CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Auckland Uniservices Ltd
Project Title:	Raising awareness of biodiversity values and the nature of invasive alien species as a threat to priority species in Vanuatu, Solomon Islands and Papua New Guinea
Date of Report:	January 31st 2015
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CEPF Region: East Melanesian Islands Biodiversity Hotspot

Strategic Direction: Strategic Direction 1. Empower local communities to protect and manage globally significant biodiversity at priority Key Biodiversity Areas under-served by current conservation efforts

1.2 Raise awareness about the values of biodiversity and the nature of threats and drivers among local communities at priority sites.

Grant Amount: 19,549 USD

Project Dates: April 1st 2014 to September 30th 2014

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

No Implementation partners for this project

Conservation Impacts

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

Invasive species are among the top five drivers of biodiversity loss worldwide, second only to habitat destruction[1]. Studies show that three-quarters of all threatened birds on oceanic islands are under threat by invasive species- predation by introduced invasive mammals rats, cats, mongoose and feral dogs; herbivory and habitat degradation by goats, cattle and pigs; disease transmission through introduced and invasive micro-organisms. Invasive species are implicated in over half of bird extinctions on islands[2] see Figure 1 below[3].

[1] Millennium Ecosystem Assessment (2005) Ecosystems and Human Well-Being: Synthesis (Island Press, Washington, DC).
[2] BirdLife International <http://www.birdlife.org/datazone/sowb/casestudy/128>
[3] State of the World's Birds 2013 < http://www.birdlife.org/datazone/sowb/casestudy/127>

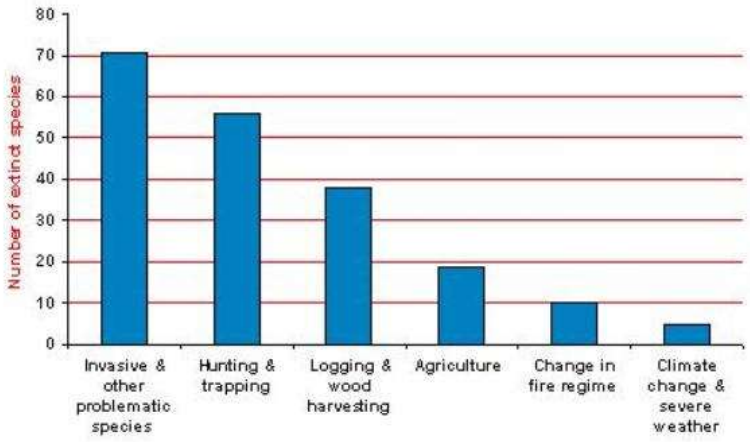

Figure 1: The major threats contributing to bird extinctions since 1500 [Analysis of data held in BirdLife's World Bird Database (2008)

Twenty sites of high biodiversity value or Key Biodiversity Areas have been identified as priority sites for CEPF Investment. Habitat loss and degradation are one of the major causes of loss of biodiversity and decline in species populations on these sites. The spread of introduced and invasive alien plant species are a significant cause. The CEPF Ecosystem profile recognizes biological invasions and the impacts of invasive alien species on biodiversity and natural areas as a significant threat.

Merremia peltata and *Mikania micrantha* are two species which are known to be widespread in Vanuatu's conservation areas and management options are being trailed. Five of the priority sites are in Papua New Guinea, these areas are rich in biodiversity, both terrestrial and marine- the rainforests of Mussau support seven endemic birds and many endangered and endemic plant species occur in forests of Manus and Baining Mountains. While logging is a well-known threat, other threat mechanisms such as biological invasions is less well documented

Three main threats have been identified for the 48 native species that have been prioritized for CEPF investment – biological resource use (over exploitation), the spread of invasive alien species and population management which involves preventing further loss and degradation of native species habitats. Of the different taxa in the 48 priority species, native bird species are under threat of invasive species; these include introduced mammal predators rats, cats, dogs and pigs. Mammal predators (feral dogs and rooting pigs) are also implicated as a threat to nesting endangered turtles in the Pacific region[4], feral dogs have been implicated as predators of turtle eggs on 157 nesting sites on the islands of Vanuatu. Four endangered turtles Loggerhead turtle (*Caretta caretta*), Hawksbill turtle *(Eretmochelys imbricata*), Green turtle (*Chelonia mydas*) and Leatherback turtle (*Dermochelys coriacea*) are listed as priority CEPF species.

This project focused on the review and compilation of data and information on the impacts of invasive alien species on priority sites and species on Vanuatu, the Solomon Islands and Papua New Guinea, with the objective of developing a resource that can aid in decision making and setting priorities in invasive species management. In the case of Vanuatu the project built on the work that the ISSG has undertaken in the past year.

There is a paucity of studies conducted to study the extent of impact of invasive plant species on habitat loss on sites of high biodiversity value; however the spread of invasive plants leading to competition and displacement of native species is known to be a major cause of habitat loss

Before any biodiversity conservation planning and action is undertaken, sufficient biological and related information must be gathered in order to make informed decisions and establish appropriate priorities

[4] From review of the impacts of invasive alien species on migratory species listed in the Appendices of the Convention on Migratory Species undertaken by the IUCN SSC Invasive Species Specialist Group (under review by CMS)

for the formulation of an effective and practical strategy and action plan. Biodiversity information management including data and information on the threats to biodiversity are critical to the success of these projects. Access to, and availability of current and credible biodiversity data and information are a must for setting conservation action priorities, managing pathways of introduction, spread and control of invasive alien species and other threats to biological diversity. Pertinent socio-economic information such as population demographics, land use, trade and economics are necessary and useful to take informed decisions.

This project has contributed to the development of a knowledge base on the threats of invasive alien species on priority sites and the priority species they contain in the three project priority countries of Vanuatu, Solomon Islands and Papua New Guinea

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

This project aimed to review and compile data and information on the impacts of invasive alien species on priority sites and species on Vanuatu, the Solomon Islands and Papua New Guinea, with the objective of developing a resource that can aid in decision making and setting priorities in invasive species management.

Summary of overall results

All known invasive alien species threats were documented for (a) CEPF priority list of species and (b) native species listed as 'threatened' (IUCN Red List category Critically Endangered (CR), Endangered (EN) and Vulnerable (VU)).

The IUCN Red List of Threatened Species lists 3549 (Papua New Guinea), 1689 (Solomon Islands) and 1170 (Vanuatu)[5] native species as 'conservation assessed' according to IUCN Red List criteria in the three priority countries.

Table 1: List of species from Papua New Guinea, Solomon Islands and Vanuatu that have been conservation assessed in the IUCN Red List of Threatened Species

IUCN Red List category	Numbers of species	CEPF Priority species*[6]
Extinct (EX)	4	-
Critically Endangered (CR)	42	11
Endangered (EN)	79	22
Vulnerable (VU)	417	13
Lower risk/ Conservation dependant (Lr/Cd)	4	-
Near Threatened (NT)	327	2
Data Deficient (DD)	512	-
Least Concern	2514	-

3899 native and endemic species are listed across the three countries[7], are classified as threatened by the risk of extinction (see Table 1). The 48 priority species classification has also been disaggregated.

[5] Please note that *Homo sapiens* has been excluded from the list

[6] Changes in classification are recorded for the following three species on the CEPF priority list since the publication of the Melanesian Islands Ecosystem profile- Vanuatu endemic *Agathis silbae* (Vulnerable to Near Threatened), the Papua New Guinea endemic plant *Ptychosperma gracile* (Endangered to Near Threatened) and the Leatherback turtle *Dermochelys coriacea* (Critically Endangered to Vulnerable)

[7] The Endangered Loggerhead turtle *Caretta caretta* is not listed as native to either of the three priority countries in the IUCN Red List of Threatened Species- hence is not included in the species totals

Biological Resource use, potential impacts of a changing climate, logging and land-use change, and the **impact of biological invasions**, resulting in species population declines and loss of habitat respectively, are the primary threats.

Of the five predominant terrestrial taxa (mammals, birds, reptiles, plants and amphibians) that form the priority list, birds (followed by reptiles and mammals) are the most under threat by invasive alien species. Mammal predators that have been historically introduced by humans are the most harmful to these native and endemic species. Species include predators such as rats (*Rattus* spp.), cats (*Felis catus*), mongoose (*Herpestes javanicus*), feral pigs (*Sus scrofa*) that cause decline in species populations and herbivores such as goats (*Capra hircus*) that degrade native species habitats.
Limited information is available on threats to endangered plant species.
Three primary components of information have been recorded

- presence of invasive alien species at the island and site level (information availability is limited)
- identification of which native species are known to be under threat from invasive alien species (information availability is medium)
- impact mechanism and outcome as a result of the impact

Narratives of description of the invasive species threat, any invasive species management action and conservation outcomes as a result of the management action have been included.

All this data and information will be available on the restructured IBIS database from mid-February 2015. **http://ibis.duckdns.org/#!Home**

Hectares Protected: Not applicable
Species Conserved: Not applicable
Corridors Created: Not applicable

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

Challenges mainly included the collecting information from country sources; responses were slow in submission of information. The value of sharing information must be encouraged and one way would be to motivate country experts to contribute to the database.

Were there any unexpected impacts (positive or negative)?

No significant unexpected impacts either positive or negative

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.

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

Aspects of project design that can be attributed to the success of this project are the preparation of templates, look up tables and tools to document and structure data and information received in the initial stages of the project. This enabled researchers to have clarity in the types of information being collated and the purpose.

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

Responses to requests for information are slow; sufficient time must be set aside for this phase

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

Additional funding should be reported using the following categories:

A *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*
Not applicable

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.)*

Not applicable

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

Not applicable

Sustainability/Replicability

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

Sustainability of the project outcomes i.e. 'access to and availability of current data and information to manage the threat of biological invasions' will be ensured through the Island Biodiversity and Invasive Species Database (IBIS) being developed within the BIOPAMA (Biodiversity and Protected Area Management) project. All data and information compiled during the implementation of this project and project outcomes will be uploaded to the IBIS database. IBIS content will be freely available to view and download. The availability of this data and information is being/ and will be promoted to conservation practitioners and protected area managers to use and contribute data and information to. Country content will be updated in increments during the year with major updates planned on a yearly basis.

Country experts, practitioners and other stakeholders consulted during the development of this resource are being updated on progress of the operationalization of the database and availability of content.

In Vanuatu the main points of contact were members of the National Invasive Species Technical and Advisory Committee (NISTAC) led by the Biosecurity Division in the Department of Environmental Protection and Conservation). Key members included Donna Kalfatak (Senior Biodiversity Officer at the Biosecurity Division in the Department of Environmental Protection and Conservation); Lilly Fatdal (Invasive species coordinator), Bule Sylverio (Plant Protection Officer) and focal points for Forestry and freshwater ecosystems.

In the Solomon Islands, key contacts were the biologist David Boseto (Co-Director of Ecological Solutions) and his team. Information was also sourced through contacts made through ISSG members and included Agnetha Vavekaramui and Jointly Sisolo who are with the Environment and Conservation Division, Ministry of Environment, Climate Change, Disaster Management and Meteorology.

Key points of contact in Papua New Guinea were Warea Orapa (Assistant General Manager Operations at National Agriculture Quarantine and Inspection Authority), with additional input on biosecurity issues by Sidney Suma. Officers from the WWF unit were contacted but no response was received. WWF was contacted due to their involvement in conservation work in areas of PNG.

Additionally colleagues from the Pacific Invasives Partnership – BirdLife International (Steve Cranwell) Ray Pierce (EcoOceania Pty Ltd) were other contacts.

IBIS ([link to old version http://ibis.fos.auckland.ac.nz/] [link to development site <http://ibis.duckdns.org/ibis-client/#!Home>]) aims to record and provide information on the occurrence, biological status and impacts of invasive alien species on native species on islands, with a focus on those that are classified as 'threatened' in the IUCN Red List of Threatened Species. IBIS will be an integral part of the planned Regional Observatory hosted by the Secretariat of the Pacific Regional Environment Programme (SPREP). Data and information available can potentially be used by protected area managers for prioritizing invasive species management, setting targets, monitoring progress, undertaking assessments and develop indicators

One of the goals of the BIOPAMA project is to enhance the capacity of protected area managers in the region to manage these high biodiversity areas effectively. The impact of invasive alien species is a key and significant threat to this biodiversity. Availability and access to data and information on this threat to native species and vulnerable ecosystems is envisaged to be an important component of capacity development of protected area managers.

The site is under development with trial data; the operational version will be available online by the month of February 2015. All data and information compiled during this project will be available online when the site is launched.

Summarize any unplanned sustainability or replicability achieved.

Safeguard Policy Assessment

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

Not relevant

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

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, 2014 to June 30, 2015 (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.	Not relevant			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?	Not relevant			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.	Not relevant			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Not relevant			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	Not relevant			

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
Total																					

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

Additional Comments/Recommendations

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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