

OFFICE OF PLANNING STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

Statement of
LEO R. ASUNCION
Director, Office of Planning
before the
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
Thursday, February 8, 2018
8:30 AM
State Capitol, Conference Room 325

in consideration of
HB 2182
RELATING TO ENVIRONMENTAL PROTECTION.

Chair Lee, Vice Chair Lowen, and Members of the House Committee on Energy and Environmental Protection.

The Office of Planning (OP) respectfully offers comments on HB 2182, seeking to amend Act 33, SLH 2017, by: (1) making permanent the Carbon Farming Task Force and renaming it the Carbon Sequestration Task Force (Task Force); (2) aligning the Task Force's initiatives with the Climate Change Mitigation and Adaptation Commission (Climate Commission); and (3) expanding the Task Force's mission to include reducing urban temperatures via tree canopies and vegetation.

Given the broad scope of Act 33, which is currently to identify agricultural or aquacultural activities and best practices to provide carbon sequestration benefits to be used to establish a carbon farming certification and its growing charge under HB 2182, OP believes that a permanent Task Force is necessary.

The concept of aligning carbon sequestration through agricultural, aquacultural, agroforestry and forestry practices with broader climate initiatives championed by the Climate Commission, set forth in HB 2182, is a commendable one. The Task Force should be working in concert with the Climate Commission where goals of both the Task Force and the Climate Commission match.

OP agrees that it would benefit the Task Force to include: (1) the chairperson of the board of land and natural resources, given that many carbon sequestration opportunities abound within the board's jurisdiction; (2) the director of transportation, as the transportation sector gives rise to the need for carbon sequestration; and (3) an additional environmental nonprofit organization for strengthening public-private partnerships to find climate change solutions.

We note that the Center for Island Climate Adaptation and Policy (ICAP) at the University of Hawai‘i at Mānoa no longer exists and the center's work is being carried on through the William S. Richardson School of Law Environmental Law Program. Accordingly, OP recommends deleting the director of ICAP from the Task Force’s membership in HB 2182, and perhaps replacing with the director of the Environmental Law Program.

Given that HB 2182 proposes to broaden the mission of the Task Force through including urban canopies and liaising with the Climate Commission and be made permanent, the Task Force should be sufficiently funded, including a permanent position to accomplish its broad mandate.

Thank you for the opportunity to comment on this measure.

HB-2182

Submitted on: 2/7/2018 3:15:39 AM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	OCC Legislative Priorities	Support	No

Comments:

**PRESENTATION OF THE
OAHU COUNTY COMMITTEE ON LEGISLATIVE PRIORITIES
DEMOCRATIC PARTY OF HAWAII**

TO THE COMMITTEE ON ENERGY & ENVIRONMENTAL
PROTECTION THE HOUSE OF
REPRESENTATIVES

TWENTY-NINTH LEGISLATURE

REGULAR SESSION OF 2018

Thursday, February 8, 2018

8:30 a.m.

Hawaii State Capitol, Conference Room 325

RE: Testimony in Support of HB 2182, RELATING TO ENVIRONMENTAL PROTECTION

To the Honorable Chris Lee, Chair; the Honorable Nicole E. Lowen, Vice-Chair, and Members of the Committee on Energy & Environmental Protection:

Good morning. My name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") Legislative Priorities Committee of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on House Bill No. 2182 relating to environmental protection recommendations by the Carbon Sequestration Task Force, including but not limited to, adding trees or vegetation to expand the urban tree canopy.

The OCC Legislative Priorities Committee is in support of House Bill No. 2182 and is in favor of its passage.

House Bill No.2182 is in accord with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it (1) makes permanent the carbon farming task force established by Act 33, Session Laws of Hawaii 2017, and renames the task force the carbon sequestration task force; (2) aligns the State's clean energy and carbon sequestration efforts with climate initiative goals; (3) requires 1 of the members of the Carbon Sequestration Task Force to also be a member of the Climate Change Mitigation and Adaptation Commission; and (4) expands the mission of the Carbon Sequestration Task Force by requiring that the task force identify practices and policies to add trees or vegetation to expand the urban tree canopy.

Specifically, the DPH Platform provides that "[w]e believe in supporting best management practices in sustaining our environment and in increased citizen involvement. We support programs that encourage sustainable clean, efficient, creative and environmentally-friendly modes of transportation, recycling, and waste reduction.

The conservation, preservation, and restoration of Hawaii's natural resources are connected to the health and welfare of our people; therefore, we support the conservation and protection of our natural environment, which includes reducing our carbon footprint for the benefit of current and future generations.

We support the protection of our 'aina against destruction by corporate, government, or military usage and expect full restoration and reparation of environmental damage to handle current and future demands for water, we mu assess the current condition of our aquifer and take appropriate action to secure our freshwater resources.

We support the democratic participation of citizens and residents to protect (i) valuable coastal ecosystems and reefs from misuse and (ii) beaches for public use and recreation. The Hawai'i Coastal Zone Management (CZM) law, HRS Chapter 205A, currently provides for public participation in the management of coastal resources.

We believe in the vigorous enforcement of our environmental laws and increased public-private stewardships and citizen involvement in protecting our resources.

We know that climate change is a real threat to our islands and the world. We strongly urge our candidates and elected officials to take immediate action to mitigate and adapt to the consequences of climate change. This includes funding adaptation measures including coastal retreat, effective participation of indigenous people in climate change governance, and recognition that indigenous, local, and traditional ecological knowledge is key in climate change adaptation solutions." (Platform of the DPH, P. 7, Lines 413-439 (2016)).

Given that House Bill No. 2182 requires environmental protection recommendations by the Carbon Sequestration Task Force, including but not limited to, adding trees or vegetation to expand the urban tree canopy, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/s/ **Melodie Aduja**

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativepriorities@gmail.com, Tel.: (808) 258-8889

DAVID Y. IGE
GOVERNOR OF
HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the House Committee on
ENERGY & ENVIRONMENTAL PROTECTION**

**Thursday, February 8, 2018
8:30 AM
State Capitol, Conference Room 325**

**In consideration of
HOUSE BILL 2182
RELATING TO ENVIRONMENTAL PROTECTION**

House Bill 2182 proposes to convert the carbon farming task force established by Act 33, Session Laws of Hawaii 2017, into a permanent carbon sequestration task force and expand its mission to include identification of practices and policies that increase the urban tree canopy. Further, one task force member would also have to be a member of the Climate Change Mitigation and Adaptation Commission, and the State's clean energy and carbon sequestration efforts would be aligned with climate initiative goals. **The Department of Land and Natural Resources (Department) supports this initiative and provides the following comments.**

The Department is charged with the stewardship and management of the State's terrestrial and aquatic areas, including its natural resources. Climate change poses an imminent threat to these natural resources. As shown by research and as already practiced around the world, climate-smart agriculture, including agroforestry systems, can have multiple environmental, social, and economic benefits.

Among the different land uses, forest ecosystems, and long rotation systems, such as agroforests, permaculture, home gardens, and boundary plantings have the capacity to sequester greenhouse gases in plant biomass and in long-lasting wood products. Agroforestry, an integral part of historic native Hawaiian land use, was found to be one of the land uses with the most potential to reduce emissions from agriculture. Many agroforestry systems can also increase below-ground carbon storage, both in plant biomass and soil organic matter. In addition to higher rates of carbon storage, agroforestry systems provide benefits, such as improved soil protection and ameliorated microclimatic conditions due to their wind break effect, improved soil fertility

through higher content of soil organic matter and higher biological activity, improved nutrient cycling, reduced soil toxicities, more efficient use of solar energy, and reduced pests and diseases, by integrating trees and shrubs into agricultural practices. These benefits are consistent with the objectives of this measure.

Thank you for the opportunity to comment on this measure.

HB-2182

Submitted on: 2/6/2018 6:53:23 AM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Leslie Cole-Brooks	DER Council of Hawaii	Support	No

Comments:



SIERRA CLUB OF HAWAII
MĀLAMA I KA HONUA. *Cherish the Earth.*

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Thursday, February 8, 2018 8:30AM Conference Room 325

In SUPPORT of HB 2182 Relating to environmental protection

Aloha Chair Lee, Vice Chair Lowen and members of the Committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i, a member of the Common Good Coalition, **supports HB 2182**, which seeks to convert the carbon farming task force--established by Act 33, Session Laws of Hawaii 2017--into a permanent carbon *sequestration* task force and expand its mission to include identification of practices and policies that increase the urban tree canopy. The bill also proposes a requirement that one task force member also be a member of the Climate Change Mitigation and Adaptation Commission and the State's clean energy and carbon sequestration efforts would be aligned with climate initiative goals.

The Sierra Club of Hawai'i's central objectives are to preserve and protect clean air and clean water resources. Therefore, we support efforts across the state that steward and manage the terrestrial and aquatic regions and the natural resources offered by them. Climate change poses an imminent threat to the aforementioned natural resources. As illustrated by numerous peer-reviewed studies and practiced the world over, climate-smart agriculture, including agroforestry systems, can have multiple environmental, social, and economic benefits.

Among the different land uses, forest ecosystems and long rotation systems such as agroforests, permaculture, home gardens, and boundary plantings have the capacity to sequester greenhouse gases in plant biomass and in long-lasting wood products. Agroforestry plays an integral part in historic native Hawaiian land use and was found to be one of the land uses with most potential to reduce emissions from agriculture. Many agroforestry systems can also increase below-ground carbon storage, both in plant biomass and soil organic matter.

Integrating trees and shrubs into agricultural practices, which leads to higher rates of carbon storage, agroforestry systems provide a multitude of benefits such as:

- Improved soil protection and ameliorated microclimatic conditions due to their windbreak capabilities
- Improved soil fertility due to a higher composition of soil organic matter and increased biological activity
- Improved nutrient cycling
- Reduced soil toxicities
- Increased efficiency of solar energy intake
- Reduced incidence of pests and disease

These benefits are consistent with the objectives of this measure. Therefore, we urge the committee to pass HB 2182.

Thank you for the opportunity to provide testimony in support of this important measure.

LATE



HOUSE EEP COMMITTEE
Tuesday, February 8th, 2018 8:30 AM
In SUPPORT HB 2182 Relating to Climate Change

Dear Chair Luke and members of the committees:

On behalf of Surfrider Foundation's Oahu Chapter, I am writing in strong support of HB2182, which expands upon last years Carbon Farming Task Force in the state of Hawai'i.

Sustainable and healthy soils are a pertinent part of a future Hawai'i that reduces the impact that agriculture land is having on our oceans – the largest economic engine for our State. One of the most successful programs of Surfrider Oahu is its Ocean Friendly Gardens & Surfblitz program which teaches home owners, school children, and businesses how to create healthy soils that retain storm water runoff. Through organic soil enrichment, we can also take huge strides in creating land that fosters its ability to sequester carbon from our atmosphere. The combination of having soils that are healthy enough to be large sinks for pollution and to be sources of home grown food production, makes HB 2182 a key step forward in a sustainable Hawai'i that takes responsibility for its part in reducing the impact of climate change.

This bill will help to identify future possibilities in agriculture that lead to regenerative soils and increased abilities of our land to harness its true potential to mitigate the effects of climate change. The benefits of creating healthier soils for food growth also mean less reliance on fossil fuel based transportation to bring food to our islands. By harnessing the power of photosynthesis, plants convert carbon dioxide into energy and send as much as 40% of that carbon down through their roots to feed hungry microorganisms living in the soil.

The Food and Agriculture Organization of the United Nations (FAO) and the United States Natural Resources Conservation Service (NRCS) have both identified soil health and soil carbon as critical factors for climate resilience, food production, and climate change mitigation. Many of Hawai'i's soils are currently degraded, but we have the opportunity to reverse that trend.

There is great need to figure out ways that we can incentivize a Hawaii with regenerative soils through tax credits, composting programs, and the future of value added products from this industry. Taking initial steps in the form of a task force and information gathering is a prudent step towards this future. By using the collective knowledge of stakeholders, farmers, scientists, community groups, and citizens concerned with this issue we

will be able to formulate a program that creates a robust future for sustainable agriculture in Hawai'i.

By adding mechanisms to increase urban forest cover we also derive multiple benefits related to climate mitigation. Urban centers are often found to be multiple degrees hotter than the surrounding rural or forested areas and thus are often associated with large energy consumption just in cooling costs. This effect is known as the urban heat island effect. By focusing resources on renewing urban forestry and programs that involve living roofs and walls, cities across the world are seeing huge benefits in reduced urban heat, runoff from hard spaces, and energy consumption, while also having vegetation act as carbon sequestration.

Surfrider appreciates the legislature's willingness to tackle these issues with innovative solutions that will put Hawai'i at the forefront of global climate resiliency.

Mahalo for taking the time to consider this testimony,

Rafael Bergstrom
Oahu Chapter Coordinator, Surfrider Foundation.

HB-2182

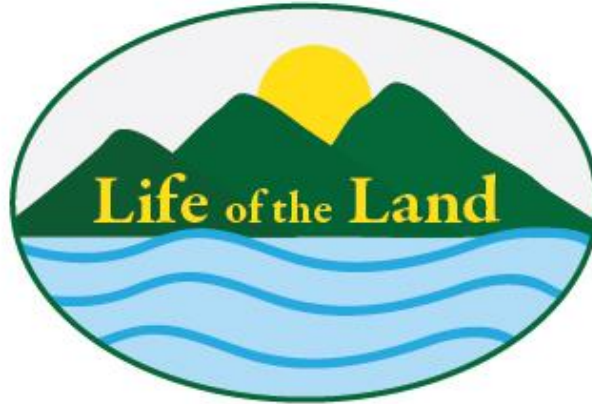
Submitted on: 2/6/2018 8:49:48 PM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Erica Scott	Cuddle Party	Support	No

Comments:

LATE



P.O. Box 37158, Honolulu, Hawai`i 96837-0158
Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Chris Lee, Chair

Rep. Nicole E. Lowen, Vice Chair

COMMITTEE ON AGRICULTURE

Rep. Richard P. Creagan, Chair

Rep. Lynn DeCoite, Vice Chair

Thursday, February 8, 2018

8:30 a.m.

Conference Room 325

HB 2182 RELATING TO ENVIRONMENTAL PROTECTION

SUPPORT

Aloha Chairs Lee, Vice Chairs Lowen, and Members of the Committees

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 47 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

The carbon farming task force should be made permanent, and at some point, receive additional funding.

To promote reliability, resilience, sustainability, and common sense, we must address energy, agriculture, water, and soil, in a holistic manner.

In the atmosphere-vegetation-top soil system, most of the carbon is in the soil. Those who focus only on carbon located in, or moved between, vegetation and the air, are missing a sizable piece of the picture.

Clean dirt is essential to agriculture. Dirt also led to great literature. Pearl Buck wrote about China in "The Good Earth." She won a Nobel Prize in 1938. She was in China because her husband was conducting the first systematic study of Chinese soils.

The health of soils is critical as climate change worsens.

Sequestration must mean that the total stored greenhouse gases have increased, rather than the situation where one account rose, and one fell, resulting in a net wash, but also a sequestration payment.

HECO proposed building a biofuel-powered generation in Campbell Industrial Park (CIP) in 2005.

That plant was built, however, to keep requiring renewable energy, without guaranteeing any increase in renewable energy, the biofuel-power Schofield Generation came with the agreement that the CIP generator would be converted to fossil fuel.

HECO originally proposed that ethanol be used in the CIP facility, and then switched to biodiesel. Life of the Land sponsored 16 lawyers, scientists and community witnesses. That proceeding led HECO to acknowledge that fossil fuels cause climate change.

Life of the Land sponsored a world-renown expert, Dr. Tadeusz W. Patzek. He noted that the three leading sources of greenhouse gases in the ethanol biofuel process are (1) conversion of plant material into ethanol; (2) oxidation of humus in the soil; and (3) the use of nitrogen fertilizer.

The remarkable thing about greenhouse gases is that first one must know how much is produced.

The last comprehensive study of Hawai'i greenhouse gas inventories is several years out-of-date (2007). The 2015 data will not be available until nearly 2019.

Mahalo,

Henry Curtis,
Executive Director

HB-2182

Submitted on: 2/6/2018 10:14:59 AM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez		Support	No

Comments:

HB-2182

Submitted on: 2/7/2018 12:54:35 PM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Margaret Maupin		Support	No

Comments:

HB-2182

Submitted on: 2/7/2018 2:22:40 PM

Testimony for EEP on 2/8/2018 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
pat gegen		Support	No

Comments: