

EXECUTIVE CHAMBERS KE KE'ENA O KE KIA'ĀINA

JOSH GREEN, M.D. GOVERNOR KE KIA'ĀINA

## Senate Committees on Agriculture and Environment and Water and Land Wednesday, March 22, 2023 1:00 p.m. State Capitol, Conference Room 224 and Videoconference

### In Support H.B. No. 952, H.D. 1, Relating to Natural Resources

Chairs Gabbard and Inouye, Vice Chairs Richards and Elefante, and members of the Senate Committees on Agriculture and Environment and Water and Land:

The Office of the Governor supports H.B. No. 952, H.D. 1, Relating to Natural Resources. The dire effects of climate change are among us. As we know, hotter temperatures, severe storms, increased drought and flooding, stronger hurricanes, and warming, rising sea levels are some of the effects of climate change being felt not only globally and nationally, but here in our State. The effects of climate change pose pressing and immediate challenges for our way of life and survival. Addressing climate change is one of the priorities of this Administration.

Consider this: According to the State of Hawaii Climate Change Portal, the detrimental effects of climate change in the State include:

- 13 miles of beaches (10 percent of Oahu's beaches) around the State already lost, and 70 percent of beaches around the State currently threatened;
- Flooding is worsening further inland. Seawater flows backwards from storm drains, leading to pools of dirty, contaminated, brackish water where we live;
- 1.5 million acres of native forests are lost. Climate change and forest loss are working together to make Hawaii drier and hotter;
- Warmer waters are harming sea life. Warmer water means less oxygen in the water. Decreasing oxygen levels makes it harder for corals and marine life to survive and takes a toll on tourism and fishing industries that rely on them;
- Hawaii's average temperature could increase as much as 5°F to 7.5°F by 2100;

Testimony of Office of the Governor H.B. No. 952, H.D. 1 March 22, 2023 Page 2

- Rainfall has declined significantly over the past 30 years, and average yearly rainfall is declining across all islands; and
- Less rainfall will put our drinking water supply at risk.

These grim facts demonstrate that climate change is an immediate threat among us and requires a strong commitment of resources to combat its detrimental effects. This measure dedicates essential funds to stem the effects of climate change by appropriating funds to protect, manage, and restore Hawaii's natural resources.

Thank you for the opportunity to provide testimony on this measure.

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

SYLVIA LUKE LIEUTENANT GOVERNOR | KA HOPE KIA'ÄINA





STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I DEPARTMENT OF LAND AND NATURAL RESOURCES KA 'OIHANA KUMUWAIWAI 'ĀINA P.O. BOX 621 HONOLULU, HAWAII 96809

> Testimony of DAWN N. S. CHANG Chairperson

### Before the Senate Committees on WATER AND LAND and AGRICULTURE AND ENVIRONMENT

Wednesday, March 22, 2023 1:00 p.m. State Capitol, Conference Room 224 & Videoconference

### In consideration of HOUSE BILL 952, HOUSE DRAFT 1 RELATING TO NATURAL RESOURCES

House Bill 952, House Draft 1 proposes to allocate funds to the Department of Land and Natural Resources (Department) to address the impacts of climate change in the State. **The Department supports the bill.** 

The impacts of a changing climate on the natural and cultural resources of Hawai'i will be widespread, and the legislature has recognized that the State is facing a climate emergency. Rising sea levels threaten critical coastal infrastructure, warmer waters and acidifying oceans will threaten coral reefs, and changing rainfall patterns harm our native forests. Coral reefs and native forests are integral to Hawaii's traditional identify, and maintaining healthy natural environments from mauka to makai will help mitigate climate change's impacts.

A University of Hawai'i study, for example, examined the various services provided by the Ko'olau forest on O'ahu, including drinking water recharge, flood prevention, water quality, carbon storage, biodiversity, cultural, aesthetic, recreational, and commercial values. These services were calculated to have a net present value of between \$7.4 and \$14 billion. Coral reefs are estimated to protect \$836 million each year in averted damages to property and economic activity in Hawai'i.

Recent federal legislation such as the Infrastructure Investment and Jobs Act, Inflation Reduction Act of 2022, and the Restoring Resilient Reefs Act of 2021, as well as the proposed Recovering America's Wildlife Act, will result in record amounts of funding available for natural resource protection. The

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

> LAURA H.E. KAAKUA FIRST DEPUTY

M. KALEO MANUEL DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES BOATING AND OCEAN RECREATION BUREAU OF CONVEYANCES COMMISSION ON WATER RESOURCE MANAGEMENT CONSERVATION AND CASTAL LANDS CONSERVATION AND RESOURCES ENFORCEMENT ENGINEERING FORESTRY AND WILDLIFE HISTORIC PRESERVATION KAHOOLAWE ISLAND RESERVE COMMISSION LAND STATE PARKS Bipartisan Infrastructure Bill includes a variety of climate-specific programs and funding opportunities. In order to leverage these federal funds state agencies will need access to matching funds.

House Bill 952, House Draft 1 will increase the Department's capacity to fully partner in federal programs designed to protect the State's natural resources, including native forests, shoreline habitats, wetlands and streams, and offshore reefs. It will also permit the Department to commit staff and resources to partner with other State agencies engaged in climate impact mitigation, including but not limited to the State Department of Transportation's work on protecting our coastal highways, the Office of Planning and Sustainable Development's work on managed retreat and in conducting vulnerability assessments and the individual counties' work on coastal zone restoration.

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



STATE OF HAWAI'I

HAWAI'I CLIMATE CHANGE MITIGATION & ADAPTATION

COMMISSION

POST OFFICE BOX 621

HONOLULU, HAWAII 96809

Co-Chairs: Chair, DLNR Director, OPSD

Commissioners: Chair, Senate AEN Chair, Senate WTL Chair, House EEP Chair House WAL Chairperson, HTA Chairperson, DOA CEO, OHA Chairperson, DHHL Director, DBEDT Director, DOT Director, DOH Chairperson, DOE Director, C+C DPP Director, Maui DP Director, Hawai'i DP Director, Kaua'i DP The Adjutant General Manager, CZM

# Testimony of Testimony of Coordinator, Hawai'i Climate Change Mitigation and Adaptation Commission

### Before the Senate Committees on AGRICULTURE AND THE ENVIRONMENT & WATER AND LAND

### Wednesday, March 22, 2023 1:00 PM State Capitol, Via Videoconference, Conference Room 224

### In consideration of HOUSE BILL 952, HOUSE DRAFT 1 RELATING TO NATURAL RESOURCES

House Bill 952, House Draft 1 proposes to appropriate funds to the Department of Land and Natural Resources (Department) to address the impacts of climate change in the State. The Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) <u>supports</u> this measure.

The Hawai'i Climate Change Mitigation and Adaptation Commission consists of a multijurisdictional effort between 20 different departments, committees, and counties. Natural lands such as forests, watersheds and our reefs are vital for the state to reach our climate and food security goals. Hawai'i's forests are our only carbon sink. Half of Hawaii's forests have already been lost. If we are to be carbon net negative by 2045 as mandated by Act 15 (2018) we will need to protect our existing forests to protect the carbon stored in them and expand the forest footprint to capture additional carbon.

Our native forests are also needed for water security. Impacts of climate change such as droughts and rain bombs are already occurring. Without vegetation and forest cover, most of our islands' rainfall would quickly run off unused into the ocean. Instead, the forest buffers the impact of heavy rains. Even without rain, Hawaii's native forests can absorb moisture from passing clouds that condense on the thick vegetation. Intercepting cloud drip increases water capture by as much as 30% of rainfall, and increases groundwater re-supply by 10-15%.

Coral reefs provide habitat for our nearshore fisheries, protect coasts from waves and storms, and support tourism and fishing industries worth billions of dollars. Coral reefs are also fundamental to the fabric of local communities, providing a source of food, materials and traditional activities. In a recent report by USGS, Hawaii's coral reefs were valued at \$863

million per year.

Wetlands help purify our water. During major rain events that due to climate change are expected to increase in frequency and intensity, a wetland can trap and allow pollutants and toxins to settle before they reach the ocean. In the same way they can help us control sediment and store flood water. Wetland habitats that also absorb carbon and can act as buffers to sea level rise.

Historically natural lands have been underinvested in. The United Nations Intergovernmental Panel on Climate Change (IPCC) 2022 report highlights the importance of nature as a climate solution. Three of the five most effective strategies for mitigating carbon emissions are all natural climate solutions. The enactment of the green fee would be a game changer for the state, not only for our natural and cultural environment but for the survival of the people of Hawai'i.

Mahalo for the opportunity to testify on this measure.

JOSH GREEN, M.D. GOVERNOR KE KIA'ĀINA



KENNETH S. HARA DIRECTOR OF EMERGENCY MANAGEMENT

JAMES DS. BARROS ADMINISTRATOR OF EMERGENCY MANAGEMENT

STATE OF HAWAII KA MOKU'ĀINA O HAWAI'I DEPARTMENT OF DEFENSE KA 'OIHANA PILI KAUA HAWAI'I EMERGENCY MANAGEMENT AGENCY 4204 DIAMOND HEAD ROAD HONOLULU, HAWAI'I 96816-4420

### STATE OF HAWAI'I DEPARTMENT OF DEFENSE HAWAI'I EMERGENCY MANAGEMENT AGENCY

### TESTIMONY ON HOUSE BILL 952 HD1 RELATING TO NATURAL RESOURCES

### BEFORE THE SENATE COMMITTEES ON WATER AND LAND AND AGRICULTURE AND ENVIRONMENT

ΒY

### JAMES DS. BARROS ADMINISTRATOR HAWAI'I EMERGENCY MANAGEMENT AGENCY

### MARCH 20, 2023

Aloha Chair Inouye, Chair Gabbard, Vice-Chair Elefante, Vice-Chair Richards, and members of the committees:

I am James Barros, Administrator of the Hawai'i Emergency Management Agency (HI-EMA).

HI-EMA provides written testimony in **SUPPORT** of HB952 HD1.

This bill would appropriate funds to the Department of Land and Natural Resources to address the impacts of climate change in Hawai'i.

The latest science continues to support the projections that climate change will increase the risk of flooding, coastal inundation, storm surge, prolonged drought, and other hazards to Hawai'i. This growing risk increases the urgency and need for mitigation measures.

HI-EMA supports steps that increase the availability of resources to mitigate against these hazards, especially those that potentially can be used to leverage federal funds to address the problems.

The agency would note that the stated purpose of the appropriation to "protect" natural resources is closely aligned with the existing hazard mitigation activities by the State and Counties. HI-EMA respectfully requests that the committee consider adding language to

encourage that DLNR's spending from this appropriation be aligned with the hazard mitigation framework, including the State Hazard Mitigation Plan which HI-EMA is updating in 2023.

We support this bill provided that its passage does not replace or adversely impact priorities indicated in the Governor's budget.

Thank you for the opportunity to provide testimony.

James Barros: james.barros@hawaii.gov; 808-733-4300



# UNIVERSITY OF HAWAI'I SYSTEM 'ÕNAEHANA KULANUI O HAWAI'I

Legislative Testimony Hōʻike Manaʻo I Mua O Ka ʻAhaʻōlelo

Testimony Presented Before the Senate Committee on Water and Land Senate Committee on Agriculture and Environment Wednesday, March 22, 2023 at 1:00 p.m. By Charles "Chip" Fletcher, PhD Dean, School of Ocean and Earth Science and Technology And Darren T. Lerner, PhD Director, Sea Grant College Program, School of Ocean and Earth Science and Technology And Michael Bruno, Provost University of Hawai'i at Mānoa

HB 952 HD1 - RELATING TO NATURAL RESOURCES

Chairs Inouye and Gabbard, Vice Chairs Elefante and Richards, and Members of the Committees:

The University of Hawai'i Climate Resilience Collaborative (CRC) and Sea Grant College Program (Hawai'i Sea Grant) **support House Bill 952 HD1.** 

This measure appropriates funds to the Department of Land and Natural Resources to address the impacts of climate change in the State.

Natural resource protection and interagency coordination are critical to the State's success in mitigating and adaptation to climate change. The Department of Land and Natural Resources has the lead in protecting natural and cultural resources in the public trust, which support community vitality and resilience in Hawai'i. Threats to Hawai'i's native forests and watersheds, beaches and wetlands, and coral reef ecosystems are increasing with climate change. It is crucial that the department be adequately funded to meet the present and growing challenges through its divisions and the Climate Change Mitigation and Adaptation Commission.

CRC is a multi-investigator research project at the University of Hawai'i at Mānoa focused on sea level rise adaptation and climate resilience. CRC is updating coastal models that project the impacts of sea level rise.

Hawai'i Sea Grant's mission is to provide integrated research, extension, and education activities that increase understanding and use of ocean and coastal resources of the

Hawaiian and Pacific Islands and support the informed personal, policy, and management decisions that are integral to realizing this vision. Hawai'i Sea Grant is part of a national network of 34 university-based programs associated with the National Oceanic and Atmospheric Administration that promote better understanding, conservation, and use of coastal resources.

CRC and Hawai'i Sea Grant would be happy to provide updated sea level rise data and projections to the Committee or any lawmaker upon request.

### CRC and Hawai'i Sea Grant support House Bill 956 HD1.

Thank you for the opportunity to testify on this measure.

### HB-952-HD-1 Submitted on: 3/18/2023 4:01:10 PM

Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
John Latkiewicz	Testifying for Kauai Climate Action Coalition/Carpture the Carbon	Support	Written Testimony Only

Comments:

The climate crisis is upon us. Policy and funding need to directed to all agencies with climate change as part of their planning effort. For that reason, please support HB952 which appropriates funds to the department of land and natural resources to address the impacts of climate change in the State.



The Nature Conservancy, Hawaiʻi and Palmyra 923 Nuʻuanu Avenue Honolulu, HI 96817 Tel (808) 537-4508 Fax (808) 545-2019 nature.org/HawaiiPalmyra

### Testimony of The Nature Conservancy Supporting HB 952 HD1, Relating to Natural Resources.

### Committee on Agriculture and Environment Committee on Water and Land March 22, 2023, 1:00 pm Conference Room 224 via Videoconference

Aloha Chairs Gabbard and Inouye, Vice Chairs Richards and Elefante, and Members of the Committees:

**The Nature Conservancy (TNC) supports HB 952 HD1**, Relating Natural Resources, which would appropriate funds to the Department of Land and Natural Resources (DLNR) to address the impacts of climate change in the State.

Hawai'i's environment is the engine that drives our economy and a natural, recreational, and cultural treasure that supports our island lifestyle and livelihoods. At the same time, our native forests and nearshore reefs and fisheries are threatened by stresses including drought, overuse, sedimentation, and invasive species, all of which are exacerbated by climate change. DLNR is charged with protecting our natural environment, and climate change continues to increase the needs for funding to meet the Department's mission.

TNC works to protect and manage the natural systems that sequester carbon, provide our fresh water, and protect our coastlines; all of which reduce the impacts of climate change. However, to fully address the growing impacts of our changing climate, we need bold action. Nature can play a vital role in pulling carbon out of the atmosphere and making our islands and oceans more resilient, but we need to support nature and fund the management of our key ecosystems. This bill will help to support those efforts with complementary efforts through DLNR. The bill will also help to take advantage of Federal programs which require matching funds.

As Hawai'i and the world continues to face the impacts of climate change, support for sustained funding at a scale to meet the needs for conservation and management will be necessary for future generations to benefit from the natural resources that we and past generations have. It is our kuleana to care for the resources to pass on to the future. This bill will help to fulfill that kuleana.

Mahalo for the opportunity to provide testimony on HB 952 HD1.

The Nature Conservancy of Hawai'i and Palmyra is a non-profit 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 nature preserves and work in over 50 coastal communities to help protect and restore the nearshore reefs and fisheries of the main Hawaiian Islands. We forge partnerships with government, private parties, and communities to people.

#### BOARD OF TRUSTEES

Duke E. Ah Moo Paul D. Alston Kris Billeter Dr. C. Tana Burkert Anne S. Carter (Chair) Ka'iulani de Silva Dave Eadie Matt Emerson Hon. Judith Epstein Dr. Alan M. Friedlander Benjy Garfinkle Sean A. Hehir Puni Jackson Brett MacNaughton Janet Montag Alicia Moy Bradley E. Smith Julie Smolinski Vern Yamanaka Richard N. Zwern

Ihupani Advisory Council: Paul D. Alston Christopher J. Benjamin Kenton T. Eldridge Eiichiro Kuwana Duncan MacNaughton Jean E. Rolles Crystal K. Rose Nathan E. Smith

### HAWAI'I FOREST INDUSTRY ASSOCIATION (HFIA)



Date: 03/21/2023
TO: WTL Chair Inouye, WTL Vice Chair Elefante, AEN Chair Gabbard AEN Vice Chair Richards and WTL and AEN Committee Members
FROM: the Hawai'i Forest Industry Association (HFIA)
SUBJECT: In Support of HB952 HD1 Relating to Natural Resources

Dear Chair Inouye, Chair Gabbard and Committee Members,

On behalf of the Directors and members of the Hawai'i Forest Industry Association (HFIA), please support HB952 HD1 Relating to Natural Resources, which would appropriate money to the DLNR to address the impacts of climate change.

It is not unknown to any of us that the changing climate and increasing levels of CO2 in our atmosphere pose serious threats to Hawai'i's lands, ecosystems, wildlife, human infrastructure and human life, and that action is needed now.

While addressing the impacts of climate change will include a wide range of actions from mauka to makai, as the Hawai'i Forest Industry Association we are especially interested in and concerned with terrestrial efforts to address climate change and properly care for Hawai'i's forest resources. The DLNR will need to include in its plans the use of fast growing trees with high capacities to sequester carbon. If done properly within an adequate time frame, Hawai'i will be able to sequester carbon with these quick growing trees as well as actualize an economic opportunity by harvesting mature trees before they decay and emit their stored carbon and methane. When we reuse wood fibers (by making wood products such as lumber, furniture etc.) we continue to store the carbon that the harvested tree was holding. Allowing mature trees to die off and decay will only add more greenhouse gasses to our atmosphere. Therefore, we will need to both plant fast growing trees as well as harvest and utilize mature trees, as appropriate, at the end of their life cycles.

Addressing climate change in Hawai'i in order to protect our unique natural resources and Hawai'i's residents of today and tomorrow must happen. It will require adequate funding and adequate planning. For these reasons we hope that you will support HB952 HD1.

Mahalo for your time and consideration,

Juy Cellier

Guy Cellier, Acting President Hawaii Forest Industry Association

Established in 1989, HFIA's is a nonprofit organization founded by people committed to sustainable forest management. HFIA's mission is to promote healthy and productive forests and a sustainable forest industry through management, education, planning, information exchange, and advocacy. HFIA has over 120 members including woodworkers, landowners, sawyers, foundations, foresters, growers, educators, environmentalists, architects, millers, ranchers, and others interested in HFIA's mission and goals.

HFIA Board of Directors

Officers: Acting President/Vice-President Guy Cellier, Secretary Peter D. Simmons, Treasurer Wade Lee Directors: Thomas Calhoun, Jeremy Campbell, Aaron Hammer, Nickolas Koch, Tai Lake, Michael Sowards, Irene Sprecher, Michael Tam, Jorma Winkler, Ron Wolfe, Aileen Yeh

### <u>HB-952-HD-1</u>

Submitted on: 3/18/2023 12:14:41 PM Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Virginia Tincher	Individual	Support	Written Testimony Only

Comments:

Members of the Water and Land Committee and the Agriculture and Environment Committee,

Mahalo for this opportunity to testify.

I am in strong support of HB952 HD1. Appropriating funding opens up opportunities to act now on climate impact solutions to help prevent even higher costs in the the future.

Virginia Tincher, Oahu

### HB-952-HD-1

Submitted on: 3/21/2023 11:16:39 AM Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Dylan P. Armstrong	Individual	Support	Written Testimony Only

Comments:

Committee on Water and Land The Honorable Lorraine Inouye The Honorable Brandon Elefante

Committee on Agriculture and Environment The Honorable Mike Gabbard The Honorable Tim Richards

Aloha mai kākou,

RE: HB951 HD1

I write in support of House Bill 952 HD1, which is needed to provide funding for climate change adaptation and mitigation actions across the state.

Note that as of this testimony, the earth has already currently experienced about 1.3 degrees Celsius of the supposedly 'safe' range of 1.5 degree Celsius warming.

Our climate and environments have experienced profound and monstrously outsized changes in my short life, changes that are dangerous for human civilization. These changes have occured on a scale that surpasses all of humanity's prior existence, and will continue to rank in the geologic record after our lives end. Even if new warming were to cease, which it very much will not, these processes would continue to transform in new and destabilizing ways.

The need for climate change action has almost no upper limit at the moment. Places never known for significant air pollution like Portland, OR, now experience up to a month of the world's most unbreathable air due to trans-continental smoke columns. Record droughts in Europe are destroying staple crops and driving inflation. Currently, southern South America is experiencing dire and dangerous heat not previously known to its inhabitants. We are creating a hell on earth.

Note the language of this measure, which states that:

"...to best access, leverage, and maximize these federal funds, state agencies will need access to matching funds to draw in federal grants."

While climate change makes for easy banter, the mechanism for action is the most practicable point of debate.

Federal funds dwarf most state or local resources in Hawai'i. Without federal funds, the social and infrastructure systems and processes of the state would halt and cease to function, such as university research, and the highways and federally-funded bridges that allow for daily intraisland travel.

Much of this measure's proposed funding will be available for adaptation, which will allow infrastructure systems to harden themselves against natural disasters, which are growing in occurance due to climate change and worsening in intensity (or, impact), fire mitigation, as well as intensified weathering and erosion processes, such as wind, rain, or wave action.

Thank you for your consideration. Please vote in favor.

Best, DP Armstrong *B.Sci, Natural Resources and Environmental Management University of Hawai'i* 

### HB-952-HD-1

Submitted on: 3/20/2023 1:20:08 PM Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Helen Cox	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Committee Members,

Please pass HB952 HD1 which appropriates funds to the department of land and natural resources to address the impacts of climate change in the State. We clearly are seeing impacts of climate change now, and these impacts will only increase It is only wise and prudent planning to appropriate funds to address these impacts if we are to continue to have a safe environment and a thriving economy. I urge you to pass HB952 HD1. Mahalo.

Helen Cox, Kalaheo, Kauai

HB-952-HD-1 Submitted on: 3/20/2023 7:21:40 PM Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
B.A. McClintock	Individual	Support	Written Testimony Only

Comments:

Climate change is happening. We must be ready. Please support this bill. Mahalo.

HB-952-HD-1 Submitted on: 3/21/2023 12:40:45 PM Testimony for WTL on 3/22/2023 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Molly Whiteley	Individual	Support	Written Testimony Only

Comments:

Please suppot HB952.

Mahalo!

M. Whiteley

Kihei