effectiveness of local conservation organizations by developing peer-learning networks and promoting exchanges and study tours.* *3.3 Raise the environmental awareness of communities about species and sites of global conservation concern through social marketing and participatory planning and management approaches.*	*3.1 & 3.2 could only receive limited attention during the survey.* *3.3 was provided with and received significant attention both through direct contact with resource owning communities and the production of conservation education and advocacy products.* *Opportunities to actively work on participatory planning and management approaches during this intervention were limited.*
4. Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team.	*4.1 Build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the shared conservation goals described in the ecosystem profile.*	*This priority was not actively pursued during the BIORAP survey.*

Please summarize the overall results/impact of your project.

The BIORAP survey was embarked upon as part of a process to facilitate the improved management of the forests and biodiversity of Upland Savaii and to help fill key gaps in the knowledge of this globally important put poorly studied region of montane and cloud forests.

This information is available to MNRE and can / ought to be used when making decisions for the conservation management of the area's biodiversity.

This needs to be carried out in collaboration with Savaii land-owning communities, other government departments and partners.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

Over the next 10 years this project will contribute to Samoa's NBSAP, and therefore its commitments to the CBD and Programme of Work on Protected Areas and the Islands Biodiversity PoW, by, inter alia, enhancing good governance and leadership (by building local and national capacity), increasing stakeholder participation (by engaging communities and the MNRE), drawing on traditional knowledge and practices (through insight gained by community involvement and participatory film making), public awareness and education (through film screenings and community seminars). This

project is also a crucial early step toward social and economic development in the form of ecotourism.

Specifically, the conservation of Samoa's Central Savaii uplands KBAs ecosystems, endemic species and landscapes, including a range of specific endangered fauna and flora, will be enhanced by formulating and progressively implementing a Conservation Management Plan (CMP) that will coordinate conservation efforts, among all stakeholders, to protect and rehabilitate the site's full range of ecological systems and native species.

Actual Progress toward Long-term Impacts at Completion:

The comparatively short period that this project was developed and implemented within needs to be recognised.

Most results/impacts of the BIORAP survey need to be measured over several years (or even in decades) rather than months.

Development of a comprehensive conservation management plan for the site would require the establishment of a dedicated planning team. This team would need to include specialist support that would work with MNRE and local communities over a period of probably up to 12 months.

[Potential eco-tourism initiatives through the Samoa Tourism Authority were introduced during the BIORAP project. Aopo cloud forest was assessed as a potential eco-tourism site to be developed and promoted by the Samoa Tourism Authority in close collaboration with the village of Aopo].

MNRE is proposing a major GEF5 project that has integrated strategic management follow-up activities, which will see the implementation of some key recommendations from the BIORAP survey

CEPF funding levels precluded this scale of intervention and only provided resources for developing BIORAP survey protocols, implementing the actual survey and producing reports and awareness/advocacy material.

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

(i) The status of several key species, in particular puna'e, manumea, the Samoan white-eye, is confirmed. Importantly, the Savaii uplands is the only known site for Samoan white-eye and is considered critical to the overall status of other species, including the ma'oma'o ground dove and seabirds.

The Avifauna team visited three main areas during the BIORAP. The first was the forests above Asau towards Mauga Maugaloa; the second was the forests above A'opo on the trail to Mauga Mata o Le Afi and beyond to Mauga Silisili; and the third was around several craters nearer the centre of the island. The first two included areas where there were possible sightings of the Puna'e or Samoan Moorhen last century and the third, accessible only by helicopter, is unlikely to have ever before been visited by scientists.

No trace of the Puna'e was found although it needs to be noted there are still significant areas in which searches for this bird have not been undertaken. The survey tends to confirm the view that this species is extinct (last confirmed report 1873).

Only a single uncorroborated sighting of the endangered Manumea or Tooth-billed pigeon was made, despite the presence of large numbers of its food trees, raising concern that its situation may now be critical. Reasonable numbers were recorded in a previous upland survey in 1996 but the area no longer seems to be a stronghold for this species. No Tuaimeo or Shy Ground-doves were seen.

Small number of the endangered Ma'oma'o or Mao were found at the second and third sites, re-enforcing a general perspective that these species have particular habitat requirements, which are now hard to find.

Other forest birds were found in good numbers including the Matapaepae or Samoan White-eye which is found only in the Savai'i uplands. It was sufficiently numerous for the team to recommend a change in its current IUCN status.

One seabird, a Tahiti Petrel, was found at an inland crater, a first record for this species in Samoa. This suggests that the uplands may still be an important area for nesting seabirds and further surveys are needed during the breeding season.

(ii) Management issues, for fauna in the uplands, that would contribute to the successful management of the KBA are confirmed. These include threats posed by invasive species.

Invasive plants and insects typically impacting islands elsewhere in the Pacific are mostly not found in the upland forests and measures to limit their spread are possible. Wild cats, rats and pigs have penetrated some remote higher altitude areas with impacts on birdlife and native vegetation but natural values still persist and active management could conserve these values.

(iii) The status of a range of endangered plants is clarified.

From the data and observations, it appears that the vegetation is very healthy and that it has recovered from damage inflicted by two severe cyclones which hit two decades ago (Val and Ofa), and the forest is returning to its "natural" state.

(iv) Species new to Samoa are, possibly, located.

Two species new to Samoa, both orchids, were recorded during the expedition, and they (Calanthe sp. and Bulbophyllum sp.) are now being studied; one or perhaps both of them represent new, unnamed species.

(v) Gaps are filled in the national ecological surveys, which pertains to uplands ecosystems, not surveyed by ecologists in the past few decades.

Two hundred and thirty-five vascular plant species were recorded in the upland area above 1,000 m elevation, including 71 endemics. A total of 196 voucher numbers were collected. The total number of species recorded from the area represents about one quarter of the known vascular flora of Samoa.

Six 500 m2 plots were sampled between 1,600 and 1,250 m elevation. The diameter at breast height (dbh) of every tree over 5 cm dbh was measured, and tables of the results were prepared for each plot. Checklists of all vascular plants were made in these plots (as well as for the area as a whole) to determine the elevation range of the upland species.

(vi) Priority habitats/areas are identified based on the endangered fauna and flora they support, which will inform future management of the KBA.

Based on the data and observations, 5 plant communities have been shown to exist in the area: (i) montane forest, (ii) cloud forest, (iii) volcanic scrub, (iv) Carex bog, and perhaps (v) Pandanus swamp forest.

Most of the site above 1,000 m elevation is montane forest, followed in total area by cloud forest. The main difference between the two seems to be the presence and dominance of Reynoldsia pleiosperma (vī vao) in the latter plant community. Volcanic scrub is found only on and around Mata o le Afi and Mauga Mū craters and their respective lava flows that extend a few km down slope. Carex bog was not visited by the botanical team, but is known to occur in waterlogged craters and depressions in the area. Pandanus swamp forest was seen by helicopter to occur around the margins of Lake Mataulano, but no areas of this vegetation, which may lie below 1,000 m in elevation, were visited.

(vii) The presence/absence of the Samoan swallowtail butterfly is confirmed.

No Samoan swallowtail butterflies were observed or trapped during the BIORAP. The results of moth and butterfly surveys indicate a relatively unspoilt biodiversity. Of the 135

taxa in 21 families recognised in the upland survey, 44 species or 33% have been identified with published species names, but this includes the difficult and largely newly discovered micro-moth taxa. The majority (65%) of the large-bodied macro-moths and butterflies are assigned to previously named species. Several new species were discovered among the smaller moth families including families; Crambidae, Tortricidae, Carposinidae and another eight families where new species await formal description.

Actual Progress toward Short-term Impacts at Completion:

On a scale of 1 to 10 (with 1 very limited progress and 10 complete achievement) progress towards short term impacts can be objectively ranked as 8. Severe weather conditions during the middle part of the BIORAP Survey compromised the findings of three survey teams (2 avifauna teams and 1 entomologist team).

Please provide the following information where relevant:

Hectares Protected: N/A

Species Conserved: N/A

Corridors Created: N/A

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

All BIORAP participants combined well and completed and documented a comprehensive survey of the site's fauna, flora and avifauna.

As well as the actual survey, which involved 12 days of intensive activity in the Savaii upland cloud forest, a significant amount of pre-survey planning and logistical work was needed. This phase also involved a wide cross section of organizations and individuals.

Visitors to Samoa often talk casually about "spending a few days on Savaii". These comments invariably relate to the extraordinary reefs, beaches and resorts that are scattered along the island's coast. The BIORAP teams were focused, however, on the cloud forests and volcanic craters that, to a large extent, shape this remarkable island.

The BIORAP study area covered something like 100km^2 of extremely rugged and inaccessible terrain, including the 1860m Mt Silisili – the highest point in Samoa.

The logistical challenges associated with undertaking surveys in this very remote area would be easy to underestimate. Without the support from the New Zealand Defence Force Helicopters, who provided an estimated 30 hours or helicopter support, a survey such as this would have taken several months.

The dedicated participation of MNRE staff, local villagers and other interested groups and individuals was particularly impressive and many local staff increased their skills, and knowledge of the biodiversity of the upland forests of Savai'i.

Were there any unexpected impacts (positive or negative)?

An early lesson was that everyone who was involved is now much more aware of why there is a dearth of information on the fauna and flora of this very remote and little visited area. In simple terms we discovered that this is a hard place to access and even harder to work in.

Project Components

Project Components: Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.

The following project components have been ranked on a scale of 1 to 10, with 1 being the lowest rank and 10 the highest.

Component 1 Planned: Design: Planning and survey preparations, in consultations with key stakeholders, particularly local communities, are completed.

Component 1 Actual at Completion:

Ranking 7

A joint working group with MNRE was established early in the project's inception phase. The working group met reasonably regularly but it was difficult to get continuity as all members of the working group had other responsibilities.

Limited consultation with local communities was undertaken during the project formulation phase but contact increased as the planning advanced.

Component 2 Planned: Survey and Fieldwork. Survey fieldwork is completed by teams composed of technical and support staff from MNRE (Forestry and the Division of Environment and Conservation), two or three local villagers who will act as guides and assist with the surveys (contributing to capacity building that enables them to understand basic surveying skills), SPREP staff, and regional experts. MNRE staff, local villagers and other interested groups and individuals trained on surveying techniques

Component 2 Actual at Completion:

Ranking 8.5

This phase worked particularly well and once fieldwork actually started all teams applied themselves with commitment and diligence.

Component 3 Planned: Awareness and communications. In collaboration with MNRE, a community awareness and education program is completed that utilizes participatory video production, a film screening, and community discussions. Different community groups are engaged in information sharing. Findings from the project are used to gauge community views on ways to better conserve and sustainably manage their biodiversity.

Component 3 Actual at Completion:

Ranking 7

Most community collaboration was facilitated by MNRE staff. The DVD production was completed in both English and Samoan languages. This proved to be an effective way of reaching out to communities.

The sessions organised to report the BIORAP findings and conclusions back to communities was very well organised and presented by MNRE staff.

Were any components unrealized? If so, how has this affected the overall impact of the project?

The scale of time and resources required to adequately consult and involve communities was underestimated. MNRE and SPREP staff were unable to allocate sufficient time for this important and fundamental part of conservation advocacy. It is probable that this aspect compromised some of the project outcomes.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.

Final report and DVD set dispatched separately.

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

General observations

All conservation initiatives face an uncertain future and although the establishment and ongoing management of protected areas has caught the attention of donors, including the CEFP, GEF, and many bi-lateral contributors, an important consideration is that long-term funding is not assured. Leveraging additional resources takes-up time, which should be directed to field conservation work, not fund raising.

Conservation outcomes and interests will only be achieved through long-term commitments and this requires sustained commitments to counteract the factors working against conservation (perverse incentives) and to establish an enabling environment.

Another consideration is that during the formative phases of a conservation programme, projects will generally suffer from a lack of data and information, particularly a basic socio- economic community profile. These need to include distribution, patron-client networks and power hierarchies.

Information is also often lacking on the reasons why communities decide on various development options and land uses. While these might be known generically, differences in the determinants of decision-making between households, family, tribes, and clans, and along gender and generational lines, is often poorly understood. This can have significant impacts on how projects approach and deal with a given group of people.

Efforts are needed to collect such information as it is vital for developing strategies and objectives, as well as structuring and targeting interventions.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

Ranking 8

The design process applied the significant body of biodiversity conservation and ecosystems management knowledge and experience that has been amassed in SPREP over many years.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

Application of this experience work to ensure that the BIORAP was built on practical in-house experiences.

Other lessons learned relevant to conservation community:

Although many answers to achieving biodiversity conservation, through PA interventions, are arguably as remote as they were 10 years ago, there is little doubt that our questions are now better defined.

Another important reality, drawn from the experience and groundwork that has gone on in various parts of the world, is that protected area and conservation advocates/managers need to direct significant attention to the "social sciences". Rural sociology, social anthropology, resource economics, and rural development specialists are all needed to contribute to PA establishment processes. Biodiversity conservation must remain the primary objective, however, and it is important that other agendas are not allowed to hijack the central conservation focus.

Additional Funding[i]

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Position	*Estimate of days in project Proposal*	*Estimate of days actually spent*	*Daily or Hourly Rate*	*Travel & Associated Expenses*	*Total Estimate*
Terrestrial Ecosystem Management Officer	*20*	*85*	*$350.00*	*$2,000.00*	*$31,750.00*
Biodiversity Adviser	*10*	*20*	*$400.00*	*$300.00*	*$8,300.00*
Conservation Analyst	*10*	*18*	*$400.00*	*$500.00*	*$7,700.00*
Helicopter Support Costs	*0*	*30*	*$7,500.00*	*$0.00*	*$225,000.00*
New Zealand Department of Conservation	*0*	*20*	*$350.00*	*$0.00*	*$7,000.00*
Birdlife International	*0*	*20*	*$350.00*	*$0.00*	*$7,000.00*
Islands Conservation	*0*	*20*	*$350.00*	*$4,800.00*	*$11,800.00*
United States Geological Survey (USGS)	*0*	*20*	*$350.00*	*$4,800.00*	*$11,800.00*
Ministry of Natural Resources and Environment (MNRE)	*30*	*60*	*$100.00*	*$0.00*	*$6,000.00*
Total					*$316,350.00*

***Additional funding should be reported using the following categories:**

A Project co-financing (Other donors or your organization contribute to the direct costs of this project)

B Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)

C Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project).

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

The methodology applied during the BIORAP focused on 3 main steps:

i. The first step was Participatory Biodiversity Appraisal (PBA). This involved ways to involve people from local communities in a discussion about their natural resources.

- *This step was hindered by several constraints including the availability of skilled practitioners to facilitate this process.*

ii. The Ecological survey followed methodologies used in many other places. These involved diurnal and nocturnal observations, limited specimen collection and discussions with local inhabitants.

- *This step was very effective and produced excellent outputs.*

iii. The third step involved returning the ecological survey results to the local communities.

Comments outlined under i. above are reiterated here. The facilitators from MNRE who led this part of the process did an outstanding job.

- *Summarize any unplanned sustainability or replicability achieved.*

A consultancy has recently been asked to write up the BIORAP methodology. Particular emphasis in the terms of reference requires the consultant to carefully consider community/socio-economic aspects of the BIORAP process.

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

No action required

Additional Comments/Recommendations

The recommendations emanating from the BIORAP Survey are integrated into the final report. The report can be downloaded directly from:
http://www.sprep.org/publications/rapuplandsavaiisamoa

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

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****If your grant has an end date other than JUNE 30, please complete the tables on the following pages****

[i] ***the figures provided in this table are not definitive but can be regarded as an accurate order of additional funding.***