CRITICAL ECOSYSTEM PARTNERSHIP FUND

Pest Management Plan

Date 25 May 2012

CEPF Grant 60896

Grantee: R Pierce EcoOceania Pty Ltd

Project Title: Action Plan for Tokelau Islands Biosecurity and Restoration

Project Location: Tokelau and Samoa

Grant Summary

1. Grantee organization. EcoOceania Pty Ltd
2. Grant title. Action Plan for Tokelau Islands Biosecurity and Restoration
3. GEM number 60896
4. Grant amount (US dollars). 31,000
5. Proposed dates of grant. 1 July 2012 – 30 June 2013
6. Countries or territories where pesticides will be applied. Tokelau
7. Full name, title, telephone numbers, and electronic mail address of Grantee personnel responsible for the pest management plan.
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8. Summary of the project.
   In partnership with the traditional island councils and the Tokelau administration, develop a comprehensive biosecurity and biodiversity action plan for the three atolls Atafu, Nukunonu and Fakaofo. Provide training for key staff and community members in implementing these plans. Increase awareness of the importance of the native fauna and flora and encourage the participation of the local communities in the protection of their natural environment.

9. Date of preparation of the pest management plan. 30 May 2012

Pest Management Approach: This section should describe the applicant's understanding of the problem, their experience with pest management issues, and their proposed actions during the project. Specifically, what do you intend to do and how will you do it? The information presented should include methods of application, e.g. by hand or via aerial spraying.

10. Current and anticipated pest problems relevant to the project.

Key invasive issues are vertebrate pests and ants, along with minor issues with weeds. The work is in two parts A: preemptive biosecurity approach for the prevention of further invasion - this involves border and in country surveillance (observations, trapping etc primarily at Tokelau) and any contingency management that may be needed – the latter could include spraying of ants with biodegradable sprays.

11. Current and proposed pest management practices.

Current control methods for rodents on Tokelau comprise relatively ad hoc approaches aimed at reducing numbers of rats in coconut plantation areas and using unspecified anticoagulants. Similarly the biosecurity work for rats (and ants etc) is currently inadequate. Ant work has also been unprescribed in recent years.

This project will provide the training for Tokelau to maintain pest-free islets including:
Implementing effective surveillance at border and entry points to prevent (re)invasion
Implementing effective internal biosecurity (between and within atolls)

Advocating for removal of pigs and cats from high value motu and maintenance of pest-free status

Trialing alternative methods of eradicating and controlling ants using boric acid.

12. Relevant integrated pest management experience within the project area, country or region. Our two staff are eminently qualified to deal with pest management in the country and region. A summary of experience includes:

Dr Ray Pierce – Over 20 years of experience with planning and implementation of biodiversity restoration in New Zealand (Hen and Chickens Islands, Matakohe Island, Motuopao Island, national advice), Kiribati (Phoenix Islands and Kiritimati), and French Polynesia. Prepared biosecurity protocols and guidelines for several operations including nearby Phoenix Islands and provided recommendations to Tokelau following recent surveys with Gruber and co of Tokelau. Provided advice to community groups and reviews of different approaches for myna management to PII.

Dr Monica Gruber – 4+ years of experience with invasive ant projects, including research surveys, biodiversity assessments, feasibility studies, management planning, and best-practice assessments. Researched environmental costs and benefits of using different toxins for controlling invasive ants in New Zealand and Tokelau. Familiar with the methods and outcomes of the yellow crazy ant management projects in Australia, Christmas Island and Tokelau (2006). Scientific collaborator with the leaders of these management projects and subject matter experts (Drs Ben Hoffmann, Chris Boland and Kirsti Abbott). Closely familiar with the Tokelau Islands current situation from recent surveys and has assessed the invasion status, local capabilities, and biosecurity risks at key points.

Assessment of proposed or current pest management approach and recommendations for adjustment where necessary.

Our assessment of current pest management is that it is inadequate for several reasons – inadequate biosecurity, unspecified management approaches, and outcomes of management are not documented.

Our recommendations are as follows:
Black rats and Norway rats (as yet unrecorded at Tokelau) – implement effective biosecurity surveillance at border

Cats and pigs – aim for reducing the number of motu that these animals are released on via local harvesting

Yellow crazy ants – trial methods of localized control around homes, all in conjunction with local people and Tokelau staff – trial boric acid, boiling water and other environmentally acceptable approaches as advised by international colleagues.

Weeds – trial hand-pulling and burning of Widelia

Mynas – preferred method is trapping using a trap refined in Australia over 2011-12.

Supplementary approaches e.g. shooting will be evaluated.

Pesticide Selection and Use: This section aims to get a comprehensive understanding of the pesticide that will be selected, why it was selected and what efforts were made to assess risk. Note that in this section the applicant will also be required to present information on the potential risk that the selected pesticide will have on non-target species.

13. Description of present, proposed and/or envisaged pesticide use and assessment of whether such use is in line with best management practices.
    Ants - Raid Liquid and No Ants will be trialed. Xtinguish has been considered best-practice by some as it is more effective, but it contains fipronil, however, which can have significant side effects and which would need to be assessed and mitigated and is excluded from this work.

14. Indication of type and quantity of pesticides envisaged to be financed by the project (in volume and dollar value) and/or assessment of increase in pesticide use resulting from the project.
    Raid Liquid and No Ants– minimal quantities depending on the number of homes for trial treatment (~ < 10kg < USD2000).

15. Chemical, trade, and common name of pesticide to be used
    Raid Liquid, No Ants – these are trade names. Raid and No Ants contain Boric Acid.

16. Form in which pesticide will be used (e.g., pellet, spray).
    Raid Liquid and No Ants – respectively, liquid and gel.

17. Specific geographic description of where the pesticide will be applied: name of province, district, municipality, land owners, or map coordinates (if available); and the total area (hectares) to which the pesticide will be applied.
    Raid Liquid, No Ants – to be finalized, but key recommendations are to trial control methods for smaller incursions Atafu (c.300 hectares), Nukunonu (c.500 hectares) and Fakaofo (c.400 hectares) to give residents immediate relief from the problem and learn efficacy of the method.

18. Assessment of environmental, occupational and public health risks associated with the transport, storage, handling and use of the proposed products under local circumstances, and the disposal of empty containers.
    Raid Liquid, No Ants – Nil to minimal environmental, occupational and public health risks as long as simple usage instructions followed. Other invertebrates eating the bait will only be around homes, where access by coconut crabs is unlikely.

    Description of plans and results for tracking of damage to and/or deaths of non-target species prior to pesticide application and subsequent to pesticide application.
    Raid Liquid, No Ants - before and after hand searching and recording of dead invertebrates around treatment areas. Restrict treatment areas to inhabited motu. Restrict treatment timeframe to within daytime to maximize detectability of mortality.

19. Pre-requisites and/or measures required to reduce specific risks associated with envisaged pesticide use under the project (e.g., protective gear, training, upgrading of storage facilities, etc.)
    The action plans will stipulate application sites and periods as in #20 above.

20. Selection of pesticides authorized for procurement under the project, taking into consideration WHO and World Bank standards, the above hazards and risks, and availability of newer and less hazardous products and techniques (e.g. bio-pesticides, traps).
    Raid Liquid, No Ants– consultation and assessment of other management projects has shown that these may not be as effective as Fiprinol but their more environmentally and user-friendly approach means they may be a better option and more sustainably used.

21. Name and address of source of selected pesticides.
    Raid - SC Johnson 160 Epping rd Lane Cove NSW, Australia

22. Name and address of vendor of selected pesticides.
    SC Johnson 160 Epping rd Lane Cove NSW, Australia and many supermarkets in New Zealand supply Raid Liquid and No Ants. Also Xtinguish supplied by Flybusters Antiants, Auckland, New Zealand

    Tokelau Administration on each of the three atolls (contact address Tokelau Administration, Apia, Samoa) under Quarantine supervision.

Policy, Regulatory Framework, and Institutional Capacity: This section aims to understand the institutional and legal framework under which the pesticide will be applied, with reference to the documentation and standards required under local and national law and international good practice. Where the particular pesticide is not regulated at the target site, the proponent must identify similar pesticides and the applicable regulation, international laws in neighboring countries that could apply, and international good practice. The proponent must also explain why this particular pesticide is necessary even in the absence of national laws.

23. Policies on plant/animal protection, integrated pest management, and humane treatment of animals.
    None specific to Tokelau, but the action plans take into account Best Practice manuals of Department of Conservation, New Zealand.

24. Description and assessment of national capacity to develop and implement ecologically-based AIS control.
    Tokelau has been undertaking this sort of work for many years, but apparently without rigid procedures. It is our judgment that they have lacked good advice and therefore understanding on how to undertake integrated pest management. Meetings over the past year indicate a genuine desire by Tokelau Administration to provide a more rigorous and monitored approach to integrated pest management. Including aiming to manage invasives and prevent further invasions.

25. Description and assessment of the country's regulatory framework and institutional capacity for control of the distribution and use of pesticides.

They have a suitable structure in place for undertaking safe application of pesticides, and these action plans will provide precautionary guidelines for pesticide use.

26. Proposed project activities to train personnel and strengthen capacity (list # of people and what they are being trained in).
    The action planning process will include on site discussions of risks, mitigation and appropriate precautions to be undertaken, while the plans themselves will include these aspects in the actions

27. Confirmation that the appropriate authorities were approached (who and when) and that the appropriate licenses and permissions were obtained by the project.
    We have been dealing with the Tokelau administration throughout including Director of Agricultural Development and Environment and will continue to do this.

Consultation: This section aims to outline the range of informed consultations that the grantee has had both with experts to optimize the potential for success, and with stakeholders, particularly local communities, who are potentially affected (by proximity, by the use of certain areas for free-ranging livestock or non-timber forest product collection, etc.) by the use of pesticides.

28. Plans for, dates, and results of expert consultations, if necessary.
    Multiple past meetings with technical experts in New Zealand (Dept Conservation, Landcare Research toxicologists, consultants) and plans to maintain liaison as needed.

29. Plans for, dates, and results of consultations with local communities.
    Past meetings with Taupalega and government staff at each of three atolls, and many community members directly affected by invasives (September-October 2011, January 2012). Plans are to continue this in 2012-13, unspecified dates.

Monitoring and Evaluation: This section aims to outline what steps the proponent will take to monitor and evaluate the purchase, storage, application and effects of the pesticide in the target area.

30. Description of activities related to pest management that require monitoring during implementation.
    These will be developed during the action planning process but will include as a minimum: presence/absence of non-target birds, presence/absence non-target vectors, presence/absence human activities

31. Monitoring and supervision plan, implementation responsibilities, required expertise and cost coverage.
    These will be built in to the action plans but will include as a minimum: monitoring activity, monitoring leader (Tokelau staff member/position), monitoring tasks, monitoring timetable, monitoring recording and reporting process.

References

Pierce RJ, Gruber M. et al March 2012. Conservation survey of the Tokelau Islands. *Eco Oceania Pty Ltd* Report for CEPF, Conservation International and Tokelau islands.