

## CARE Committee

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**From:** Laramée, Leah J <Leah.J.Laramée@hawaii.gov>  
**Sent:** Tuesday, November 16, 2021 2:34 PM  
**To:** Lesley J. Milner  
**Cc:** CARE Committee; Levins, Sara D; Case, Suzanne D  
**Subject:** Chair Suzanne Case Presentation

Some people who received this message don't often get email from leah.j.laramée@hawaii.gov. [Learn why this is important](#)

Aloha Lesley,



[2021-15-11 DLNR Carbon Sequestration .pptx](#)

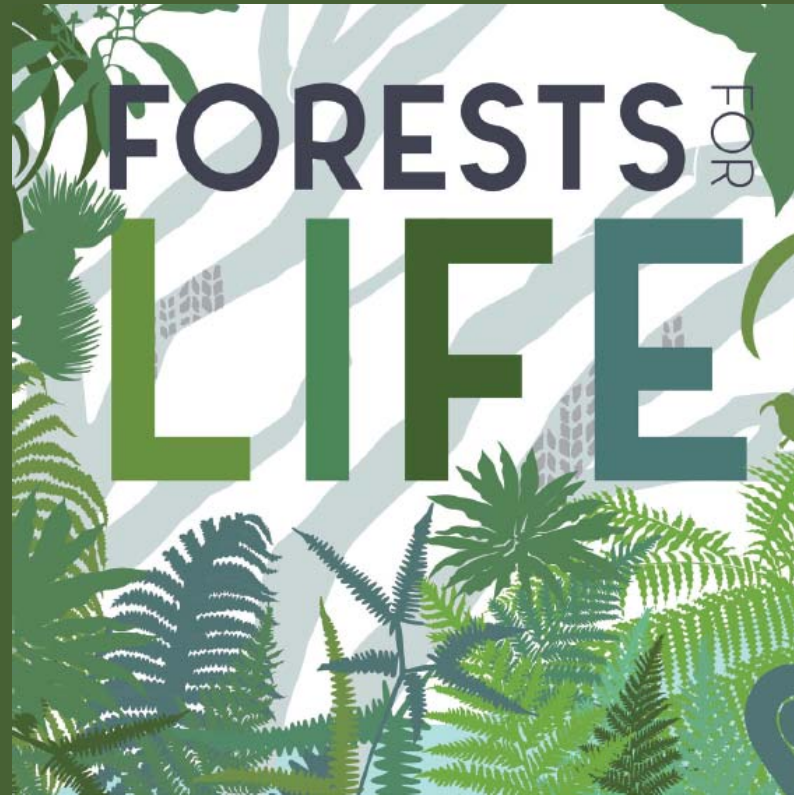
Here is a link to Chair Case's presentation for tomorrow's panel discussion on Greenhouse Gas Emission Reduction.

Please let me know if you have any questions or issues accessing the file.

Aloha,

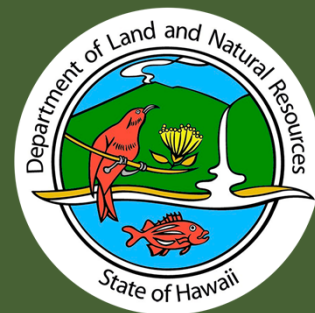
Leah Laramée  
Natural Resource Planner  
Division of Forestry and Wildlife  
Department of Land and Natural Resources  
808 895 1477

# Carbon Sequestration



**Suzanne Case**  
Chair

State of Hawai'i  
Department of Land and Natural Resources

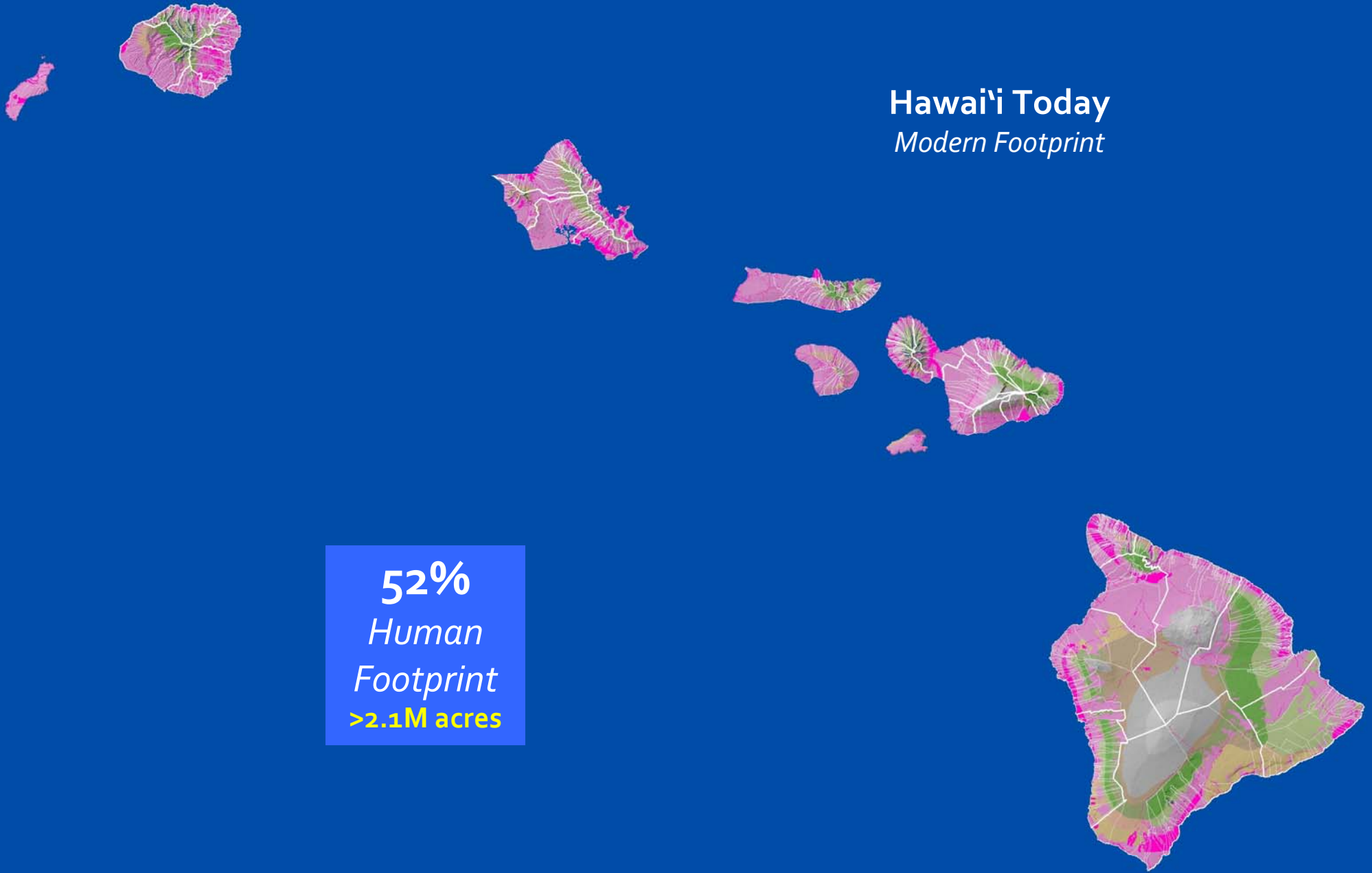




**Hawai'i**  
*Pre-human Footprint*

**0%**  
*Human  
Footprint*

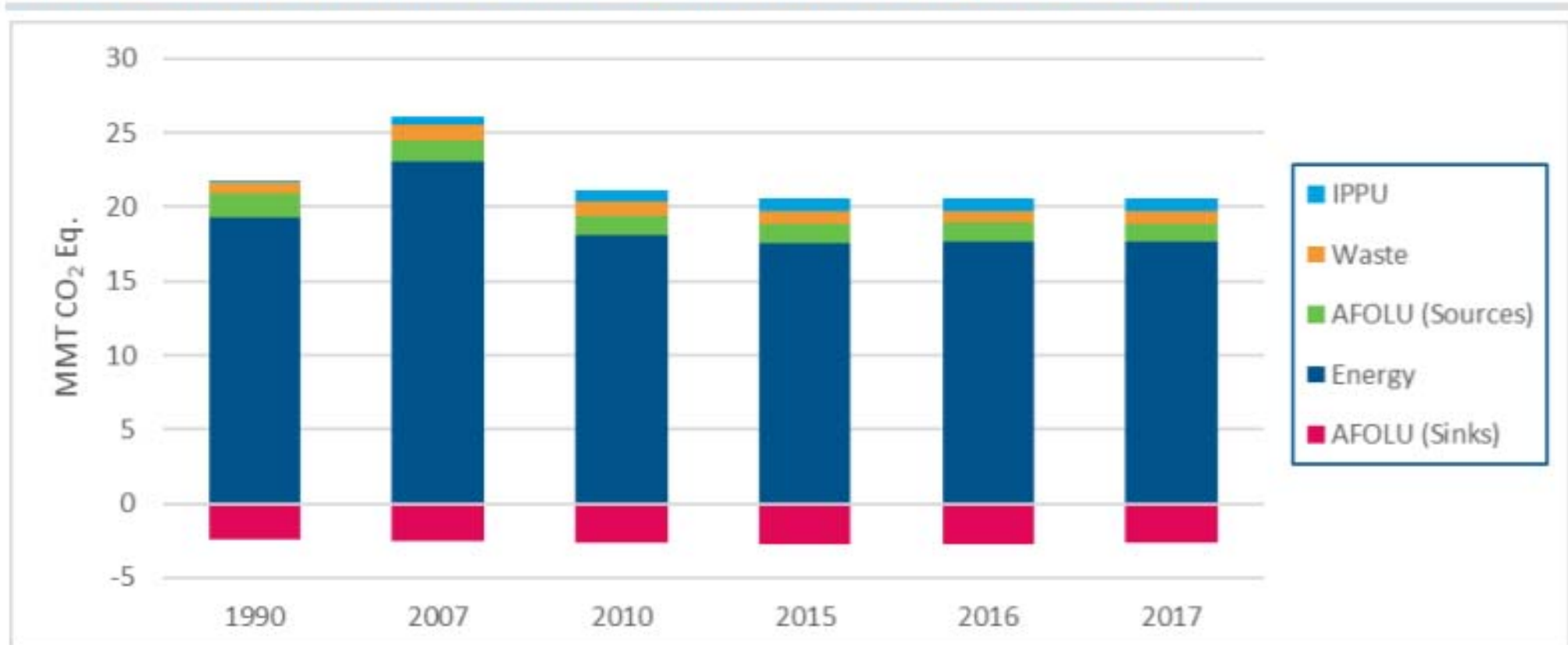




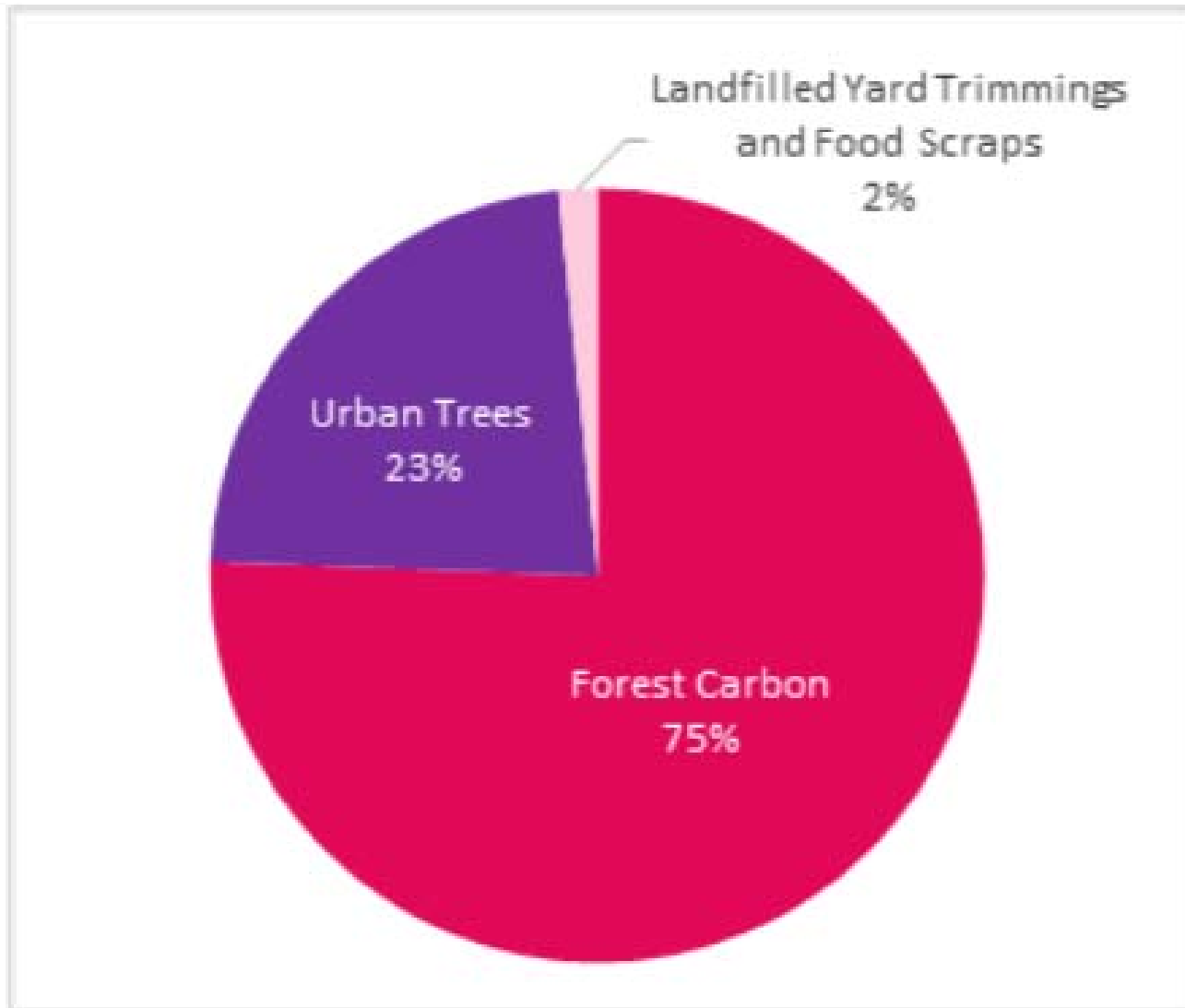
**Hawai'i Today**  
*Modern Footprint*

**52%**  
*Human  
Footprint*  
**>2.1M acres**

Figure ES-2: Hawaii GHG Emissions by Sector (1990, 2007, 2010, 2015, 2016, and 2017)



**Figure 5-3: 2017 AFOLU Removals by Carbon Sink**

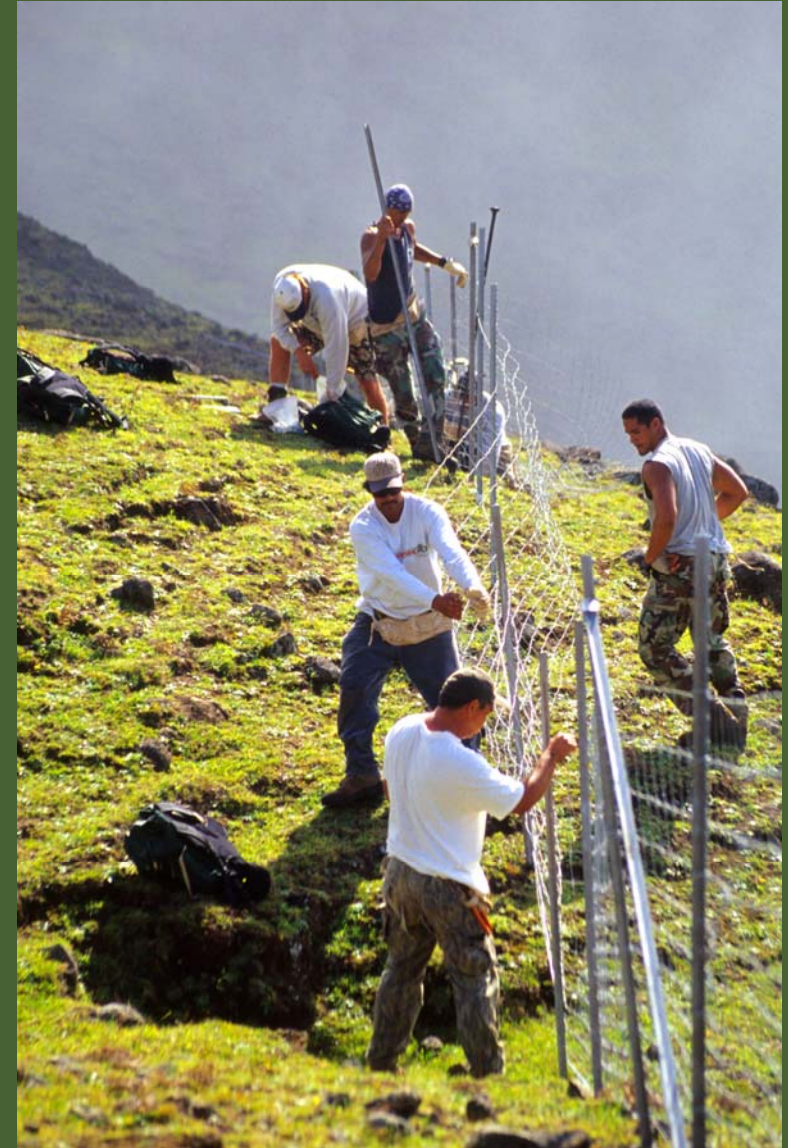


Source: Hawaii Greenhouse Gas Emissions Report for 2017



# DLNR Sequestration Priorities

- ◆ Protect existing forests
- ◆ Plant more trees
- ◆ Conserve more land





# Estimating Carbon Sequestration Potential

- ◆ Contracted the development of a Carbon Sequestration Potential Index (CSPI) for 257 DLNR conservation land management units located across the main Hawaiian Islands.
- ◆ The CSPI Identifies areas with high potential to respond to restoration
- ◆ The CSPI also identifies areas better suited for protection.





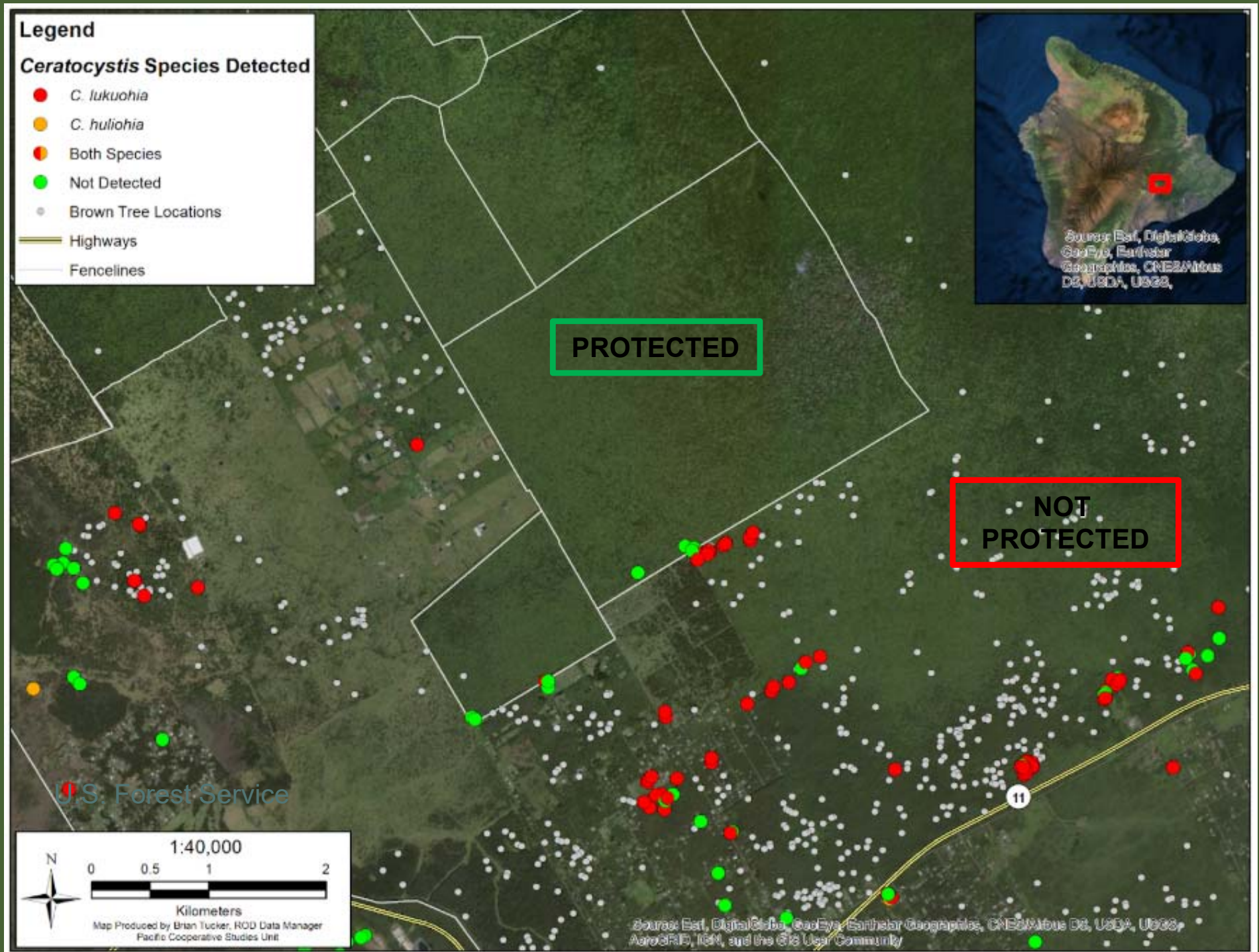
# Protect existing forests

- ◇ Conservation Fences
- ◇ Ungulate Control
- ◇ Forest health (ROD)





# Ola'a tract near Volcano







Cattle and sheep rubbed off bark, allowing black ROD fungus to infect and kill this 'Ohi'a tree

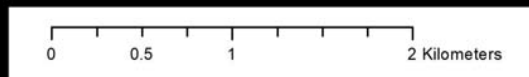
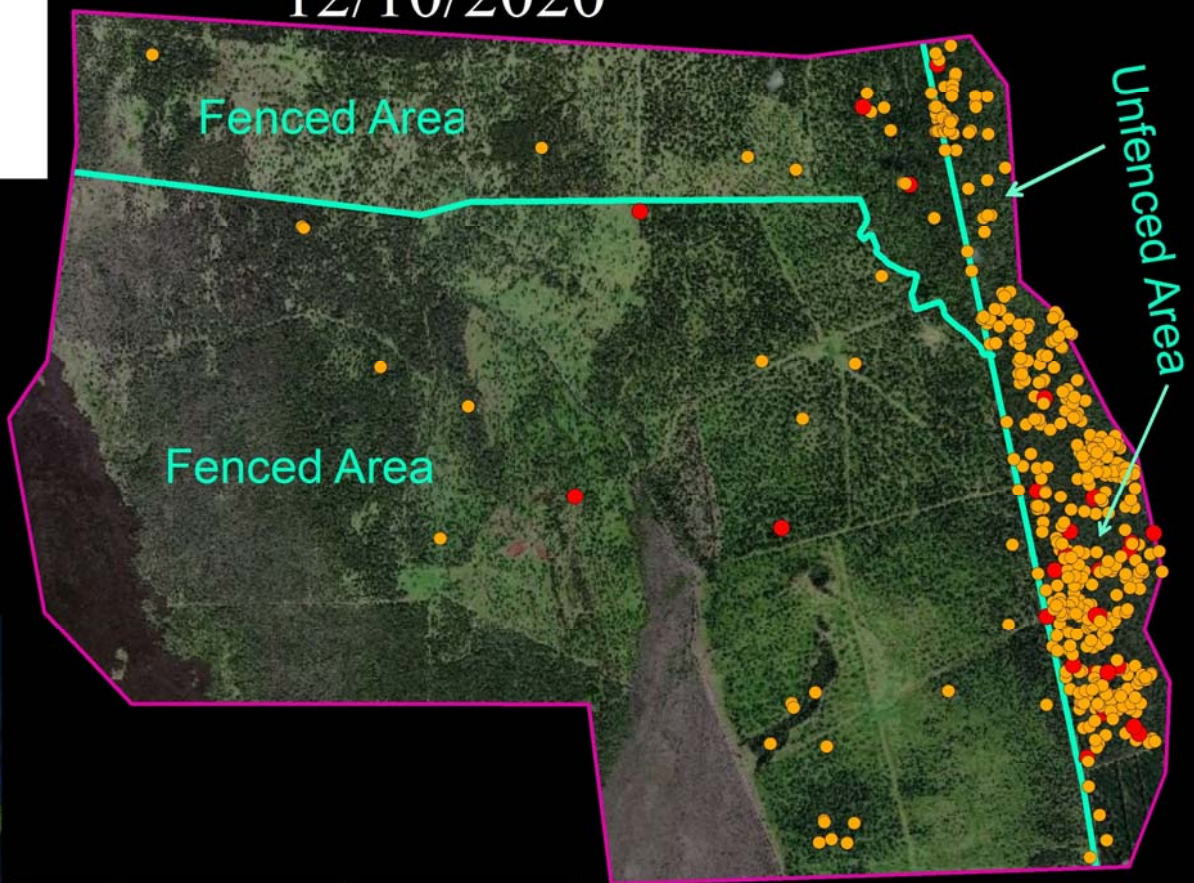
Dying 'Ohi'a trees mapped in aerial surveys (Photo: Dr. Ryan Perroy)



# Helicopter ROD Survey 12/10/2020

## Suspect ROD Trees

- High confidence
- Med. confidence
- Surveyed Area
- HAVO Fenceline





# Conserve through legal protections

- ◆ 46,000 Acres
- ◆ Acquisitions
- ◆ Conservation Easements



# Plant more trees

- ◇ Current Capacity is 50,000 trees annually
- ◇ Potential to plant many more.





# Challenges

- ◇ Funding
  - ◇ High cost of Fences
  - ◇ High land values
- ◇ Nursery capacity
- ◇ Biosecurity
- ◇ Maintenance
  - ◇ Ongoing funding to care for trees and fencelines.



# Successes

- ◆ Highly competitive for federal funding
- ◆ 2021: \$5 Million for partnership tree planting and invasive species control from USDA
- ◆ High survivor rate
  - ◆ 90% survivorship in many areas
- ◆ Strong partnerships
  - ◆ Watershed Partnerships
  - ◆ Invasive Species Committees



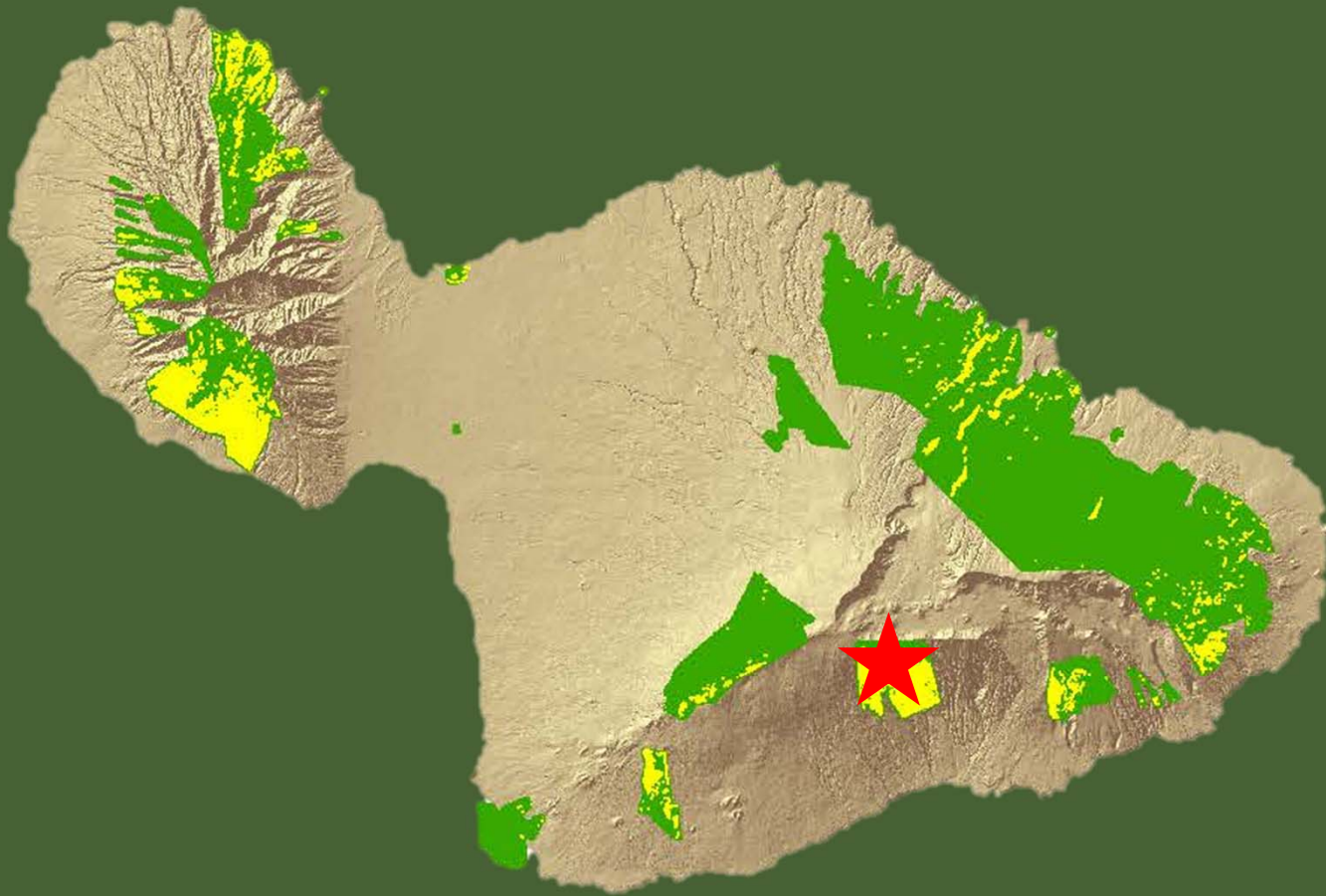


# Landscape reforestation

- 12 species of forest tree species
- 250,000 trees planted last 4 years



# Kahikinui/Nakula Forest Carbon Project



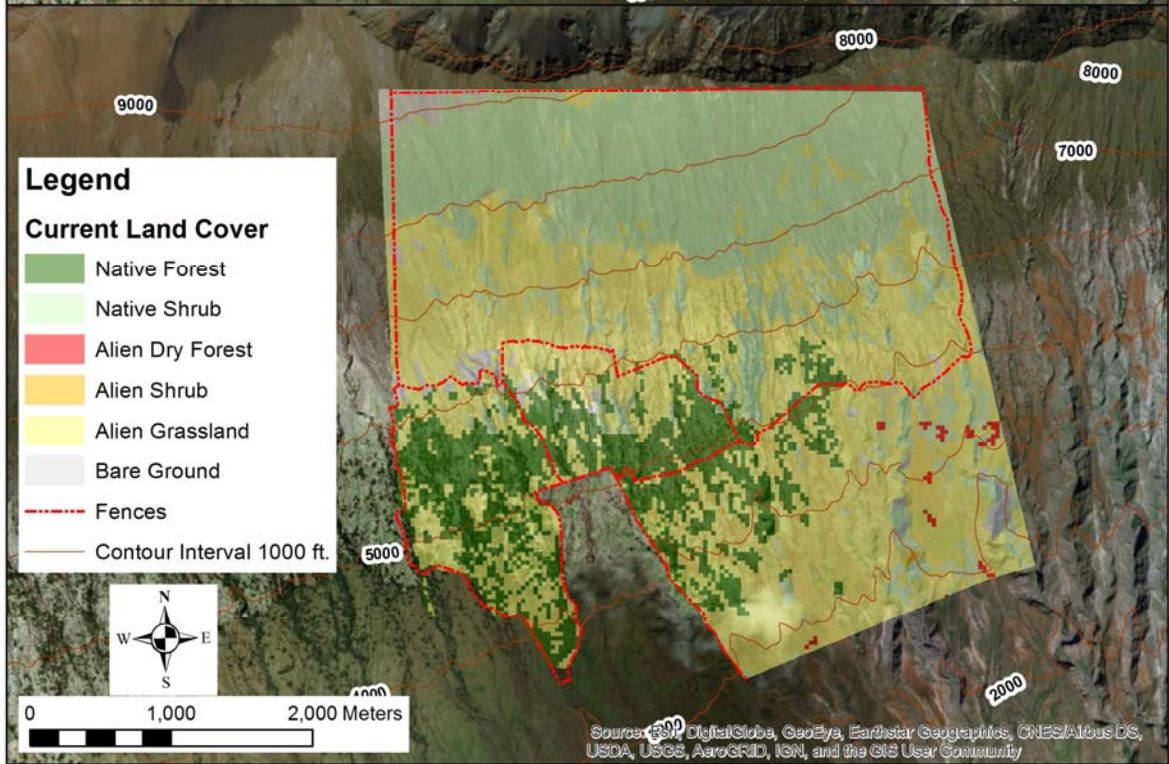
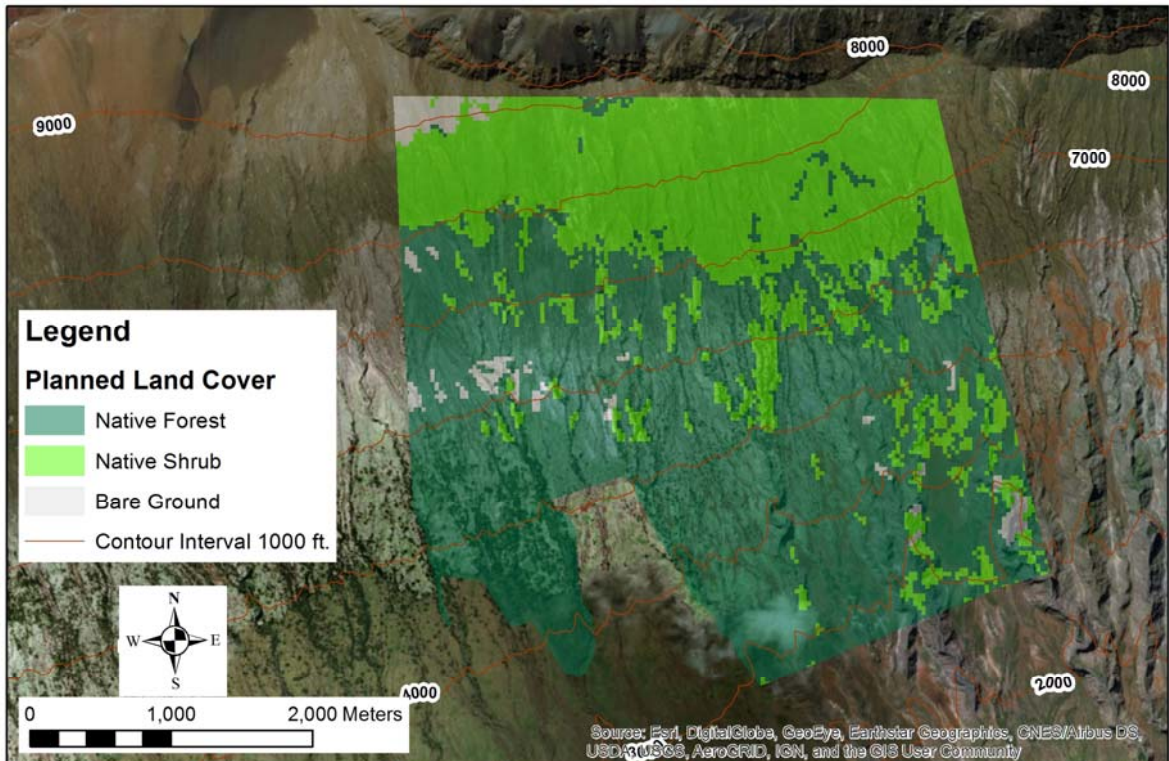














2009





2015





2020





# Urban Trees

URBAN & COMMUNITY FORESTRY PROGRAM  
**KAILUNANI**  
*the beautiful growth*

*"Right tree, right place, right care"*

*\*ulu Artocarpus altilis*





Mahalo!

