CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Landcare Research Manaaki Whenua Ltd
Project Title:	Evaluation of the feasibility of eradicating macaques from Palau
Date of Report:	October 2011
Report Author and Contact Information	John Parkes & Penny Fisher PO Box 40, Lincoln 7640, New Zealand

CEPF Region: Polynesia-Micronesia

Strategic Direction: Prevent, control and eradicate invasive species in key biodiversity areas

Grant Amount: US$19,800

Project Dates: 19 Sept 2011 – 30 Nov 2011

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

Sustainable Decisions (Palau NGO): organized field trips and consultations for authors in Palau (3 people for 7 days). Governor, traditional chiefs and people of Angaur State (consulted over 2 weeks). National government of Palau (consulted agencies and political leaders over 2 weeks).

Island Conservation: This NGO in association with Palau partners is seeking funding to implement the actions recommended as feasible in this report. We discussed out preliminary finding with Island Conservation's Pacific Director.

Conservation Impacts

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

Angaur (and Peleliu) forests are listed as key biodiversity areas in Polynesia-Micronesia Hotspot. Angaur Island has 6 species of invasive vertebrates (macaques, feral cats, musk shrews, Polynesian rats, red jungle fowl and chestnut manikins – and arguably monitor lizards whose status as native or alien is unclear). The macaques appear to have severely reduced the number of native bird species and their abundance by removing most of the species that nest in the canopy. Species that nest on the ground, on cliffs or in holes appear to have escaped this depredation. The evidence for this comes from a comparison with the nearby Peleliu Island with more species but with no macaques – as yet.

CEPF has recognized the threat posed by macaques to Angaur and well as the risk that animals taken as pets will spread to other islands in Palau including the large island of Babeldoab which is a priority site for CEPF investment.

CEPF has invested in earlier small projects to manage this pet trade in Palau by sterilizing animals and by a public information campaign, i.e. to 'prevent and control' under Strategic Direction 1. However, dealing with the in situ problem on Angaur Island

requires more substantial investment and so a feasibility study of what is possible was the focus of this report. As part of this study we involved all levels of Palau society (from central and State Government, NGOs, local Angaur leadership and the people whose livelihoods are directly affected by the macaques) in part as a necessity in judging whether there was local support for eradication (there was 100% such support (in itself a unique circumstance), and in part to set the scene for ongoing local involvement in the proposed eradication action (Strategic Direction 3).

This detailed consultation led to other issues being raised with the project team and for which advice is ongoing. For example, the management of mosquitoes on Merir Island and cockatoos on the Rock islands.

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

1. Eradication of macaques is possible. However, it will require a substantial investment (estimated at over $1 million over about 4 years) and development of site-specific control methods such as trapping, shooting and poison baiting.
2. Success will depend on developing a project team that balances international expertise with local capacity, the latter yet to be built.
3. Two excellent base-line studies have been completed. One surveyed bird abundance across Palau (including Angaur Island) in 1999 and 2005 (VanderWerf 2007). The biodiversity benefits of removing macaques can be assessed by repeating the Angaur component of this study. A detailed study of the social and population structure, livelihoods and agro-economic trends on Angaur was completed in 2011 by the German government (McGregor & Bishop 2011). The data presented in this will allow the socio-economic benefits of macaque eradication to be measured – a somewhat unique case study given the critical nature of the pest in this society.

Please provide the following information where relevant:

Hectares Protected: Potentially 830 ha on Angaur Island
Species Conserved: 14 native bird species not found on Angaur but present on nearby Peleliu
Corridors Created: NA

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

The people of Angaur Island are desperate to be rid of macaques so there were few social constraints standing in the way of a successful attempt at eradication. This need is partly driven by biodiversity impacts of the macaques but also by the effect of the animals on peoples' livelihoods and the flow-on effects on the viability of the islanders' ability to sustain their economic and cultural identity. The cultural status of women on Angaur (land tenure is matrilineal and women have political status because of this) is severely compromised.

The challenge is largely technical (there are few precedents on which to judge whether macaques can be eradicated and thus control methods are untested), and financial (the costs will be substantial).

Were there any unexpected impacts (positive or negative)?

No

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.

This project included both an independent assessment of feasibility (Parkes & Fisher 2011 Landcare Research Contract Report) and the aim to build capacity on Palau amongst NGOs and government agencies in developing this step of project design.

We think there are advantages in separating the components of project design where proponents want to manage a pest, but someone else has to fund most of it and someone else again might be the main instrument of delivery. It might be a good idea but is it possible and what needs to be known by the funding agency (and delivery agencies) before the funders should take the risk in an eradication project? Thus, the template for an independent feasibility study between the proposal and the funding decision is ideal. We attach a full report on this study.

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

Success: our Palauan partners were very successful in ensuring we met all the major stakeholders and considered all their views.
Shortcomings: timeframes were very tight. Partly we did not spend as much time on Angaur as ideal, the sea conditions curtailing our planned visit to the island to just one day. Similarly, we are aware that Island Conservation and Sustainable Decisions are developing bids to implement the recommendations of this feasibility study with deadlines this month, so we have had only a few days to table the full report and discuss details with stakeholders. Any gaps in detail will have to be addressed by the next set of bids for funds.

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

Project implementation (the actual eradication) will depend on funding, but the process of consultation we conducted during the feasibility study has at least ensured the parties progressing the bid are talking at the planning phases.

Other lessons learned relevant to conservation community:

ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
Landcare Research	Co-financing	$10 000	Unfunded in-kind time

Additional funding should be reported using the following categories:

A *Project co-financing (Other donors contribute to the direct costs of this CEPF 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 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 project is not expected to be sustainable – if the eradication of macaques is successful it will stop. However, the process of judging feasibility and addressing constraints and risks is replicable (in principle if not detail) to other pests in Palau and elsewhere.

Summarize any unplanned sustainability or replicability achieved.

NA

Safeguard Policy Assessment

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

The study identified several issues that will have to be addressed by the Palau Government and/or an implementation team if eradication is to succeed.

1. There are legal issues involving the use of firearms on Angaur Island that will require changes to the regulations. State and national agencies saw this as not a problem but will have to be resolved.
2. Development of a toxic bait will require some testing, ideally on Angaur island. Palauan regulations allow for this under relatively simple experimental permits and again it is not seen as a problem so long as normal welfare and regulatory processes are followed.
3. Non-target issues (edible crabs) were raised as a problem if toxins were used. We note Palau's pragmatic solution to similar problems during the rat eradication on Kayangel island.

Additional Comments/Recommendations

The Angaur Government and people are desperate to get rid of macaques and want to see action as soon as possible.

Some of this action will have to start with development of appropriate control tools (traps, shooting and toxic baits) and an adaptive management approach to their deployment at the start of an eradication attempt. That is, although a complete eradication will take some years and cost a lot of money a lesser sum to start the project implementation will have social benefits (demonstrate to the people of Angaur that progress is being made) and operational benefits (sort out best methods).

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*****

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)
September 2011 to 30 November 2011

Provide a numerical amount and brief description of the results achieved by your grant.
Please respond to only those questions that are relevant to your project.

Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved from July 1, 2007 to June 30, 2008. (Attach annexes if necessary)
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	NA			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	0			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	Yes	830	830	Provided necessary step in ongoing planning process
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Yes	30000		Rest of Palau
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	NA?			But eradication will have socioeconomic benefits

If you answered yes to question 5, please complete the following table.

Table 1. Socioeconomic Benefits to Target Communities

Please complete this table if your project provided concrete socioeconomic benefits to local communities. List the name of each community in column one. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes. In the bottom row, provide the totals of the Xs for each column.

Name of Community	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 rate	Other	Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services	Increased food security due to the adoption of sustainable fishing, hunting, or agricultural practices	More secure access to water resources	Improved tenure in land or other natural resource due to titling, reduction of colonization, etc.	Reduced risk of natural disasters (fires, landslides, flooding, etc)	More secure sources of energy	Increased access to public services, such as education, health, or credit	Improved use of traditional knowledge for environmental management	More participatory decision-making due to strengthened civil society and governance.	Other
Angaur Islanders		X	X				X		X				X						X	X	
Total																					

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