



**A Proposal to the
Hau'oli Mau Loa Foundation
for
2013 CGAPS Invasive Species Prevention Projects**

Introduction

The CGAPS Steering Committee is grateful for the opportunity to submit this proposal for funding consideration. This proposal draws heavily from the needs identified in the CGAPS Action Plan, and lessons learned during the first year have helped us to better define these projects. We feel that these projects lay the groundwork for addressing gaps in knowledge, policy, or communication, and we are especially pleased to see steps being taken to address the issue of aquatic invasive species that arrive on the hulls of vessels.

Foundation support is helping us to look at our Action Plan with new eyes and identify the pieces that can be achieved, even with changes within agencies and the CGAPS partnership. The close of 2012 comes with several changes to the Steering Committee, including the retirement of Dr. Lloyd Loope (U.S. Geological Survey/Pacific Island Ecosystem Research Center) and Paul Conry (Department of Land and Natural Resources/Division of Forestry and Wildlife), and the departure of Rachel Neville (Oahu Invasive Species Committee). In early 2012 we invited Jodi Chew (U.S. Department of Agriculture/U.S. Forest Service) to join the committee. Jodi was recently nominated and has accepted the Deputy Chair position and will become CGAPS Chair in July 2013. Carol Okada completed her year guiding the Steering Committee and Teya Penniman is the current CGAPS Chair. In short, this fall has been a time of change. In the coming months as we discuss the composition of the Steering Committee, we will be thinking about the upcoming revision of our Action Plan and the key people and agencies that can help us advance our priorities.

The total request for project support is \$352,791, including indirect costs. Some important issues, like the interisland movement of pests, have not been discussed enough to assess the support and capacity which is necessary before moving to the project planning stage. We hope that if consensus is reached on such projects, that we might approach the Foundation for consideration.

We are honored to work with Hau`oli Mau Loa Foundation on the important job of protecting Hawai'i's environment. As always, feel free to contact us with any questions, comments, or concerns on this proposal or any aspect of our work. We are happy to provide additional information or clarification. Mahalo nui loa for your support and for your good work.

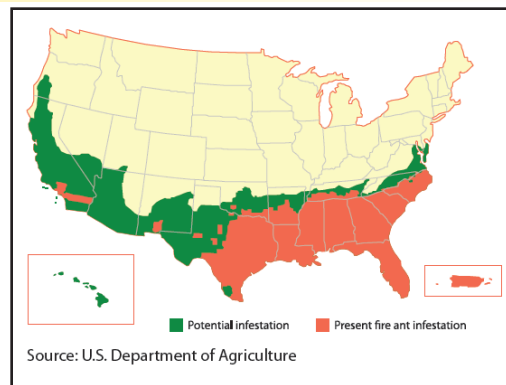
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Project: Crafting and Testing a Hawai'i Plant Health Emergency Plan

(CGAPS Action Item #9, page 13)

Executive Summary

This project will use a contractor to work with CGAPS Steering Committee and staff to review the existing Hawai'i Plant Health Emergency Plan draft, work with agency and NGO partners to gather information and reinforce communication pathways, and draft a completed plan for responding to serious plant pests and preventing or mitigating harm.



Background

Even the countries with the best prevention measures accept that there will be incursions and they plan accordingly by devising and practicing emergency response plans. For example, New Zealand has what are arguably the best and most comprehensive prevention mechanisms, yet non-native Red Imported Fire Ants (*Solenopsis invicta*) have been detected three times and emergency response has led to successful eradications. The first two incursions were found within ports, Auckland International Airport in March 2001 and Napier Seaport in 2004. At Napier, the ants were detected during routine pest monitoring by a private contractor for the government. Although the detection was made over a weekend, by the following Monday a full response had been launched because they had in place an emergency response plan. The third incursion was discovered in June 2006 in Whirinaki. MAF Biosecurity Zealand conducted the emergency response and declared the pest eradicated in 2009. Even though NZ seems to be well versed in emergency response, recent internal changes prompted a review and tabletop exercise to test their emergency response plan (see <http://www.biosecurity.govt.nz/pests/surv-mgmt/resp#prePlan>).

Red Imported Fire Ants populate an estimated 278 million acres in U.S., from a single introduction at a port in the 1930s.

In Hawai'i, we have experienced serious loss of capacity in many State offices that play an integral role in leading or participating in an emergency response. The March 2012 CGAPS meeting featured presentations on three incursion events to date: the discovery of a live malaria-vectoring mosquito and a live non-native bat at Honolulu International Airport, and the discovery of a live bull snake on Nimitz Blvd. The discussion that followed underscored the need for clear emergency response plans with designated authorities and communication pathways, and periodic exercises to improve our response.

The U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS) has emergency response plans for many of the states, and has a draft Hawai'i Plant Emergency Response Plan that was started in 2004. The goal of the plan is to show how Hawai'i is preparing for, identifying and responding to, mitigating

against, and recovering from new plant pests that could adversely affect the health and wellbeing of Hawaii's and the nation's agriculture and natural resources.

The 2004 Plan is a framework* based on some of the international efforts concerning Red Imported Fire Ant prevention and rapid response. It includes largely unfinished sections that should identify the roles and capacities of agencies/NGOs pertinent to an outbreak or prevention effort, sharing or contribution of resources, lead authorities on various actions, lines of communication, and key contacts. Such a plan requires vetting in an exercise in which diverse groups, including relevant state and federal agencies (e.g., agriculture, natural resources, security, emergency response), the university, and private sector partners can learn why and how to participate, identify gaps in coverage, and most importantly how responsibility for action might be effectively transferred from one entity to another. To become a living and useful document, the Plan would need a visionary and capable leader/writer to facilitate the contributions of a wider stakeholder community, arrange for productive collaboration and facilitated meetings with the appropriate combination of attendees, and draft a comprehensive written plan.

Deliverables

A tabletop exercise will be planned and held similar to previous exercises with a report generated by the exercise leader. A Hawai'i Plant Emergency Plan will be completed based on input from meetings and the tabletop exercise and will incorporate necessary changes requested by the CGAPS SC.

Budget

(Contact CGAPS for details)

Project: Supporting the State Biofouling Risk Assessment (CGAPS Action Item #5; State Aquatic Invasive Species Management Plan)

Executive Summary

This project will provide support to the Department of Land and Natural Resources—Division of Aquatic Resources (DLNR DAR) Ballast Water & Hull Fouling Coordinator to work with a contractor and research staff from Bishop Museum to complete an existing but only partially-funded project to create and test self-reporting forms to analyze the risk of non-native marine species arriving on the hulls of vessels from outside Hawai'i and vessels operating interisland. Assessment of data and recommendations will help inform policy options to manage vessel biofouling.

Background

The State of Hawai'i Aquatic Invasive Species Management Plan (http://hawaii.gov/dlnr/dar/pubs/ais_mgmt_plan_final.pdf) completed in 2003 provides a blueprint for key actions that need to be addressed to protect our nearshore reefs from new invasive marine species. Based on surveys conducted by Bishop Museum and others, there are approximately 350 non-native marine and brackish water species in Hawai'i. While some were intentionally introduced for food or research, and some (39) arrived in ballast water, the vast majority of non-native marine species are believed to have arrived attached to the hull or other parts of vessels (collectively referred to as biofouling). Further, more than 200 non-native marine invertebrates in the main Hawaiian Islands have been recorded within harbors, yacht basins, and embayments. A number of these species have become invasive and cause negative impacts such as coral smothering, links to tumor growth in turtles, outcompeting native organisms, disturbing ecosystem processes, and reducing habitat for natives.

Pursuant to §187A-32 Hawaii Revised Statutes, DLNR is designated as the lead State agency for preventing the introduction and carrying out the destruction of alien aquatic organisms through the regulation of ballast water discharges and hull fouling organisms (biofouling). While Hawai'i passed ballast rules in 2007, the rules rely largely on a ballast form for self-reporting and, when staff time permits, spot-checking records and inspection. Ballast forms also allow staff to assess the relative risk of different types of vessels and use limited resources more effectively. There is currently no formal state or federal management of vessel biofouling and this biosecurity gap exposes Hawaii's unique ecosystem to further aquatic bioinvasions and impacts.

A 2004 Bishop Museum Technical Report, "The Assessment of Hull Fouling as a Mechanism for the Introduction and Dispersal of Marine Alien Species in the Main Hawaiian Islands," assessed the numbers and types of species arriving via biofouling and the relative risk of the species found. While the risk assessment confirmed the high risk to Hawai'i from marine species arriving as biofouling, there is no self-assessment or reporting mechanism that could be used for targeting inspection or mitigating risk.

DLNR recently reinitiated work on managing vessel biofouling, with the aim of minimizing further introductions of alien aquatic organisms into Hawaiian waters. With support from the Hawai'i Invasive Species Council, DLNR is engaging the services of the Aquatic Bioinvasion Research & Policy Institute* (ABRPI, see <http://www.clr.pdx.edu/abrpi/>) to develop draft risk assessment tools for vessel biofouling. These tools will be circulated to vessel owners and operators during the first half of 2012 to collect as much biofouling management data as possible.

Foundation funding would enable finalization of relevant tools (self-reporting forms and groundtruthing), data collection and analysis, and synthesis and presentation



Invasive marine invertebrates like this snowflake coral outcompete native species. Hawai'i lacks procedures and rules to reduce the risk posed by biofouling.

of recommendations for policy options to manage the biofouling risk. Funding would also support the participation of Bishop Museum researchers in vetting forms, review and feedback of data collection and analysis, and in groundtruthing. This work would be done by the State Ballast and Hull Fouling Coordinator working with the current contractor, pursuant to satisfactory progress on the existing contract, with participation from Bishop Museum researchers. It is envisioned that biofouling rules would need to be similar to ballast rules, requiring self-reports be submitted to DLNR prior to arrival, so that DLNR can perform desk-based risk assessment and allocate resources to inspect the biofouling on the highest risk vessels.

Deliverables

The State Ballast and Hull Fouling Coordinator will work with Bishop Museum research staff and the Contractor to develop, test, and finalize self-reporting forms that can be used to assess risk of vessel biofouling. The Coordinator, Bishop Museum research staff, and the Contractor will produce a final report with recommendations. The Coordinator and Contractor will engage the Aquatic Invasive Species Taskforce and additional stakeholders in a meeting to discuss the options for future risk management.

Budget

Existing funding will be used to collect the biofouling management data, create draft self-assessment tools, and re-engage the AIS Taskforce and additional stakeholders by June 2013. Existing funds will also be used to support the Coordinator. Foundation funds would support a contract with ABRPI and will provide funds to support Bishop Museum research staff to assist with this project. The tasks detailed in this proposal have an estimated completion date of December 2013.

(Contact CGAPS for details)

*ABRPI= Aquatic Bioinvasion Research Policy Institute is a joint initiative between Portland State University and the Smithsonian Environmental Research Center. The lead of the HISC-funded current project is Dr. Ian Davidson, with Dr Greg Ruiz (ABRPI Director) also helping.

Project: CGAPS Invasive Species Law Fellowship

(Multiple Action items, listed by issue)

Executive Summary

Working through the UH Richardson School of Law Environmental Law Program, with the CGAPS Steering Committee and appropriate legal counsel, Foundation-supported legal fellows will work on a systematic review and revision of identified invasive species prevention-related statutes and rules in Hawai'i; prepare policies, rules, and proceedings for presentation to the appropriate body and where possible, assist with rule promulgation. Support for 1.5 FTE would allow for extending the term of the Myrtaceae Fellow (position description in review) to a full year to work on revisions to other parts of Hawai'i Administrative Rules Chapter 70 (Plant Import Rules). A second full-time 1-year position would allow work on two main federal issues.

Background

Hawai'i has a complex set of laws, rules, and authorities that we rely on to prevent the introduction of invasive species. State agencies largely rely on their Attorney General to provide counsel on legal matters, respond to requests, and draft, review, and promulgate rules. The Hawai'i Department of Agriculture has a single AG that works on all aspects of the Department's business, from pesticide registration to restricted plants. This means that agency staff that are trained inspectors or biologists have to learn how to draft rules, prepare submittals, and shepherd these documents through the rulemaking process, at times with little guidance, while maintaining their regular duties.

Over the course of the past year, events leading to the investigation and eventual prosecution of the people responsible for moving game animals interisland underscored the need to better acquaint the next generation of legal professionals with conservation and natural resource protection laws. Although this has been identified as a CGAPS action item to address smuggling, the bigger picture is that we could gain some valuable help from our local law school graduates, reduce the burden on agency staff in rulemaking, provide on-the-job training on agency rules and process, and form a closer relationship and understanding between the UH Richardson School of Law Environmental Law Program and CGAPS partners.

The CGAPS Steering Committee has identified a list of thirteen prevention issues with six selected as the highest priority for two FTE in year one. The full list and a briefing would be shared with Denise Antolini, as Environmental Program Dean and supervisor for the fellows, so they can see a broader range of concerns. Because some of these issues may require a longer time to see to completion, we would like the option of extending the term of the fellowships to a second or even third year, pending project needs and the satisfactory job performance and productivity of the individual. Such a term extension would be included for consideration by the Foundation in project proposals in future years.

Deliverables

The Steering Committee has agreed on these top two priorities:

1. Review rules (or lack thereof) regarding federal agency response to vectors i.e. mosquitoes and biting flies in foreign imports (these are currently not addressed by feds on imports). Propose mechanisms (such as an MOA/MOU from a federal agency to CBP) to allow/compel an agency/agencies to take action, including the notification to relevant state agencies. (#7 Address federal laws that expose HI to unnecessary risk; #1 Border Protection)
2. Review the existing analyses regarding the State's plant import rules, federal constitutional and statutory restrictions (preemption), and federal assistance programs (such as NAPPRA and others) to protect Hawai'i from a greater suite of pest plants and plant pests. Propose options for action within the existing structure. (CGAPS Action items #3 Importation of invasive plants; #1 Border protection, #7 Federal laws that expose HI to unnecessary risk)



Legal gaps expose us to unnecessary risk. One example is the lack of agency authority to enable or compel federal response to non-actionable species such as mosquitoes in foreign imports.

The Steering Committee has also listed the following issues as important. However, we have yet been able to come to a consensus on which projects should move forward this year and which will need to wait until department resources can help in guiding these projects. The Steering Committee, staff, and Law School staff will be working together to do this as soon as possible.

- Analysis of policy gaps pertaining to aquaculture. (CGAPS Action item #5 Aquatic invasives)
- Review rules related to the interisland movement of pests and propose legal mechanisms to mitigate, incl. the negligent transport of known pests (CGAPS Action item #9 Early detection and rapid response; CGAPS Action item #1 Border protection)
- Review of HRS 150A and HAR Ch. 71 to address the import of biocontrol agents. (CGAPS Action item #10 Capacity to control widespread pests)
- Review of ballast rules and authorities and begin drafting complementary hull fouling rules (#5 Aquatic invasives)
- Potential civil vs. criminal penalties or tort law for negligent movement of invasive species; section 125 DLNR rules
- Review emergency rulemaking procedures for restricting or prohibiting the movement of known invasive species (including microbes) into the state. Recommend changes to streamline and provide a “fast track” option for the most serious, high-risk cases (CGAPS Action item #9 Early detection and rapid response)

Budget

(Contact CGAPS for details)

Project: Capacity Support for CGAPS Prevention Projects

(Multiple Action items)

Executive Summary

Partial support for three months of salary and fringe for one FTE (CGAPS PIO) to continue the momentum of the CGAPS Action Plan, coordinate partners, and facilitate communication and collaboration on prevention priorities. Support for one (1) FTE or two (2) 0.5 FTE) to assist primarily with invasive plant prevention issues and tasks.

Background

CGAPS Public Information Officer

CGAPS has a single staff member (Public Information Officer, PIO) whose primary goal is to raise public awareness about invasive species issues in order to positively change perceptions and actions, and increase funding for invasive species programs. Outreach is conducted in a number of ways, including television, print, radio media, news stories, public displays, educational materials, and direct outreach at community events and schools. In the absence of a program coordinator, the CGAPS PIO has also taken on those duties by coordinating the CGAPS partnership and facilitating communication within and between agencies and NGOs involved in invasive species issues in the State of Hawai'i.

The U.S. Fish & Wildlife Service (FWS) has been the primary source of funding support for the PIO position over the last decade. However, FWS discretionary funding in Hawaii for FY 2013 and beyond is being reduced by more than 60%, and remaining funds will focus on "hot spot" areas that directly affect the survival of federally-listed Threatened and Endangered species. The CGAPS Steering Committee has discussed sharing support for the coordination function, and HDOA, DLNR and TNC each voiced the steps they would take to investigate this possibility. As of the end of September, if no additional funds are received and if funds are not rebudgeted from the Materials, etc. column, funding for the PIO salary will be depleted by July 15, 2013 payroll.

Accounts (as of 9/30/12, not incl. 9/30 pay)	Original Award	Salary & Fringe	Materials, printing, travel, indirect, etc. (some may be used for salary, depending on circumstances)	Designated Projects & Services	Balance
HMLF 4433888 (11/30/12)	59,500	0	0	0	0
USFWS 6659870 (9/30/13)	77,919	5,456	3,102	0	8,558
USFWS 6658159 multi-yr(9/30/14)	231,555	54,339	37,396	0	91,735
NPS 6100477 (12/31/13)	5,400	4,596	804	0	5,400
DOFAW/USFS 6100566 (7/31/13)	24,250	0	7,868	16,382	24,250
Kaulunani (9/30/12)	9,900	0	0	9,900	0
Totals		\$ 64,391.00	\$ 49,170.00	\$ 26,282.00	\$ 129,943.00

Foundation support for two months of salary would provide a cushion of time between the end of existing funds and the potential encumbrance of new funds. An added benefit of private foundation funds is the flexibility of travel to meetings (anyone using federal funds has been restricted from conference travel this fall.

CGAPS Staff Support

It is legal to import into Hawai'i more than 250,000 species of plants and none of them will be checked for their potential to be invasive. Further, there are no requirements or laws that nurseries and garden shops sell only non-invasive plants. Although we have noxious seed and weed lists, these rules regulate less than 100 species of plants, most of which are already present in Hawai'i. Examination of these rules is a high-priority identified in the legal fellow section. However, inspection and enforcement would still be tremendous hurdles. Therefore, one of the first and most consistent priorities of the PIO throughout the years has been to work with plant industry groups, botanical gardens and arboreta, and gardening clubs to promote the use of non-invasive plants. Statewide outreach is ongoing, but could be improved, and the recent launch of a new website, www.plantpono.org could provide the tools for people to make sound import and planting decisions, if it were widely used.

Funding for one (1) FTE (or two (2) 0.5 FTE) would help expand and implement the tasks necessary to promote the use of the website, including contacting all major

nurseries and garden shops statewide, providing them with outreach materials and arranging training sessions for key collections managers in assessing the potential risk of plants to become invasive in Hawai'i. This would be a term position, intended to function as a largely targeted outreach campaign for one year.

Deliverables

The CGAPS PIO will work with PCSU and RCUH to draft documents and RFPs for contracts related to projects in this proposal and will be the point of contact on the contracts. The PIO will also engage the individuals necessary to prioritize and provide greater detail for the legal fellow program. The PIO will also work with PCSU on a job description and hiring for the Plant Pono term position, and will also work with NREM to see how students might be utilized. A final report will be generated for these and a variety of other accomplishments at the end of the year.

The Plant Pono staff will work with the PIO to target outreach to individuals and groups to promote the use of the Weed Risk Assessment and Plant Pono website for import and planting decision. Individuals, groups and businesses reached, website analytics, participation of key individuals in training workshops, and number (and origin) of screening requests will all be used to as indicators of progress and will be provided as a final report.



The CGAPS PIO duties include public outreach, project facilitation and the coordination of CGAPS.

Budget

(Contact CGAPS for details)

Project: Financial support for the Hawaii Green Growth Initiative (HGG)

Executive Summary

Provide support for the leadership and coordination of HGG.

Background

The Hawai'i Green Growth Initiative (HGG) brings Hawai'i leaders from energy, food and the environment together to achieve Hawaii's sustainability goals and to be a model for integrated green growth. Formed in 2011, HGG actively supports the New Day Hawai'i plan, the HI 2050 Sustainability Plan, and other statewide sustainability initiatives. HGG 2030 targets include 70% clean energy - 40% from renewables & 30% from efficiency; Double local food production - 20-30% of food consumed is grown locally; Reverse the trend of natural resource loss mauka to makai - more water, more reef fish, more healthy forests, streams & coastlines, no new extinctions of Hawaiian species; and Increase local green jobs and education to implement these targets.

Moving forward, HGG participants and leadership outlined four shared priorities for 2013-14 in our first strategic plan – 1) green funding mechanisms & legislation; 2) statewide sustainability measures & implementing partnership; 3) international partnerships with other islands on sustainability priorities; and 4) effective engagement within and between our sectors.

Deliverable

Although support would be to HGG to continue coordinating participants and advancing priorities, as a HGG participant the CGAPS PIO would continue to engage with HGG and assist with moving towards shared priorities.

Budget

(Contact CGAPS for details)