PROJECT PLAN

Title: Project Plan for the Eradication of Rats from Far and Away Islands, Republic of Pacifica

Authors: V. Reed (NPC) and M. Toa (NPC)

Reviewer: R. View (Moore Consulting Ltd)

Version History:

VERSION	DATE	AUTHOR	REASON FOR CHANGE
Version 0.2	15th June 2010	V. Reed and M. Toa	Version ready for independent review
Version 0.3	1st July 2010	V. Reed and M. Toa	Changes made after review
Version 1.0	9th July 2010	V. Reed	Further changes made at request of reviewers after review of V0.3.

Citation:

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[NB. This is a fictitious example that is intended for training purposes, based on real islands but with many details altered to present a particular scenario. Be aware that some situations, references and a few names are real, most are not!]

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EXECUTIVE SUMMARY

Explanation: *Summarise the key points of the Project Plan*

Prompts

- *The Project Plan enables a project manager to keep the right focus for the project, manage it to a successful completion and provide adequate information about the project (and it's progress) to others*.
- *The audience is the project manager, implementing agency management, funders and external partner organizations*.
- *The executive summary should contain enough information to give a manager a high level view of the whole project*
- *Keep the length to less than 1 page*
- *The Executive Summary is usually written last, after the main document is completed*

This Project Plan for the eradication of rats from Far and Away Islands in the Republic of Pacifica sets out the management structure and individual tasks and responsibilities required to fulfil the goal and objectives of the proposed project.

The Republic of Pacifica's Department of National Parks and Conservation (NPC) have taken on the role of implementing agency for the operation, and have appointed staff members to key roles in the project, including the Project Manager.

The Project Manager will be responsible for developing further planning, and will be the key person to engage in stakeholder consultation, as well as in selection and delegation of staff to specific roles, and overseeing implementation and monitoring tasks.

A technical subject matter expert will be contracted as a technical co-ordinator to support the project manager in the technical aspects of planning and implementation.

Specialist advice and support will also be required for captive holding of ground doves to protect them from possible adverse effects of baiting.

NPC staff (with some support if required for guidance and training), will undertake the monitoring requirements for the project.

The local Windward Marine Protected Area (WMPA) officer will be the principal agent for overseeing biosecurity measures on the ground.

1. INTRODUCTION

Explanation: *Explain the purpose of this document, and set the scene for the following sections*

Prompts:

- *Include what agency is responsible for the work*
- *Who has funded the work*
- *What is the purpose of the document, ie To describe how the eradication project will be managed*
- *What documents were used as background information, for example, Feasibility Study Report*
- *Include thanks to any people organizations that have provided support/help/advice etc to the preparation*
- *Remove this Help Box when the Project Plan is complete.*

This document is the project plan for the eradication of rats from the Far and Away Islands, Republic of Pacifica. The project plan was written by National Parks and Conservation Department (NPC), Republic of Pacifica with funding from Biodiversity International (BI).

A Feasibility Study of the eradication project (Toa and Reed, 2009) concluded that the project was both feasible and worthwhile, and would have significant conservation value. It also outlined some issues relating to the project and a basic outline of tasks required to ensure a successful completion of the project.

This Project Plan forms the next step towards a successful implementation of the project. It outlines the proposed management framework that needs to be put in place to support the successful implementation of the eradication operation.

The Project Plan is primarily targeted at funders, management and project managers and is used in all later stages to manage the project. It will also be made available to all relevant Republic of Pacifica Government authorities (e.g. the Windward Marine Protected Area committee (WMPA), and Ministry of Agriculture and Fisheries (MAF)) and to local villages and other key stakeholders. It will assist these stakeholders to identify who is managing the project and what their responsibilities are.

The Project Plan will be used to support NPC's application to Biodiversity International to fund the remaining stages of the eradication project, i.e. Operational Planning, Implementation and Sustaining the Project Stages.

The plan has drawn upon recommendations from the Feasibility Study, and from resources in the PII Resource Kit. Further consultation with many key stakeholders has occurred in the time since the Feasibility Study was completed.

A number of people have been involved in the development of this Project Plan, and thanks should go to:

- Lance Denver (Invasive Species & Bird Conservation Officer, PEA) for providing R. View's time to review the plan.
- Staff of the National Parks and Conservation Department, particularly the Director Taiaga Wilson for his support, and Tunia Tokoa for generous assistance.
- Staff of the Marine Protected Areas Programme, particularly Susan Jolie and David Sagolo.

2. GOAL, OBJECTIVES and OUTCOMES

Explanation: Define what the project will achieve (objectives) and the changes that will result (outcomes)

Prompts:

- *Copy and paste from Feasibility Study Report.*
- *Indicators to be measured for each outcome are defined in the Monitoring the Success of the Project Section.*
- *Remove this Help Box when the Project Plan is complete.*

Useful Tools:

- *Guidelines for Project Managers*

The goal, objectives and outcomes of the project remain as recorded in the associated Feasibility Study for Eradication of Rats from Far and Away Islands (Toa andReed, 2009)

2.1. Goal

The goal of the project is:

"*Restoration of Far and Away Islands, Windward Group, as key sites for the conservation of Republic of Pacifica's indigenous biodiversity, through the eradication of Pacific rats*"

2.2. Objectives and Outcomes

The objectives that this project will achieve and the outcomes that will be seen as a result of achieving these objectives are:

Objectives	Outcomes
1. Eradicate Pacific rats (*Rattus exulans)* from Far Island	1.1 No Pacific rat population on Far Island.
	1.2 Increase in population size of native bird species on Far Island.
	1.3 Increase in native vegetation densities on Far Island.

2. Eradicate Pacific rats (*Rattus exulans)* from Away Islands	2.1 No Pacific rat population on Away Island.
	2.2 Increase in population size of native bird species on Away Island.
	2.3 Increase in native vegetation densities on Away Island.
3. Safeguard the ground dove populations on Far and Away Islands	3.1 Increase in population sizes of ground dove on Far and Away Islands.
4. Improve the capacity of NPC to undertake larger eradication projects.	4.1 NPC staff have skills to undertake further eradication projects of a similar size to current project.

Indicators for each outcome are recorded in Section 7: *Monitoring the Success of the Project.*

3. THE SITE AND TARGET SPECIES

Explanation: Describe the eradication site & the target species

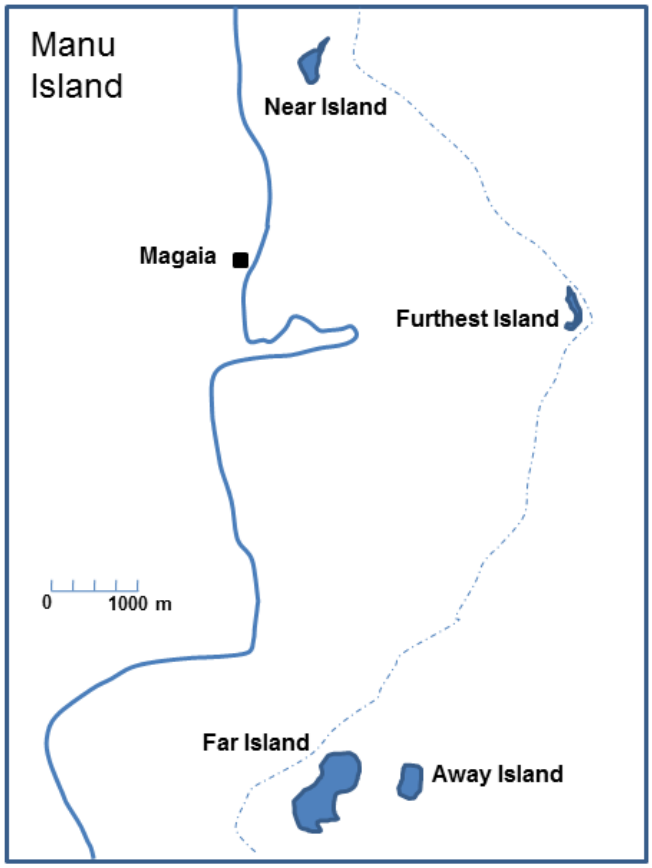
Prompts:

- *You are giving the reader only enough information to understand the context of the project plan – refer the read to the Feasibility Study for the details.*
- *Only provide a summary of the site and target species information relevant to the project management*
- *Most of the information will have been recorded in Site and Target Species Sections of the Feasibility Study Report.*
- *Consider copy and pasting relevant parts from the Feasibility Study Report rather than re-writing.*
- *Remove this Help Box when The Project Plan is complete.*

3.1. The Site

The Windward Island group lies off the east coast of Manu Island, in the Republic of Pacifica. The group is made up of four islands, namely Far, Away, Near and Furthest (see Table 1 and Map 1).

Island ownership rests with the head of individual families in the main village of the Windward coast, Magaia, but the island group forms an integral part of the Windward Marine Protected Area (WMPA), established in 1999. All claimants have endorsed the islands as being part of the WMPA and they are included in the management plan for it. The WMPA is managed by a committee which includes leaders from the local village as well as government representatives from the National Parks and Conservation Department (NPC) and Ministry of Agriculture and Fisheries (MAF).



Map 1. Location of Windward Island Group, off Manu Island, Republic of Pacifica.

All of the islands are uninhabited, but are sometimes used by villagers from the Windward coast villages for harvesting of coconuts and other wild-growing crops. Far Island is visited very infrequently by one of the families and Away Island even less so (P. Matipo *pers. comm*. 2006). This region is not developed for tourism as yet, so the islands receive very few visitors apart from infrequent visits from scientists and conservation managers.

None of the islands have any wharves or permanent structures on them.

Near Island's proximity to the mainland also means it has a much higher risk of re-invasion. Because of this, and the modified nature and relatively lower conservation value the inner two islands (Near and Furthest) have been excluded from this current proposal.

Weather patterns are typical for the region, with a wet season from October to April, and a dry season with often strong trade winds in the months June to September. The outer two islands have limited safe access spots and are often difficult to access during the trade wind season.

Table 1. Islands in the Windward Group, Republic of Pacifica.

ISLAND	SIZE	DISTANCE TO MAINLAND and/or NEAREST ISLAND	PEST STATUS
Far	108 ha	1.3km to mainland, 500m to Away	Rats present, Pacific rat
Away	25 ha	500m to Far	Rat-free until 2003, Pacific rat
Near	21 ha	700m to mainland, but within fringing reef	Rats present, unknown species
Furthest	7 ha	>4km to mainland	Rats present, unknown species

Comprehensive details of the vegetation and fauna of Far Island are available in Jameson *et al* 1992. Away Island has also had some survey work conducted (e.g. Johnson 2003) but literature on Near and Furthest is relatively lacking.

A wildlife survey report (McCormack *et al* 2000) found that Far Island is home to a number of endemic and internationally threatened species. These include:

- Crimson pigeon (endemic; Endangered)
- ground dove (regional endemic, Vulnerable)
- Pacifica broadbill *(Myiagra pacifica)* (Endemic, Vulnerable)
- coconut crab (*Birgus latro*) (Vulnerable).
- Pacifican 'flying fox' fruit bat (*Pteropus pacificus*) (Endemic, Endangered)

Far Island also provides habitat for a number of other locally and regionally endemic birds (Turner 2000). This island is a breeding ground for the red footed and brown boobies (*Sula sula* and *Sula leucogaster*), black terns (*Sterna sumatrana*) and white terns (*Gygis alba),* great frigate bird (*Fregata minor)*, and other seabirds, and is the last nesting seabird colony in Republic of Pacifica (WMPA, 2002).

Four skinks, two geckos and one snake species (the Pacifican boa *Candoia pacifica*) are present on the Windward Islands. None of these reptile species are threatened (McCormack *et al.* 2003b). Hawksbill turtles (Critically Endangered) nest on the beaches of Far and Away, and they and green turtles (*Chelonia mydas*) are often observed in the seas around the islands (P. Matipo *pers comm.*).

Collectively this group of islands make up approximately a third of the total number of small forested islands off the coast of the main islands of the Republic of Pacifica. Far and Away

are the only two of these in relatively unmodified state and far enough offshore to provide a degree of surety against natural rat re-invasion. They therefore offer a limited and valuable potential resource for conservation of any of the Republic of Pacifica's biodiversity that is affected by the presence of rats.

Far Island

Far Island lies 1.3 kilometres from the Windward coast, and is only 500m from Away Island. Far (108ha) is the highly eroded remains of a tuff cone (high point is 100 metres) that was originally circular in shape, but due to erosion, various portions of the rim are now gone (Singer 1983). Hence, Far has moderate slopes with some small areas of steep to vertical terrain, which is broken by a series of small bluffs (Turner 2000). On the north and west sides of the island are low marine cliffs up to 30m high (Singer 1983). The vegetation covering the whole island is native or only partially disturbed, with a relatively open understorey, only a few vine tangles and limited ground cover (Turner 2000). However there is a small plantation area on the island (at Black Beach) supporting vegetable species and coconuts.

The vegetation of Far Island was considered by Jameson *et al.* (1992) to be of conservation significance because:

- coastal and lowland forests are rare and uncommon (respectively) in the Republic of Pacifica
- Species diversity is high, with over 160 species of plants recorded
- Several species are rare, the most significant being *Chionanthus vitiensis*, polo (*Solanum viride*) and pani (*Manilkara dissecta*)
- The vegetation is very important for the seabirds present.

Away Island

Away Island (25ha) is in effect a smaller version of Far. It is similar to Far in its geology, with a tuff cone (maximum height 70m) breached on the eastern side by the sea, though its cliffs are not so high. Its vegetation is also similar, though few formal surveys have been made. It is more difficult to land upon and is further offshore than Far Island so visits have been relatively rare.

Away Island contains the most intact lowland coastal forest assemblage in Republic of Pacifica and is of high conservation significance. The vegetation is very similar to that of Far (Jameson *et al.* 1992), but is practically unmodified and there are few coconut palms. One plant species is present that is found nowhere else in the country (*Suriana maritime*) (Jameson *et al.* 1992)) and another, *Boerhavia alba* is rare in Polynesia and has only been recorded from Away Island and Fanuatapu in Samoa.

3.2. The Target Species

The rat species present on Far and Away Islands is the Pacific rat *Rattus exulans*. Eradication will be needed on both islands concurrently because of the proximity of the two islands.

As the islands have no regular human habitation, the rats' principal sources of food are the natural plant and wildlife communities of the islands. It is considered that smaller ground-nesting bird species such as shearwaters, petrels and the ground dove have been particularly affected by predation of eggs and chicks by the rats.

It is almost certain that Far and Away Islands once held significant populations of burrow-nesting seabirds such as shearwaters and petrels but these have been wiped out by the rats. Seabirds are important not just in themselves but because their breeding stimulates local changes in the invertebrate fauna and vegetation which increases the biodiversity of the islands.

Anecdotal evidence of the decline in Republic of Pacifica land-bird populations suggest that it is highly probable that the populations of the birds are much lower than they would be in the absence of rats because of possible predation of eggs, chicks and even adults of smaller bird species, while there is also overlap between the diets of rats and many birds. This means that the ecosystem is likely significantly altered from the natural state, with loss of native biodiversity and disruption to ecosystem processes as a result of the presence of the rats.

Eradication would be easily justified in terms of protecting and enhancing the current biodiversity values of the islands, but there is also an opportunity to use them as predator-free refuges for safeguarding the nation's whole fauna. There are several other Republic of Pacifica birds whose status is a concern and for which rat predation may be the key threatening factor. One such is the purple lory (*Vini purpurea*) a parakeet now endemic to Republic of Pacifica after becoming extinct on neighbouring islands. It is now rare on the main islands of Republic of Pacifica. Other species suggested (e.g. Turner 2000) are the island thrush (*Turdus poliocephalus*) and the Pacifican white-eye (*Zosterops pacificus*). These could be transferred to Far and Away to ensure their long-term survival. A list of possibilities needs discussion but should be developed out of recovery planning for the country's threatened species.

Based on results from eradications in New Zealand and elsewhere in the Pacific, it is likely that the eradication of Pacific rat from Far and Away Islands would result in:

- Enhanced breeding success of populations of small surface-nesting seabirds and ground-nesting forest species such as the ground dove.
- Expansion of any undetected relict populations of petrel species, and/or recolonisation by locally extirpated species of seabirds.
- Improved regeneration of those species of forest plants sought by rats because of the palatability of their fruit, attractiveness of seeds or vulnerability due to reproductive strategy (e.g. some species that are dioecious).
- Benefits to pigeons, doves and other fruit and nectar-feeding species from enhanced abundance of fruit and flowers, and possibly to insectivorous species from enhanced invertebrate abundance. These benefits would be realised in increased population sizes of the birds.

- Increase in abundance of smaller reptiles and reappearance of rarely seen or even unknown species of large invertebrates whose populations had been suppressed by rats.
- Opportunities to translocate threatened species (such the purple lory, thrush and white-eye) from the main islands to establish secure populations on these pest-free islands.
- Any crops or sustainably harvested foods from the islands will not be eaten or affected by rats.
- All of the above would help to create the islands as a unique environment in the modern Republic of Pacifica that could with care be used to create ecotourism opportunities and local employment.

4. PROJECT APPROACH

Explanation: Give a brief description of the approach to the eradication project

Prompts:
- *Summarise the main points from the Technical Approach Section of the Feasibility Study Report and updated if necessary*
- *You do not need to include all the details from the Feasibility Study Report; only a summary of points relevant to the management of the project*
- *Consider copy and paste relevant parts from the Feasibility Study Report rather than re-writing.*
- *Details are not required here as they will be planned in detail in the Operational Plan.*
- *You are giving management an overview of the project approach*
- *Identify any tasks/trials required to resolve issues or missing information identified in the Feasibility Study Report*
- *Remove this Help Box when the Project Plan is complete*

The Feasibility Study for Eradication of Rats from Far and Away Islands (Toa and Reed, 2009) established that hand-broadcasting of cereal bait pellets containing brodifacoum is the most appropriate eradication option in this instance, as the cost of the operation will be significantly less than a helicopter-based operation, and has no technical limitations such as procurement of helicopters (the 'technical' resources required for hand-broadcasting operations are minimal). It is considered that hand-broadcasting of brodifacoum baits is a viable eradication option for islands of this size. There is significant potential for use of local resources and therefore it will assist with development of local 'ownership' and pride in the project.

The 'dry' season from June to September is considered the ideal period for baiting, to maximise the chances of dry weather necessary to ensure bait remains in good condition for as long as possible once broadcast.

Further background information on the eradication method can be found in the Feasibility Study for Eradication of Rats from Far and Away Islands (Toa and Reed, 2009). In the next project stage:

Operation Planning Stage, the different technical aspects of the project will be planned and recorded in the Operational Plan, the Biosecurity Plan and the Monitoring and Evaluation Plan

5. SCOPE

Explanation: To describe what is included in the project (in scope) and to describe what is not included in the project (out of scope) is a useful way of communicating the details of the project

Prompts:

- *This section is used to clear up any uncertainties about what is included in the project.*
- *This section is very useful if your project is part of a programme of work and you need to communicate what is part of this project and what is part of another project*
- *You do not need to repeat the objectives or outcomes, but concentrate of details that may not be stated in other parts of the Project Plan*
- *The out of scope items are as important as the in scope: having a list of out of scope avoids surprise later in the project when people realize certain activities will not be completed as part of the project.*
- *Remove this Help Box when the Project Plan is complete*
-

Useful tools:

- *Guidelines for Project Managers*

5.1. In scope

Activities that will be completed as part of this project:

- Eradication of rats from Far and Away Islands
- Monitoring of forest birds and seabirds before and after eradication operation as part of evaluating the success of the project
- Funding application for implementation of a biosecurity plan for the first 5 years
- Holding in captivity and subsequent release of ground doves back on Far Island
- Practical 'hands-on' training of local workers in eradication, survey and monitoring techniques

5.2. Out of scope

Activities that will NOT be completed as part of this project:

- Eradication of rats from the adjacent islands (Near and Furthest Islands)

- Resolution of ownership of the islands and long-term access/management issues
- Monitoring of any marine wildlife
- Any alteration to the management of the Windward Marine Protected Area, with exception of improving biosecurity for the islands
- Translocation proposals for any native wildlife not currently found on the islands
- Funding for biosecurity measures beyond a 5-year timeframe
- Any activities and cost of an Environment Effect Assessment (EEA) if required by GPA.

6. PROJECT GOVERNANCE

Explanation: Who and which organizations will be involved in managing the project?

Prompts:

- *Describe how important decisions will be made*
- *Explain who will be involved in making key project decisions in later Stages, for example, who can decide if the Goal, Objectives and Outcomes can change after the Project Design Stage?*
- *Include key people/organizations who will take responsibility for parts of the project*
- *When there is more than one organizations taking part, it is important to clearly identify which organization is responsible for completing which part of the project.*
- *Describe how the project team will relate to the external stakeholders and funders.*
- *If there are many people involved, consider including a diagram of the relationships*
- *What will be the authorization process for spending money?*
- *How and when will the project manager monitor and report on the project management status?*
- *How and when will the project manager report on the results of the outcome monitoring and evaluation?*
- *Remove this Help Box when the Project Plan is complete.*

Useful Tools

- *Guidelines for Project Managers*

The Department of National Parks and Conservation (NPC) will be the implementing agency for the project. Some non-NPC staff will be required for the project, e.g. technical co-ordinator and aviculturalist. These people will be contracted to NPC and NPC will retain responsibility for the project.

The WMPA will be a project partner, taking responsibility for working with the community to ensure biosecurity prevention measures are applied. WMPA staff will also act as back-up for the incursion response if the NPC project manager is not available.

Funding for the project will best be allocated to NPC and a special project code will be established for this project for all expenditure to be drawn from. Normal NPC financial processes will therefore apply to ensure expenses go through the established authorisation processes. V. Reed will be the project manager for this NPC project.

During later stages of the project, any changes to the objectives, outcomes or indicators as documented in the Project Plan need to be approved by NPC Director, Taiaga Wilson, or his delegate.

Currently it is assumed that the project will not require an EEA – timelines and budgets are based on this assumption. If this changes and the GPA decide an EEA is required the impact to the project will be significant. The project manager will need to halt the project and seek approval from NPC management for a revised Project Plan.

Table 2. Roles and Responsibilities for the Far & Away Rat Eradication Project

Name	Role	Responsibilities
V. Reed (PM, NPC)	Project Manager	• Completion of all aspects of the project (other than biosecurity prevention) • Project reporting
F. Paua	Assistant Project Manager	• Deputy for project manager.
T. Wilson (Director, NPC)	NPC Management	• Provides through his department the financial management and administrative support for project. • Approval of project scope change.
Grant Bigg (Pacific Regional Co-ordinator, Biodiversity International)	Funder	
D. Sagolo, WMPA	Project Partner	• Implementing the prevention measures of the Biosecurity Plan • Deputy for incursion response

6.1Project Reporting

The project manager will be responsible for reporting on the project management status and progress towards achieving the project outcomes. Project reporting will include:

Reporting	When	Contents	Distribution

Status reports	Six-monthly	Project management status[1]	NPC management Biodiversity International
Operational Review	On completion of the eradication operation.	• Evaluation of pre-operation monitoring • Operational review outcomes	NPC management Biodiversity International Other stakeholders on request
Project Report	On completion of post-operation monitoring.	• Assessing the overall success of the project • Project management status • Results of outcome monitoring	NPC management Biodiversity International Other stakeholders
Project indicators	Annually	• Results of annual outcome monitoring	NPC management Biodiversity International Other stakeholders

Note 1: required to follow Biodiversity International's standard reporting format.

7. MONITORING THE SUCCESS OF THE PROJECT

<u>Explanation:</u> What indicators will be measured to determine whether the project outcomes have been achieved?

<u>Prompts</u>:
- *Only include monitoring of project outcomes.*
- *Copy and paste the outcomes from the Goal, Objectives and Outcomes section.*
- *Operational monitoring is recorded in the Operational Plan.*
- *Project Management monitoring will be defined in the Project Governance section.*
- *Remove this Help Box when the Project Plan is complete*

<u>Useful Tools</u>

- *Guidelines on Monitoring & Evaluation*
- *Guidelines on Monitoring of Native Species Techniques.*
- *Guidelines on Rodent Surveillance Techniques.*
- *Guidelines on Cat Eradication and Monitoring Techniques.*

It will be important to demonstrate the benefits of the eradication of rats to communicate and promote such projects to a wider audience, and also to be able to assess whether objectives and outcomes of the project have been met.

How and when the outcome monitoring results are reported is recorded in section 6.1 *Project Reporting.*

Monitoring the populations of all bird species, particularly the threatened species is highly desirable, and although some prior information exists, further pre-eradication bird counts should be undertaken to establish an up-to-date baseline, against which to compare changes after the eradication operation. Repeat counts should occur a year or more after the eradication, and could be continued further if finances allow.

Table 3. Outcome Monitoring Requirements

Outcomes	Indicator
1.1 No Pacific rat population on Far Island.	Absence/presence of Pacific rats
1.2 Increase in population size of native bird species on Far Island.	All forest bird populations
	Population size of crimson pigeon
	Population size of common noddy.
	Population size of black tern.
1.3 Increase in native vegetation densities on Far Island	Photo points
2.1 No Pacific rat population on Away Island.	Absence/presence of Pacific rat
2.2 Increase in population size of native bird species on Away Island	All forest bird populations
	Population size of crimson pigeon.
	Population size of common noddy.
	Population size of black tern.
2.3 Increase in native vegetation densities on Away Island	Photo points
3.1 Increase in ground dove populations on Far and Away Islands.	Increase in population sizes of ground dove on Far and Away Islands.
4.1 NPC staff have skills to undertake further eradication projects of a similar size to current project.	Skills and knowledge in areas of planning and implementation of current project.

Forest Bird Monitoring

Monitoring of the forest birds will include monitoring: all forest bird species, the ground dove and the crimson pigeon. As the crimson pigeon and the ground dove are considered endangered and vulnerable, respectively (Watling (2001)), it was decided these were the most important forest birds to monitor. Including an all-bird count will provide an overall measure of the bird population.

Some monitoring has already occurred with 5-minute bird counts being undertaken previously by McCormack *et al* (2000, 2001) Parita *et al* (2003) and during the Feasibility Study Toa and Reed (2009). Results from 5-minute bird counts can vary markedly according to seasonality so information will be split into quarter-year periods for seasonal comparison. More counts are planned for any further trips to the islands prior to the baiting, and also during any 'free' time during the baiting operation (e.g. in period between the two applications of bait). The Feasibility Study Report (Toa and Reed, 2009) provides baseline data for Far Island, but baseline monitoring on Away Island will need to occur before the eradication operation.

Post-eradication monitoring will commence one year after the baiting, to allow populations and ecosystems time to recover before measuring any changes that may accrue after rat eradication.

All information is being held by R. Suleosi at NPC.

Ground dove

The population on Far Island should be assessed further through capture and colour-banding of a number of birds. This will provide an overall estimate of numbers through proportion of banded birds in subsequent sightings of doves on the island. This will aid planning in terms of how many birds are likely or possible to be caught for captive holding, and will also aid in determining the possible effects of the bait on the remaining population, which will be important information for similar future projects. Once a sample of the population has been banded, all future trips to the island will record sightings of both colour-banded and unbanded birds, and from this a more accurate estimate of the current population can be obtained.

Seabird Monitoring

Some anecdotal information also exists for seabird populations but no formal monitoring has been undertaken. Baseline monitoring on both islands will take place before the eradication operation. There are a large number of sea bird species on both islands and all would be expected to benefit from the eradication of rats. It was decided that the indicator species would be: the black tern and the common (brown) noddy. The black tern is considered to be amongst the most vulnerable to rat predation due to their small size and ground-nesting behaviour. After discussions with the community and their highlighting of the cultural significance of the common noddy (a common emblem in local folk lore and tradition) to the local communities, we decided to select it as the other indicator sea bird.

NPC staff time has been made available to do the monitoring. Some advice or support may be required from an international seabird specialist to set up a monitoring structure to ensure monitoring methods are standardised, so that monitoring is efficient and practical, and that data is comparable between each monitoring effort.

Rodent Monitoring

DNA samples have been obtained (Toa and Reed, 2009) and pre-eradication densities have already been determined well enough to determine baiting rates.

As rats in very low numbers are hard to detect, outcome monitoring should occur, using a range of standard techniques (e.g. snap-traps, tracking tunnels, wax tags), after at least one year has elapsed since the eradication operation. Opportunistic surveillance may occur in the first year (i.e. if and when field parties are on the islands for other purposes) but this will provide only an indication, not proof, of success.

Once eradication success has been confirmed, rodent surveillance will continue as part of the longer-term biosecurity plan.

Vegetation monitoring

Any potential changes in vegetation will be recorded through collection of a set of photos over time from set photo-points

Details of the monitoring activities will be recorded in a Monitoring and Evaluation Plan to be written during the Operational Planning Stage.

8. STAKEHOLDER ENGAGEMENT

Explanation: Detail the different stakeholders and explain how they will be involved in the project.

Prompts:

- *Copy and paste the table of Stakeholders from the Feasibility Study Report, update it if new stakeholders have been identified.*
- *If useful, group them into different groups based on their involvement and role involved in the Implementation and Sustaining the Project Stages*
- *Ensure any issues on Stakeholder support and participation identified in the Feasibility Study are addressed.*
- *Remove this Help Box when the Project Plan is complete*

Useful Tools:

- *Guidelines on Stakeholder Engagement*
- *Guidelines for Project Managers*

Table 4. Key Stakeholders

Name	Organization	Contact details	Stakeholder Group	Notes/comments
	Magaia Village elders	In person	Local Community	Support in principle given to project. Some concern about toxins, and about long-term land tenure of the

				islands
Paga Matipo	Local with most interest/use of island. Also probable boat operator for project.	In person, Magaia Village	Local Community	Very positive toward project. Knowledgeable on islands. A valuable local contact.
Grant Bigg	Biodiversity International		Funder	Project funders
Taiaga Wilson	NPC Director	[e-mail address]	Management	Need to ensure staff allocation to project is given priority and occurs when required
Souad Boudjelas	PII	[e-mail address]	Project Partner	
David Sagolo	WMPA	[e-mail address]	Project Partner	Biosecurity prevention
Helen Willis	Registrar of Poisons (MAF)	[e-mail address]	Government Agency	Responsible for permitting use of brodifacoum
	MAF Fisheries section	[e-mail address]	Government Agency	Involved in WMPA management
	Government Planning Authority (GPA)	[e-mail address]	Government Agency	Need to approve plans from environmental effects viewpoint Approval for disposal methods for waste material (empty bait bags and waste bait)
A. Eagle or B. Hawke	Auckland Zoo	[e-mail address]	Technical input	Prime candidates for leading the captive dove project
	SPREP, PILN, NZ DOC	To be sourced	Regional Conservation organizations	Parties who will be interested in being informed of project progress, outcomes and lessons learnt.

All identified key stakeholders with e-mail addresses were sent a copy of the recently completed feasibility study (Toa and Reed 2009). The accompanying e-mail requested that all recipients

acknowledged receipt of the document, and that any issues with the Study were to be sent to the author as soon as possible. This was followed up by a reminder e-mail two weeks later.

Taiaga Wilson and Viliamu Reed of NPC presented the results and summary of the Feasibility Study Report to the leaders of the Magaia villages, and to receive any feedback.

During the writing of the Project Plan the authors have met informally with village elders on a number of occasions. The purpose of the meetings was to keep the community informed of progress and allay the fears regarding the use of toxic bait. The village was pleased to hear that the Project Plan had been funded and that it was progressing. In the meetings, considerable time was spent on explaining the use of toxic bait to the villagers and some lively discussions ensued. Most people in the village now seem comfortable with the use of bait. There are a few in the village who remain concerned, but we feel that the use of bait now has the general support from the village. The village elders, on behalf of the landowning families gave approval to continued access to the islands and for the track cutting.

A number of regional conservation organizations have already been identified that will be interested in being kept informed of project progress and any lessons learnt. If Pacific agencies are to increase their ability to manage the effects of invasive species it is important that implementing agencies share their experiences when undertaking eradication operations. The project team will work with PII to identify a set of regional agencies that will be regularly updated on project progress.

It has been agreed amongst all parties that local communities and Republic of Pacifica agencies are next consulted when more practical details are available, i.e. when drafts of the operational and biosecurity plans especially are being prepared.

9. PROJECT TIMELINE

Explanation: Include indicative dates of key project activities and milestones

Prompt:
- *Include start and end dates of each of the later project Stages*
- *Include dates of any key decisions*
- *Remove this Help Box when the Project Plan is complete.*

Useful Tools:
- *Guidelines for Project Managers*

This timeline is based on the assumptions:

- An EEA will not be required.
- Funding will be secured by no later than 30th October 2010

If these assumptions do not eventuate then the project plan will need to change and NPC management will need to be consulted.

Table 5. Project Milestones

Milestone	Date	Responsible
Operational Planning Stage		
Contract a technical co-ordinator for project	As soon as funding permits	Project Manager/NPC
Operational Plan draft	1 December 2010	Viliamu Reed (Project Manager) and technical co-ordinator (possibly M. Toa, but yet to be confirmed)
Biosecurity Plan draft	20 December 2010	Viliamu Reed (Project Manager) and D. Sagolo (WMPA)
Monitoring Plan draft	15 January 2011	Viliamu Reed (Project Manager) and technical co-ordinator
Review of drafts	By 30 Jan 2011	Discuss with PII suitable independent technical advisors/reviewers.
Produce an Environmental Effects Assessment (EEA) if required by GPA	By 30 Jan 2011	Viliamu Reed (Project Manager) and technical co-ordinator
Finalising draft documents	15 February 2011	Viliamu Reed (Project Manager) and technical co-ordinator
Final agreement with local communities and key stakeholders	28 February 2011	Viliamu Reed (Project Manager), aided by Taiaga Wilson (Director, NPC)
All legal approvals and permits obtained	5 March 2011	Viliamu Reed (Project Manager)
Decision to proceed with implementation	5 March 2011	Project Manager in consultation with Technical Co-ordinator, Director NPC, and PII.
Implementation Stage - pre-operation phase		
Ground dove banding and pre-operation monitoring	Any opportunity prior to July	NPC staff co-ordinated by R. Suleosi
Ordering of bait	15 March 2011	Project Manager (may be delegated to Technical co-ordinator)

Training of local staff in GPS and compass use	By end of May	PII trainer
Shipping of bait	To be confirmed - needs to arrive in Port Pacifica by 20 June.	Bait supplier, in liaison with Project Manager
Preparation of holding aviaries	15 June 2011	NPC on advice from Aviculturalist
Project Readiness evaluation and Report	15 June 2011	Discuss with PII suitable independent technical advisors/reviewers.
Arrival of bait in Port Pacifica	By 20 June 2011	Project Manager
Implementation Stage – Operational phase		
Track network cut to specification, and grid marked out on both islands	May-June 2011	Assistant Project Manager and Technical Co-ordinator
Capture of ground doves and transfer to captivity	June 2011	Assistant Project Manager and Aviculturalist
Start First Bait Spread	1 July 2011	Project Manager and Technical co-ordinator
Start Second Bait spread	8 July 2011 or as soon as possible after	Project Manager and Technical co-ordinator
Release of ground doves	As determined safe, following 2nd bait application	Project Manager and Technical co-ordinator
Sustaining the Project Stage		
Implementation of biosecurity prevention measures	In place as soon as possible.	D. Sagolo (WMPA)
Biosecurity – Surveillance and incursion response implemented	In place by baiting operation. Initial funding for 5 years.	Project Manager
Post-eradication monitoring	July 2012 onwards	NPC with possible technical co-ordinator

Project Report	September 2012	Project Manager, NPC
Monitoring reports	Annually	Project Manager, NPC

10. PROJECT COSTS

Explanation: Provide estimated costs of the Operational Planning Stage, the Implementation Stage and the Sustaining the Project Stage.

Prompt:

- *Remember to include: Biosecurity costs. These costs could continue for many years after the eradication operation.*
- *Remember to include monitoring costs before and after the eradication operation.*
- *As detailed planning has not been completed you will need to add in a contingency amount for unexpected costs that are identified in the later detailed planning*
- *Remove this Help Box when the Project Plan is complete.*

Useful Tools:

- *Guidelines for Project Managers*

Table 6. Estimated Project Costs per Stage

Item	Details	Cost (NZ$)
Operational Planning Stage:		
Contract technical expertise	Planning costs – assistance in development of biosecurity, monitoring, stakeholder, and operational plans	15,000
Meeting/travel costs	Food, gifts, travel costs etc for meeting with local communities, Government agencies, reviewers, etc	8,000
Salary: project manager/administrator	Part-time for one year. Covers all stages of project	40,000*
Field trip(s) for ground dove banding, seabird and forest	Contract expert(s), plus local staff	20,000

bird monitoring, etc		
Publication of pamphlets etc on project, and biosecurity	500 pamphlets in English and Pacifican	1,000
GPS and compass training	4 locals involved in project	1,000
Operational Planning Stage, Sub-total		85,000
Operational Planning Stage, Contingency (10%)		8,500
Operational Planning Stage, Expected cost		**93,500**
Implementation Stage:		
Bait purchase in NZ, transport to port	At least 2.5 to 3 tonnes (2,500-3,000kg). Bait rates suggested at 12kg/ha for a total of 133 ha, plus additional needed for extra-high baiting areas and for contingency)	10,000
Shipment, NZ to Port Pacifica	Up to 3 tonnes of bait on pallets	2,000
Local storage and transport	Storage costs in Port Pacifica or Windward, and road transport from port to Windward coast	2,000
Contracted NZ baiting expert	2 months	15,000*
Airfares, accommodation, taxi, etc for NZ expert	Return flights from NZ, motel accommodation	5,000
Waterproof/rat-proof containers for bait and electronic equipment	20 large dry bags @ $50 ea and 20 x 20-litre sealed pails @$20 each	1,200
Track-cutting staff	Estimated 50km of track, at 300m/track per person per day = 170 person days, plus equipment	18,000
Food and consumables for trackcutters	170 person days @ $10/day	1,700
8 baiting staff	2 baitings a week apart, each taking estimated 20 person days each, plus allowances.	32,000*
Food and other consumables (batteries for GPS's,	40 person days @$12/day	500

kerosene for lighting etc) for baiting staff		
Local boat transport to islands	20 return trips @ $200 each	4,000
Technical, camping & safety equipment	incl. GPS's, sat. phone, computer, GPS software, VHF radios, tents, cooking utensils, protective clothing, marking tape and pens, notebooks	12,000
Dove Capture Expedition	1 week on the island for 1 specialist (airfare, accommodation) and 4-6 NPC staff	6,000
Captive holding facility for ground doves.	2 person team – airfares, transport, food, accommodation, aviary materials, bird food.	20,000^
Pre-operational monitoring	Transport, labour costs	5,000
Post-Operation Report	Contractor, with local input, for 2 weeks	3,000
Implementation Stage, Sub-total		137,400
Implementation Stage, Contingency (20%)		27,480
Implementation Stage, Expected cost		**164,880**
Sustaining the Project Stage:		
Biosecurity – Set up	Equipment: Traps, bait stations, tracking tunnels.	2,000
Biosecurity – annual running costs	Bait replacement, wages for monitoring costs.	4,000 per annum*
Post-operational monitoring – annual costs	Transport, labour costs. (may be covered in government department budgets?)	5,000 per annum
Sustaining the Project Stage running costs for 5 years (A)		45,000
Sustaining the Project Stage Set up costs (B)		2,000
Sustaining the Project Stage sub-total(C=A+B)		45,000

Sustaining the Project Stage Contingency (D=20% of C)	9,000
Sustaining the Project Stage, Expected 5-year cost	**54,000**
PROJECT TOTAL, Expected cost	**$ 312,380**

NOTES:

Costs not included: an Environment Effect Assessment if required by GPA.

11. RISK MANAGEMENT

Explanation: Describe the major risks to the project and what you will do to minimize the impact of the risk to the project

Prompts:

- *Review the issues recorded in the Feasibility Study Report to help identify risks*
- *Under the management approach explain what you will do to minimize the impact of the risk,*
- *Need to weigh up the risk vs the actions to minimise it and the impact these might have on the operation. Ask the questions:*
    - *Will the risk have a significant effect on the project? If yes then you need to manage them.*
    - *Is the cost or flow on effect of the mitigation action greater than the benefits of managing the risk? Then look for other mitigation actions or don't manage the risk.*
- *Remove this Help Box when the Project Plan is complete.*

Useful Tools:

- *Guidelines for Project Managers*

Table 7. Key Project Risks & Proposed Management

RISK	Management approach
Local communities withdrawing support	Widespread and on-going consultation to address any issues. Provide as much information as possible in planning phases in response to any issues raised. Project should not

	proceed unless support is gained.
Field work taking longer than anticipated	Contingencies built into project funding. Two 'spare' months available to complete the project within desired timeframe.
Non-target poisoning of ground dove	Capture and remove a number of doves from island to hold in captivity until all bait has been eaten or broken down
Non-target poisoning of other wildlife	Don't manage risk. Some individuals may be affected but populations will recover or in the worst case will re-colonise.
Toxic residues in edible wildlife, plants, etc posing a risk to human consumers	Extensive consultation with local communities, with established agreement on a period for 'no take' from the islands. Widespread notification of start of baiting. Warning signs maintained on islands for months after baiting.
Risk of re-introduction of rats or introduction of other pest species	Public education for biosecurity. Development of a biosecurity plan and standard procedures. Assistance to local villagers to reduce risk (e.g. provision of rat-proof containers)
Extra project costs if GPA require a EEA	Funders will be made aware of possible extra cost. Early discussions with GPA to seek a decision on whether an EEA is required.

12. REFERENCES

<u>Explanation:</u> Use this section to record other documents that have been used and referred to in preparing the Feasibility Study Report

<u>Prompts</u>

- *List the references alphabetically*
- *Remove this Help Box when the Project Plan is complete.*

NB. For the purposes of this example document some references have been invented and some are real. The real documents are shaded like this and some are valuable references for developing projects. The others in the example reference list do not exist!

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