CEPF Final Project Completion Report – EMI Small Grants

Please complete all fields and respond to all questions below.

Background Information

Organization Legal Name	Bishop Museum
Project Title	Baining Mountains Biological Survey
Date of Report	28 March 2017
Report Author	Allen Allison
Author Contact Information	allison@hawaii.edu
CEPF Region	**East Melanesian Islands**
Strategic Direction	
Grant Amount	$20,000
Project Dates	March 2016 to February 2017

1. Implementation Partners for this Project
   (please list each partner and explain how they were involved in the project)

   This project involved a comprehensive biological survey of the Baining Mountains in East New Britain Providence, Papua New Guinea. Funding from CEPF was combined with funding from the PNG Conservation and Environmental Authority (CEPA) as part of its "Community-based Forest and Coastal Conservation and Resource Management Project" supported by the United Nations Development Programme (UNDP)/Global Environment Facility (GEF).

Other organizations involved in this project included:

1. COSMO ARM [local Community-based Organization] – outreach & logistics
2. PNG Conservation and Environmental Protection Authority (CEPA) – funding and logistical support;
3. PNG National Museum – survey personnel and logistical support;
4. PNG University of Technology – survey personnel (general botany);
5. University of California at Davis, USA – survey personnel (birds & mammals);
6. PNG Fisheries College – survey personnel (amphibians and reptiles);
7. Naturalis Biodiversity Centre, Leiden, Netherlands – survey personnel (orchids);
8. University of Vermont, USA - survey personnel (ferns);
9. Angus Fraser Nature Photography - photography

Conservation Impacts

Information on the occurrence and status of the plants and animals of an area is crucial to justify, guide and inform conservation of that biota. The information that we gathered during out survey confirms that the Baining Mountains are a high value conservation target.

2. Please explain/describe how your project has contributed to the implementation of CEPF's Ecosystem Profile for the East Melanesian Islands. For example, you may refer to the Strategic Directions that your project has contributed to.

This project was funded under Strategic Direction 1: Empower local communities to protect and manage globally significant biodiversity at priority Key Biodiversity Areas under-served by current conservation efforts:
1.1 Conduct baseline surveys of priority sites that build government-civil society partnerships and bridge political boundaries
1.2 Raise awareness about the values of biodiversity and the nature of threats and drivers among local communities at priority sites.

Although the northern versant of the Baining Mountains is accessible from Kokopo/Rabaul, the major administrative centre of East New Britain, it was until our survey the most poorly known of the three main mountain ranges in New Britain – the others being the Whiteman Mountains and the Nakanai Mountains. The Baining Mountains were thought to be an important conservation target but the biota was too poorly known to confirm this. We addressed that information gap via a comprehensive field survey that involved more than 550 person days of field work by a team of scientists.

3. Please summarize the overall results/impact of your project against the expected results detailed in your approved proposal.

I have attached a preliminary report that includes lists of plant and animal taxa that we documented from specimen collections or visual observations. We had anticipated that our survey would confirm the importance of the Baining Mountains as a nationally important high value conservation target in New Britain. That indeed proved to be the case.

4. Please describe any successes and/or challenges faced towards achieving the expected short-term and long-term impacts of the project work.

I recruited an impressive PNG national and international group of experts to carry out the survey and they produced impressive results (see attached preliminary report).

We established the Baining Base Camp at the headquarters area of the former Wild Dog Mine. This site was accessible via 4WD vehicle which simplified logistics. However, our presence at the site led some in the surrounding communities to suggest that our survey was simply a cover for gathering information in order to resume gold mining in the area, a matter of considerable community controversy. We addressed this by inviting members of the surrounding community to visit the site and see for themselves what we were doing. We

also carried out an extensive outreach effort, working closely with the Sinivet Local level Government and with the East New Britain Provincial Government. These efforts added quite a bit of expense to the project (covered by UNDP funding) but were essential to maintaining good relations with the community.

5. Were there any unexpected impacts of your project (positive or negative)?

   We had not anticipated that members of the surrounding community would become suspicious that the survey was simply a cover or ruse to assess the feasibility of resuming gold mining in the area, especially as we were highly critical of the environmental damage created by the former mine operator, New Guinea Gold.

   When we began the project we met extensively with community groups, Sinivet Local level Government leaders, Qaqet leaders and senior personnel of the East New Britain Provincial Government. We updated them from time to time about our plans and of our findings during the survey.

   Some member of the local community continue to think that there is still considerable gold in the area to be mined. This is unlikely based on our discussions with geologists and mining professionals but these beliefs persist. This needs to be taken into account when evaluating conservation prospects for the area.

   On the other hand during our time in the field we held *ad hoc* discussions with local landowners and something of a consensus gradually developed that with modest funding the base camp area could be developed into an ecotourism lodge. We had hoped for this sort of interest and were pleased to confirm it.

6. If you did not complete any project components or activities, how did this affect the overall impact of the project?

   We had hoped to get to the summit of Mt. Aserki, the highest mountain in the Baining Mountains. Although we had engaged a helicopter operator to transport us to Mt Aserki (2062 m) these arrangements fell through. We compensated for this by establishing a camp at Mt. Regis (1482 m), about three hours (by foot) from the Base Camp. Although Mt. Regis is 500 m lower in elevation than Mt. Aserki, it supported an impressive cloud forest ecosystem that very likely had a similar biota to that of Mt Aserki.

   The area of land in the Baining Range above 1500 m is relatively small and in our opinion is unlikely to harbour much in the way of high-elevation, restricted range endemics. Species that inhabit cloud forest often have elevational ranges of 500-600 m and so we would have sampled this biota in the lower part of its range on Mt. Regis.

   It is interesting to note that a lizard, *Tribolonotus annectens*, which was previously known from New Britain from a single specimen collected by a Bishop Museum biologist in 1963 and was thought to be exceedingly rare, was actually abundant in the cloud forest habitat that we sampled.

   The returns from mammal trapping were low. This was expected and really didn't affect the overall significance of our findings, but this was nevertheless somewhat disappointing.

Products/Deliverables

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

   Our survey methodology largely followed that described in *Allison, A., and R. Englund. 2008. Terrestrial animals and aquatic invertebrates, p. 50-67. In: Biodiversity Assessment of Tropical Island Ecosystems. PABITRA Manual for Interactive ecology and Management. D. Mueller-Dombois, k. W. Bridges, and C. C. Dahler (eds.). Bishop Museum Press, Honolulu, Hawaii.*

CEPF Global Monitoring Data

Respond to the questions and complete the tables below. **If a question is not relevant to your project, please make an entry of 0 (zero) or n/a (not applicable).**

8. Did your organization complete the **CEPF Civil Society Tracking Tool (CSTT)** at the beginning and end of your project?
   (Please submit the final CSTT document to IUCN Oceania if you have not already done so).

	Date	Composite Score
Baseline CSTT	N/A	
Final CSTT	N/A	

9. Please list any **Vulnerable, Endangered, or Critically Endangered species** conserved due to your project.

   The major goal of our project was to confirm the conservation importance of the Baining Mountains. We worked closely with COSMO ARM Conservation Project (named after the wards of Arabam, Raigel and Maranagi). The leader of that initiative – Raymon Joshua – was an important member of our project team. The information that we gathered will be used by ARM to advance and guide designation of a large area of the Baining Mountains as a conservation area (please see attached map).

10. Hectares Under Improved Management – N/A

Project Results	Hectares*	Comments
11. Did your project strengthen the management of an existing protected area?		*List the name of each protected area*
12. Did your project create a new protected area or expand an existing protected area?		*List the name of each protected area, the date of proclamation, and the type of proclamation (e.g., legal declaration, community agreement, stewardship agreement)*

13. Did your project strengthen the management of a key biodiversity area named in the CEPF Ecosystem Profile (hectares may be the same as questions above)		*List the name of each key biodiversity area*

** Include total hectares from project inception to completion*

14. In relation to the questions above on protected areas, did your project complete a Management Effectiveness Tracking Tool (METT), or facilitate the completion of a METT by protected area authorities? If so, complete the table below. *(Note that there will often be more than one METT for an individual protected area.)* – N/A

Protected area	Date of METT	Composite METT Score	Date of METT	Composite METT Score	Date of METT	Composite METT Score

15. Direct Beneficiaries: Training and Education

Did your project provide training or education for . . .	**Male**	**Female**	**Total**	**Brief Description**
16. Adults for community leadership or resource management positions	6	0	6	We trained a group of six males from the local community in field survey techniques. This equips them to become local ecotourism guides.
17. Adults for livelihoods or increased income				
18. School-aged children	~45	~45		We hosted visits by children, generally accompanied by their parents.
19. Other				

20. Please list the name and approximate population size of any "community" that benefited from the project.

Community name	Population size	Surrounding district	Surrounding province	Country
Sinivit LLG	~3000	Pomio	East New Britain	Papua New

			Province	Guinea

21. Socioeconomic Benefits to Target Communities

Using the communities listed above, please complete the table below, inserting the name of the communities in the left column, and placing an X in all relevant boxes in the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit.

N/A

Community Name	**Community Characteristics**								**Nature of Socioeconomic Benefit**												
									Increased income due to:												
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists / nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty line	Other	Adoption of sustainable natural resources	Ecotourism revenues	Park management activities	Payment for environmental services	Increased food security due to the adoption of	More secure access to water resources	Improved tenure in land or other natural resource due	Reduced risk of natural disasters (fires, landslides,	More secure sources of energy	Increased access to public services, such as education,	Improved use of traditional knowledge for	More participatory decision-making due to	Other (please provide details below)

If you marked "Other", please provide details on the nature of the Community Characteristic and Socioeconomic Benefit

Lessons Learned

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

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

    Our approach involved an initial visit to the area – far in advance of field work - to consult with land owners and gain their permission to work in the area. We then returned to the area and deployed an initial team of Papua New Guinea biologists. Their presence attracted additional community interest and attention and resulted in additional outreach efforts. This resulted in the rest of the survey team – which included international experts – being received warmly when they reached the area.

    Otherwise our standard survey approach – to identify areas of particular interest and recruit specialists to address these interests – worked well. For example, the tree flora of New Britain is relatively well known but the ferns and orchids – which comprise around a quarter of the plant diversity in New Guinea rain forests – are poorly known. We therefore included an orchid and a fern specialist on our team.

    Although it would seem abundantly obvious that documenting the biota of an area should include a comprehensive survey of the literature followed by a targeted field survey, this is often not the case. Field surveys are often proposed and conducted in PNG as if there has been no previous field work in the areas. This simply wastes time and resources. Although in many cases collectors do not produce published reports, the specimens that they collect are deposited in herbaria and museums and are available for study. These collections should be studied prior to field work.

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

    See above

24. Describe any other lessons learned relevant to the conservation community

    The success of our approach – which involved broad engagement with the land-owing community – was essential to ensure the success of the survey.

Sustainability/Replication

25. Please summarize the success or challenges in ensuring that the project will be sustained or replicated in the future.

    It is clear that broad community outreach is essential for gaining approval and community support for field survey operations.

26. Please summarize any unplanned activities that are likely to result in increased sustainability or replicability of your project work.

    N/A

Safeguards

Please provide a summary of the implementation of any required action toward the environmental and social safeguard policies for this project.
This may be attached in the form of an updated Social Safeguards document.

When conducting field work in Papua New Guinea it is essential to gain permission from landowners for field work on their land. It isn't always easy to determine who actually owns the land of interest. To accomplish this one needs to mount a broad-based outreach effort that involves government officials, land owning groups and others – i.e., to engage with all possible stakeholders and to ensure that benefits are equitably shared with all.

We did this. In particular we relied on landowners to recommend the field assistants whom we engaged on the project. We also made an effort to purchase vegetables from local farmers. This helped to ensure that women benefited from the project. They tend to use cash income much more responsibly than do men and by purchasing vegetables from them we helped to ensure that income from the project was broadly shared with the community and put to good use.

Additional Comments/Recommendations

27. Please use this space to provide any further comments or recommendations in relation to your project or CEPF.

Our work has confirmed the importance of the Baining Mountains as a high value conservation target in New Britain. We strongly recommend that CEPF engage with COSMO ARM and other community-based organizations to develop ecotourism or other business activities that can potentially provide modest and on-going revenue essential to sustain conservation of a large portion of the Baining Range over the long term.

We believe very strongly that the future of conservation in Papua New Guinea will best be assured by work of grass-roots conservation organizations. Most of the large international conservation NGO's focus on working with local communities to build capacity for conservation. There is remarkably little to show for this approach.

We believe that local landowners already know and have the capacity to sustainably protect and manage lands. They have after all successfully managed the living landscape for countless generations and are extraordinarily knowledgeable about the plants and animals of their areas. Any biodiversity worth saving is the result of their stewardship. What they often lack is the capacity to link to national and international funding sources, to prepare complicated proposals and to acquit for the funds. COSMO ARM is something of an exception and has made excellent progress. We encourage CEPF to help support COSMO ARM to nurture this progress. And we encourage CEPF to work with grass-roots conservation organizations throughout Eastern Melanesia to advance conservation in this megadiverse part of the Pacific.

Additional Funding

Please provide:

28. details of any additional funding that supported this project
29. details of any further funding secured for this project, your organization, or the region, as a result of CEPF's investment in this project

Donor	Type of Funding*	Amount	Notes
CEPA/UNDP	Grant – Co-financing	~USD 150,000*	

** Categorize the type of funding as:*

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 investm*ent or successes related to this project)

*N.B. Bishop Museum has a current contract, funded by the United Nations Development Program through the PNG Conservation and Environmental Protection Authority for surveys of the Baining and Nakanai ranged. The overall contract is for around $300,000 so the Baining is estimated at around half that.

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 website, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below if different from what has already been provided:

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