

“Operation Counter-Invasion”

Interim Implementation Plan

for the

Palau National Invasive Species Strategy

Summary Report

August, 2007

Prepared by the

PALAU NATIONAL INVASIVE SPECIES COMMITTEE

A COMMITTEE OF THE NATIONAL ENVIRONMENTAL PROTECTION COUNCIL



OPERATION COUNTER-INVASION SUMMARY REPORT AUGUST 2007

INTRODUCTION

On August 1, 2006, the member agencies and organizations of Palau's National Invasive Species Committee (NISC) began implementation of "**Operation Counter-Invasion**" as a one-year project to initiate implementation of the National Invasive Species Strategy (NISS). Operation Counter-Invasion was initiated by His Excellency, President Tommy E. Remengesau, Jr. to meet the urgent need to respond to the ongoing threat of invasive species to Palau's economy and environment. Operation Counter-Invasion received \$100,000 in funding from the government of the Republic of China – Taiwan.

Operation Counter-Invasion is the Committee's response to the President's directive, and has the following six components:

- National Invasive Species Coordinator
- Strengthening Quarantine
- Public Awareness
- Implementing the Strategic Plan for Invasive Weeds
- Marine/Aquatic Invasive Species Baseline Survey
- Support for Priority Projects

All of the above components of this plan have been accomplished by working in partnership with local communities, agencies, and organizations, and also with regional and international partners and organizations. In addition to optimizing the effective use of the funds made available by the President for implementation of this plan, it was also the task of the Invasive Species Coordinator in cooperation with the NISC and its member agencies, to seek additional funding support from as many sources as possible.

Operation Counter-Invasion has served as an interim plan for implementation of the NISS, for the duration of one calendar year from its initiation. In January 2007, the NISC adopted a five-year strategic plan, which will guide the activities of the NISC through calendar year 2011. Following is a summary report of progress on the several components of Operation Counter-Invasion, through July 31, 2007.

SUMMARY REPORT

Invasive Species Coordinator: The creation and staffing of this position was identified by the NISC as one of its highest priorities. The NISC recommended that the position be part of the Executive Branch, to be located in the Office of Environmental Response and Coordination. Dr. Joel Miles was selected to fill this position. He officially began on August 1, 2006. Funding for this position under Operation Counter-Invasion was only through July 31, 2007. The NISC shifted funding to cover the Coordinator's salary through September 30, when it should be taken over as part of the operations of the Executive Branch.

One of the first tasks of the new Coordinator was to develop, with the NISC and other partner agencies, a five-year strategic plan. This task was completed in November,

2006. Implementation of this strategic plan began in January, 2007, in tandem with Operation Counter-Invasion, and will continue upon the completion of Operation Counter-Invasion.

Strengthening Quarantine: The Plant Protection & Quarantine Service (PPQS) of the Bureau of Agriculture has completed construction of an inspection facility for PPQS at the cargo area of the Airai International Airport. Prior to construction of this facility, imports with suspected infestations of quarantine pests either had to be inspected outside the cargo area, or transported to the inspection facility at Malakal. In either case, there was a risk that quarantine pests could escape during the inspection and/or transport process. The new inspection facility greatly reduces the risk of such escapes.

In addition to the above, copier machines, authenticating stamps, and back up batteries were purchased for the Malakal sub-station and the main office. This equipment is being used for processing permits and other paperwork.

Public awareness program focusing on two key invasive species: The NISC identified two priority species for increased public awareness activities: the invasive vine **kebeas** (*Merremia peltata*) and macaque monkeys (*Macaca fascicularis*). Public awareness and community mobilization for kebeas is being conducted by the Bureau of Agriculture. We have not yet found a lead agency/organization for monkey awareness, but activities have been initiated by the Coordinator, in cooperation with NISC members and partner agencies. Both of these are long term activities are continuing beyond July 31, 2007.

Community Mobilization to Combat Kebeas This is a high priority project, to mobilize communities in the 10 states on Babeldaob to combat kebeas (*Merremia peltata*) along the Compact Road and along other secondary roads. The lead agency is the Forestry Unit of the Bureau of Agriculture. As of the end of July 2007, the following progress has been made:

- The Ngiwal kebeas clean-up demonstration project is ongoing, including cooperation with PALARIS to map the cleared areas;
- Arrangements were made with the Governor of Airai, and kebeas clean-up in Airai State began in June, 2007;
- Request letters have been sent to other state governors regarding nationwide kebeas clean up efforts;
- The Ngarchelong women's group, Bngal a Klikm, has begun a kebeas clean-up in Ngarchelong State;
- The Bureau of Agriculture is proposing, through the Ministry of Resources and Development, that kebeas control be included in the contracts for roadside maintenance currently being negotiated with the Babeldaob States. This will be a permanent and ongoing solution to the kebeas problem along the Compact Road.

Public Awareness for Macaque Monkeys This is also a high priority project. In the absence of a lead agency, the Coordinator has worked with the Ministry of Justice to improve enforcement of the existing law prohibiting transport of macaques from Angaur to other islands in Palau. He was also able, in cooperation

with PCS and with support of Island Conservation, to bring an expert in invasive mammal eradication to Palau in March 2007, to visit Angaur and meet with representatives of the Angaur State Government and other agencies and organizations. This expert, Mr. Karl Campbell, submitted a report containing several recommendations and a stepwise process leading to eventual eradication of macaques from the Republic.

The Coordinator has organized a planning group which is moving forward with this initiative. The Division of Fish and Wildlife Protection and the Patrol Division in the Ministry of Justice have stepped up enforcement of the national law prohibiting transport of macaques from one island to another. We held a community meeting on Angaur in August 2007, and this will be followed by additional public awareness activities; we are working with a local video production company to produce a series of five public service announcements highlighting the negative impacts of macaques on the economy, culture, environment, and human health. We are receiving good cooperation from the Governor of Angaur, the Koror State Animal Shelter, and others.

Strengthening the Invasive Weed Eradication Program: The Invasive Weed Eradication program was to be strengthened by the purchase of a pickup truck and the hiring of an assistant to the Invasive Weed Eradication Coordinator. A used flatbed truck in excellent condition was found for much less than the \$10,000 originally budgeted for this item. Some of the original budget has been retained for ongoing maintenance, while the rest has been shifted by the NISC to other components of Operation Counter-Invasion. An assistant for the Invasive Weed Eradication Coordinator was hired with funding from the US Forest Service, so this budget item was also shifted.

Marine/Aquatic Baseline Survey: To develop our capacity to prevent, detect, and respond rapidly to marine invasive species, the National Invasive Species Committee organized a marine invasives survey and training from July 23-27, 2007. The training was conducted by Dr. Chad Hewitt and Dr. Marnie Campbell, both from Australia. Participants developed recommendations to enable Palau to respond to the threat of marine invasives, which will be taken up by the National Invasive Species Committee. The training in survey design and methodology included hands-on surveying in the field as well as training in laboratory techniques for sorting and identifying marine invasives. High-risk sites in Malakal Harbor were selected for the training and as a result Palau now has a 17-member team of divers and support personnel representing national government agencies, state governments, non-governmental agencies, and dive tour companies.

On July 26, 2007, during the survey and training, Palau's newly-formed Marine Invasives Survey Team discovered several potentially invasive species in small patches on the keel of a vessel docked at the commercial port in Malakal, Koror. All of these organisms are found in the Philippines and Indonesia, but have never before been found in Palau and all have the potential to grow in Palau, and to significantly impact Palau's world-renowned marine ecosystems. It was therefore urgent that these organisms be removed from Palau's waters before they could reproduce and spread.

The President of Palau joined the Survey Team and volunteers in an emergency cleanup to keep them from spreading.

In addition to the \$10,000 budgeted for this activity under Operation Counter-Invasion, significant support was also provided by the IUCN, the Marine Bio-security Education Consortium, the Australian Maritime College, and the Pacific Invasives Learning Network (PILN), as well as several local agencies, organizations, and private companies.

Other Priority Projects: Three high priority projects also received funding under Operation Counter-Invasion. They are:

- **Eradication of Feral Pigs from Ngerchur Island** The Division of Fish and Wildlife Protection (DFWP) has successfully removed all pigs from this island, thereby protecting an important turtle nesting beach. The Turtle Monitoring Project of the Bureau of Marine Resources will continue to monitor the beach at Ngerchur. This project was completed within its budget, and the NISC approved shifting \$500 of the remaining funds for hunting of destructive feral pigs on the island of Babeldaob. Sufficient funds have been retained for travel to Ngerchur should pigs be detected there again.
- **Invasive Species Calendar** The \$1,500 committed by Palau to reimburse the Secretariat of the Pacific Community for printing this calendar has been paid.
- **Invasive Anemone in Ongeim 'I Tketau (Jellyfish Lake)** The Koror State Department of Conservation and Law Enforcement has completed its public awareness activity for the invasive anemone. They were able to complete this project under budget and therefore requested that remaining funds be used for control of the very invasive Coral Bean Tree (*Adenanthera pavonina*) on Ngeremdiu, Ngermalk, and Ulebsechel islands. The NISC approved this request at its regular meeting on January 23, 2007. Funds have been shifted, and work is expected to begin at Ngeremdiu before the end of calendar year 2007.

New Initiatives: In addition to the initial components of Operation Counter-Invasion, unforeseen events led the NISC to shift budget for two additional initiatives, participation in the Micronesia Regional Invasive Species Council, and eradication of tilapia.

Participation in Micronesia Regional Invasive Species Council (RISC):

The Micronesia Regional Invasive Species Council (RISC) was created by the Chief Executives of Palau, Yap, Guam, and the CNMI to enhance cooperation among these island groups to prevent and control invasive species. The NISC shifted budget from components with surplus to enable participation in four RISC meetings in Saipan, CNMI, in calendar year 2007.

Tilapia Eradication: On June 7, 2007, staff of the Bureau of Agriculture (BOA) and the Palau Environmental Quality Protection Board (EQPB), with support from the Bureau of Public Safety and the Bureau of Public Works, once again treated the sedimentation pond at the PTC Quarry in Malakal to destroy tilapia which had been discovered as survivors of previous treatments. Funds were shifted from the Invasive Weeds component to cover the cost of this activity.

Three other ponds which were treated 3 years ago continue to be free of tilapia, but the Quarry pond has presented unusual difficulties to the eradication team. This is because there is a source of fresh water near the bottom of the pond. The team used a longer hose for this treatment, and a small outboard motor boat, to ensure that the rotenone was fully mixed with the water in the pond, and that the rotenone reached the bottom of the pond. BOA and EQPB staff will continue to monitor this pond, and it will be treated again if necessary.

ADDITIONAL FUNDING

As noted above, in addition to optimizing the effective use of the funds being made available by the President for implementation of this plan, it was also the task of the Invasive Species Coordinator in cooperation with the NISC and its member agencies, to seek additional funding support from as many sources as possible. Several sources of funding were accessed to support implementation of Operation Counter-Invasion, and related activities. These included the following:

Private Pesticide Applicator Training Through PILN, funds were obtained from the training section of the Secretariat for the Pacific Regional Environment Programme (SPREP) to send three trainers from Palau to Yap in October 2006 to conduct this training. Trainees were staff of the Yap State invasive weed eradication project, as well as the Yap EPA, the College of Micronesia, FSM, and some private farmers. Palau benefited from this because two of the trainers gained experience in conducting the training, and by receiving assistance from Yap in computerized record-keeping for invasive weed eradication.

Strategic Plan The PILN and US Forest Service supported development of this plan by sending two facilitators to the planning workshop in November 2006

Support for the Invasive Weeds Program Financial assistance is being provided by the US Forest Service. This pays the salaries of the Invasive Weed Eradication Coordinator and his assistant, and also provides some operational funds.

Marine Invasives Survey and Training In addition to the \$10,000 budgeted for this activity under Operation Counter-Invasion, support was also provided by the IUCN, the Marine Bio-security Education Consortium (MBEC), the Australian Maritime College (AMC), and the Pacific Invasives Learning Network (PILN), as well as several local agencies, organizations, and private companies. The amount of additional support far exceeded the amount originally budgeted, which was just enough to cover local training costs plus airfare and per diem for one of the trainers. Airfare and per diem for the other trainer and a representative of IUCN, plus the usual charges for such a training, were provided by IUCN, MBEC, and AMC. The trainers are now developing a proposal for funding from the Australian Government to conduct a full survey of high-risk locations in Palau.

International Pacific Invasive Ant Conference (IPIAC) Support was obtained from SPREP, PILN, and the Pacific Invasives Initiative to send Mr. Alan Olsen, entomologist at the Belau National Museum, to the above conference in May 2007 on behalf of the NISC. His airfare, conference fees, and per diem were paid by the above organizations.

Rat Eradication Workshops Representatives of the NISC participated in rat eradication workshops in Fiji and Pohnpei in 2006 and 2007. This participation was funded by PILN and SPREP.

Mammal Eradication Prioritization Project This ongoing project to prioritize islands in Micronesia (Palau, FSM, and RMI), is being funded by a grant from an anonymous donor to the Micronesia Conservation Trust. The NISC and partner agencies are actively participating in this project, which will produce prioritized lists of islands within Palau and the rest of Micronesia where eradication of invasive mammals may be feasible.

Biosecurity and Quarantine Palau is participating in a project funded by the Secretariat for the Pacific Community to update our biosecurity legislation and bring it into harmony with global standards.

The NISC continues to actively seek funding for priority projects, but core funding – for the Coordinator and for emergency response, as well as for key projects – should continue to be provided by the national government. The successful acquisition of additional funding for several of the components of Operation Counter-Invasion clearly demonstrates how a limited amount of “seed” funding can facilitate acquisition of additional funding.