CRITICAL ECOSYSTEM PARTNERSHIP FUND

Pest Management Plan

May, 6, 2014

CEPF Grant 64116

Mlup Baitong

Project Title : Embedding Sustainable Community Management Practices at Key Sarus Crane Wetlands in the Cambodian Lower Mekong: Environment and Livelihood Improvements at Anlung Pring Sarus Crane Reserve

Project Location: Cambodia

Pest Management Plan

Objective

The pest management plan (PMP) will describe CEPF requirements to ensure the use of best practice in the control and removal of alien and invasive plants, insects, and animals in compliance with World Bank Safeguards. This is included in the CEPF Operational Manual.

The objective of these guidelines is to avoid, minimize, or mitigate potentially adverse effects of the application of pesticides, insecticides, and herbicides (herewith referred to in the unitary as "pesticides") in efforts to restore natural habitats.

This document describes the requirements and planning procedures for applicants/grantees in the preparation and implementation of alien and invasive species (AIS) control projects funded by CEPF, as well as the role of CEPF in ensuring compliance with these guidelines.

The spread of alien and invasive plants and animals is the second greatest cause of biodiversity loss after habitat destruction. In the context of CEPF, many of the KBAs and corridors targeted for investment suffer from, in particular, non-native plants which have opportunistically taken over natural landscapes, and from non-native animals that upset island ecosystems. Many Ecosystem Profiles specifically include the control and removal of such alien and invasive species as an investment priority. The control of alien and invasive species in KBAs and corridors is not an exception, but a standard part of CEPF operations in some hotspots, and as such, applicable guidelines must be followed.

Situations where these guidelines apply include grants which:

- Pay for the direct purchase or expenses related to the manufacture, acquisition, transport, application, storage, or disposal of pesticides, including the costs of materials, equipment, and labor.
- Pay for the direct purchase or expenses related to the control or removal of animals by chemical means.
- Pay for the planning, management, or supervision of work which involves the general use of pesticides or animal control as described in the two points above.

Examples of the types of grants to which these guidelines apply include, but are not limited to:

- A grant that involves the employ of labor and application of herbicide to restore a degraded landscape and allow endemic vegetation and animals to return.
- A grant that involves the supervision of teams conducting AIS control by chemical means, where those teams are operating with funding from a host country government or other donor.
- A grant that involves the eradication by chemical means of non-native rats, cats, reptiles (e.g., Brown Tree Snake), birds (e.g., Common Myna), and invertebrates (e.g., Golden Apple Snail) from an island or isolated natural habitat.

These guidelines do **not** apply to the physical removal of alien and invasive plant and animals through physical means as part of the restoration of degraded habitat or the maintenance of KBAs and corridors.

A single set of guidelines cannot anticipate every scenario under which a grantee will propose to remove alien and invasive species. The conditions of the habitat, the type of species, the method of control, the capacity of the organization, the latest knowledge of environmental impacts, and even the definitions of "best practice" will change over time. Thus, these guidelines establish a process that grantees must follow, rather than a specific set of AIS control measures.

Components of the PMP

Any CEPF project that proposes to use a pesticide must prepare a pest management plan with six sections, outlined below. These projects should benefit from the accumulated knowledge on the use of pesticides in invasive eradication, including those that are available at:

- The IUCN Invasive Species Specialist Group (http://www.issg.org /index.html), which provides dozens of resources, including the Global Invasive Species Information Network List of Invasive Alien Species Online Information Systems (http://www.gisinetwork.org/Documents/draftiasdbs.pdf).
- The World Health Organization's Recommended Classification of Pesticides by Hazard, updated every two years (http://www.who.int/ipcs/publications/pesticides_hazard/en/).

The pest management plan consists of six sections comprising 34 questions.

Grant Summary

1. Grantee organization.
   Mlup Baitong

2. Grant title.
   Embedding Sustainable Community Management Practices at Key Sarus Crane Wetlands in the Cambodian Lower Mekong: Environment and Livelihood Improvements at Anlung Pring Sarus Crane Reserve

3. GEM number
   64116

4. Grant amount (US dollars).
   69949.00 USD

5. Proposed dates of grant.
   Start Date: 2014/7/1; End Date: 2016/9/30

6. Countries or territories where pesticides will be applied.
   Cambodia

7. Full name, title, telephone numbers, and electronic mail address of Grantee personnel responsible for the pest management plan.
   Va Moeurn, Executive Director Mlup Baitong, +(855) 23 214 409, vamoeurn@online.com.kh

8. Summary of the project.
   The project will support "existing environmentally friendly livelihood development mechanism and Sarus Crane Conservation efforts in the project's target areas through technical assistance to and collaboration with existing Community-Based Ecotourism Team (CBET) and Self-Help Group (SHG)". This leads to both the increase in income and the decrease in disturbance to the biodiversity, especially the endangered species of Sarus Crane, when people's attention is diverted away from destructive extraction of biodiversity. Environmentally friendly agriculture will be promoted by applying the Farmer Field School method to train farmers about the use of SRI for rice intensification and IFS method for improved home gardening and animal raising. These methods include the application of traditional organic pesticides for pest control. These organic pesticides have no negative environmental impacts and are traditionally produced and used by many Cambodian farmers.

9. Date of preparation of the pest management plan.
   May 2014

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.
    Vegetable and rice production in Cambodia is vulnerable to a wide range of pests. Cambodian farmers use homemade traditional organic pesticides to control these pests. Many farmers currently replace these environmentally friendly traditional methods by imported chemical pesticides, which have negative impacts on the environment and can harm the users and are more expensive.

11. Current and proposed pest management practices.
    The project is proposing to encourage farmers to continue the use of these traditional organic pesticides and not to replace them by chemical pesticides.

12. Relevant integrated pest management experience within the project area, country or region.
    Mlup Baitong successfully promoted the production and use of traditional organic pesticides in its other projects. Mlup Baitong staff and the trainers from the Provincial Department of Agriculture, Forestry and Fishery in Kampot Province have experience to provide this training. The method of Farmer Field School (FFS) is used to provide the farmers a forum to exchange their knowledge and experience on this issue and to learn from each other.

13. Assessment of proposed or current pest management approach and recommendations for adjustment where necessary.
    The application of traditional organic pesticides is environmentally friendly and provides no danger for the user and is easy to produce on the farm, using locally available organic ingredients such as water, herbs, garlic, tobacco, etc.. However, the application of imported chemical pesticides causes negative environmental impacts on soil and water, can be dangers to the farmers, particularly if they cannot read the description of use, which is usually in Thai or Vietnamese language, and do not use masks and is expensive. The application of chemical pesticides could also harm the Sarus Crane.

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.

14. Description of present, proposed and/or envisaged pesticide use and assessment of whether such use is in line with best management practices.
    The traditional organic pesticides are environmentally friendly and material for their production is locally available. In comparison with chemical pesticides they are cheap and appropriate for poor smallholder farmers and therefore in line with best management practices.

15. 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.
    The project will support the purchase of jars for each of the three FFS, in which the pesticides will be produced by the farmers. One jar is about 10 USD. Therefore the total costs are 30 USD. The ingredients are locally available and provided by the farmers.

16. Chemical, trade, and common name of pesticide to be used.
    These traditional organic pesticides (tnam boran) have no particularly name and are not traded but produced by the farmers on the spot.

17. Form in which pesticide will be used (e.g., pellet, spray).
    These traditional pesticides will be sprayed

18. 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.
    These traditional pesticides will be used by the farmers outside the protected area on their fields and garadens in Anlung Pring (10°26'N, 104°31'E), Kampong Trach District, in Kampot Province on the Bassac River floodplain, in the greater Mekong Delta of Cambodia, however they are traditionally used all over Cambodia. The project will apply the traditional pesticides on the 3 hectare trial fields of the 3 FFS.

19. 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.
    There are not any known risks.

20. 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.
    No negative impacts to people, animals and plants are known and expected.

21. 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 project will provide all participants in the Farmer Field Schools with appropriate protective clothing (i.e. gloves, masks, etc.) for use when handling organic pesticides".

22. Basis of 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).
    n/a

23. Name and address of source of selected pesticides.
    Home production by farmers

24. Name and address of vendor of selected pesticides.
    n/a., they are not traded, but produced by the farmer

25. Name and address of facility where pesticides will be stored.
    Farmers will produce and store them at their field/garden. The jars will be covered and the organic pesticide will be ready for use about one week after production.

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.

26. Policies on plant/animal protection, integrated pest management, and humane treatment of animals.
    There is no policy/regulation for the use of traditional organic pesticides in Cambodia

27. Description and assessment of national capacity to develop and implement ecologically-based AIS control.
    Not relevant

28. Description and assessment of the country's regulatory framework and institutional capacity for control of the distribution and use of pesticides.
    Not relevant

29. Proposed project activities to train personnel and strengthen capacity (list # of people and what they are being trained in).
    The project will use the three FFS to facilitate the members to exchange knowledge and experience on the production and use of traditional organic pesticides for rice and vegetable production, which is common in Cambodia. The training will be facilitated by experienced technicians from Mlup Baitong and the Provincial Department of Agriculture of the Kampot Province. The effectiveness and impacts of the organic pesticides will be closely monitored by the members of the FFS and the trainers.

30. Confirmation that the appropriate authorities were approached (who and when) and that the appropriate licenses and permissions were obtained by the project.
    There is no need for to apply for licenses and permissions for the production of traditional organic pesticides

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.

31. Plans for, dates, and results of expert consultations, if necessary.
    No plans

32. Plans for, dates, and results of consultations with local communities.
    The project discussed with the farmers the project outline. Traditional organic pesticides are known and used by some of the farmers in the communities. The farmers agreed to use the method of FFS to share their experiences and to learn from each other to produce and apply traditional organic pesticides on the FFS field trials and to replicate them on their own fields, if they are effective.

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.

33. Description of activities related to pest management that require monitoring during implementation.
    The members of the FFS meet regular on their trial field and monitor closely the need for traditional organic pesticides. E.g. if they see butterflies, which produce caterpillars who are known to eat the plant, they will decide to apply the traditional organic pesticide. Afterwards they will monitor closely the impact.

34. Monitoring and supervision plan, implementation responsibilities, required expertise and cost coverage.
    The farmers will meet regularly. They will plan, implement and monitor the use of their traditional organic pesticide according to their need. Trainers of the project will provide expertise, if required.