



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
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**SUZANNE D. CASE**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

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ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**Testimony of**  
**SUZANNE D. CASE**  
**Chairperson**

**Before the Senate Committee on**  
**WAYS AND MEANS**

**Tuesday, February 25, 2020**  
**12:40 PM**

**State Capitol, Conference Room 211**

**In consideration of**  
**SENATE BILL 2531, SENATE DRAFT 1**  
**RELATING TO FORESTRY**

Senate Bill 2531, Senate Draft 1 proposes to establish a fund to increase the existing plant stocks, invest in public outreach, and renovate the equipment and facilities of the state tree nursery. **The Department of Land and Natural Resources (Department) supports this measure with comments, provided that its passage does not replace or adversely impact priorities indicated in the Executive Supplemental Budget request.**

The Department recognizes there is a clear need to increase capacity at the State Tree Nursery as well as our district nurseries to meet the growing demand for seedlings and planting stock to support climate mitigation, carbon neutrality, forest restoration, wildlife habitat improvements, agroforestry development, and diversified agricultural needs. Trees are our strongest allies for addressing the climate crisis, and the most efficient method for removing carbon dioxide from the atmosphere, including by direct carbon sequestration and improving soil health.

The Department has decided that due to biosecurity concerns, we are no longer transporting plant material between islands, and thus to meet the purposes of this measure would need to factor in the state tree and district nurseries. The Department has already identified several necessary nursery improvements and upgrades for the state tree and district nurseries, equal to approximately \$1.3 million (details available upon request). Further, the Department notes that increasing capacity to meet needs will also require additional personnel resources at each of the Department's nurseries, some of which do not have any full-time staff. Current staffing needs include 2.0 FTE Horticulturist (Maui, Oahu), 4.0 Nursery Workers II (Hawaii, Maui, Kauai, Oahu).

The Forest Stewardship Program works collaboratively with the United States Department of Agriculture Natural Resources Conservation Service and the University of Hawaii College of Tropical Agriculture and Human Resources to support several demonstration agroforestry projects

that promote diversification of agricultural operations and incorporate native species whenever possible. However, there is a substantial number of interested private and community-supported forest management projects that the program is not able to serve due to limitations in both forest stewardship program funding and personnel resources. To successfully meet this measure's purpose, the Department would need a Forester IV position and an additional \$200,000 annually to increase program reach and projects.

Thank you for the opportunity to comment on this measure.



# SIERRA CLUB OF HAWAI'I

## SENATE COMMITTEE ON WAYS AND MEANS

February 25, 2020 12:40 PM Room 211

In **SUPPORT** of **SB2531 SD1**: Relating to Forestry

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Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **supports SB2531 SD1**, which funds the Department of Land and Natural Resource's state tree nursery to increase and expand plant species that will improve soil health and agricultural productivity. Support for practices that foster healthy soils is a priority of the Sierra Club during the 2020 legislative session.

### **Improved soil health is good for agriculture**

The United States Department of Agriculture affirms that managing soil health is "one of the most effective ways for farmers to increase crop productivity and profitability while improving the environment." Both small and large producers who implement practices to improve soils see benefits such as increased crop production from encouraging soils rich in organic matter and nutrients, increased profit from optimizing inputs by reducing the need for fertilizers, pesticides, and water, and reduced farm labor and machinery fuel expenses.<sup>1</sup>

### **Improved soil health benefits the climate**

Studies from the Intergovernmental Panel on Climate Change show that agriculture, forestry, and other types of land use account for 23% of human greenhouse gas emissions, making it a significant contributor to the climate crisis. At the same time, natural land processes absorb carbon dioxide equivalent to almost a third of carbon dioxide emissions from fossil fuels and industry practices.<sup>2</sup> Modern agricultural practices can be improved to harness the natural power of photosynthesis in plants to actually pull carbon from the atmosphere and sequester it in the ground.

### **Planting trees can improve soil health**

This bill supports the state tree nursery, which can protect and regenerate healthy soils through the cultivation of the following beneficial species for agricultural production:

1. Windbreaks: trees that are placed in single or multiple rows that minimize soil erosion and shelter crops from wind damage.
2. Nitrogen-fixing: trees that reduce or eliminate the need for nitrogen fertilizers, which

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<sup>1</sup> <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils/health/>

<sup>2</sup> [https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource\\_srccl/](https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource_srccl/)

produce a major source of the potent greenhouse gas nitrous oxide.

3. Overstory: shade trees that provide habitat and increase biodiversity on agricultural lands, supplying ecosystem services of use for agricultural production and improved ecosystem function.

Soils are a highly effective means of carbon sequestration, but most agricultural soils have had their carbon sequestration capacity dramatically reduced by soil loss, excessive tillage, overgrazing, erosion, and extensive use of fertilizers. Protecting and regenerating healthy soils can help to mitigate the effects of climate change, while also supporting local agricultural production and ecosystem resiliency. We see expansion of the State Tree Nursery as an important tool to achieve these goals.

Thank you very much for this opportunity to provide testimony in **support of SB2531 SD1**.

Mahalo,



Jodi Malinoski, Policy Advocate



**Senate Committee on Ways and Means  
Hawai'i Center for Food Safety supports: SB2531 SD1**

Dear Chair Dela Cruz, Vice Chair Keith-Agaran and members of the committee:

My name is Lauryn Rego and I am the Director for the Hawai'i Center for Food Safety (CFS). CFS is a nationwide public interest, sustainable agriculture nonprofit organization whose missions include the promotion of agricultural production methods that are beneficial to the ecosystem. We have over 950,000 farmer and consumer members across the country, including nearly 14,000 in Hawai'i. On behalf of CFS and our members, I thank you for the opportunity to submit testimony today regarding this important bill.

I am writing in strong support of SB2531 SD1, related to forestry. It is well established that agriculture contributes roughly 1/3 of greenhouse gas emissions globally. However, unlike other sectors like energy and transportation, agriculture also has the potential to sequester carbon emissions in terrestrial ecosystems. As noted in SB2531 SD1, trees have an important function in improving soil health and building climate-resiliency for Hawai'i's environment, including its agricultural landscapes. The Natural Resources Conservation Service (NRCS), a division of the United States Department of Agriculture, has identified agroforestry as a unique land management approach that intentionally blends agriculture and forestry to enhance productivity, profitability, and environmental stewardship. According to NRCS, the strategic planting of trees in agriculture landscapes may increase crop yield, improve soil health, provide habitat for wildlife, and provide a variety of other benefits.<sup>1</sup>

CFS supports SB2531 SD1, to increase the availability of tree stocks for agroforestry and soil health in the State by expanding the tree and plant stock available to the public through the state tree nursery, and provide assistance and education regarding the benefits of trees in the agricultural setting. A variety of NRCS Conservation Practice Standards are recommended to implement agroforestry practices in Hawai'i, including alley cropping, multi-story cropping, riparian forest buffers, silvopasture establishment, windbreak establishment, and windbreak restoration.<sup>2</sup> The support and implementation of these agroforestry practices can play an effective role in increasing Hawai'i's food sovereignty, as well as our food and climate security.

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<sup>1</sup> NRCS, Sustaining Agroforestry Systems for Farms and Ranches,  
<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/forestry/sustain/>

<sup>2</sup> NRCS, Agroforestry,  
<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/wa/technical/ecoscience/agronomy/?cid=nrcseprd1178607>

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Respectfully,

A handwritten signature in black ink, consisting of several overlapping loops and a trailing line, set against a light gray rectangular background.

Lauryn Rego  
Director, Hawai'i Center for Food Safety

**SB-2531-SD-1**

Submitted on: 2/20/2020 6:05:44 PM

Testimony for WAM on 2/25/2020 12:40:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Andrea Quinn	Individual	Support	No

Comments: