



Supporting the Invasive Species Committees



What are the ISCs?



The Invasive Species Committees

- **Each ISC has an advisory committee** made up of representatives from multiple agencies and NGOs:

Federal:

- US Forest Service IPIF
- US Fish & Wildlife
- Army Natural Resources Program
- National Park Service
- USDA-ARS

State:

- HISC Staff
- UH CTAHR & Faculty
- DLNR - DOFAW, NARS, NEPM
- HDOA
- CRB Response Program
- Hawai'i Watershed Partnerships

County/Private/NGO:

- Honolulu C&C Board of Water Supply
- The Nature Conservancy
- Hawaiian Electric
- National Tropical Botanical Gardens
- Malama o Puna
- SWCA Consultants
- County of HI Res & Dev

- The ISCs are a project of the University of Hawai'i, Pacific Cooperative Studies Unit (PCSU/RCUH)

- The ISCs are a member of Hawai'i Conservation Alliance and participants of the Coordinating Group on Alien Pest Species (CGAPS)



Albizia on Hawai'i Island

- A serious threat to public safety and infrastructure



Albizia on Hawai'i Island

Tropical Storm Iselle
Puna District (2014)



PRIMEFOOTAGE



Stakeholder collaboration



**Hawaiian
Electric**



COUNTY OF
HAWAII

DEPARTMENT OF
PUBLIC WORKS



**Black Sands
Community
Association**




Plant Detection & Evaluation

- **Early detection surveys**
 - iNaturalist
 - Island-wide roadside surveys
 - Community reports
- **Assessment & prioritization**
 - Hawai'i Pacific Weed Risk Assessment (HPWRA)
 - Plant Pono
- **Control**
 - Surveys
 - Buffer zones
- **Monitor**
 - Ensure elimination/site eradication



Early Detection Survey Results



 KISC KAUAI INVASIVE SPECIES COMMITTEE	Kauai Status	KISC Status	HPWRA	Invasive Impacts Score	Feasibility Score	Combined Score
<i>Buddleja madagascariensis</i> (smoke bush)	NATURALIZED	EARLY DETECTION	HIGH RISK (21)	8	4	12
Initial Prioritization Report completed: December 2017 Report updated as of: N/A Current Recommendation for KISC: pending scoring rank and committee review. Knowledge Gaps and Contingencies: 1) Delimiting surveys surrounding known locations are required to gain knowledge of the extent of populations. 2) An understanding of partnership roles may increase the likelihood/rate of success.						

Background

Buddleja madagascariensis, or “smoke bush” (Buddlejaceae), is a large, woody vining shrub that is cultivated in warm temperate areas worldwide as an ornamental (Staples and Herbst 2005). *B. madagascariensis* is not currently considered a “Target” (i.e. controlled for island-wide eradication) by KISC, but the staff has assisted Kokee Resource Conservation Program (KRCP) with the control of this plant in Kokee. *B. madagascariensis* is included in the 2016 Kauai Pono Endorsement program to limit its dispersal through the nursery trade. The purpose of this prioritization assessment report is to consider the potential invasive impacts of *B. madagascariensis* and evaluate whether KISC should attempt whole-island eradication in cooperation with partnering agencies (i.e. accept as “Partnership” species status). This will be informed by scoring and comparing *B. madagascariensis* to other “Early Detection” species known to Kauai (See Table 5 in KISC Plant Early Detection Report for status terminology).

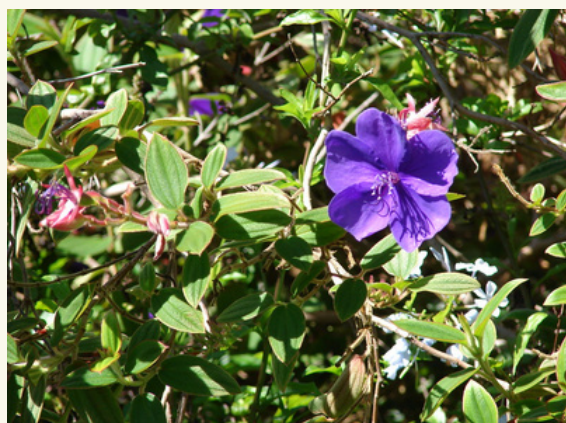
Detection and Distribution

B. madagascariensis was first vouchered on Kauai at a private residence in Kalaheo in 1987 (D.H. Lorence 5342, PTBG),

Current Eradication Targets

56

total targets
statewide



Successful eradications



- Coqui
- Pampas Grass
- Fireweed
- Wax Myrtle



- Jerusalem Thorn
- Poison Devil's Pepper
- Cogon Grass



- Giant Reed
- Pampas Grass
- Parasol Tree
- Fountain Grass
- Gorse
- Tree Daisy
- Albizia
- Coqui

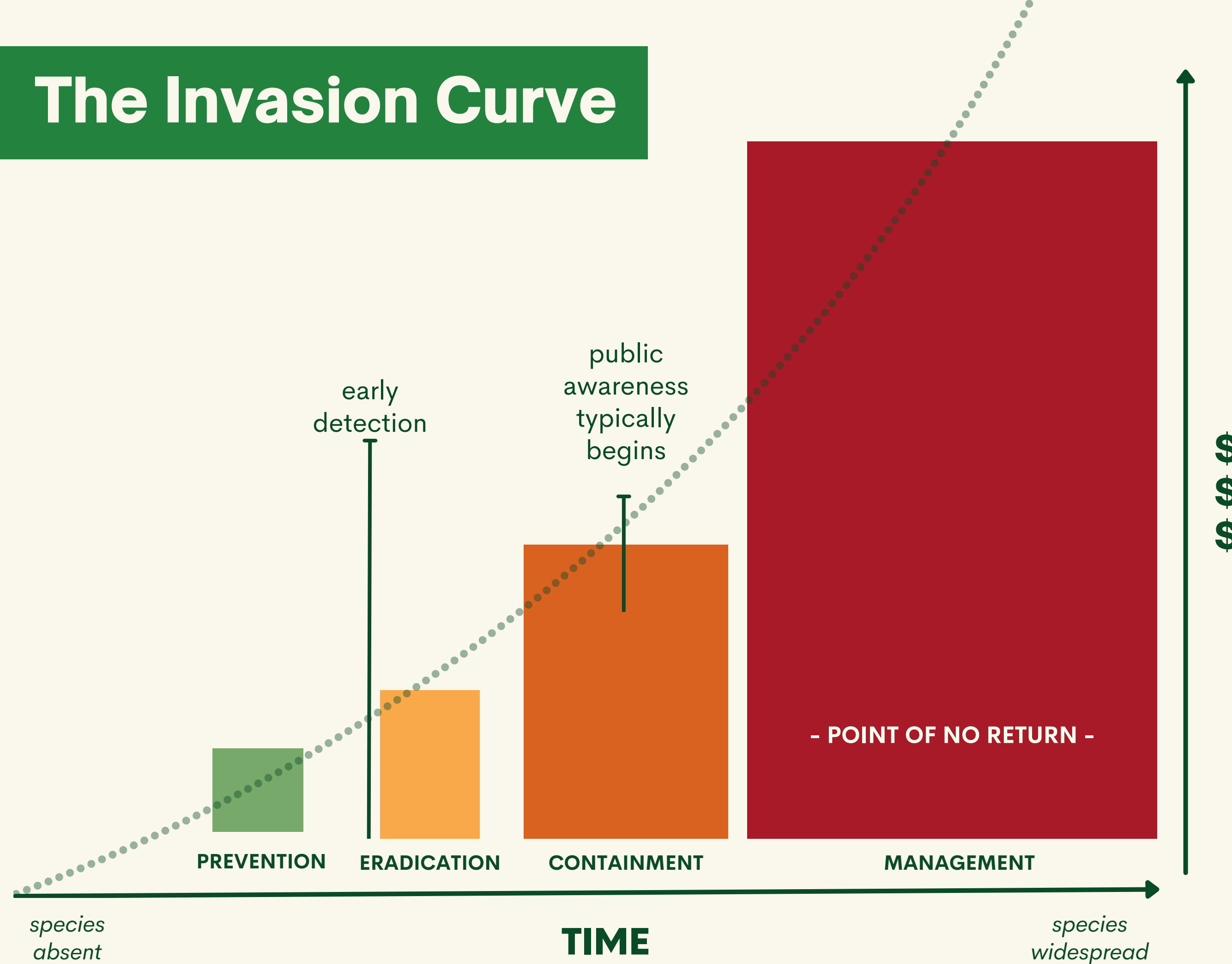


- Ruby Saltbush
- Bingabing
- Asian Melastome
- Red Melastome
- Jerusalem Thorn
- Downy Rose Myrtle
- Himalayan Raspberry
- Milk Thistle
- Osage Orange
- Veiled Chameleon



- Pampas Grass
- Axis Deer
- Jerusalem Thorn
- Princess Tree
- Purple Toadflax

The Invasion Curve



ERADICATION:

The complete removal of an invasive species from an island.

CONTAINMENT:

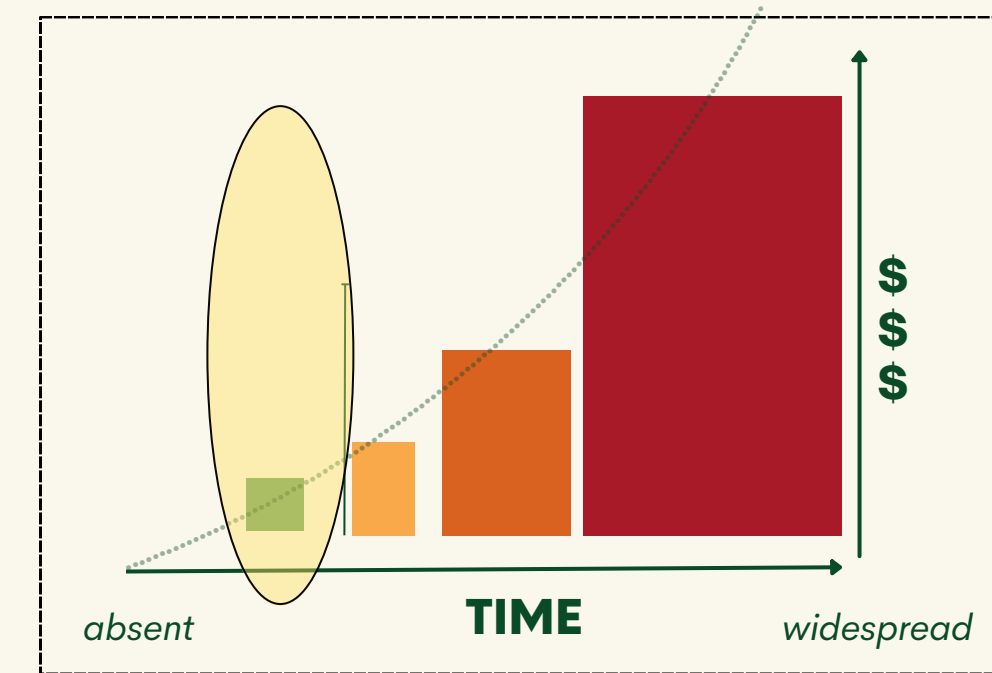
Restricting an invasive species to a limited area to try to prevent spread.

MANAGEMENT:

Eradication is not feasible. Landowners and land managers control at own expense.

Port of Entry/Exit Pest Monitoring Program

- University of Hawai'i - Invasive Species Committees, Hawai'i Ant Lab (HAL)
- Hawai'i Dept of Transportation (HDOT)
- Hawai'i Dept of Agriculture (HDOA)
- Hawai'i Dept of Health (HDOH)
- Hawai'i Dept of Land & Natural Resources (DLNR)



**Coconut
rhinoceros
beetle**



**Japanese
Beetle**



**Africanized
Honeybees**



Mosquitoes



**Red Imported
Fire Ant**

Invasive animal species

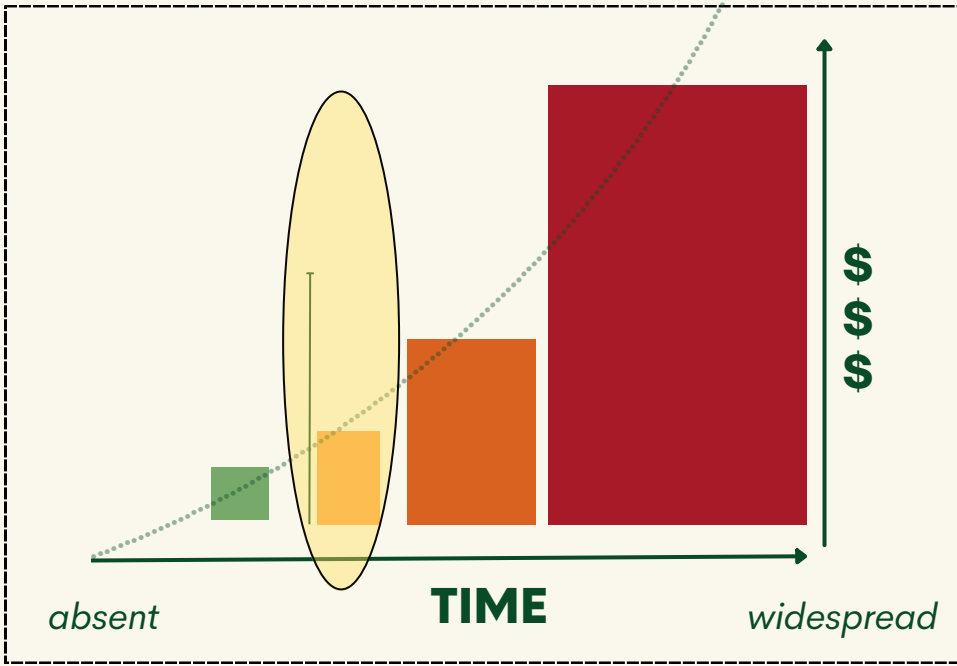


Mongoose (Kaua'i)



Coffee Berry Borer (Kaua'i)

Russell Messing



Coqui frog (Kaua'i)



Rose-ringed Parakeet (Maui)

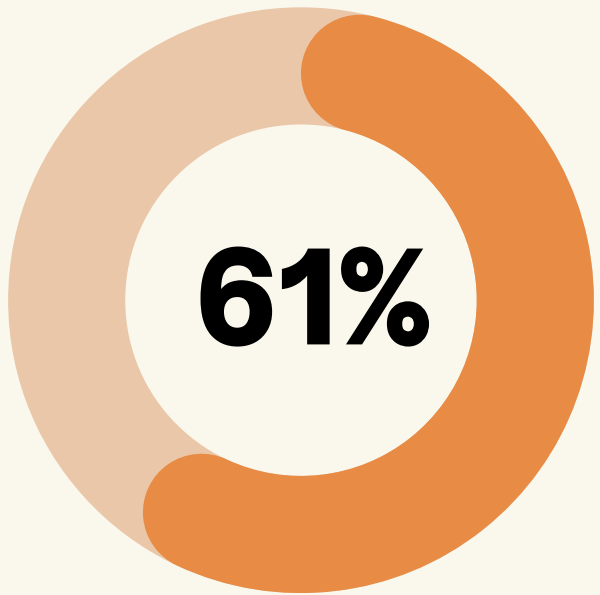
Rapid 'Ōhi'a Death

**1,108,105
acres**

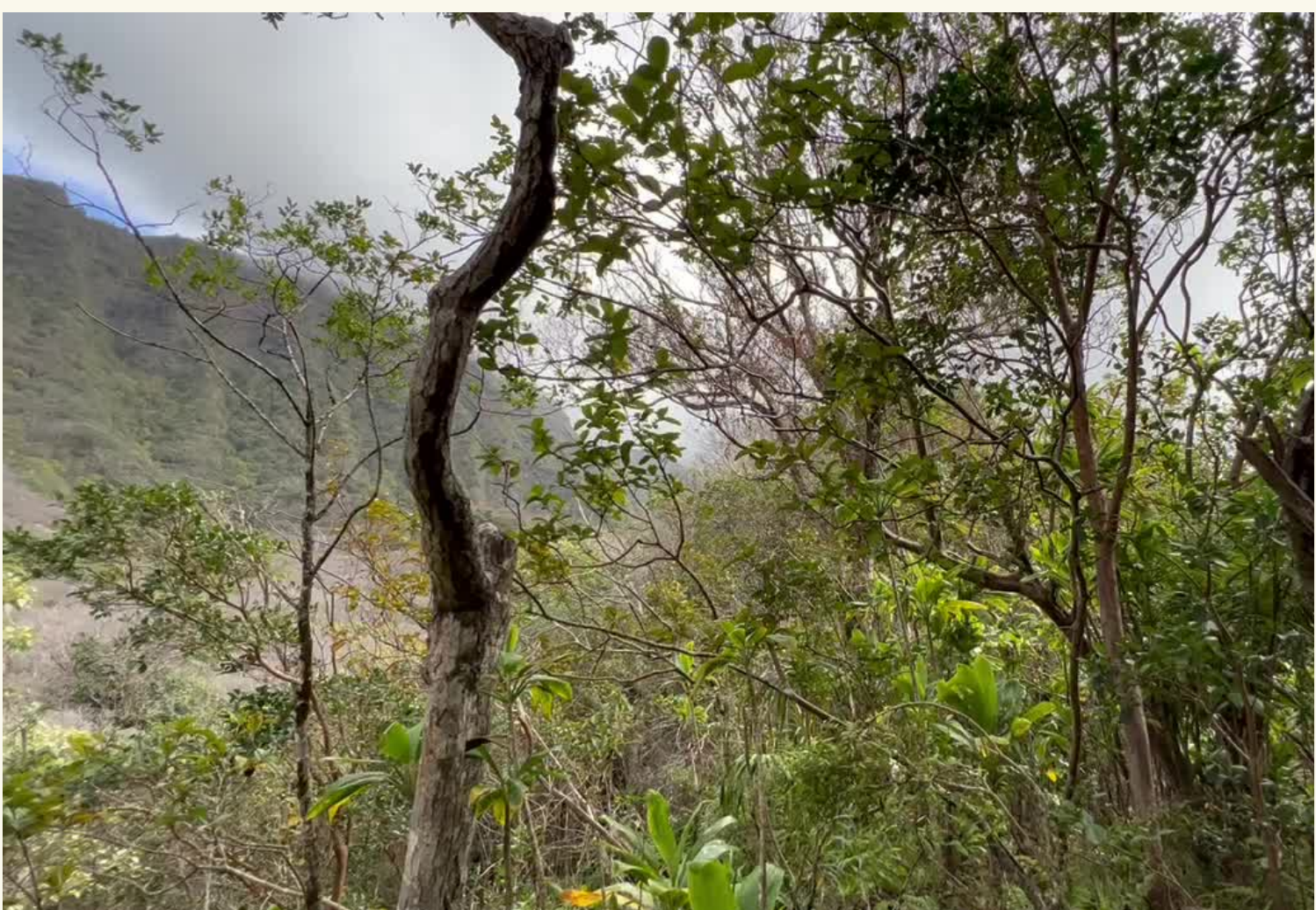
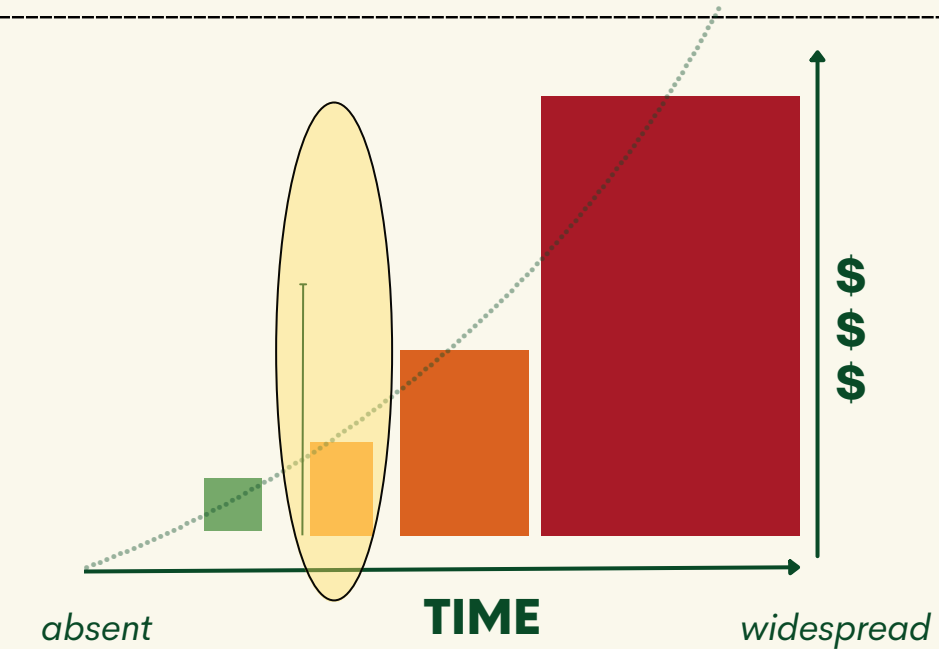
acres of 'ōhi'a forest
surveyed for ROD
suspect trees

216 trees
sampled for ROD

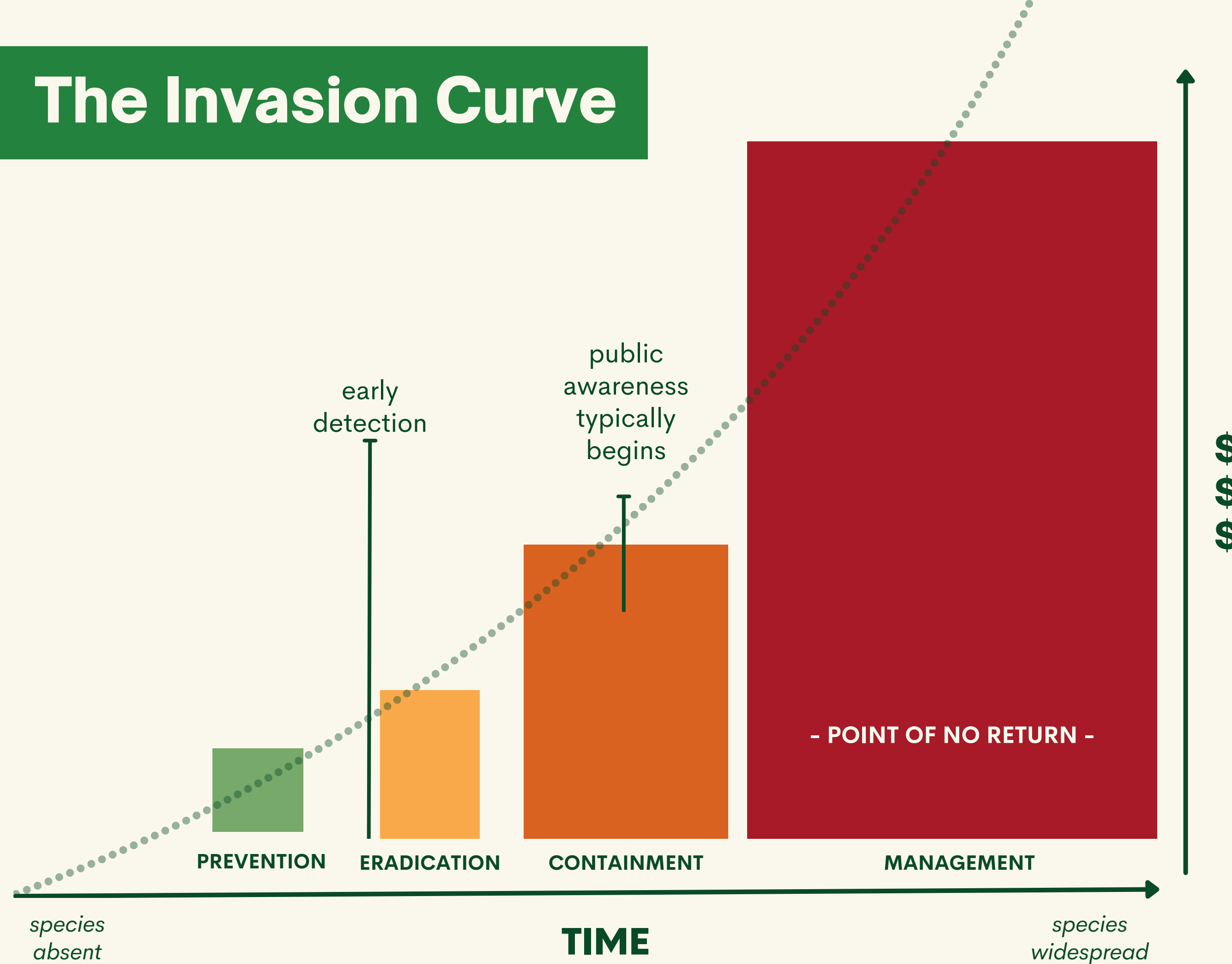
12 detections
of ROD on O'ahu



of ROD samples taken
came from public reports



The Invasion Curve



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The complete removal of an invasive species from an island.

CONTAINMENT:

Restricting an invasive species to a limited area to try to prevent spread.

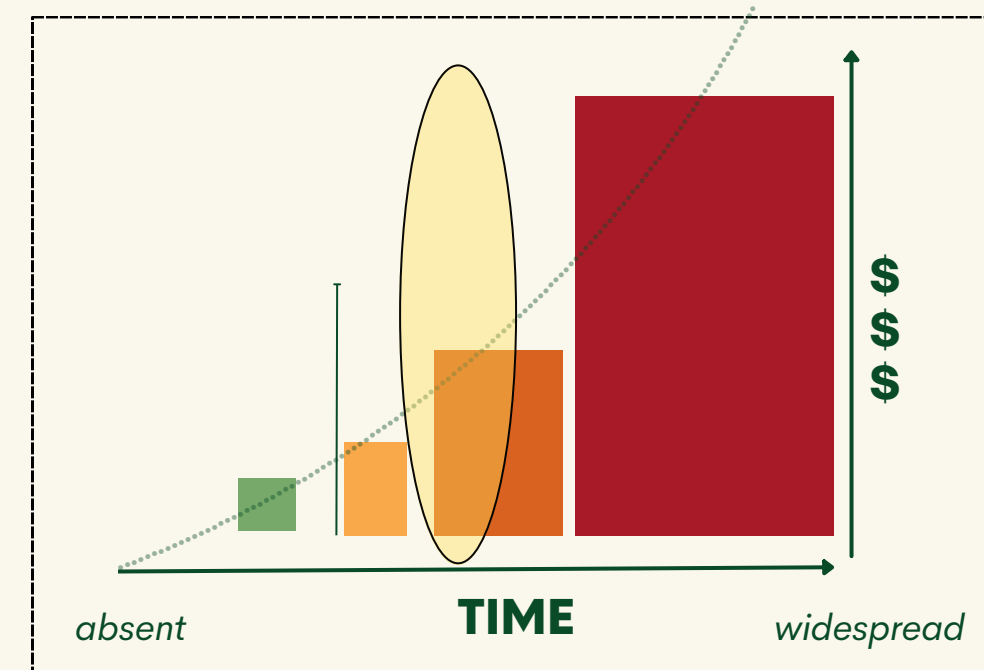
MANAGEMENT:

Eradication is not feasible. Landowners and land managers control at own expense.

LFA Control on Maui



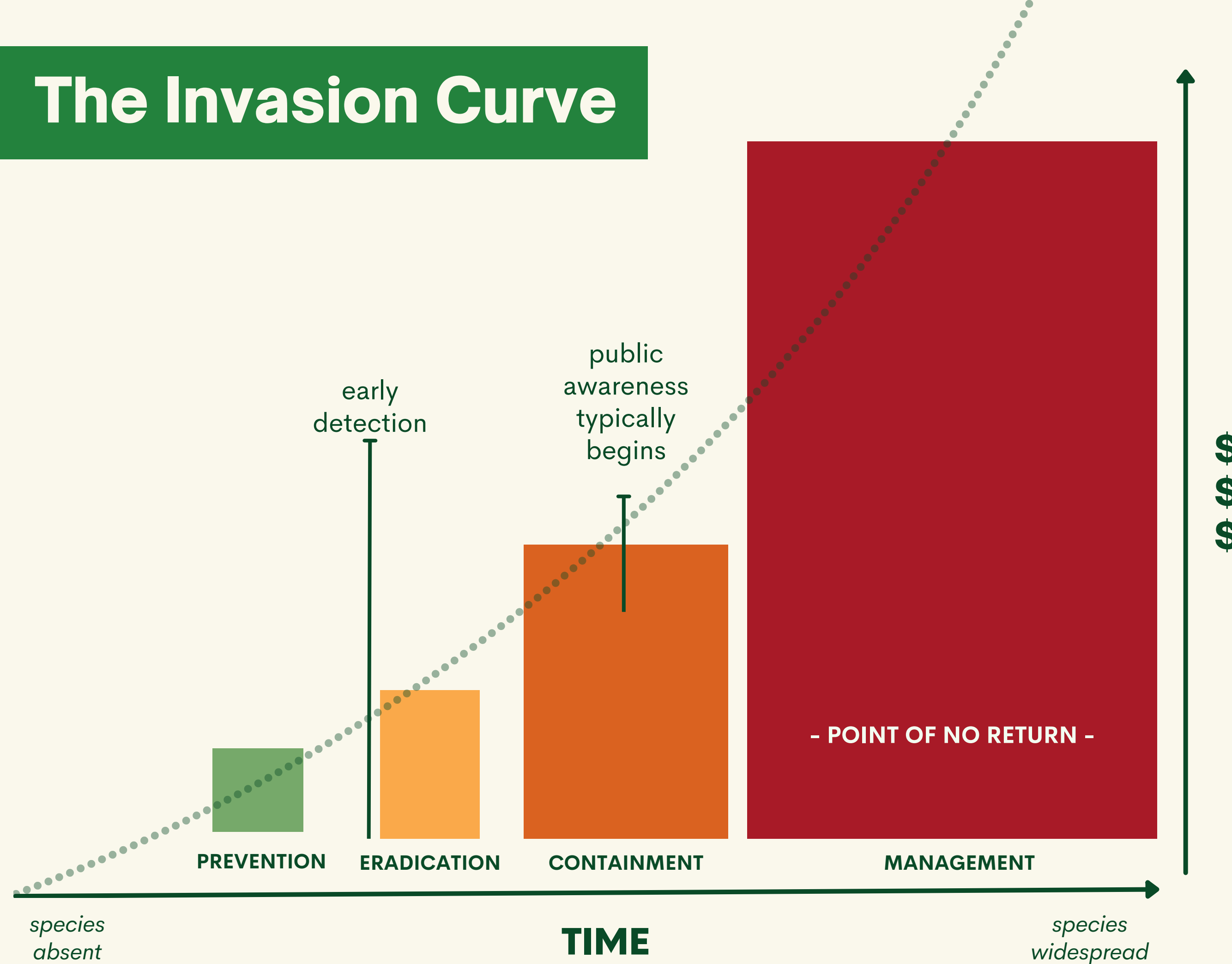
- Aerial delivery of gel-bait developed with Hawai'i Ant Lab
- SLN label approved by HDOA
- Currently exploring use of UAVs (drones) with UH Hilo SDAV Lab



**175-acre
treatment area**

reduced to no detectable
LFA after 19 treatments

The Invasion Curve



ERADICATION:

The complete removal of an invasive species from an island.

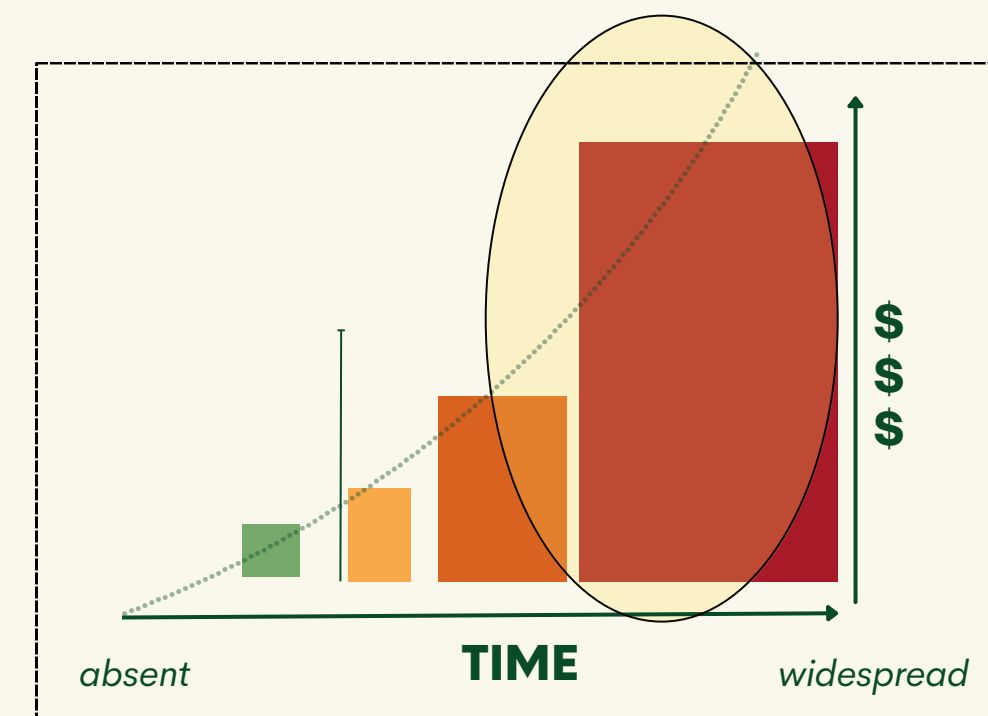
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Community outreach



Community Engagement (2022)



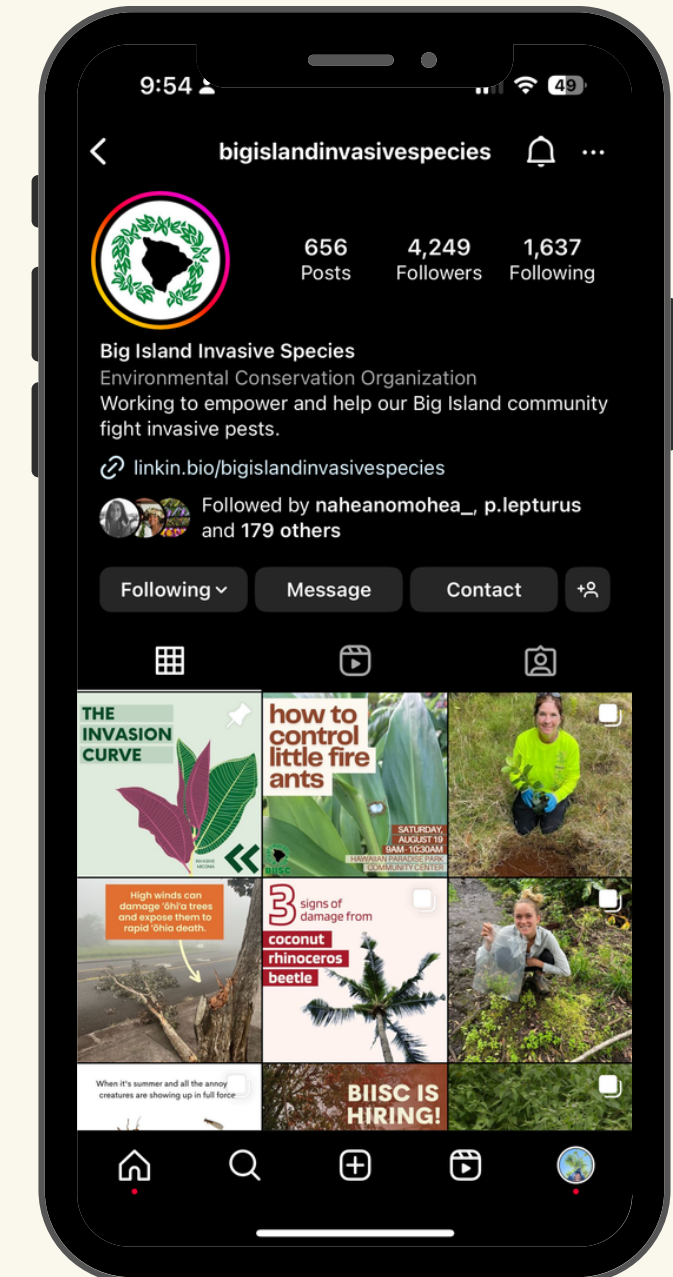
4,322

K-12 students
reached



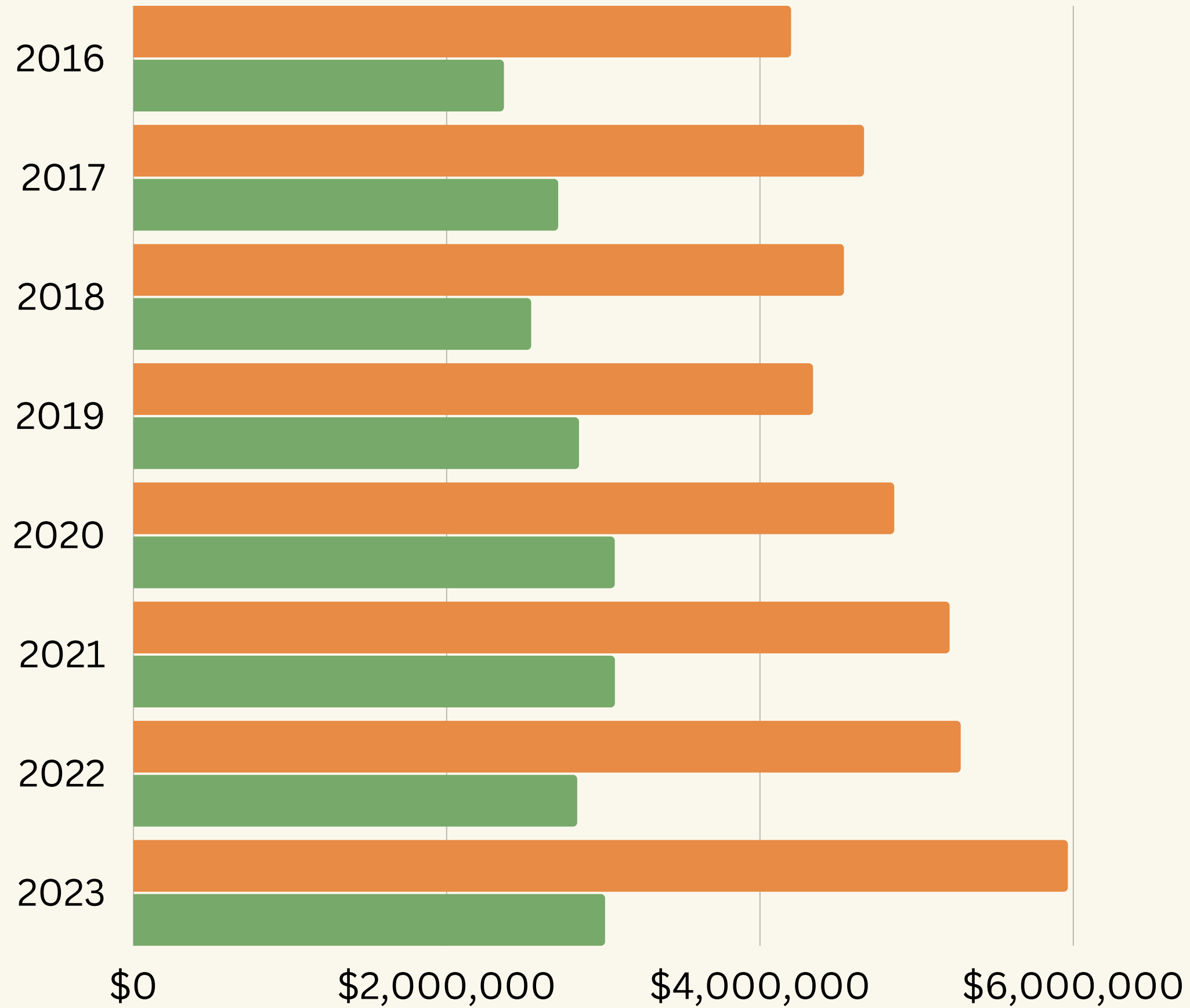
13,040

person-to-person
contacts



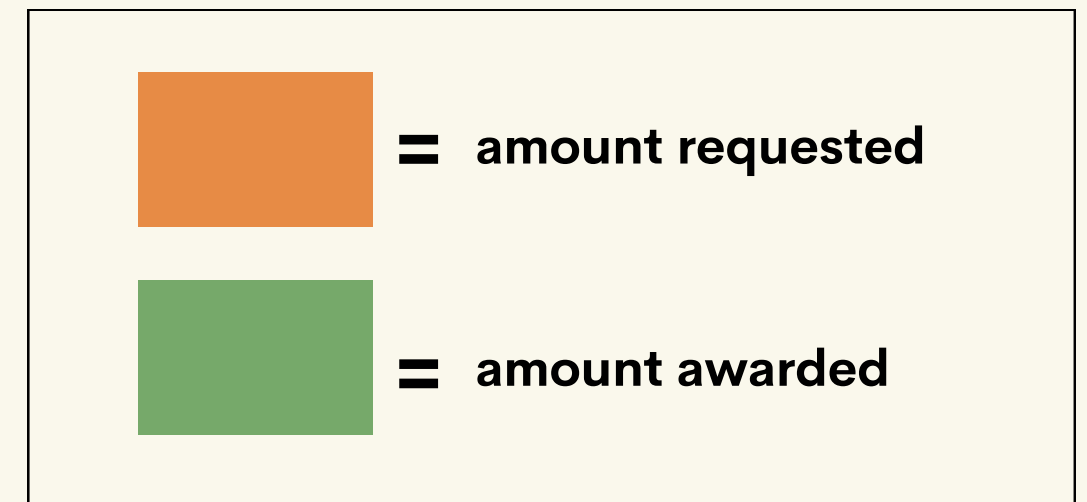
733,389

reached via social
media platforms

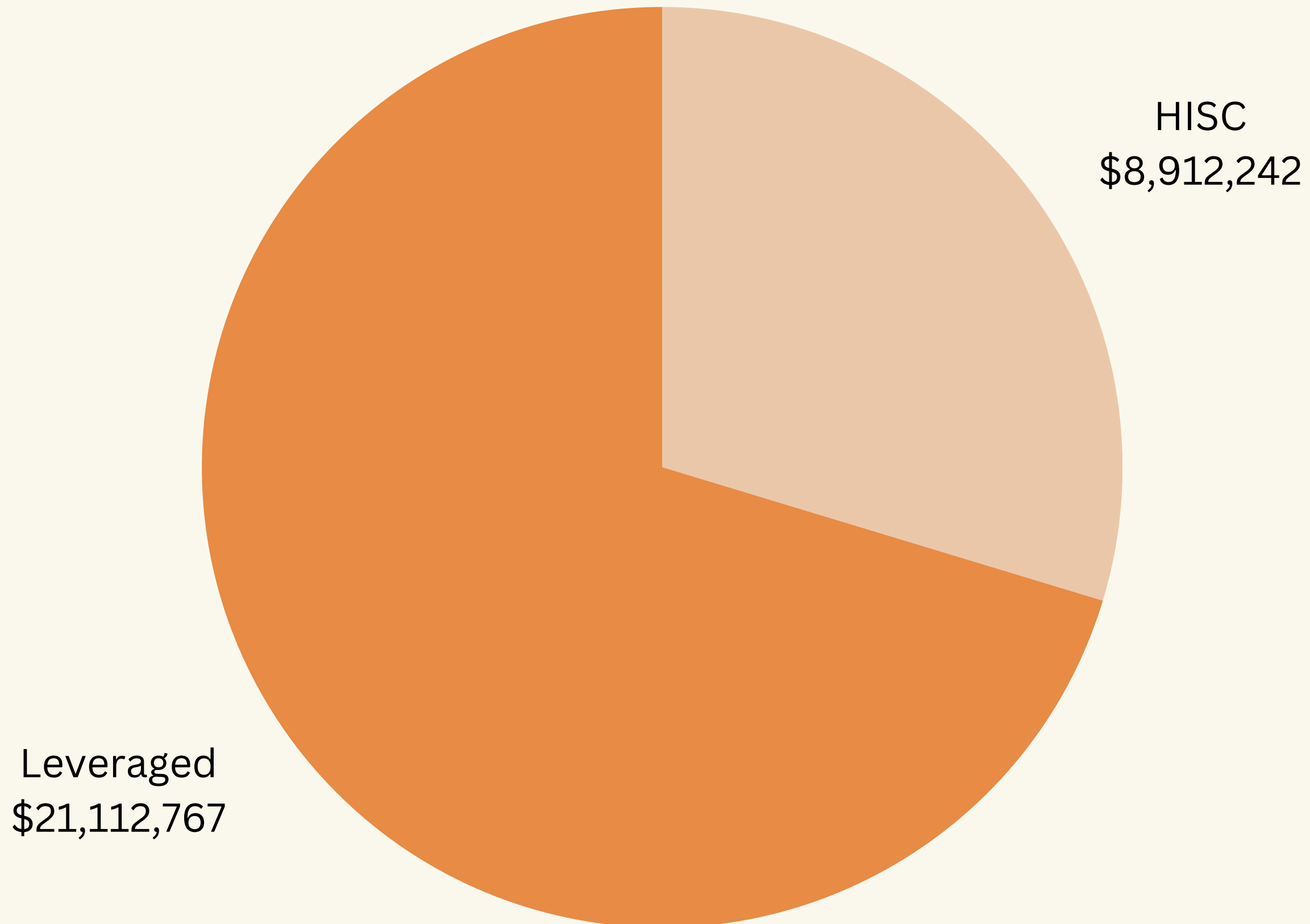


HISC Funding

- Island ISCs are entirely reliant on grant funding from year to year
- Operational funding
- Baseyard rentals, trucks, vehicle repairs, staff PPE and equipment, etc.



Leveraged funding over 3 years



Federal:

- USDA Forest Service
- USDA APHIS
- National Fish & Wildlife Program
- USDoD Readiness & Environmental Integration Protection
- Oahu Army Natural Resources Program
- US Fish & Wildlife Service

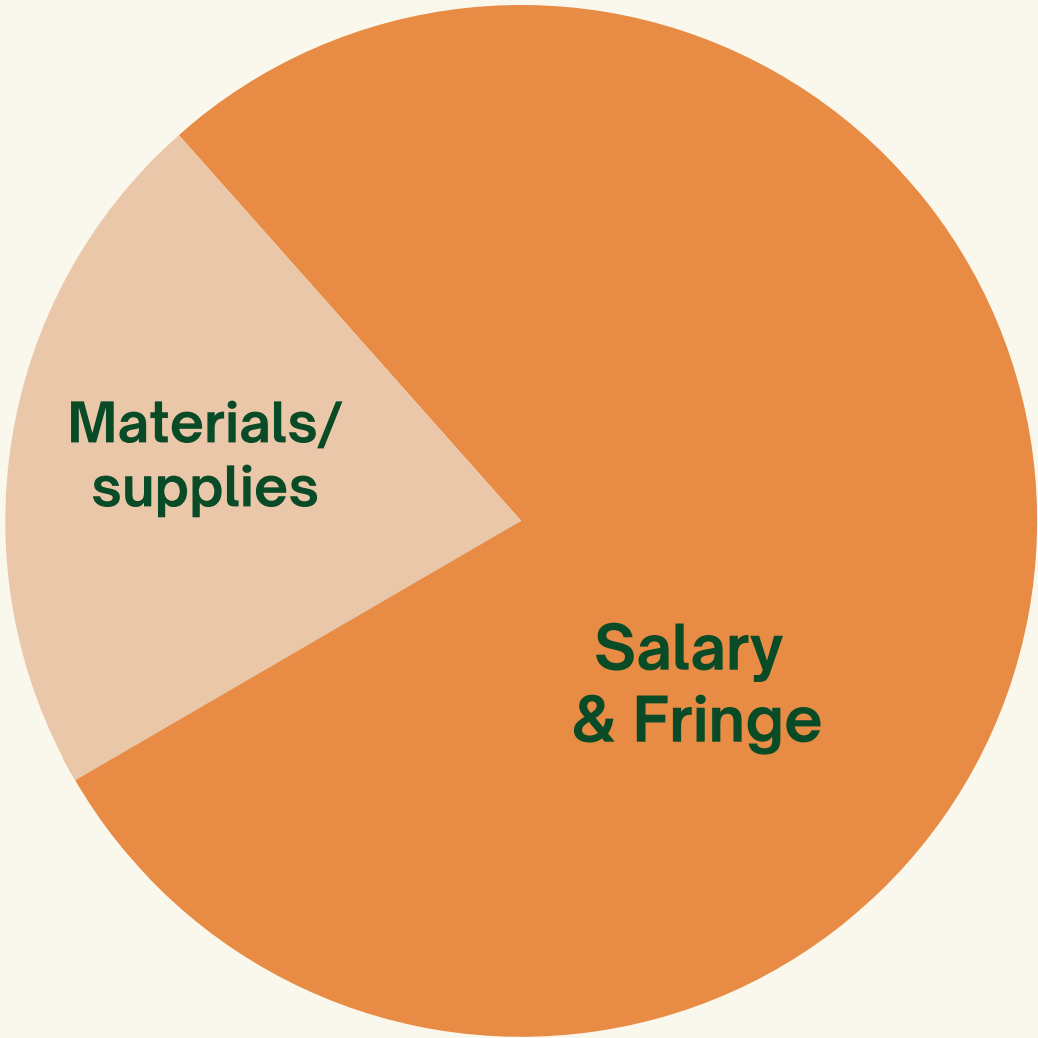
State:

- Hawai'i Tourism Authority
- DLNR/DOFAW
- Watershed Partnerships Program
- Hawaii Army National Guard

Local/Private:

- Counties of Maui, Kaua'i, Hawai'i
- Honolulu Board of Water Supply
- Hawai'i Community Foundation
- Mosaic
- Vibrant Hawai'i
- Private donations

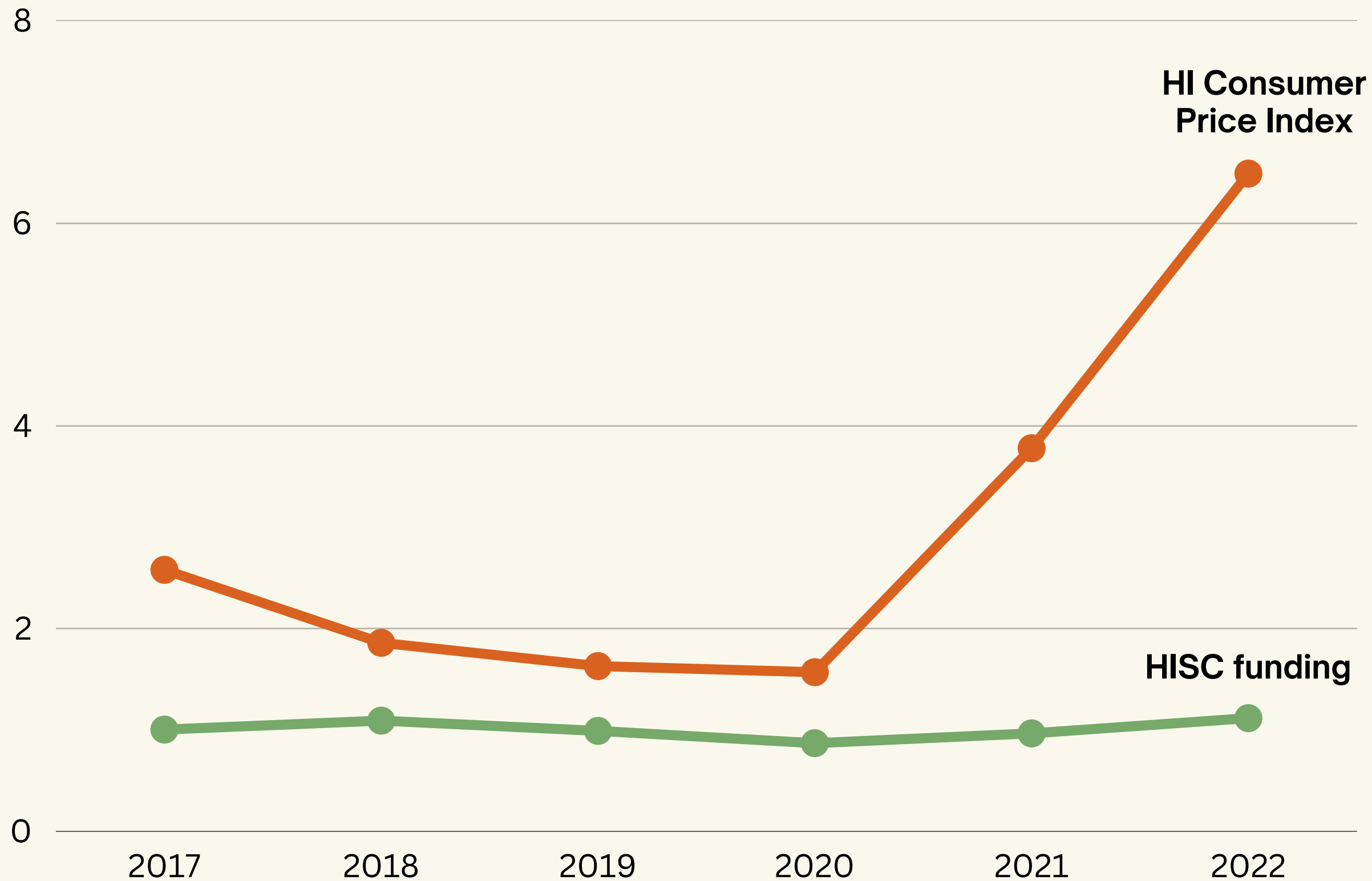
Most HISC
funding is spent
on staff



Based on BIISC 2023 budget



HI Consumer Price Index vs. HISC Funding

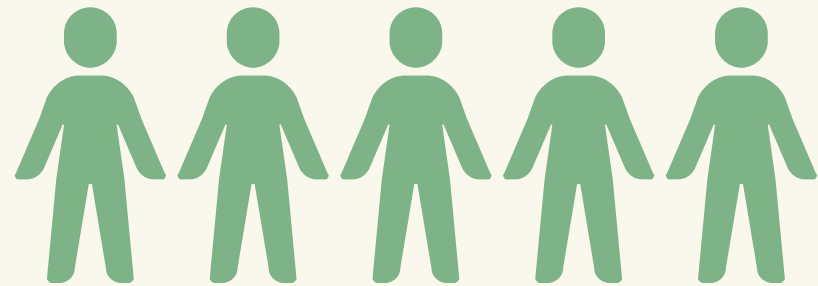


Source: Hawaii Annual CPI Data - Federal Reserve Bank of St. Louis or originally, US Bureau of Labor Statistics (August 2023)

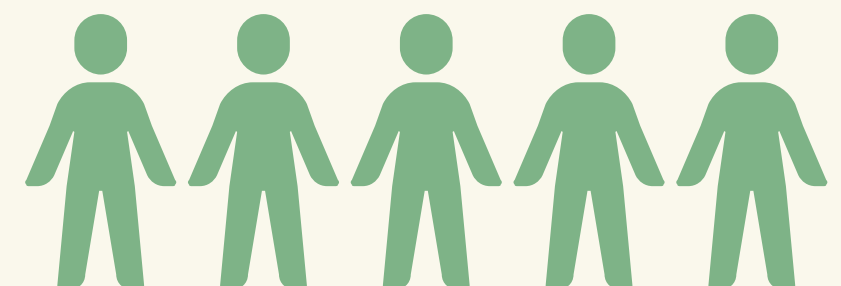
Invasive Little Fire Ants



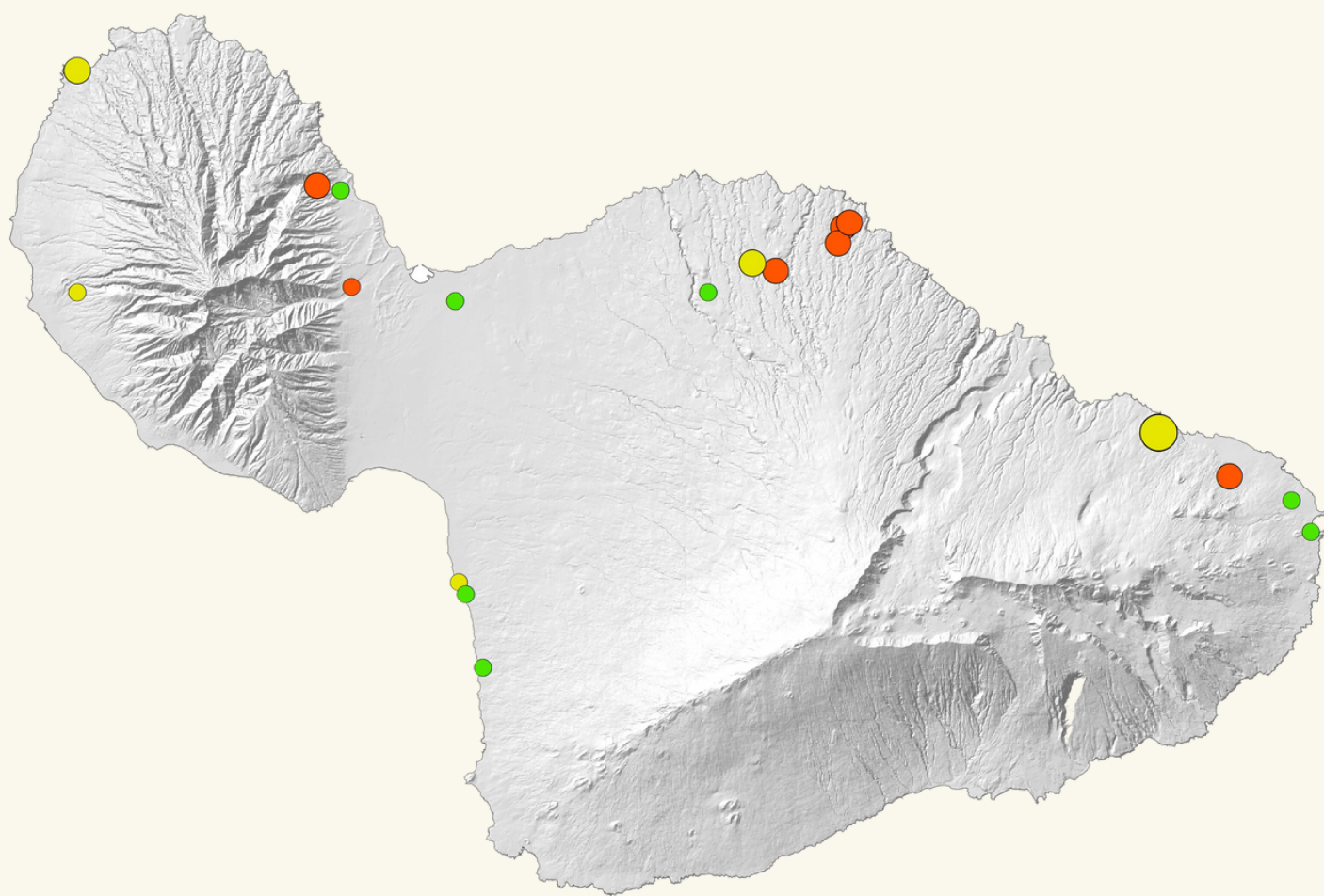
MISC
Hawai'i Ant Lab
HDOA



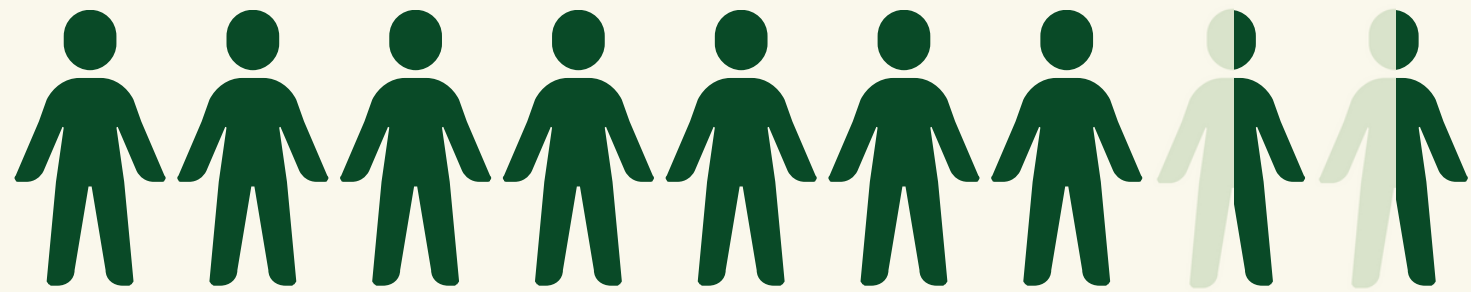
OISC
Hawai'i Ant Lab
HDOA



Maui - 7 active sites



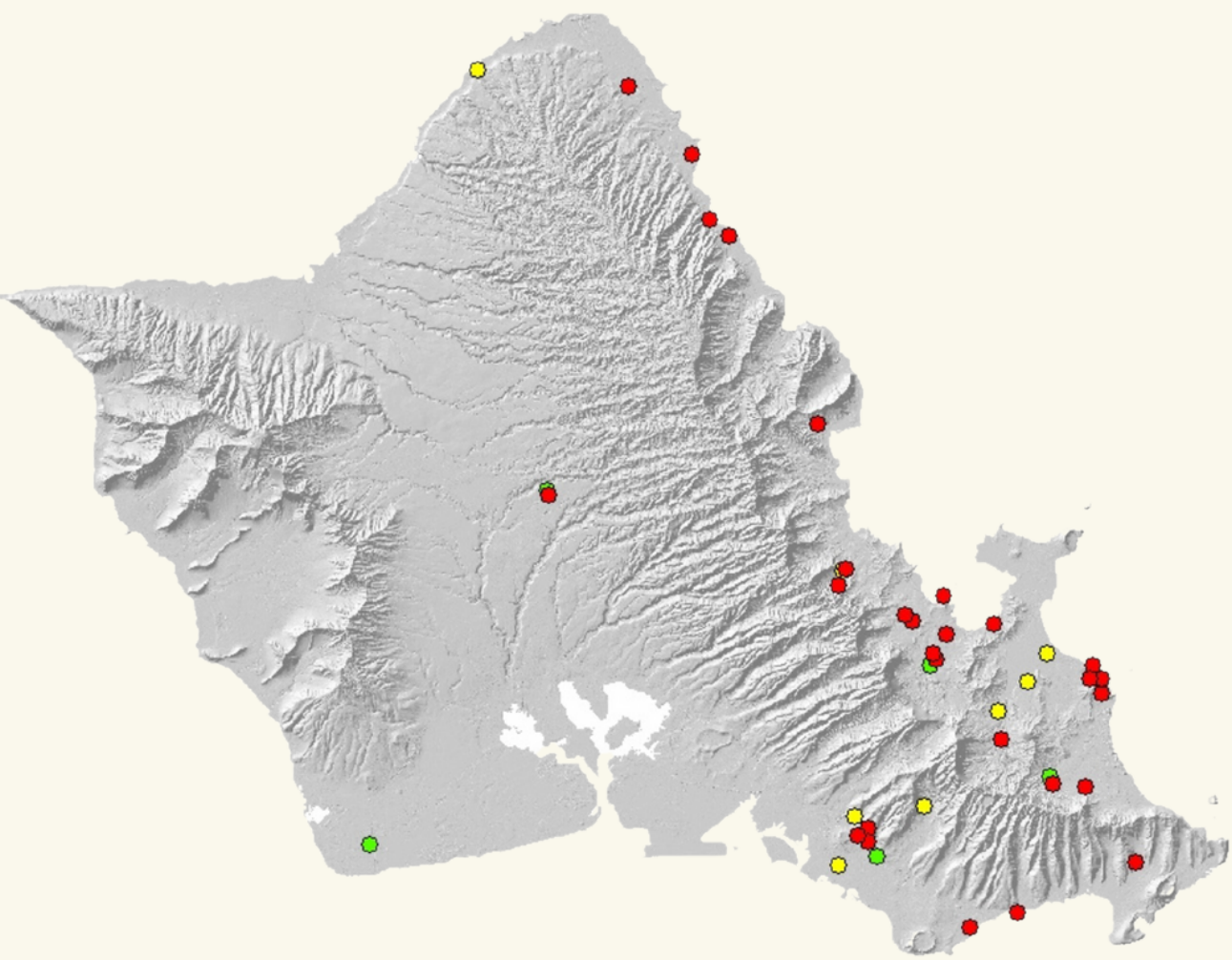
MISC



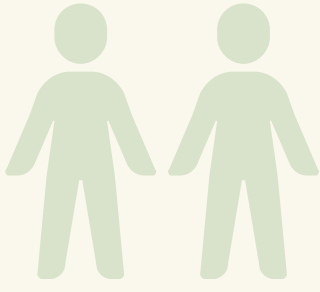
7 full-time staff

2 outreach staff

O'ahu - 32 active sites

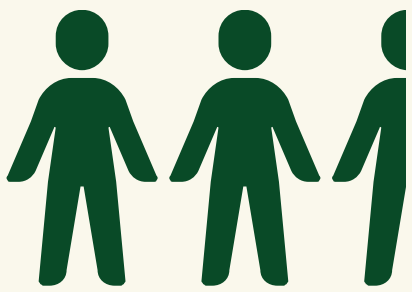


OISC



2 outreach staff

Hawai'i Ant Lab (HAL)



2 full-time, 1 part-time staff



MAHALO NUI!



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