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Statement of
LEO R. ASUNCION
Planning Program Administrator, Office of Planning
before the
HOUSE COMMITTEE ON FINANCE
Friday, February 22, 2019
11:00 AM
State Capitol, Conference Room 308

in consideration of
HB 1487, HD 1
RELATING TO CLIMATE CHANGE.

Chair Luke, Vice Chair Cullen, and Members of the House Committee on Finance.

The Office of Planning (OP) offers the following comments to HB 1487, HD1, which establishes a shoreline climate protection pilot project.

- Section 2(b) of this HB 1487, HD1 directs the Hawaii Climate Change Mitigation and Adaptation Commission (State Climate Commission) to plan a system of coastal protection for the low-lying topography of urban Honolulu between the Daniel K. Inouye Honolulu International Airport and Diamond Head State Monument.

The University of Hawaii Community Design Center (UHCDC) is currently undertaking an urban design study of the south shore of Oahu, which was funded by the Legislature in 2017. The *“South Shore Promenade and Coastal Open Space Network Study, Resilience and Connectivity by Design”* assesses past, present, and future shoreline conditions in urban Honolulu from Diamond Head to Pearl Harbor. This design study is slated to be completed in April 2020, with the submission of a final report to the Office of Planning.

The goal of the UHCDC study is to provide recommendations for future waterfront designs that are resilient to sea level rise related hazards. Should this measure move forward, OP urges the State Climate Commission to consult with the UHCDC to ensure there is no duplication of efforts.

- If managed retreat is to be considered during the shoreline climate protection pilot project, as envisioned by HB 1487, HD 1, OP further recommends that the State Climate Commission, and any of its partners, review the OP Coastal Zone Management Program’s Final Report on *Assessing the Feasibility and Implications of Managed Retreat Strategies for Vulnerable Coastal Areas*, available on the OP website

(www.planning.hawaii.gov). OP is committed to furthering the managed retreat analysis and working collaboratively with agency and stakeholder partners.

Thank you for the opportunity to comment on this matter.

DAVID Y. IGE
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the House Committee on
FINANCE**

**Friday, February 22, 2019
11: 00am
State Capitol, Conference Room 308**

**In consideration of
HOUSE BILL 1487, HOUSE DRAFT 1
RELATING TO CLIMATE CHANGE**

House Bill 1487, House Draft 1 proposes to establish the Honolulu Shoreline Climate Protection Pilot Project to develop a plan to protect urban Honolulu from the acute impacts of sea level rise, floodwater, storms, and other impacts of a rapidly changing climate. **The Department of Land and Natural Resources (Department) supports this measure provided that its passage does not replace or adversely impact priorities indicted in the Executive Supplemental Budget.**

Thank you for the opportunity to comment on this measure.

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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



HB 1487, HD 1, RELATING TO CLIMATE CHANGE

FEBRUARY 22, 2019 · HOUSE FINANCE
COMMITTEE · CHAIR REP. SYLVIA LUKE

POSITION: Support.

RATIONALE: IMUAlliance supports HB 1487, HD 1, relating to climate change, which establishes the Honolulu shoreline climate protection pilot project to develop a plan to protect urban Honolulu from the acute impacts of sea level rise, floodwater, storms, and other impacts of a rapidly changing climate.

According to a report produced by the Hawai'i Climate Change Mitigation and Adaptation Commission, global sea levels could rise more than three feet by 2100, with more recent projections showing this occurring as early as 2060. In turn, over the next 30 to 70 years, approximately 6,500 structures and 19,800 people statewide will be exposed to chronic flooding. Additionally, an estimated \$19 billion in economic loss would result from chronic flooding of land and structures located in exposure areas. Finally, approximately 38 miles of coastal roads and 550 cultural sites would be chronically flooded, on top of the 13 miles of beaches that have already been lost on Kaua'i, O'ahu, and Maui to erosion fronting shoreline armoring, like seawalls.

As we work to reduce carbon emissions and stave off the worst consequences of climate change, we must begin preparing for the adverse impact of sea level rise on our shores. We are now quantifying the speed at which we must act. We cannot continue to develop the 25,800-acre statewide sea level rise exposure area—one-third of which is designated for urban use—without risking massive structural damage and, potentially, great loss of life.

Testimony of The Nature Conservancy of Hawai'i
Supporting HB 1487 HD1 Relating to Climate Protection
House Committee on Finance
Friday, February 22, 2019, 11:00AM, Room 308

The Nature Conservancy of Hawai'i is a non-profit conservation organization dedicated to the preservation of the lands and waters upon which all life depends. The Conservancy has helped protect more than 200,000 acres of natural lands in Hawai'i and Palmyra Atoll. We manage 40,000 acres in 13 preserves and work in over 30 coastal communities to help protect the near-shore reefs, waters and fisheries of the main Hawaiian Islands. We forge partnership with government, private parties and communities to protect forests and coral reefs for their ecological values and the many benefits they provide to people.

The Nature Conservancy supports HB 1487 HD1 to establish a Honolulu shoreline climate protection pilot project.

We especially appreciate that this bill recognizes the potential for natural or green infrastructure to help mitigate impacts from climate change as we face increasing exposure to storms, flooding and sea level rise. Our island have environmental resources such as forests, wetlands, coral reefs, and other natural infrastructure that – if healthy, well-managed, and functioning – can help reduce emissions as well as mitigate the risks and related loss and damage from climate change.

For example, a team from The Nature Conservancy, University of California at Santa Cruz, Stanford University, and the US Geological Survey has developed biophysical models showing that coral reefs can provide an effective first line of defense for coastal flood reduction. These scientists have demonstrated that **healthy reefs can absorb up to 97% of wave energy**, protecting coastal properties from the power of the sea. Conversely, the loss of just one meter of reef could result in a doubling of the cost of damage.¹ And, two recent studies by the Conservancy and partners found that **natural climate solutions (i.e., conservation, restoration, and improved land management on natural and agricultural lands) can provide carbon storage and avoid greenhouse gas emissions equivalent to 21% of current U.S. annual emissions and 37% of cost-effective mitigation needed through 2030 toward holding global warming below 2°C.**^{2, 3}

As such, it is important to invest in nature-based infrastructure to protect built infrastructure and property.

Thank you for your support of this measure.

¹ Ferrario, Filippo, Michael W. Beck, et al. "The effectiveness of coral reefs for coastal hazard risk reduction and adaptation." *Nature Communications* volume5, Article number: 3794 (2014). www.nature.com/articles/ncomms4794

² Fargione, Joseph E., Steven Basset, et al. "Natural Climate Solutions for the United States.", *Science Advances* 2018, **4**: eaat1869, November 14, 2018. <http://advances.sciencemag.org/content/4/11/eaat1869>

³ Griscom, Bronson W., Justin Adams, et al. "Natural Climate Solutions." *Proceedings of the National Academy of Sciences*. October 31, 2017 114 (44) 11645-11650. www.pnas.org/content/114/44/11645



SIERRA CLUB OF HAWAI'I

MĀLAMA I KA HONUA. *Cherish the Earth.*

HOUSE COMMITTEE ON FINANCE

February 22, 2019 11:00 AM Room 308

In **SUPPORT** of **HB 1487 HD 1**: Relating to Climate Change

Aloha Chair Luke, Vice Chair Cullen, and members of the committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **supports HB 1487 HD 1**, which establishes and appropriates funds for the Honolulu shoreline climate protection pilot project to develop a plan to protect urban Honolulu from the acute impacts of sea level rise, floodwater, storms, and other impacts of a rapidly changing climate.

Climate Change impacts, especially sea level rise, create a new type of coastal hazard affecting coastal areas now and increasingly in the future. The “Hawai'i Sea Level Rise Vulnerability and Adaptation Report” prepared by the Hawai'i Climate Change Mitigation and Adaptation Commission, provides the first state-wide assessment of Hawaii's vulnerability to sea level rise by showing sea level rise exposure areas (SLR-XA) that are exposed to potential chronic flooding and land loss based on modeling passive flooding, annual high wave flooding, and coastal erosion. A summary of potential state-wide impacts from 3.2 feet of sea level rise (25,800 acres) are estimated to be \$19 billion in loss of land and structures, 38 miles of major roads flooded, 6,500 structures flooded, and 19,800 people displaced.¹

The coastline of urban Honolulu will be a particularly important and challenging area to protect in the face of rising seas and more frequent flooding and inland inundation. This bill will initiate and fund a pilot project to create a shoreline buffer from the Honolulu International Airport to the Diamond Head State Monument.

HB 1487 directs the Hawaii Climate Change Mitigation and Adaptation Commission to plan a system of coastal protection for the “low-lying topography” of urban Honolulu, designating in

¹ https://climateadaptation.hawaii.gov/wp-content/uploads/2017/12/SLR-Report_Dec2017.pdf

these areas different protection compartments and buffer zones. We would recommend language relating to “low-lying topography” to be replaced with “SLR-XA maps, as officially adopted by the Hawaii Climate Change Mitigation and Adaptation Commission”, to provide clarity on which areas should be the focus of the pilot project and ensure consistency with the findings of the Hawaii Sea Level Rise Vulnerability and Adaptation Report.

Thank you very much for this opportunity to provide testimony in **support of HB 1487 HD 1**.

Mahalo,

A handwritten signature in cursive script that reads "Jodi Malinoski".

Jodi Malinoski, Policy Advocate

HB-1487-HD-1

Submitted on: 2/21/2019 11:00:49 AM

Testimony for FIN on 2/22/2019 11:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:

LATE

HB-1487-HD-1

Submitted on: 2/22/2019 6:42:05 AM

Testimony for FIN on 2/22/2019 11:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1487. Hawaii's valuable coastlines are eroding due to rising sea levels which, at 3mm/year, is unprecedented in the geologic record.

Thank you for the opportunity to present my testimony.

Sincerely,

Andrea Quinn

Kihei