



**A Proposal to the
Hau'oli Mau Loa Foundation
for
2022 CGAPS Invasive Species Prevention Projects**

Introduction

The CGAPS Steering Committee and staff are deeply grateful for the opportunity to propose prevention projects for the 2022 calendar year and to again submit a proposal for the Rapid 'Ōhi'a Death (ROD) Strategic Response. As you will see with this proposal, the Steering Committee's priority is to support key individuals to fill gaps and advance collaborative projects in the [HISC & CGAPS 2025 Joint Strategy](#) and the [2020-2024 ROD Strategic Response Plan](#).

We have had some good wins during this second year of the Covid-19 pandemic, even as most work was conducted remotely. First, funding for ROD that was omitted in the 2019 session was again provided to the Department of Land and Natural Resources (DLNR), preventing the layoff of dozens of staff statewide and ensuring the continued implementation of the Strategic Response Plan.

Second, language in a bill that would have repealed the collection of a vessel cargo fee was struck near the end of the session and did not pass, and the funds in the account itself remain intact. These funds currently support nearly half of the Hawai'i Department of Agriculture (HDOA) inspectors and a significant portion of the Hawai'i Ant Lab's operating costs, among other important work.

For aquatic biosecurity, the Environmental Protection Agency (EPA) re-engaged with Hawai'i and other states to hear and work to address issues with its proposed regulations on ballast water, biofouling, and in-water cleaning of vessel hulls. At the same time, the Division of Aquatic Resources' (DAR) Ballast Water and Hull-fouling Coordinator left to pursue her PhD, leaving CGAPS staff to communicate the State's position on these draft regulations that will eventually be national standards.

One last example is the work and accomplishments of the Hawai'i delegation at the International Union for the Conservation of Nature World Conservation Congress (IUCN WCC). The Foundation provided support for Chelsea Arnett (Hawai'i Invasive Species Council Planner) and Christy Martin's travel, and with other funders supported a delegation and the hosting of the Hawai'i portion of the Oceania-Hawai'i Pavilion. From the opening ceremonies to the very end of the members meeting, the Hawai'i delegation and Governor Ige (via remote participation) engaged not just in passing the torch, but in communicating our needs and solutions. From this work, the IUCN will add a seventh Commission, focused on addressing the Climate Crisis, and the IUCN also recognized that indigenous communities and practices, such those in Hawai'i, can reunite and heal the relationship between people and the environment.

The work ahead remains daunting, but looking back at accomplishments and working together to identify the next year's work is always an invigorating time for the Steering Committee. Mahalo for your consideration of these requests, and for your support of our work. Mahalo nui loa!

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Project: CGAPS Legal Fellows (Strategies 1, 2, and 3)

Executive Summary

Funding for this project will provide continued salary and operational support for two full-time University of Hawai'i (UH) William S. Richardson School of Law Legal Fellows, and up to two interns to work in collaboration with CGAPS and relevant agencies in reviewing invasive species prevention-related statutes and rules, providing internal analyses, and drafting improved statutes and rules for consideration.

Background

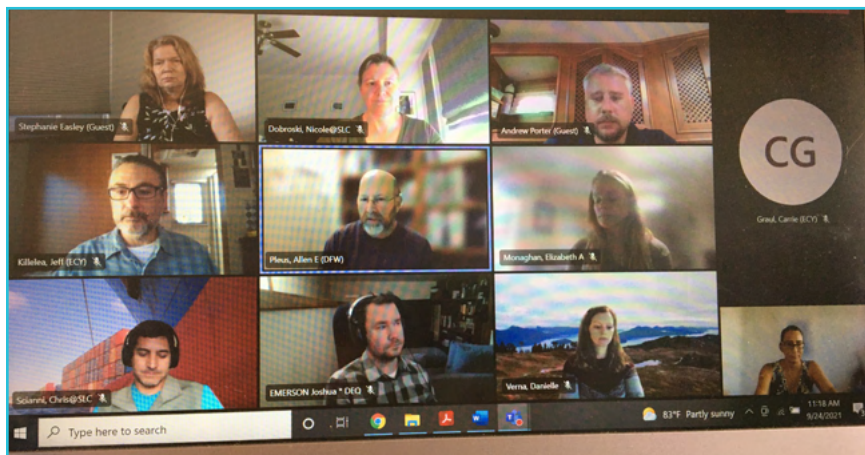
The CGAPS Law Fellowships continue to provide critical support and services focused on the invasive species prevention actions in the HISC & CGAPS 2025 Joint Strategy. Past work has helped the CGAPS network gain improved or new protection language in federal and state laws, and a Hawai'i county ordinance, and has provided the background information that is the foundation of many of CGAPS' ongoing projects.

CGAPS Legal Fellow Stephanie Easley continued to focus on terrestrial invasive species issues by providing support to the Hawai'i Department of Agriculture in analyzing and proposing changes for several rules and procedures, and in co-facilitating the Prevention Working Group with Hawai'i Invasive Species Council's Leyla Kaufman. Longtime CGAPS Legal Fellow Andrew Porter continued to focus on aquatic invasive species issues as the lead on ballast water and biofouling, and also worked to address the purposeful importation of certain invasive aquatic species. Andrew also provided support for the Aquatic Biosecurity Working Group.

In addition to this work, the Legal Fellows also participate in occasional UH William S. Richardson School of Law classes and workshops in their areas of expertise, to foster an understanding of invasive species issues within the learning community.

In 2021, Stephanie and Andrew also worked with and mentored two student interns from the William S. Richardson School of Law, one of which continued as an extern in the fall.

Existing funds are projected to last until the middle of February, 2022. Therefore, this request is for \$175,000, which would support two FTE from mid-February 2022 through January 2023,



CGAPS Legal Fellows Stephanie Easley (top left) and Andrew Porter (top right), and PIO Christy Martin (bottom right) meeting with West Coast partners to discuss the EPA re-engagement meetings on incidental discharges..

with salary and fringe (and possible increases in July, 2022), travel, materials, and supplies, plus up to two UH William S. Richardson School of Law interns.

The legal fellows will be responsible for continuing work on the following issues:

- Support DLNR DAR on creating a programmatic and regulatory framework for ballast water and biofouling inspection/in-water cleaning that does not conflict with impending federal standards and regulations
- Assist DLNR DAR and West Coast state counterparts in analyzing the EPA and U.S. Coast Guard regulations related to ballast water, biofouling, and in-water cleaning
- Support HDOA Plant Quarantine in reviewing statutes and rules related to prevention, early detection & rapid response, intrastate and interstate movement, and purposeful importation of aquatic species
- Assist CGAPS in petition/s for rulemaking to restrict domestic importation of certain invasive plants, and subsequent request to the U.S. Department of Agriculture for federal rulemaking to also restrict foreign importation
- Address gaps in quarantine action authority for federal agencies when human health vectors are found in international cargo or conveyances
- Address DAR policy gaps regarding aquaculture, including permitting for culture, facilities inspection (for biosecurity purposes), and compliance
- Support the implementation of the HISC and CGAPS 2025 Joint Strategy and the Hawai'i Interagency Biosecurity Plan
- Participate in UH William S. Richardson School of Law lectures, classes, workshops, or other learning events where appropriate

Deliverables

The deliverables will consist of regular reports and a year-end final report on progress towards these and other priority issues.

Budget: \$175,000 (\$8,750 UHF)

Project 2: Capacity Support for CGAPS PIO and Planner *(Strategies 1-7, 9, and 10)*

Executive Summary

Funds are requested for up to three months of salary plus annual operating support for the CGAPS Statewide Invasive Species Public/Community Relations Coordinator (shortened to PIO), and nine months of salary plus operating costs for the CGAPS Planner. The goals of the PIO are to manage CGAPS projects and staff; facilitate engagement and inter- and intra-agency communication; coordinate and catalyze collaborative projects towards the goals outlined in the HISC & CGAPS 2025 Joint Strategy; promote key outreach messages; and to educate decision makers, special interest groups, and the public in order to effect a change in perception, actions, rules, or funding for invasive species issues. The CGAPS Planner goals are to plan and carry out projects and tasks in support of the HISC & CGAPS 2025 Joint Strategy,

to assist in coordinating the CGAPS partnership, and strengthen communication networks. As a project of the University of Hawaii's Pacific Cooperative Studies Unit (UH PCSU), CGAPS staff also conducts and coordinates research, works with UH faculty to provide learning opportunities for students, and functions as a connector between the University's knowledge base, resource management agencies, and the community.

Background

The University of Hawai'i is a key resource in the effort to protect Hawaii's natural resources, economy, and residents from the threats posed by invasive species. Under the direction of UH PCSU Director Dr. Shaya Honarvar and in partnership with the CGAPS Chairs, this project will benefit UH by integrating faculty, researchers, and students in Hawaii's biosecurity programs. Close collaboration between biosecurity agencies and the University also provides research and outreach capacity where there are currently gaps, and in turn, greater integration between the University and Hawaii's biosecurity programs will enable faculty to identify job training and research pathways.



CGAPS Planner Kailee Lefebvre (center), HISC Mamalu Poepoe Program Coordinator Leyla Kaufman (right) and Christy Martin (left) met with exhibits staff at Bishop Museum to begin planning the new airport biosecurity display.

The role of CGAPS as a federal, state, and non-government organization partnership is to identify gaps in Hawaii's biosecurity framework and programs, and work to bridge or fill these gaps. A core function of the CGAPS staff is to catalyze, coordinate, and in some cases, implement projects or initiatives that improve our ability to prevent or address invasive species. In addition to coordinating agencies and filling gaps, the CGAPS PIO (Christy Martin) and Planner (Kailee Lefebvre), along with the ROD Statewide Outreach Coordinator (Ambyr Mokiao-Lee) and the CGAPS Legal Fellows (Stephanie Easley and Andrew Porter) serve as informational resources and collaborators for the UH community.

Support is requested for nearly three months of salary and fringe, and for operating funds to support the CGAPS PIO through January 2023. Whenever possible, salary and operating costs for this position are shared between partners, including the Hawai'i Invasive Species Council, Hawai'i Department of Agriculture, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service, and additional funds are being sought. This year, funds from the CHANGE Fund of the Hawai'i Community Foundation were received to partially support the CGAPS Planner and projects. Therefore, we are also requesting approximately nine months of salary and fringe for the CGAPS Planner, and operating costs through January 2023.

CGAPS is able to conduct its work through the help of the Pacific Cooperative Studies Unit, which provides assistance in the areas of human resources, budget/

accounts tracking, purchasing, reimbursements, and the tracking of grants and other paperwork through the various UH offices. A nominal amount of grant funds also supports these functions.

Deliverables

Progress reports are provided to the CGAPS Steering Committee and funders at quarterly meetings, and a final report will be produced and shared at the end of the year. Measures of effectiveness are included for projects where appropriate.

Budget: \$102,000 (\$5,100 UHF)

Project 3: Support for the Hawai'i Green Growth (Strategy 9)

Executive Summary

Funds are requested to provide support for Hawai'i Local2030 Hub leadership and work on 2022 partnership goals, including the implementation of the Hawai'i Interagency Biosecurity Plan and natural resource protection, and Hawai'i's implementation of the United Nation's Sustainable Development Goals through the Aloha + Challenge. Hawai'i Local2030 Hub formalized its nonprofit, 501(c)3, status in 2021 and encompasses the local Hawai'i Green Growth network and activities, along with global efforts through the Local2030 Islands Network.

Background

Funds are requested to help support the local Hawai'i Green Growth (HGG) network through its multi-sectoral approach to catalyze action across government, private sector, and civil society to promote a culture of sustainability through the Aloha+ Challenge 2030 – Hawaii's local framework to achieve the United Nations Sustainable Development Goals. The HGG network's working groups and activities include the Policy & Legislation Working Group and the Measures & Data Working Group, which inspire collaboration, transparency, and tracking the effects of tangible action toward progress on our collective sustainability goals, including tracking progress on implementation of the Interagency Biosecurity Plan. Other working groups and forums include HGG's Hawai'i Sustainability Business Forum, the Ala Wai Watershed Collaboration, and high-level engagement with the United Nations on the Sustainable Development Goals. Through participation in HGG network meetings and activities, CGAPS taps into a broader network for shared messaging and support for addressing invasive species issues. Although invasive species can impact multiple sectors and many agencies, organizations and businesses can take steps to prevent or address invasive species issues, it is rarely seen in this way. HGG's events and meetings provide a forum and framework for this cross-sectoral awareness-raising.

This year, HGG strengthened political sustainability leadership with unprecedented joint commitment by all branches of Hawai'i government for the Aloha+

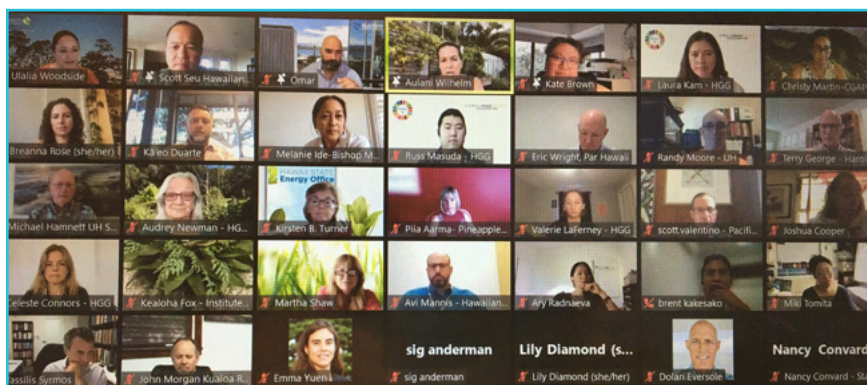
Challenge. In the first quarter of 2021, our Sustainability Business Forum working group hosted a Green Growth Talk Story session with Mayor Blangiardi, and featured members of the Office of Climate Change, Sustainability, and Resilience and the Office of Economic Revitalization. The mayor and his team expressed their openness to exploring public-private partnerships to mitigate climate risks and support a green growth recovery. Throughout the 2021 legislative season, HGG coordinated diverse sustainability policies via the Policy & Legislation Working Group, partnering with Hawai'i Pacific University faculty and students to track network partner bills, produce legislative status reports, and develop a tracking database and communications platform to facilitate collaborative actions based on shared sustainability priorities across the network including invasive species management.

During 2021, the Ala Wai Watershed Collaboration renewed convenings with regular quarterly meetings and is currently finalizing a technical feasibility assessment of watershed projects prioritized by the collaboration. The assessment tool reflects deep collaboration by diverse partners including the 'Aina Aloha Economic Futures and Stantec, an international engineering services company, with the end goal of mainstreaming cultural values and processes into methodology for assessing the long-term value of specific projects. Prioritized projects include extensive albizia and miconia control throughout the watershed. We anticipate that the finalized feasibility study will provide a solid foundation for leveraging additional financial support for project implementation that is critical to invasive species management within this watershed.

Partners recently came together on October 26, 2021, for HGG's annual meeting and partnership event. Over 100 partners convened virtually to build off the 2030 Sail Plan, a primary outcome of the prior year's annual meeting. The 2030 Sail Plan identifies seven priority areas for a green growth recovery from COVID-19 and throughout the coming decade: Climate Action, Energy and Resilience; Local Agriculture and Food Systems; Nature-Based Solutions; Circular Economy; Sustainable and Regenerative Tourism; Community Well-Being and Equity; Green Workforce, Education and Recovery.

In the recent event, specific actions were further identified and developed for collective implementation over the coming year.

Financial support for Hawai'i Local2030 Hub is shared among multiple agencies and entities. Funding is requested to provide partial support to Hawai'i Local2030 Hub for core operations and projects.



HGG convenes business, community, and agency leaders and decision makers to advance Hawaii's sustainability goals through the Aloha + Challenge. Implementing the Hawai'i Interagency Biosecurity Plan is one of the Natural Resource protection targets and also supports the local food production target.

Deliverables

With continued support, Hawai'i Local2030 Hub will be able to engage leaders, network partners, and community in meeting the Aloha+ Challenge. Hawai'i Local2030 Hub will provide updates and a year-end report to be incorporated into the CGAPS annual report.

Budget: \$25,000 (Until a new office is set up at East West Center, checks may be written out to "Hawai'i Local2030 Hub" and mailed to OEDB. Hawai'i Local2030 Hub will administer funds in house.)

Project 4: Pest Pathway Analysis (Strategy 1)

Executive Summary

This project would support a contract with a pest risk specialist to conduct research into the possible commodity pathways that may have resulted in the arrival in Hawai'i of several new pest species from the Asia Pacific region. This is an unusual source region with no clear commodity importation pathway, and a specialist is needed to look into the available data and conduct research to identify possible pathways.

Background

Several recent invasions of Austral-Asian arthropods have raised concern because they 1) have no clear invasion pathway, 2) appear to come from a region that has not previously been a high-risk source of new pest species, and 3) involve species with no history of being a pest anywhere else in the world. Internal analysis by the Hawai'i Department of Agriculture (HDOA) Plant Pest Control Branch has identified a number of new pests

that meet these criteria from Austral-Asia, with the best example being the Queensland longhorned beetle (*Acalolepta aesthetica*). This beetle was first detected on Hawai'i island as early as 2009, but has since become a serious pest of citrus, cacao, breadfruit, kukui, and other important trees.

The beetle is native to Australia and has no record of being a significant pest in Australia or elsewhere in the world. As one of several such "novel introductions" to Hawai'i, this is likely more than coincidental, and has prompted preliminary research to better understand the commodity pathway by



The arrival of several new pests like this Queensland longhorned beetle indicates the likelihood that there is an unknown commodity or conveyance that is responsible. Research called a "pathway analysis" is needed to mitigate the risk of additional introductions from this region. Big Island Invasive Species Committee photo.

which pests from this region could be moving to Hawai'i.

HDOA has consulted with other agencies and reviewed known trade commodities and pathways, but has not been able to discern a pathway for the introduction of this and the other species from the same region. This project would support a contract with a retired U.S. Department of Agriculture (USDA) entomologist with past work experience in pathway risk analysis to, 1) identify data resources, 2) conduct source and receiving region research, and 3) produce a preliminary report on likely pathways that HDOA can petition USDA to address to close gaps in biosecurity systems, as USDA regulates foreign plant trade. Further, HDOA anticipates using the resulting product to support a request for federal funds for additional pathway analyses and work related to mitigating future risk.

Deliverables

CGAPS will provide project updates upon request and an annual report within thirty days of the end of each calendar year. The contractor will provide to CGAPS a detailed budget for proposed expenditures, including any proposed collaborators/ subcontractors, and the deliverables and timeline for the project, with short reports at billing points and upon completion. The Scope of Work for the contract will include this information and will be filed with the Hawai'i Conservation Alliance Foundation.

Budget: \$48,000 (\$4,800 HCAF)

Rapid 'Ōhi'a Death (ROD) Supplemental Request: ROD Prevention Outreach & Diagnostics *(Strategies 2 and 7)*

Executive Summary

The two pathogens that cause Rapid 'Ōhi'a Death (ROD) can be spread long distance when people move items contaminated with the disease spores. Supplemental funding would support approximately six months of salary and annual operating costs for the ROD Statewide Outreach Coordinator to continue coordinating and implementing ROD prevention outreach, and up to five months' salary and annual operating costs for the UH CTAHR laboratory technician in the USDA Agricultural Research Service (USDA ARS) lab to conduct diagnostics on the many samples submitted for the detection of the ROD pathogens. These two key positions have been funded through state, federal, county, and NGO funds, and this request would ensure funding through January 31, 2023.

Background

The multi-agency & NGO response to ROD is continuing, and the University of Hawai'i plays a major role in the research, response, community outreach, and strategic planning related to ROD. This project would provide partial support for outreach and

diagnostic work that are two critical control points for the spread of ROD, and support the entire response framework of the ROD Strategic Response.

This project would provide six months of salary and annual operating costs for the ROD Statewide Outreach Coordinator, who focuses on engaging partners and potential partners to increase outreach capacity and reach across the state, and on conducting direct outreach to key audiences.

This project would also provide partial support for the diagnostic lab technician housed in the USDA ARS lab. This lab is responsible for testing all 'ōhi'a wood samples to determine which of the two pathogens are present (or if they are absent), including the testing of 'ōhi'a logs for shipment in support of the HDOA quarantine rule, and for the testing of samples from suspected ROD trees sighted during statewide aerial surveys. The diagnostic lab technician also tests for the presence of the pathogens in environmental samples such as soil, ambrosia beetles, and boring sawdust from the beetles, in support of research on the environmental pathways that spread ROD.

In the past, these positions have been funded through multiple federal, state, and private foundation grants to UH, including initial funding from the Foundation, with Drs. Michael Melzer and J.B. Friday of the UH Mānoa College of Tropical Agriculture and Human Resources (UH CTAHR) as the Principal Investigators. This year, internal UH CTAHR funds will partially support the lab technician, and funding provided by the State Legislature through the Department of Land and Natural Resources will partially support the ROD Statewide Outreach Coordinator.

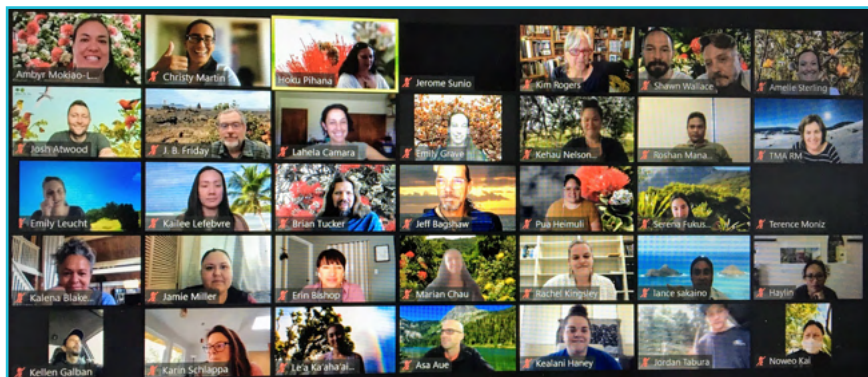
Funds would also be used to support a train-the-trainer outreach workshop, hopefully in-person and with a ROD site visit in 2022, in compliance with all federal, state, University, RCUH, and other Covid-19 requirements and protocols. These workshops for outreach specialists and educators have been extremely popular, and participants rate the content as valuable or very valuable in helping them understand and incorporate the information into their outreach programs.

Funds would also support the materials, supplies, construction, and installation of a boot brush station and decontamination signage as part of the planned airport biosecurity display for the new Hawaiian Airlines terminal in Honolulu.

Deliverables

Updates and a final report on the work and results for these two key positions will be provided, including links to recorded workshops, presentations, and other materials.

Budget: \$100,000
(\$5,000 UHF)



In 2021 the ROD Outreach Workshop engaged dozens in a series of virtual “train-the-trainer” workshops held over the course of a month and a half. The workshops focused on new findings and sharing ways to communicate about the importance of 'ōhi'a and how to protect it.

2022 Budget

Item	Projects	Term	Admin	Direct	Overhead	Total
1	Legal Fellowship Support. Salary, fringe (through 1/31/23) & operating support for two legal fellows + 2 interns	12/31/2023	UHF	\$ 166,250	\$ 8,750	\$ 175,000
2	CGAPS Core Support. Partial salary, fringe (through 1/31/23) & operating support for PIO and Planner, projects, PCSU project support	12/31/2023	UHF	\$ 96,900	\$ 5,100	\$ 102,000
3	Support for Hawai'i Green Growth. Annual support for multi-sector approach to sustainability, incl. invasive species priorities	12/31/2022	Hawai'i Local2030 Hub	\$ 23,364	\$ 1,636	\$ 25,000
4	Pathway analysis project based on pest interception data between Hawai'i and Australia-Preliminary work contracting retired PPQ risk specialist	12/31/2022	HCAF	\$ 43,200	\$ 4,800	\$ 48,000
Total						\$ 350,000
Item	ROD Supplemental Projects	Term	Admin	Subtotal	Overhead	Total
1	Outreach & Diagnostics	12/31/2023	UHF	\$ 95,000	\$ 5,000	\$ 100,000
Total						\$ 100,000