

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621
HONOLULU, HAWAII 96809

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
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
DAWN N. S. CHANG
Chairperson

Before the Senate Committee on
WAYS AND MEANS

Thursday, February 27, 2025
10:30 a.m.

State Capitol, Conference Room 211 & Videoconference

In consideration of
SENATE BILL 657, SENATE DRAFT 1
RELATING TO THE CENTER FOR CLIMATE RESILIENT DEVELOPMENT

Senate Bill 657 Senate Draft 1 proposes to appropriate funds for the School of Ocean and Earth Science and Technology within the University of Hawai'i to establish and operate a Center for Climate Resilient Development. **The Department of Land and Natural Resources (Department) supports this bill.**

The Department has a close working relationship with the School of Ocean and Earth Science and Technology (SOEST), and has used the sea level rise data and coastal erosion modeling to help develop the 2017 and 2022 State Sea Level Rise and Adaptation Reports as well as the resulting policies.

The work conducted at SOEST has largely been funded by federal grants, which can be subject to the influence of changing national priorities. Climate science and sea level rise modeling continue to advance. If the State wishes to continue to base its policies on science, the Department believes that we should invest directly in the development and support of scientific resources.

Mahalo for the opportunity to provide testimony in support of this bill.



UNIVERSITY OF HAWAII SYSTEM

‘ŌNAEHANA KULANUI O HAWAII

Legislative Testimony

Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the
Senate Committee on Ways and Means
Thursday, February 27, 2025 at 10:30 a.m.

By

Charles “Chip” Fletcher, PhD

Interim Dean

School of Ocean and Earth Science and Technology

And

Michael Bruno, PhD

Provost

University of Hawai'i at Mānoa

SB 657 SD1 – RELATING TO THE CENTER FOR CLIMATE RESILIENT DEVELOPMENT

Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Committee:

The University of Hawai'i School of Ocean and Earth Science and Technology (SOEST) strongly supports Senate Bill 657, which appropriates funds for SOEST to establish and operate a Center for Climate Resilient Development.

The proposal set forth in Senate Bill 657 to create a Center for Climate Resilient Development at the University of Hawai'i at Mānoa represents a crucial step in safeguarding the future of Hawai'i.

Building on the SOEST's proven expertise in climate modeling, the Center will provide actionable data on sea level rise, coastal erosion, wave flooding, groundwater inundation, and more—already indispensable to Hawai'i's real estate, environmental review, and county resilience laws. Further, laws that refer to the Sea Level Rise Exposure Area include the clause “or its successor,” contemplating updates to SOEST's modeling products that cannot be completed without adequate resources.¹

Currently, research at SOEST relies heavily on unstable federal grants, putting this vital work at risk without consistent funding. Recently, the Trump Administration implemented a pause on all federal grants, indicating a concerning trend for an administration that has shown limited interest in funding climate change-related research.

While Senate Bill 657 SD1 requests a one-time appropriation, SOEST advocates for an ongoing funding mechanism.

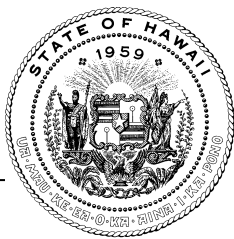
¹ See e.g. Haw. Rev. Stat. § 508D-15(a)(5).

With \$3 million annually, the Center will solidify Hawai'i's capacity to address evolving climate hazards, collaborate with communities statewide, and champion equitable, sustainable development to protect the islands' people, ecosystems, and future.

The utilization of general fund dollars for climate and sea level rise research offers significant long-term cost savings. While the initial investment may seem substantial, it pales in comparison to the future expenses that the state will inevitably face if it fails to adequately prepare for the impacts of climate change. Investing in research now allows for the development of data-driven strategies to mitigate these impacts, protecting critical infrastructure and minimizing damage from severe weather events. Every dollar spent proactively on research can save the state significantly more in the form of avoided future infrastructure repairs, emergency services costs, and the immeasurable cost of human suffering during climate-related disasters. This proactive approach is not only fiscally responsible but also demonstrates a commitment to the safety and well-being of Hawai'i's residents.

In conclusion, passing SB 657 SD1 and funding climate and sea level rise research at SOEST, whether through general fund, or through some other means, is a strategic investment in the state's future. This vital research will help to protect the natural beauty that attracts tourists and generates significant revenue, while also mitigating future costs associated with climate change impacts. This investment is not merely an expenditure, but a crucial step towards ensuring Hawai'i's environmental, economic, and social resilience in the face of an increasingly uncertain future.

We urge your passage of SB 657 SD1, provided its adoption does not impact priorities as indicated in our Board of Regents Approved Budget. Thank you for the opportunity to testify on this measure.



**STATE OF HAWAII
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT**

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARY ALICE EVANS
DIRECTOR

235 South Beretania Street, 6th Floor, Honolulu, Hawai'i 96813
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Statement of
MARY ALICE EVANS, Director

before the
SENATE COMMITTEE ON WAYS AND MEANS
Thursday, February 27, 2025, 10:30 AM
State Capitol, Conference Room 211

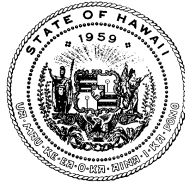
in consideration of
SB 657 SD 1
RELATING TO THE CENTER FOR CLIMATE RESILIENT DEVELOPMENT.

Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Senate Committee on Ways and Means:

The purpose of SB 657 SD 1 is to appropriate funds for the University of Hawai'i, School of Ocean and Earth Science and Technology (SOEST) to establish and operate a Center for Climate Resilient Development which will provide climate data and modeling on coastal hazards such as sea level rise, coastal erosion and groundwater inundation.

The Office of Planning and Sustainable Development (OPSD) **supports** this bill, provided that its passage does not replace or adversely impact administrative budget priorities, as the availability of up-to-date and reliable information is a critical component to ensuring that decision making along the shoreline is informed by science. Building on SOEST's proven expertise in climate modeling, the Center will provide actionable data on sea level rise, coastal erosion, wave flooding, groundwater inundation, and more—already indispensable to Hawai'i's real estate, environmental review, and county resilience laws. With dedicated funding, the Center will be able to provide foundational data for planning and managing our coastal areas.

Thank you for the opportunity to testify on this measure.



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

WRITTEN
TESTIMONY

**Testimony in SUPPORT of SB0657
RELATING TO THE CENTER FOR CLIMATE RESILIENT DEVELOPMENT.**

COMMITTEE ON WAYS AND MEANS

Senator Donovan M. Dela Cruz, Chair
Senator Sharon Y. Moriwaki, Vice Chair

Hearing Date: 2/27/2025

Room Number: 221

1 **Fiscal Implications:** This measure will impact the priorities identified in the Governor's
2 Executive Budget Request for the Department of Health's (Department) appropriations and
3 personnel priorities.

4 **Department Testimony:** The Department supports bill SB0657 and recognizes that the
5 changing climate is a worldwide environmental health problem that directly impacts the health
6 and safety of Hawaii's people, communities, and natural environment. Potential human health
7 effects resulting from climate change are broad reaching and include dangers from increased
8 natural disasters and flooding, changing vector-borne infectious diseases and food related
9 infections, as well as impacts on mental health and well-being. Hawaii has been a national leader
10 in taking steps to increase resilience and mitigate the negative impacts of climate change.
11 However, much of these efforts have been directed at planning and infrastructure and have not
12 focused on preventing the negative impacts of climate change on the community.

13
14 The need to build out further capacity throughout Hawai'i to address climate change impact to
15 the environment and community resiliency is of the utmost importance. School of Ocean and
16 Earth Science and Technology has been an integral partner to the Department for providing
17 modeling on flooding projections, heat projections, hurricane storm surge and various others that

1 are utilized for data to action. The creation of a center that provides education for the community
2 and recommendations for projects would bolster the state's efforts to further protect the
3 community from climate change hazards.

4

5 Thank you for the opportunity to testify on this measure.



Ways and Means Committee Feb 27, 2025;

10:30am

Room 211

Testimony of the Hawai'i Climate Change and Health Working Group

In Support of SB 657 SD1

Aloha Chair Dela Cruz, Vice Chair Moriwaki and Members of the Committee,

The Climate Change and Health Working Group **strongly supports SB 657 SD1** for the proposed bill to establish and operate the Center for Climate Resilient Development at the School of Ocean and Earth Science and Technology (SOEST).

Climate change, as outlined in the bill, is one of the most pertinent challenges facing Hawaii and other Pacific islands. These regions are at the forefront and stand to lose the most due to rising sea levels, coastal flooding, increased hurricane strength and frequency, and wildfire devastations, all of which will be exacerbated by Climate Change. These events disproportionately impact vulnerable communities, whose livelihoods, identities, ancestry, and ways of life are intricately tied to the land, water, and natural resources that are at risk of being lost.

Further, climate hazards are health hazards. Sea level rise and flooding brings sewage, bacteria, and other pathogens into contact with people, causing infections. Wildfires and hurricanes cause immediate morbidity and mortality, but also continue to put vulnerable people at risk days and weeks after an event as they attempt to seek healthcare or refill prescriptions when roads and buildings are burned or flooded or moldy.

Establishing a Center for Climate Resilient Development at SOEST will allow for addressing these vulnerabilities and potential losses in a scientifically evidence-based way, while ensuring that approaches remain community-centered and community-specific. Leveraging the expertise at SOEST offers a solid foundation for finding solutions. Furthermore, SOEST's focus on equity is integral in ensuring that all vulnerable communities are acknowledged, accounted for, and protected in the face of growing solutions to Climate Change.

The CCHWG strongly supports this bill because the state is in critical need of solutions and models for addressing Climate Change, grounded in science, community, and equity for all.

Mahalo nui for your consideration of this important measure.

Sincerely,

The Climate Change and Health Working Group



Email: communications@uluPono.com

SENATE COMMITTEE ON WAYS AND MEANS
Thursday, February 27, 2025 — 10:30 a.m.

UluPono Initiative supports SB 657 SD 1, Relating to Center for Climate Resilient Development.

Dear Chair Dela Cruz and Members of the Committee:

My name is Mariah Yoshizu, and I am the Government Affairs Associate at UluPono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

UluPono supports SB 657 SD 1, which appropriates funds for the School of Ocean and Earth Science and Technology (SOEST) within the University of Hawai'i at Manoa to establish and operate a Center for Climate Resilient Development.

Hawai'i faces unique and pressing challenges from climate change that require coordinated, science-based solutions. The proposed Center would fill a considerable gap by providing dedicated capacity for community-focused climate resilience planning.

SOEST is ideally positioned to house this Center, given its established expertise in climate modeling and track record of working directly with communities. Its existing modeling capabilities are already essential to the state's climate adaptation efforts, including:

- Mandatory sea level rise disclosure requirements for real estate transactions
- Environmental review processes
- County-level shoreline setback and special management area regulations

However, this vital research currently relies on vulnerable soft money funding. By providing stable state funding of \$3 million annually, this bill would protect and enhance Hawai'i's climate science capabilities at a time when federal support for climate research faces uncertainty.

Thank you for the opportunity to testify.

Respectfully,

Mariah Yoshizu
Government Affairs Associate

Investing in a Sustainable Hawai'i



February 25, 2025

Senate Committee on Ways and Means
Hawai'i State Legislature
Via Electronic Transmission

Re: Testimony in SUPPORT of SB 657, Relating to the Center for Climate Resilient Development
Hearing: Thursday, February 27, 2025, 10:30 AM CR 211

To: The Honorable Chair Dela Cruz, Vice Chair Moriwaki and members of the committee

Surfrider Foundation Hawai'i Region strongly supports Senate Bill 657 which proposes to establish a Center for Climate Resilient Development at the University of Hawai'i at Mānoa.

Surfrider Foundation is a grassroots activist network dedicated to the protection of our oceans, waves, and beaches. Surfrider Foundation Hawai'i Region supports SB657 because Hawai'i's coastal communities are particularly vulnerable to the impacts of climate change and sea level rise. Sea level rise threatens coastal communities, infrastructure, and ecosystems, including world-renowned beaches and surf breaks. Accurate projections of sea level rise impacts are crucial for developing effective adaptation strategies, such as managed retreat and infrastructure improvements.

Surfrider Foundation works closely with researchers at the School of Ocean and Earth Science and Technology (SOEST) to understand their modeling projects and interpret how to best advocate for the resilience for Hawai'i's beaches. SOEST research informs policy decisions and land management practices, helping to protect Hawaii's coastal resources for future generations.

As example, SOEST members play a key role in our North Shore Coastal Resilience Working Group (NSCRWG), a community-based effort to identify proactive solutions to combat chronic coastal erosion and beach loss along the North Shore of O‘ahu. In 2022, SOEST SLR-XA projections were a critical point of discussion and formed much of the recommended management strategies. We are reinstating the NSCRWG this year and SOEST will again be included and looked to for their expertise in climate modeling. The proposed Center will provide actionable data on sea level rise, coastal erosion, wave flooding, groundwater inundation, and more which will be instrumental knowledge to successful coastal management strategies.

Surfrider Foundation is concerned about the climate crisis in Hawai‘i because sea level is projected to rise by several feet in Hawai‘i by the end of the century, underscoring the urgent need to prioritize community resilience. In order to prepare our keiki for the climate of tomorrow, we need accurate projections of future sea level rise and climate impacts in Hawai‘i’s communities and SB657 does just that.

In summary, Surfrider Foundation strongly supports SB657 and appreciates the Committees’ thorough consideration of the bill and the positive impact it will have for Hawai‘i’s resilience.

Mahalo for your time and the opportunity to provide testimony.

Sincerely,

Hanna Lilley
Hawai‘i Regional Manager
Surfrider Foundation

SB-657-SD-1

Submitted on: 2/22/2025 10:44:58 AM

Testimony for WAM on 2/27/2025 10:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

I support SB657. The need for detailed planning for climate change mitigation is becoming ever more urgent.

SB-657-SD-1

Submitted on: 2/22/2025 2:05:43 PM

Testimony for WAM on 2/27/2025 10:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Elizabeth Kiefer	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Dela Cruz, Vice Chair Moriwaki and Members of the Committee,

My name is Dr. Elizabeth Kiefer and I **strongly support SB 657 SD1** for the proposed bill to establish and operate the Center for Climate Resilient Development at the School of Ocean and Earth Science and Technology (SOEST).

Climate change, as outlined in the bill, is one of the most pertinent challenges facing Hawaii and other Pacific islands. These regions are at the forefront and stand to lose the most due to rising sea levels, coastal flooding, increased hurricane strength and frequency, and wildfire devastations, all of which will be exacerbated by Climate Change. These events disproportionately impact vulnerable communities, whose livelihoods, identities, ancestry, and ways of life are intricately tied to the land, water, and natural resources that are at risk of being lost.

Further, climate hazards are health hazards. Sea level rise and flooding brings sewage, bacteria, and other pathogens into contact with people, causing infections. Wildfires and hurricanes cause immediate morbidity and mortality, but also continue to put vulnerable people at risk days and weeks after an event as they attempt to seek healthcare or refill prescriptions when roads and buildings are burned or flooded or moldy.

Establishing a Center for Climate Resilient Development at SOEST will allow for addressing these vulnerabilities and potential losses in a scientifically evidence-based way, while ensuring that approaches remain community-centered and community-specific. Leveraging the expertise at SOEST offers a solid foundation for finding solutions. Furthermore, SOEST's focus on equity is integral in ensuring that all vulnerable communities are acknowledged, accounted for, and protected in the face of growing solutions to Climate Change.

I strongly support this bill because the state is in critical need of solutions and models for addressing Climate Change, grounded in science, community, and equity for all.

The climate crisis is a health crisis.

Mahalo nui for your consideration of this important measure.

Sincerely,

Elizabeth Kiefer, MD MPH

SB-657-SD-1

Submitted on: 2/22/2025 2:22:03 PM

Testimony for WAM on 2/27/2025 10:30:00 AM

Submitted By	Organization	Testifier Position	Testify
James McCallen	Individual	Support	Written Testimony Only

Comments:

In Support of SB 657 SD1

Aloha Chair Dela Cruz, Vice Chair Moriwaki and Members of the Committee,

My name is James McCallen and I am a public health professional in **strong support of SB 657 SD1** for the proposed bill to establish and operate the Center for Climate Resilient Development at the School of Ocean and Earth Science and Technology (SOEST).

Climate change, as outlined in the bill, is one of the most pertinent challenges facing Hawaii and other Pacific islands. These regions are at the forefront and stand to lose the most due to rising sea levels, coastal flooding, increased hurricane strength and frequency, and wildfire devastations, all of which will be exacerbated by Climate Change. These events disproportionately impact vulnerable communities, whose livelihoods, identities, ancestry, and ways of life are intricately tied to the land, water, and natural resources that are at risk of being lost.

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Establishing a Center for Climate Resilient Development at SOEST will allow for addressing these vulnerabilities and potential losses in a scientifically evidence-based way, while ensuring that approaches remain community-centered and community-specific. Leveraging the expertise at SOEST offers a solid foundation for finding solutions. Furthermore, SOEST's focus on equity is integral in ensuring that all vulnerable communities are acknowledged, accounted for, and protected in the face of growing solutions to Climate Change.

I strongly support this bill because the state is in critical need of solutions and models for addressing Climate Change, grounded in science, community, and equity for all.

The climate crisis is a health crisis.

Mahalo nui for your consideration of this important measure.

Sincerely,

James McCallen, MPH

Testimony in Support of SB657

To: the Higher Education and the Arts / Agriculture and Environment Committee, and the Ways and Means Committee

Hearing Date: 2-27-25

Testifier: Mehana Kapoi

Position: Support

Aloha Chair, Vice Chair, and Members of the Committee,

My Name is Mehana Kapoi, and I am a student at the University of Hawaii at Manoa. As a Native Hawaiian, I have a deeply personal connection to the land, and the ocean, and the ways in which that relationship shapes Hawaiian Culture. I am testifying in strong support of the proposed bill to establish and operate the Center of Climate Resilient Development at the School of Ocean and Earth Science and Technology at UH Mānoa.

Climate Change, as outlined in the bill, is one of the most pertinent challenges facing Hawaii. Hawaii and other pacific islands are at the forefront, and stand to lose the most in the face of rising sea levels, coastal flooding, uptick in hurricane strength and frequency, and wildfire devastations, all of which would be exacerbated by Climate Change. These events also disproportionately impact vulnerable communities within Hawaii including Native Hawaiians whose livelihoods, identities, ancestry and ways of being are intricately intertwined to the land, water, and natural resources that Hawaii stands to lose.

I believe that establishing a Center for Climate Resilient Development at SOEST will allow us to address these vulnerabilities and potential losses in a scientific evidence-based way, while also ensuring that the approaches that are being taken are community-centered and community-specific. Leveraging the expertise already present in SOEST at UH Mānoa would offer a good basis to find solutions. Furthermore, SOEST, and their focus on equity is integral in ensuring that Native Hawaiians, and other vulnerable communities are being acknowledged, accounted for, and protected in the midst of growing solutions to Climate Change.

I strongly support this bill because Hawai'i is in critical need of solutions and models in the face of Climate Change that are based in science, community, and equity for all people, including Native Hawaiians like myself.

Mahalo nui for your consideration of this important measure.

Sincerely,
Mehana Kapoi

mehana.kapoi@gmail.com

Undergraduate at the University of Hawaii Mānoa

SB-657-SD-1

Submitted on: 2/24/2025 12:52:17 PM

Testimony for WAM on 2/27/2025 10:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Emily Werner	Individual	Support	Written Testimony Only

Comments:

In Support of SB 657 SD1**Aloha Chair Dela Cruz, Vice Chair Moriwaki and Members of the Committee,**

My name is Emily Werner. I am a student at University of Hawaii Manoa, pursuing a degree in Sustainability and Political Science. I am also a member of the Climate Change and Health Working Group.

I strongly support SB 657 SD1 for the proposed bill to establish and operate the Center for Climate Resilient Development at the School of Ocean and Earth Science and Technology (SOEST).

Climate change, as outlined in the bill, is one of the most pertinent challenges facing Hawaii and other Pacific islands. These regions are at the forefront and stand to lose the most due to rising sea levels, coastal flooding, increased hurricane strength and frequency, and wildfire devastations, all of which will be exacerbated by Climate Change. These events disproportionately impact vulnerable communities, whose livelihoods, identities, ancestry, and ways of life are intricately tied to the land, water, and natural resources that are at risk of being lost.

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Establishing a Center for Climate Resilient Development at SOEST will allow for addressing these vulnerabilities and potential losses in a scientifically evidence-based way, while ensuring that approaches remain community-centered and community-specific. Leveraging the expertise at SOEST offers a solid foundation for finding solutions. Furthermore, SOEST's focus on equity is integral in ensuring that all vulnerable communities are acknowledged, accounted for, and protected in the face of growing solutions to Climate Change.

I strongly support this bill because the state is in critical need of solutions and models for addressing Climate Change, grounded in science, community, and equity for all.

Mahalo nui for your consideration of this important measure.

Sincerely,
Emily Werner

SB-657-SD-1

Submitted on: 2/25/2025 5:19:03 PM

Testimony for WAM on 2/27/2025 10:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Jacob Wiencek	Individual	Support	Written Testimony Only

Comments:

Aloha Committee Members,

Hawaii is at the forefront of climate change. Our state is already feeling the negative impacts from worsening natural disasters, increasing heat, and water/ocean pollution. Preparing for and studying the cause and effects of climate change is non-negotiable for Hawaii. I believe this bill will help us lay a stronger foundation for increasing our understanding of the impacts of climate change.

I urge this Committee to SUPPORT this bill!