



2017-2027 Hawai'i Interagency Biosecurity Plan

COUNCIL UPDATE ON ACCOMPLISHMENTS &
CHALLENGES

OCTOBER 20, 2022; 9:00 AM



The Need for the HIBP



Vulnerability to Biological Invasions



Hawaii's susceptibility to invasions is illustrated by the fact that nearly as many nonnative terrestrial arthropod species are established in Hawaii as in the other 49 U.S. states combined.

Endemic/Native Plant Species Differ from the Rest of the U.S.



Ninety percent of Hawaii's native vascular plants are endemic. More than 100 plant taxa have already been lost and over 350 plant species are federally listed as endangered.

Hawai'i Imports 80% of Goods and 90% of Food



A USDA study inferred that the cause of high invasions could be due to the "various habitats are more readily accessible from the principal port of entry" and the favorable climate.



Climate Change

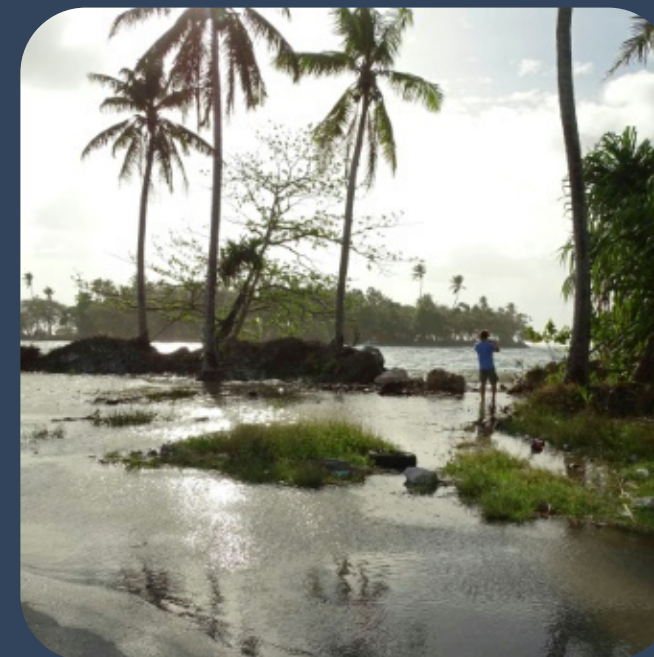


Photo credit: Top - HAVO Weed Crew (NPS), 2021 Hawaii Island Wildfire (Hawaii Tribune), Hurricane Iselle damage (Hawaii Tribune), Endangered Kiwikiu (DLNR), Cargo at seaports Canva stock image, sea level rise stock image Canva, Invasive algae covered reef (DLNR)

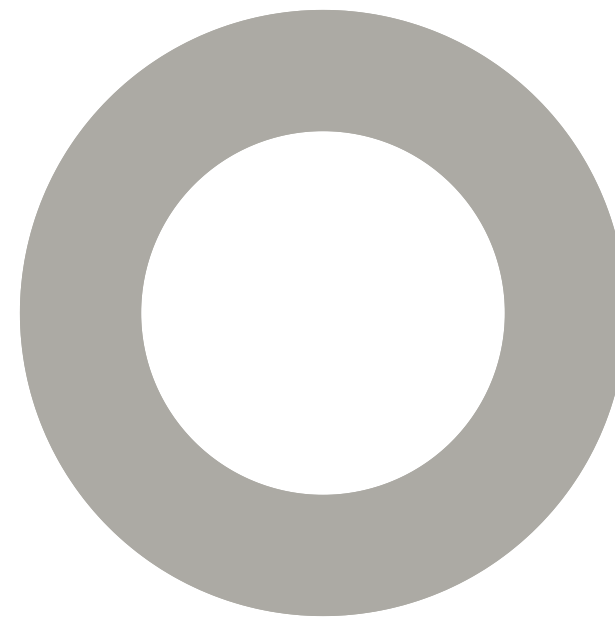
Where We Were - 2008 Financial Crisis

HDOA PQ & PPC

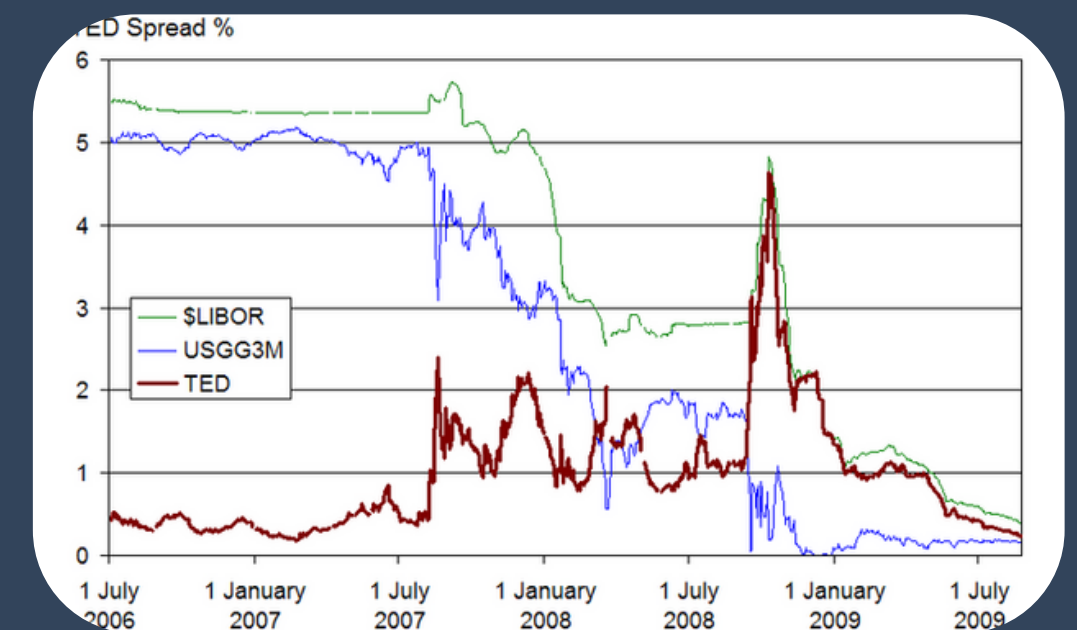


HDOA had a 147 positions in PQ and PPC in 2008. After the financial crisis, 29 positions were cut from both branches, equally a 20% reduction in capacity.

DOH Vector Control



Cuts to the Vector Control Branch in 2009 resulted in decreased capacity for mosquito surveillance increasing Hawai'i's vulnerability to the introduction and spread of mosquito-borne illnesses



2017 Baseline Known Gaps



FUNDING	STAFF	FACILITIES	POLICY
Soft funds	Fewer staff at multiple agencies compared to 2008	Transitional inspection facilities	Ballast water and biofouling
Shrinking federal grants	Communication specialists	New biocontrol facilities	Enter into cooperative agreements with other State's DOA
1.4% of state budget to DLNR & HDOA			Non-agricultural commodity inspection

2016 PLANNING PROCESS

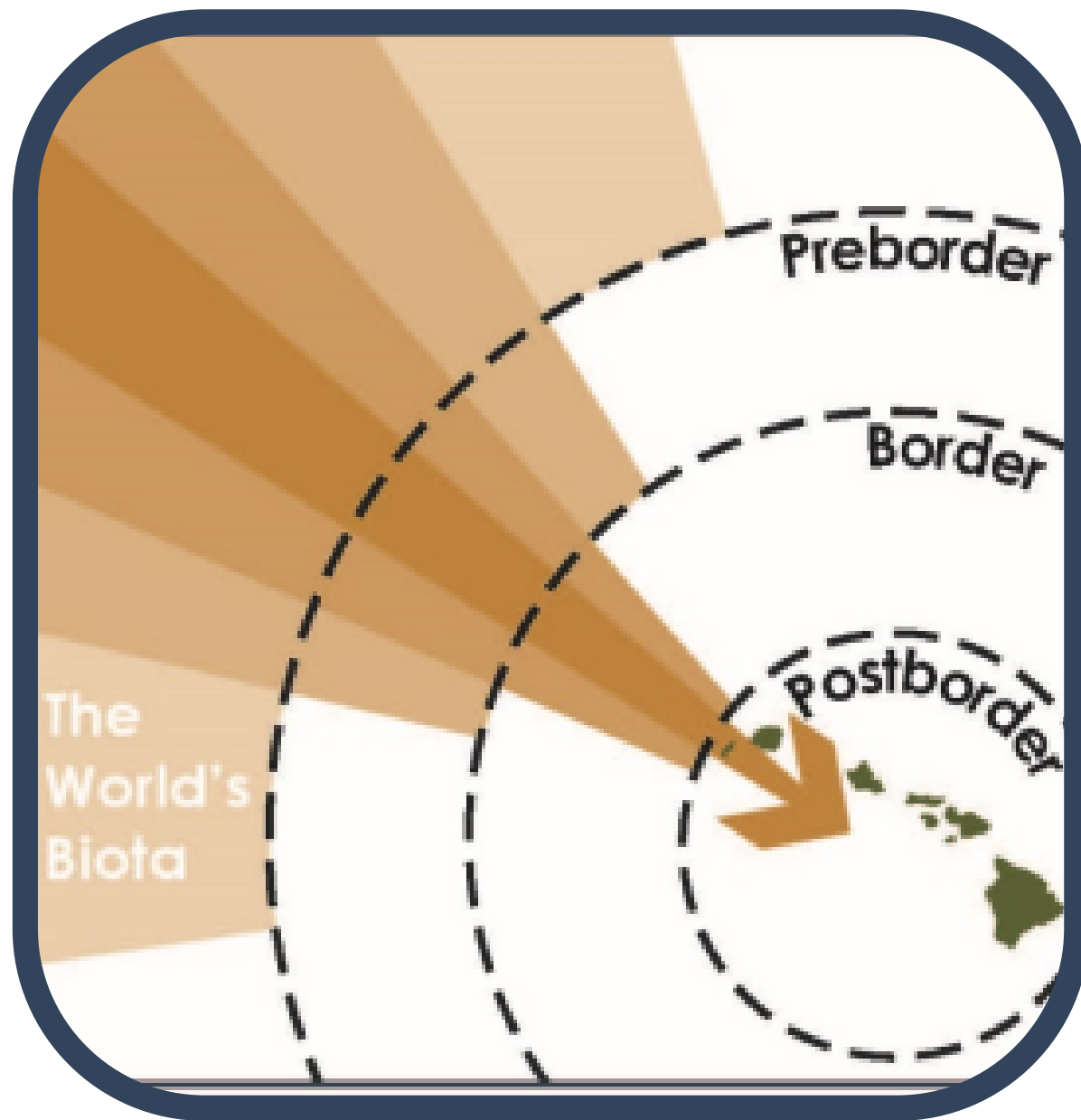
- **MARCH** - Identify biosecurity gaps and best practices
- **APRIL** - Agency guidance
- **MAY** - Private industry input
- **AUGUST** - Agency review
- **OCTOBER** - Public review
- **DECEMBER** - Final Plan



JANUARY 2017 HDOA LAUNCHES HAWAII INTERAGENCY BIOSECURITY PLAN

- Comprehensive
- Collaborative and multidisciplinary approach
- 147 action items to address gaps and weaknesses in our biosecurity system
- A 10-year path forward

HIBP - Program Areas



PreBorder

Prevent the transport of invasive species to Hawaii.

Ballast Water & Vessel Biofouling Program, Entering into cooperative agreements with other states

Border

Enhance the detection and control of pests and diseases at ports of entry.

Increase HDOA PQ Inspectors, transitional facilities for inspections

PostBorder

Protect Hawaii from invasive species already present within the State.

Regional biocontrol facilities, stable funding for critical programs

Public Awareness and Support

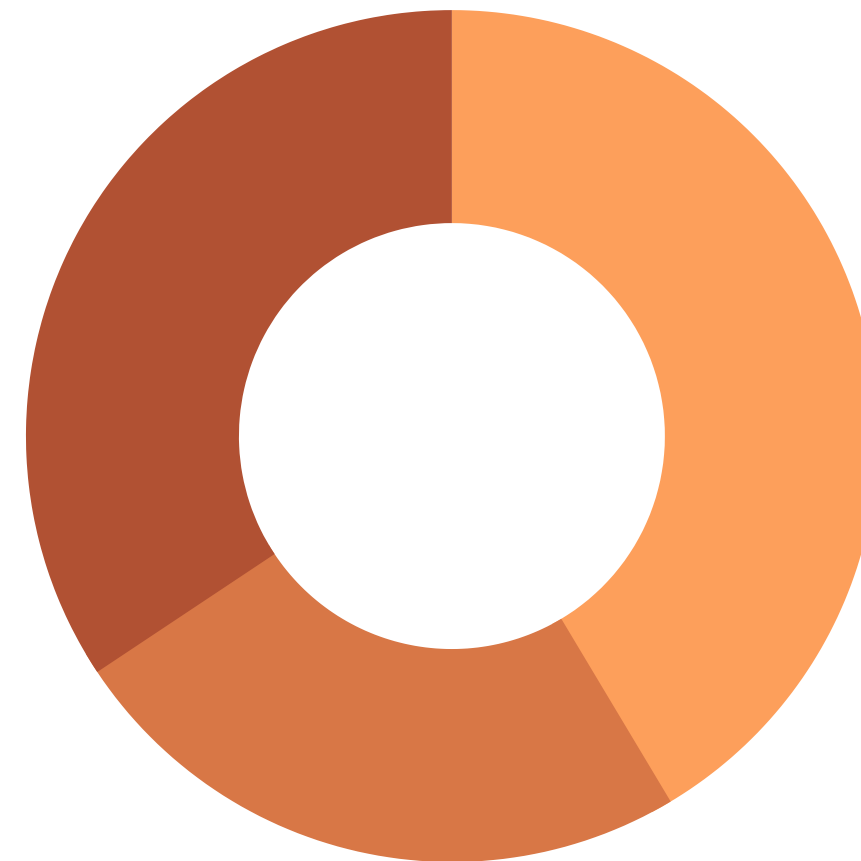
Enhance public awareness and support for Hawaii Biosecurity.

Centralized public reporting, communications on biosecurity messaging

How are we doing?

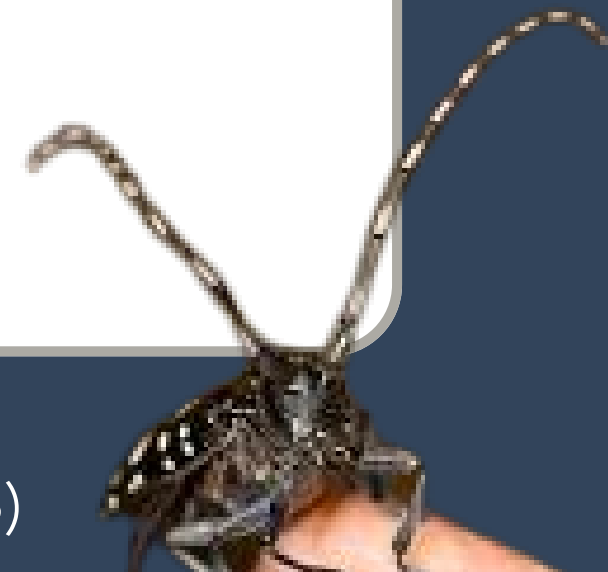
Implementation for 65% of actions has started as of January 2022

Actions not started or needs re-evaluation
34.3%



Actions completed or Ongoing
41.4%

Actions in progress
24.2%



Measuring Progress

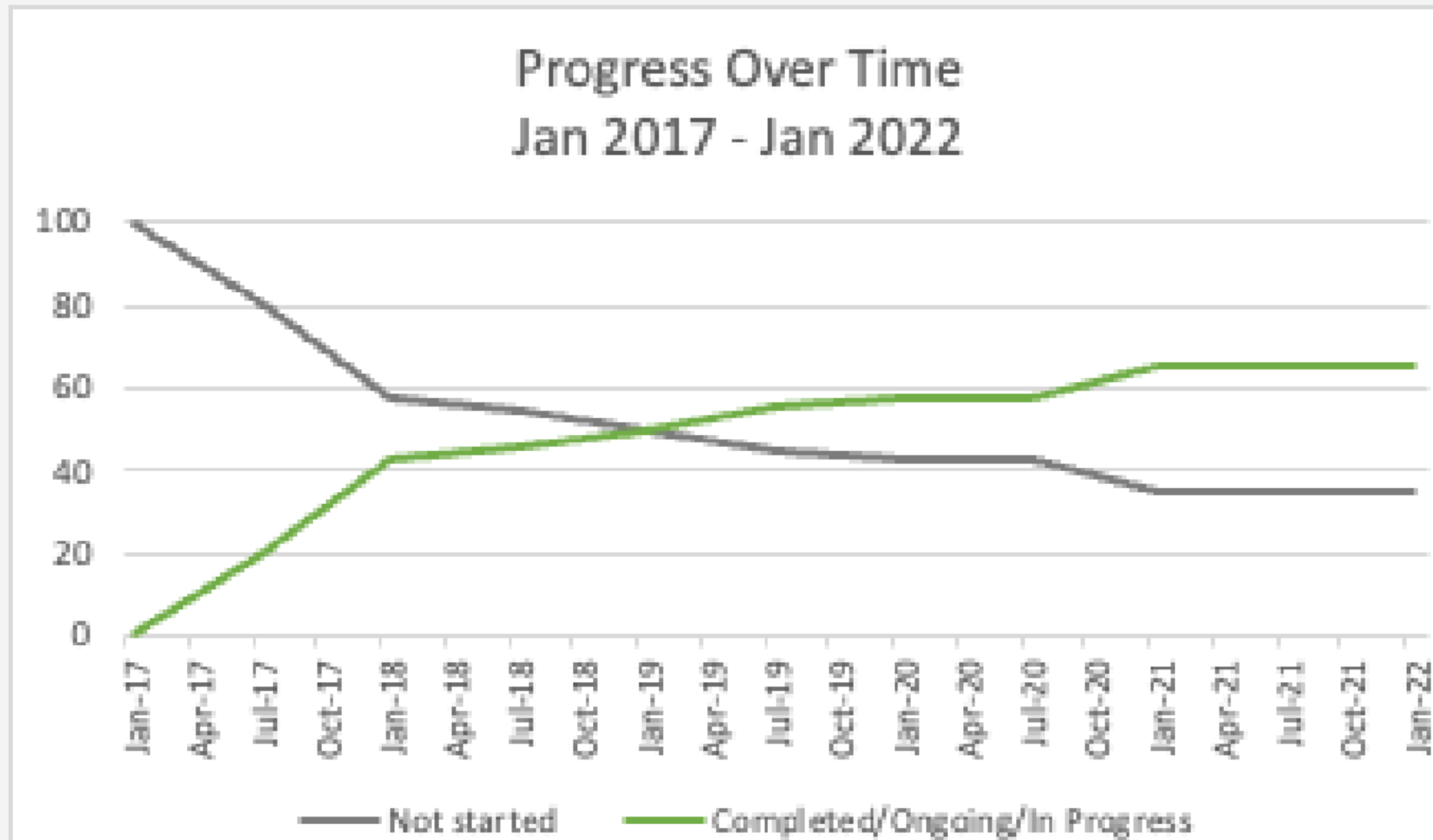


Photo: Coconut Rhinoceros Beetle, only present on O'ahu. Severely damages and kills coconut palms and other palm species. (HDOA).



65%

of actions completed,
approved, ongoing, or
in progress

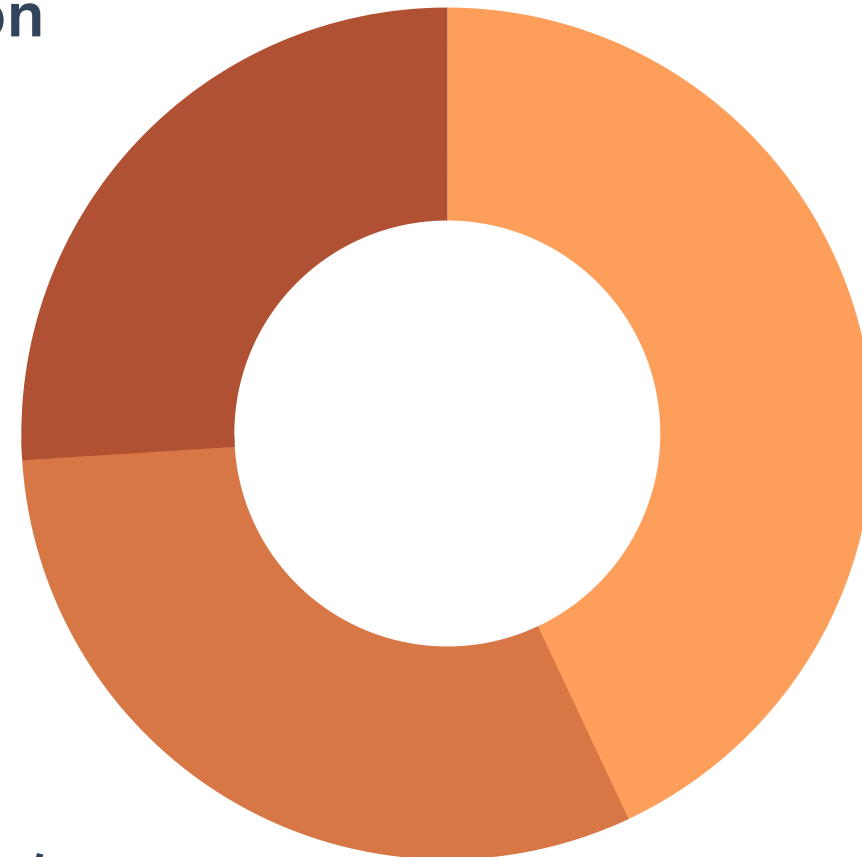
26%

of actions are not
started, or are no
longer being pursued
or need re-evaluation

PreBorder Biosecurity

Implementation for 74% of preborder actions have started as of January 2022

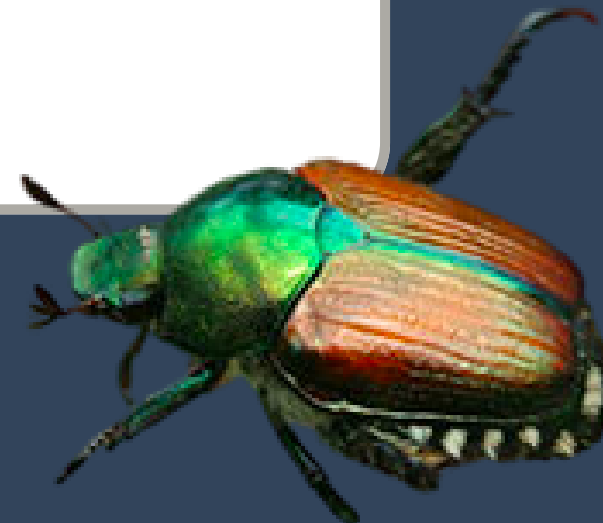
Actions not started or needs re-evaluation
26%



Actions completed or Ongoing
43%

Actions in progress
31%

Japanese Beetle is not yet present in Hawaii but present on the US mainland where it is major pest to urban forests (Clemson University)



PreBorder Accomplishments

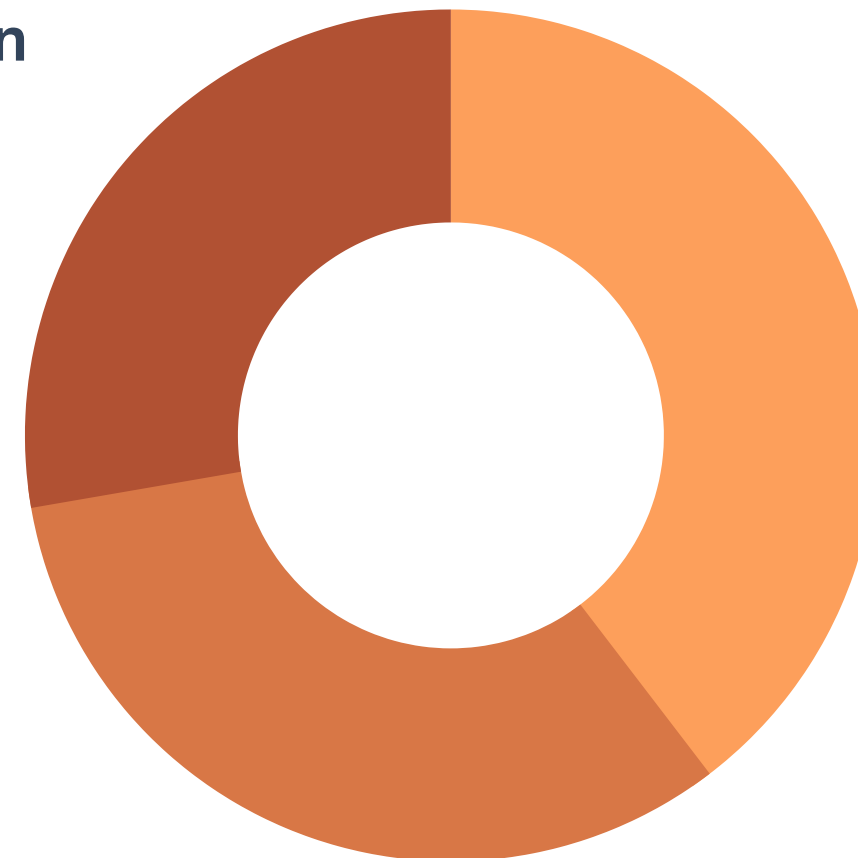
- PREPRO1.7, PRETIFS2.5- CONDUCT RISK ASSESSMENTS FOR HULL FOULING, BALLAST WATER, AQUACULTURE, AND AQUARIUM ISSUES (DAR). BIOLOGIST POSITION FOR BB/BIOFOULING
- PREPOL2.2 - ENTER INTO COOPERATIVE AGREEMENTS WITH OTHER STATE DEPARTMENTS OF AGRICULTURE (HDOA)
- PRETIFS2.1 - POLICY ANALYSTS TO CONDUCT INTERNATIONAL, FEDERAL, AND STATE POLICY ANALYSIS AND WRITE NECESSARY RULES AND REGULATIONS LISTED IN THIS PLAN (UH-PCSU-CGAPS)
- PRETIFS2.2 - HIRE SPECIALITY POSITIONS AT HDOA; ENTOMOLOGISTS & PATHOLOGISTS



Border Biosecurity

Implementation for 73% of border actions
have started as of January 2022

Actions not started or needs re-evaluation
27.7%



Actions completed or Ongoing
39.6%

Actions in progress
32.7%



Africanized Honey Bees are not yet present in Hawaii but
present on the US mainland (Georgia DOA)

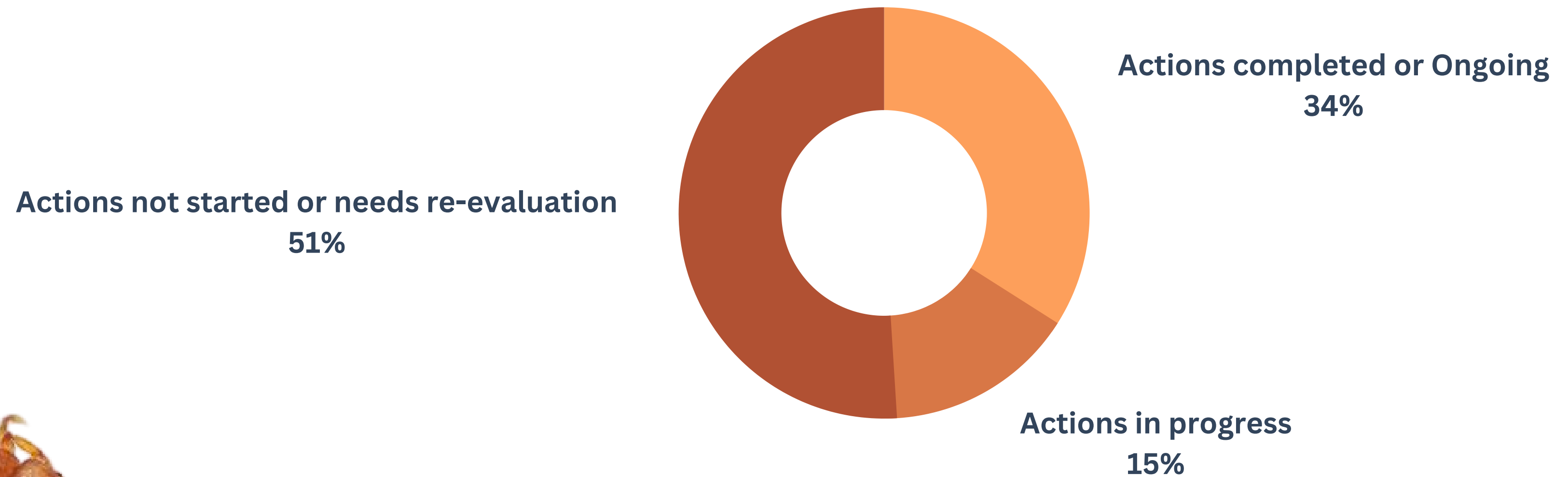
Border Accomplishments

- BORTIFS1.5 - DOH VECTOR CONTROL BRANCH STAFFING AND FUNDING RESTORED IN 2017
- BORTIFS2.1 - HDOA AI REVIEWED AND DISCUSS DISEASE RESPONSE PLANS FOR AVIAN INFLUENZA. THE DIVISION IS VIGILANT ABOUT OTHER EMERGING DISEASES LIKE AFRICAN SWINE FEVER
- BORTIFS3.2,3.3 - THE MULTI-AGENCY PORTS OF ENTRY/EXIT PEST MONITORING PROGRAM SECURED ADDITIONAL FUNDING IN FY23 TO EXPAND EFFORTS TO SEAPORTS AND ADD ADDITIONAL TARGETS
- BORPRO1.4 - HOLD QUARTERLY COORDINATING MEETINGS/ WORKSHOPS WITH APHIS, CBP, DHS, USFWS, AND DOH TO FACILITATE COMMUNICATION RELATIVE TO BORDER PROCESSES



PostBorder Biosecurity

Implementation for 49% of postborder actions have started as of January 2022



Invasive stinging ants like little fire ant are present in Hawaii, but still considered manageable on some islands (MISC).

PostBorder Accomplishments

- POSTIFS2.3,2.4 - FUND RESEARCH AND DEVELOPMENT OF NEW TOOLS AND TECHNIQUES TO CONTROL INVASIVE SPECIES
- POSPRO3.3 - INCREASED FUNDING FOR WATERSHED PARTNERSHIPS AND HAWAII INVASIVE SPECIES COUNCIL PROJECT
- POSTIFS1.12,1.13,1.14 - LEGISLATURE APPROVED 10 UH EXTENSION AGENT POSITIONS
- POSTIFS1.5 - HIRE SPECIALIST POSITION AT HDOA PPC
- POSPRO4.3 - IMPLEMENT COMPREHENSIVE APPROACHES TO REMOVE AND CONTROL THE SPREAD OF ALGAL AIS

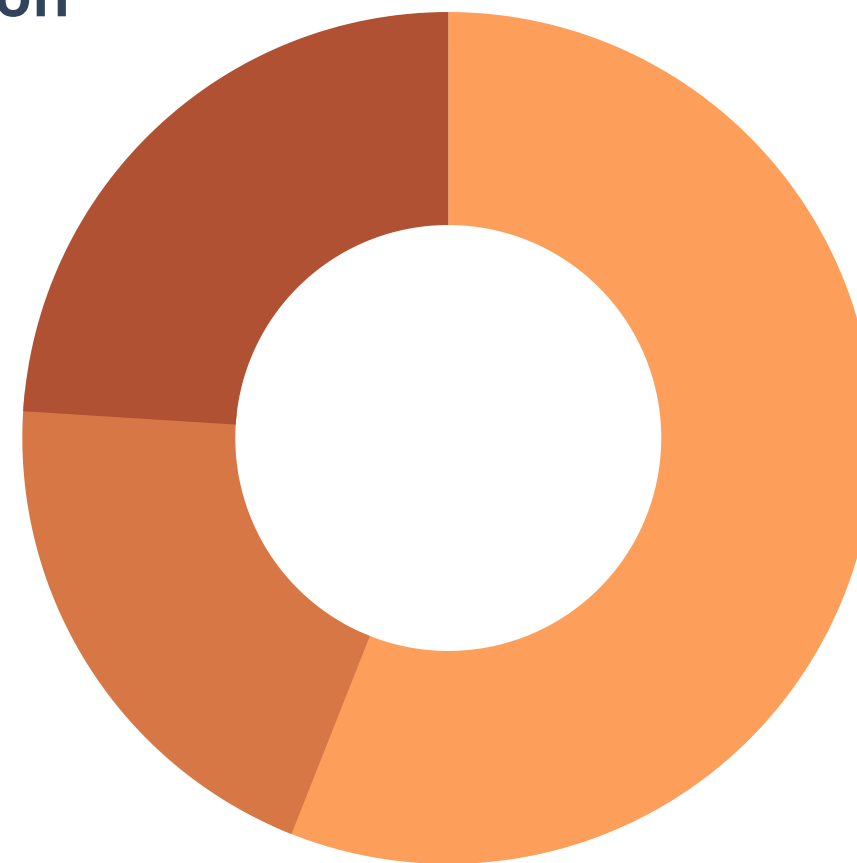


Public Awareness & Support

Implementation for 76% of PWS actions
have started as of January 2022

Actions not started or needs re-evaluation
24%

Actions in progress
20%



Actions completed or Ongoing
56%



Coqui frogs are a well known pest to Hawaii residents
because of its piercing call (HDOA).

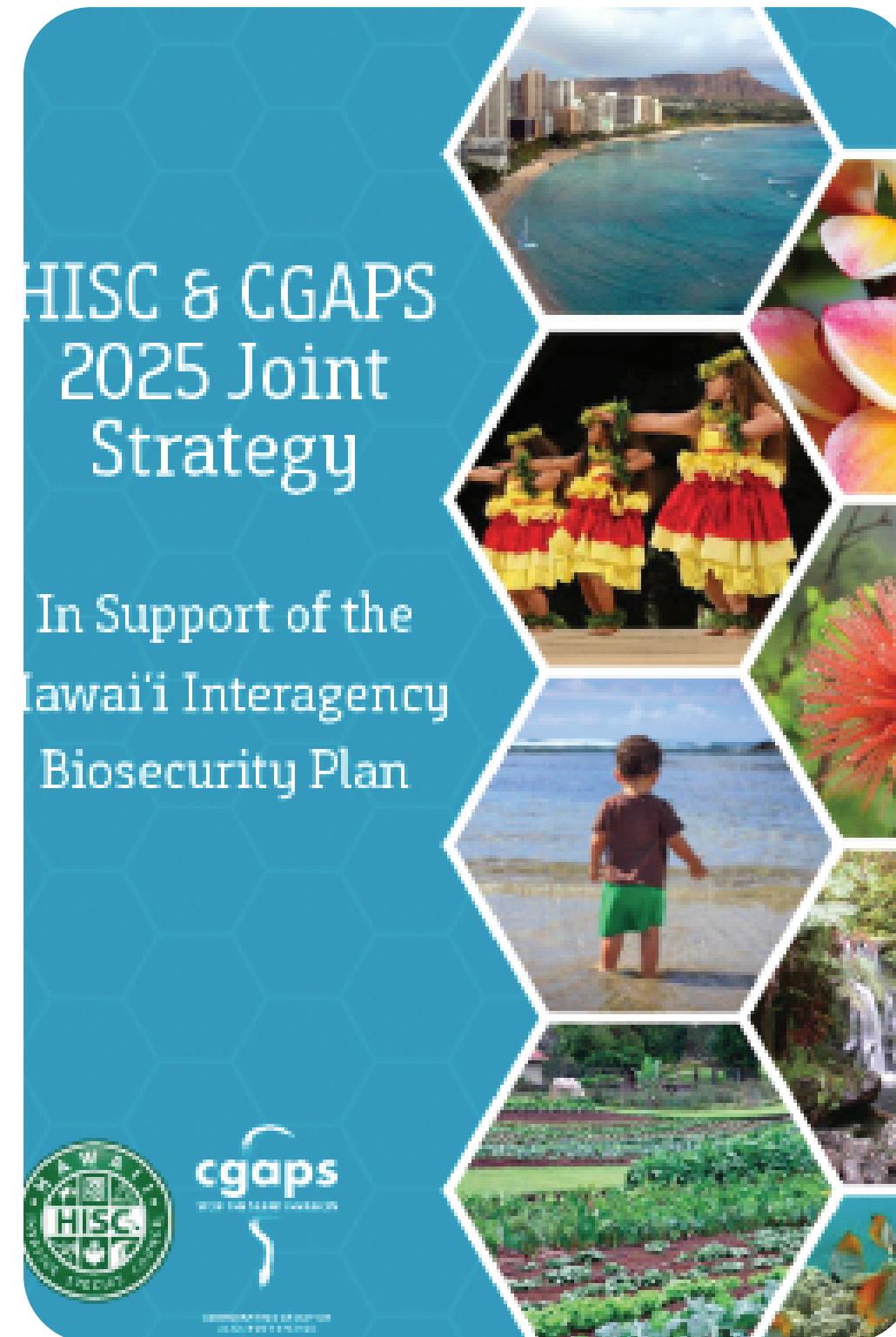
Public Awareness & Support Accomplishments

- PWSPRO2.2 - HIGHLIGHT PROGRAM SUCCESSES TO LAWMAKERS, OFFICIALS, COMMISSIONS, ETC...
- PWSPRO1.3 - COORDINATE WITH PARTNERS IN THE INDUSTRY, NONPROFITS, AND COMMUNITY GROUPS TO USE THEIR EXISTING MEDIA AVENUES
- PWSTIFS1.4 - CREATE VISUALLY APPEALING SIGNS AND DISPLAYS REGARDING BIOSECURITY AT AIRPORTS.
- PWSTIF1.2 - HIRE ECONOMIST TO ANALYZE THE COSTS OF INACTION ON HIGH-PROFILE BIOSECURITY THREATS
- PWSPRO3.5 - IMPLEMENT PEST NOTIFICATION AND REPORTING SYSTEM



Where We Are Headed...

- Prevention & Early Detection/Rapid Response for New Terrestrial Invasions
- Inter/Intra-Island Movement of Terrestrial Invasive Species
- Aquatic Biosecurity
- Large-Scale Control of High-Impact Invasive Species
- Pacific Regional Biocontrol Center
- Increased & Diversified Funding for Invasive Species Priorities
- Engaged & Supportive Community



- BUILDING BIOCONTROL CAPACITY IN HAWAII AND THE PACIFIC
- ADDRESSING BALLAST WATER AND VESSEL BIOFOULING IN HAWAII WATERS
- INCREASED FUNDING FOR INVASIVE SPECIES WORK
- CONTINUED INVESTMENT IN BIOSECURITY PROGRAM AND PORTS OF ENTRY/EXIT PEST MONITORING

BUILDING BIOCONTROL CAPACITY IN HAWAI'I AND THE PACIFIC



Miconia butterfly (USDA FS)



Parasitic wasp for Eyrthrina Gall Wasp (HDOA)

PACIFIC REGIONAL BIOCONTROL FACILITIES

New State and Federal Biocontrol Facilities are needed. Current facilities are:

- Outdated
- Hazardous location
- Inadequate space
- Do not meet high containment standards to work on smaller organisms

BUILDING BIOCONTROL PROGRAM

Funding for research and testing

Additional biocontrol researchers and staff

Grooming the next generation of biocontrol researchers

ADDRESSING BALLAST WATER AND VESSEL BIOFOULING IN HAWAII



DAR Biologist (DLNR)



Hull Fouling (Interlux)

BALLAST WATER-HULL FOULING

- Stony Coral Tissue Loss Disease (SCTLD) Prevention Measures
- Legislation to expand DLNR's authority under HRS 187A-32 to include regulation of all incidental discharges related to aquatic nuisance species covered under the federal Vessel Incidental Discharge Act of 2018 (VIDA).
- Legislation to increase the capacity of DAR's ballast water and hull fouling team in order to effectively co-enforce VIDA regulations with the USCG.
- Legislation to allow DLNR's vessel incidental discharge regulations related to aquatic nuisance species to automatically update and mirror federal regulations passed under VIDA.

INCREASED FUNDING FOR INVASIVE SPECIES WORK

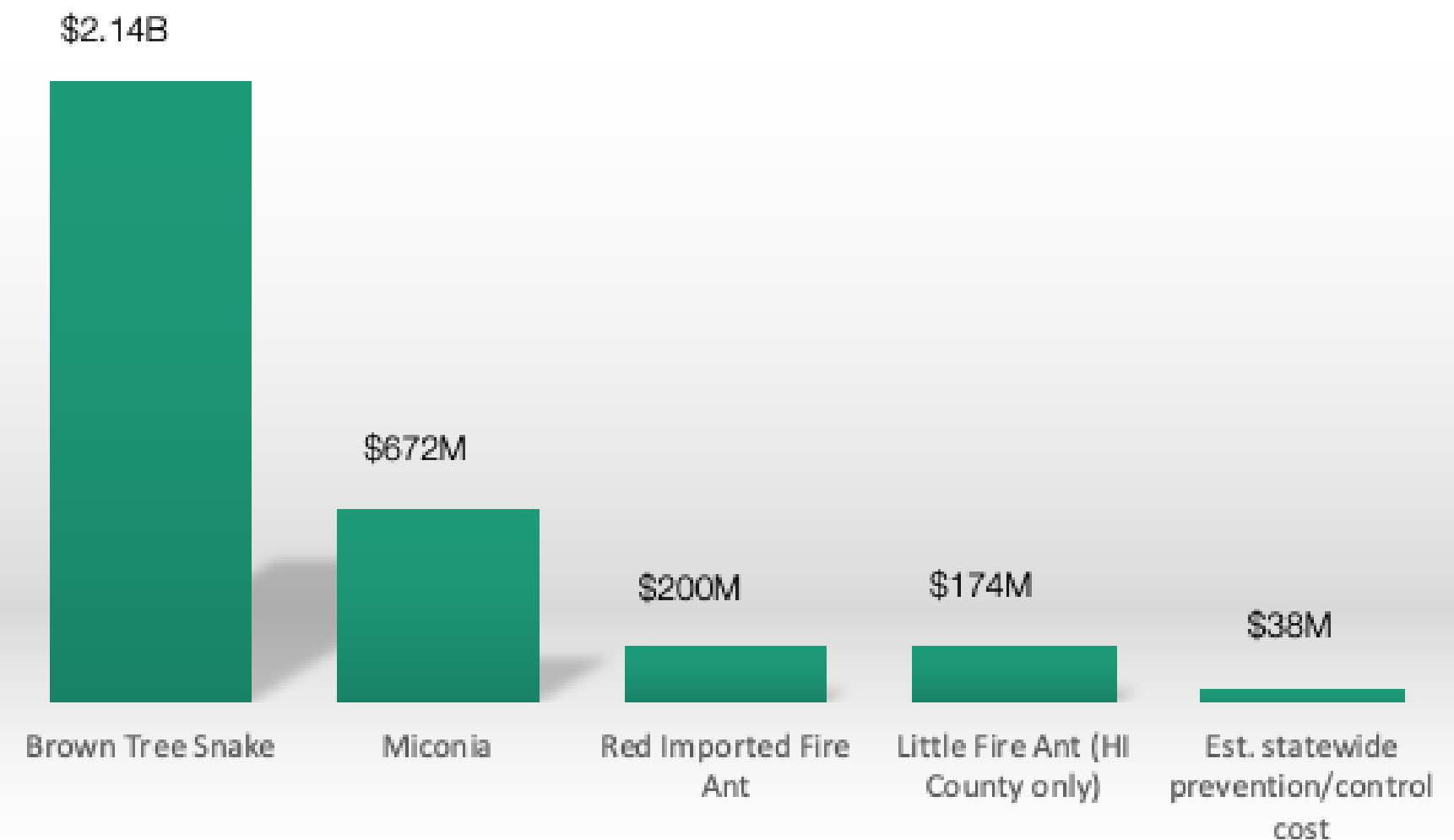


ISC Crew with miconia (BIISC)



Little Fire Ant (HDOA)

COSTS IN CONTEXT



CONTINUED INVESTMENT IN PEST SURVEILLANCE AT PORTS OF ENTRY/EXIT



CRB Traps at Kahului airport(DLNR)



Incoming cargo to Hawaii Harbor (DLNR)

HDOA's Biosecurity Program

- PREVENTION - inspections at ports of entry and development of origin certification program for high-risk commodities
- DIAGNOSTICS - identification of invasive insects, plant pathogens, and weeds
- DETECTION - surveillance for the existence and location of an invasive species that have invaded or been introduced
- RAPID RESPONSE - quick control measures to eliminate individual pest incursions as well as incipient invasive species

Multi-Agency Pest Monitoring

- Stable longterm funding to continue monitoring at airports and seaports
- Research and development of new, more effective lures and traps
- Addition of other high target pests

Mahalo to HIBP POCs



HDOA PI: HELMUTH ROGG

HDOA PPC: BECKY AZAMA, DARCY OISHI

HDOA PQ: JONATHAN HO, KENT DUMALO

HDOA AI: RAQUEL WONG

DLNR DAR: KIM FULLER, LIZZY MONAGHAN

UH: MIKE MELZER

DOH: GRACE SIMMONS

PAST POCS: JULES KUO, RANDY BARTLETT,
NATALIE DUNN, JOSH ATWOOD

<https://dlnr.hawaii.gov/hisc/plans/hibp/>

