Pacific Invasives Initiative

VIWA ISLAND: Working with the local community on an invasive species management project

The Pacific Invasives Initiative (PII) provided technical advice and support to the University of the South Pacific for an eradication project on Viwa Island, Tailevu, Fiji. The project was complex and required simultaneous consideration of social, conservation, planning and technical aspects. It provided a series of lessons that should be considered when planning for future eradication projects where communities are primary stakeholders. The aim of this paper is to share those lessons learned from the social aspects of the project.

History of the project


Viwa Island (Photo: Karen Johns)

Viwa Island is a 60 ha island located 30kms northeast of Suva and about 900m off the coast of Viti Levu in Fiji. Viwa is an inhabited island with about 104 people living in a small village. As in many other Pacific Islands Countries and Territories, the general lifestyle of the people of Viwa is based on subsistence fishing and horticulture. The island is home to a wide range of native species of plants, birds and herpetofauna including the smallest and most vulnerable population of Fijian Ground Frogs (FGF) (*Platymantis vitianus*) (Morley *et al.*, 2004) classified as an endangered species under the IUCN Red List (Zug *et al.*, 2004). When the project was initiated the biodiversity of the island as well as people's livelihoods were under threat from Pacific rats (*Rattus exulans*), feral cats (*Felis catus*), feral dogs (*Canis familiaris*) and cane toads (CTs) (*Bufo marinus*).

In 2003, the Pacific Invasives Initiative (PII) was approached by the Department of Biology of the University of the South Pacific (USP) to discuss the possibility of eradicating cane toads from the island. USP aimed to eradicate cane toads to protect the FGF as well as to demonstrate the feasibility of eradicating cane toads from an island; a project which had not been undertaken before worldwide. USP had already completed some research and conservation activities on the island and had developed a strong relationship with the local community. USP was the implementing agency and was represented by a project manager and a project coordinator.

PII decided to support USP because it provided a chance to develop a demonstration project to be used as a vehicle for raising awareness of, and developing capacity for, invasive species management through a "learning by doing" experience. PII provided technical support to the project and was involved in the planning, in the feasibility study and in the project design and implementation. PII also facilitated an expert from The New Zealand Department of Conservation (DoC) to train community members in eradication techniques.

The proposal to eradicate cane toads from Viwa allowed the residents to become aware of the possibility of eradicating invasive species. The community supported the plans for the

eradication of cane toads; however they expressed their interest in the eradication of Pacific rats before eradicating cane toads. For the community, rats were a major cause of distress as they were damaging crops, running inside houses, biting people's heels during their sleep and spoiling peoples' food. Rats were also associated with health issues. As a result of the villagers' request, the rat eradication was prioritised and the project was refined into two stages – Stage 1, invasive mammal (rats, cats and dogs) eradication and Stage 2 cane toad eradication (not yet pursued as a project).

The project followed a comprehensive process which included a feasibility study to determine the feasibility of eradicating cane toads and rats from the island, project design and thorough planning, the implementation of project activities and a monitoring and evaluation stage.

Funding for the project was obtained from three different organisations. Conservation International (CI) through its Pacific Island Programme provided funding for the Feasibility Report. The Critical Ecosystem Partnership Fund (CEPF) financed the project plan and implementation of project activities and the New Zealand International Aid and Development Agency (NZAID) jointly with CEPF funded PII support to the project. The project was officially launched on Viwa on 14 November, 2005.

Community Involvement:
Before receiving funds for the project, USP undertook a series of meetings and consultation sessions with the community. In the meetings, aspects concerning the eradication process, such as the use of rat poison, cost versus benefits, project objectives and rationale were discussed. Other points such as the clarification of roles, methodology and amount of payment to workers, as well as a timetable for those involved were clarified prior to the eradication (see CEPF Letter of Inquiry, 2005).

Members of the community as well as members of USP, PII and other stakeholders involved were able to provide input and raise concerns through two stakeholder committees (SC), the Viwa SC and the Resident SC. Meetings of the SCs were useful in raising other village concerns relating to water supply, health and rubbish disposal. These issues were addressed in the planning process and implemented in conjunction with the eradication programme.

Many of the residents of Viwa, including women, men and youth, were actively involved in the implementation phase of the project. Activities in which villagers were involved included the cutting and marking of transects, rat index monitoring, counting and putting out the bait, data entry, cat and dog eradication and some level of monitoring and evaluation. (See CEPF Final Project Completion Report, 2006; Viwa Questionnaires).


Training in session (Photo: Rob Chappell)

Over 40 members of the community were trained in rat eradication methodologies by an expert from the New Zealand Department of Conservation (DOC) and the project manager. Training was done in Viwa with demonstrations and instructions in both English and Fijian.

Some of the community members were rewarded for the implementation of the project through a system of monetary remuneration. The decision was made by USP in consultation with the community to pay youths as research assistants and, as suggested by the women, a tax of 15% was applied. The money earned by the villagers through the project was used to pay school fees and other community expenses. It also allowed the villagers to open a bank account.

What worked on Viwa?

The community played a major role in setting one of the project goals and their involvement in meetings and project implementation activities as well as community consultation was essential to generate support. The community extensively benefited from the project; their awareness on invasive species and invasive species management was substantially increased. People were also able to live without rats as well as reporting higher staple crop yields, more fruit from fruit tree crops and surprisingly more harvest from the reef at the end of the project. They were also able to experiment working together with people from outside Viwa including people from other countries.

Water Tanks in Viwa Island (Photo: Rob Chappell)

The project also assisted with and created awareness on issues related to rubbish disposal and reliable water supply. USP was successful in implementing one of the first examples of rat eradication in the Pacific and one of the few eradications on populated islands with involvement from the local residents. They managed to build up a strong relationship with the community and they made great efforts to involve different groups of people in the project.

The project was successful in that it followed a comprehensive planning process and the technical aspect of the project were fairly well addressed (a plan covering technical aspects was developed, training was provided by an expert from DoC, members of the community were informed and trained on the technical side of the project and the bait station design was trialled prior to operation). After the eradication finished and until May 2007, surveillance activities to determine the presence/absence of rats were undertaken by USP and community members. During this time it seemed that rats had been successfully eradicated from Viwa.

What were the challenges of the project?

The Viwa Island invasive mammal eradication was a challenging project with several biological problems and sensitive social issues. One of the challenges was caused by a clash of project and community activities. An example was the 2006 Methodist Conference which was held during the rat eradication. In this case conflicts arose between complying with the obligations for the conference and continuing with the project. Demands by church leaders seriously threatened the eradication timetable and the villagers needed to have serious discussions to allow the baiting team to continue with their work (Nagle and Johns, 2007).

The lack of involvement of some people important to the decision making progress, resulted in communication problems between the implementing agency and Viwa stakeholders. For example, when the project started assumptions were made that just the people residing on Viwa had title to the land. Consequently, during the early stages of the process landowners

residing out of Viwa were neither consulted nor included in the stakeholders committees (Sakitora, 2007). This later brought complications to the project as these landowners had different expectations and lacked understanding of the project. However, this problem was resolved and landowners residing out of Viwa were included in the Viwa SC.

Another example of inadequate communication was the late statement from one elderly man in the village that rat was his personal totem animal. However, upon discovery of this fact the project team presented a sevusevu to the individual and received his approval to the continuity of the project.

Another challenge faced was communication between the different stakeholders. The project manager was not living on the island and thus he was not constantly supervising the community members of the eradication team. In addition, in many cases the project leader (and others receiving information through him) was not fully up to date with progress and problems (see Viwa Island Rat Eradication Project Debrief, 2006). This lack of constant supervision could have been a source of confusion as the villagers seemed not to know how to manage project activities in the absence of the project manager (see CEPF Final Completion Report, 2006).

Individual payments may have had an effect on the ownership of the project. Some members of the community appeared not to have understood the importance of the project in terms of its value to the village and ended working more for money, rather than for the final outcome (improve livelihoods) of the project. This may have been one of the major reasons for the discontinuance of important project activities such as surveillance.

What could have been done differently?
The challenges faced by the different stakeholders provide lessons that need to be considered and addressed when planning for future invasive species management initiatives where communities are primary stakeholders.

1. *Communication:* Adequate and regular communication between stakeholders involved in a project is essential for its success. In Viwa, serious efforts were made to include every stakeholder and to maintain a good flow of information. However, the consultation process and the setting up of communication channels did not foresee and avoid every communication pitfall (see Viwa Island Rat Eradication Project Debrief, 2006).


During the eradication (Photo: Karen Johns)

Clear channels of communications and a clear debrief to stakeholders on project objectives, project durability, roles and responsibilities and modus operandi would have helped avoiding confusion and other communication problems. To ensure a clear understanding of the different aspects of the project the stakeholders understanding could have been tested and checked regularly. In addition, a continuous access to the project manager to clarify any doubts that could have arisen during the project would have been useful to avoid any degree of confusion between members of the community.

2. *Community participation:* USP had been working with the community for many years

prior to this project and had established good relationships. However, the implementing agency and the community of Viwa were unfamiliar with the demands of eradication projects where community is a primary stakeholder. This resulted in some unfortunate problems during the project. Having the support of a person with a sound understanding of the local community during the planning process could have resulted in a more effective consultation and planning process. This would have helped avoiding some of the problems that arose during the project including options from providing monetary benefits.

Giving community members as well as those stakeholders important for the decision-making process the opportunity to actively participate and learn from every step of the planning process could have contributed to reducing the problem of social issues, increase ownership of the project and increase people's capacity to plan for and/or manage this and other invasive species projects.

The community preparing baits for the eradication (Photo: Karen Johns)

Conclusion

Very important lessons have been learned from this project and until May 2007 it appeared that eradication was successful. Sadly, reports received by PII in early 2009 indicate that rats have been seen again on Viwa. However, without DNA testing it cannot be ascertained whether there has been a reinvasion or the rats were not completely removed.

The most important lesson learned is that the success of conservation projects in which communities are primary stakeholder highly depends on an adequate degree of involvement of the local community. It is necessary to ensure that community members feel a long-term ownership and commitment to the project. To achieve this it is essential to make sure that every person vital to the decision-making process is actively involved in every stage of the planning process.

A way of increasing the chances of successfully involving the community (thus increasing the chances of success of the project) is to include a person with a sound understanding of the community in the planning team. If possible, this person should be someone chosen by the villagers and landowners. Finally, good communication amongst all stakeholders is also essential to ensure that everyone is informed and any issues are identified and resolved early in the process. This would increase the chances of success of projects.

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