

**Testimony of The Nature Conservancy
Supporting HCR 80, Designating Hawai'i's coral reefs as critical natural infrastructure and
strongly supporting nature-based solutions such as coral reef restoration for risk reduction.**

**Committee on Water and Land
Committee on Agriculture and Environment
April 12, 2023, 2:00 pm
Conference Room 229 and via Videoconference**

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

The Nature Conservancy (TNC) supports HCR 80, Designating Hawai'i's coral reefs as critical natural infrastructure and strongly supporting nature-based solutions such as coral reef restoration for risk reduction.

The coral reefs that line our coasts are environmental, economic, recreational, and cultural treasures that support our island lifestyle and livelihoods. Each year, they also provide flood protection to people, property, and jobs valued at more than \$836 million, support nearshore fisheries worth \$13.4 million, and contribute more than \$1.2 billion through reef-related tourism to the state's economy. Studies have shown that coral reefs' structure can protect against natural hazards by reducing up to 97% of wave energy reaching the shoreline, resulting in less coastal flooding onshore.

The Federal Emergency Management Agency (FEMA) provides billions of dollars in hazard mitigation assistance to reduce or eliminate long-term disaster risks. FEMA is now embracing nature-based solutions (utilizing natural processes to provide increased resilience) as a viable and preferred hazard mitigation solution. Most of these programs require State or local government to apply for funding, and Hawai'i's recognition of coral reefs as critical natural infrastructure will help in future applications for FEMA funding.

Coral reefs are an important nature-based solution to coastal hazards for Hawai'i and we can potentially be a model to showcase healthy coral reefs as critical natural infrastructure that helps our communities become more resilient in the face of natural disasters, climate change, and other stressors. Mahalo for the opportunity to provide comments on HCR 80.

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 protect forests and coral reefs for their ecological values and for the many benefits they provide to people.

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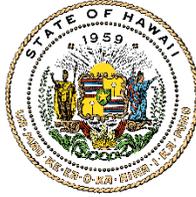
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DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. BOX 621
HONOLULU, HAWAII 96809

Testimony of
DAWN N. S. CHANG
Chairperson

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

Wednesday, April 12, 2023
2:00 PM

State Capitol, Conference Room 229 & Videoconference

In consideration of
HOUSE CONCURRENT RESOLUTION 80
DESIGNATING HAWAII'S CORAL REEFS AS CRITICAL NATURAL
INFRASTRUCTURE AND STRONGLY SUPPORTING NATURE-BASED SOLUTIONS
SUCH AS CORAL REEF RESTORATION FOR RISK REDUCTION

House Concurrent Resolution 80 designates Hawai'i coral reefs as critical natural infrastructure. **The Department of Land and Natural Resources (Department) strongly supports this measure.**

Pursuant to Hawaii Revised Statutes Section 26-15(b), the Department is responsible for managing and administering the aquatic and terrestrial wildlife resources of the State, including coral reefs. In Hawai'i, coral reefs serve as the first line of defense to shoreline erosion and tidal flooding related events. This is because coral reefs act as natural breakwaters, dissipating up to 97% of wave energy impacting shorelines and trapping sediment. This wave energy attenuation service is valued around \$836 million annually when considering people, property, and jobs.

Hawai'i coral reefs are threatened by the effects of climate change including sea level rise, coral bleaching, and ocean acidification. Other stressors include land-based sources of pollution, impacts to groundwater discharge, unsustainable fishing practices, anchor damage, and invasive species. Hawai'i has experienced three major coral bleaching events in the past eight years

DAWN N. S. CHANG
CHAIRPERSON
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resulting in 40% live coral cover loss in some areas. As these hazards continue to threaten this ecosystem, the State must be proactive in protecting and restoring our coral reefs.

The effort to protect and restore coral reefs is already underway in the Department through the operation of a coral restoration nursery, regular monitoring of reef health, invasive species prevention and control, and management of nearshore fisheries. However, to further support these efforts, the Department would like to utilize the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) program, which can provide a 3:1 match with \$2 billion - \$4 billion available funds annually for competition throughout the United States and associated territories. The formal designation of coral reefs as critical natural infrastructure demonstrates the Legislature's political support for nature-based solutions to combat climate change impacts and increases our likelihood of receiving funding through FEMA's HMA program towards coral reef protection and restoration in Hawai'i.

Additionally, this designation will promote an awareness of conservation and restoration for an important natural resource. Not only do coral reefs provide shoreline protection services, but they also provide a way of life for the people of Hawai'i through sustenance, economy, and recreation. It is estimated that annually coral reef fisheries provide 7 million meals to the people of Hawai'i, of which about 5 million are sourced from non-commercial catches. Also, coral reef associated tourism contributes \$1.23 billion to the State's economy. Furthermore, coral reefs support an intrinsic value and identity to communities rooted in culture, tradition, and recreation.

House Concurrent Resolution 80 will support the Department's continued management of coral reefs as critical natural infrastructure and support nature-based solutions to combat climate change in the State.

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



To: The Honorable Chairs Lorraine Inouye and Mike Gabbard, The Honorable Vice-chairs Brandon Elefante and Tim Richards, III, and members of the Senate Committees on Water and Land and Agriculture and Environment

From: Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

Re: **Hearing HCR80/HR85 DESIGNATING HAWAII'S CORAL REEFS AS CRITICAL NATURAL INFRASTRUCTURE AND STRONGLY SUPPORTING NATURE-BASED SOLUTIONS SUCH AS CORAL REEF RESTORATION FOR RISK REDUCTION.**

Hearing: Wednesday, April 12, 2023, 2:00 p.m.

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

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean.

The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS HCR80/HR85!

The islands of Hawai'i include environmental resources such as coral reefs that, if healthy, effectively managed, and functioning, can help mitigate the risks and related loss and damage from floods and the effects of climate change and natural disasters. Studies have shown that healthy coral reefs can absorb up to ninety-seven percent of wave energy. One study has estimated that Hawaii's coral reefs protect \$836,000,000 worth of coastal infrastructure from flooding annually.

The State's coastal areas and infrastructure face climate change-related risks and disaster events, including exposure to storms, high wave events, sea level rise, and flooding. Climate scientists and other experts predict an increase in the number and severity of hurricanes, higher levels of rainfall in fewer storm events, increasing sea surface temperatures, and increased ocean acidification, which will negatively impact coral reefs. Coastal ecosystems, such as coral reefs, that serve as a first line of defense are being lost at alarming rates. Live coral cover has declined by as much as forty percent in some areas.

The Federal Emergency Management Agency is responsible for responding to natural disasters and providing technical and financial hazard mitigation support. This support is primarily distributed as grant funding through the Federal Emergency Management Agency's Hazard Mitigation Assistance programs. Coral reef restoration for risk reduction is an active restoration strategy with the aim of increasing the structural integrity and complexity of coral reef ecosystems to attenuate wave energy and reduce coastal flooding. A recent report by The Nature Conservancy concluded that **coral reef restoration for risk reduction is a cost-effective hazard mitigation strategy in Hawai'i.**

Legislative recognition of coral reefs as critical natural infrastructure demonstrates political support for nature-based solutions, and the level of a State's political support is an important metric when the Federal Emergency Management Agency directs activities and funding toward coral reef restoration for risk reduction projects.

The Legislature should designate Hawaii's coral reefs as critical natural infrastructure and strongly support nature-based solutions such as coral reef restoration for risk reduction.

We thank the committees for hearing this important measure and respectfully urge your passage of HCR80/HR85!

Mahalo!

Hawai'i Reef and Ocean Coalition (by Ted Bohlen)



April 7, 2023

COMMITTEE ON WATER AND LAND

Senator Lorraine R. Inouye, Chair
Senator Brandon J.C. Elefante, Vice Chair

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair
Senator Herbert M. "Tim" Richards, III, Vice Chair

Date: Wednesday, April 12, 2023
Time: 2:00 PM

Regarding HCR 80 Coral Reefs as Infrastructure

Support

HFACT is a not-for-profit, IRS 501c(5) organization, that advocates for small boat commercial, non-commercial, and recreational fishermen throughout Hawaii. HFACT board members sit on a number of federal fisheries management and endangered species advisory committees as well as state marine and coastal zone advisory committees; and HFACT is thoroughly familiar with and participates in ocean and marine resource management in Hawaii and the central Pacific.

HFACT supports HCR 80. Coral reefs in Hawaii are a critical part of the coastal infrastructure. The coral reef provides a number of different ecological and physical services. Not only does the coral reef serve as a natural barrier to high waves, it is habitat for fish and marine life that is the basis of sustainable protein source for the residents of Hawaii.

HFACT asks that the committee support HCR 80

HFACT thanks the chairs, vice-chairs, and committee members for this opportunity to provide comment and to assist in providing food to the people of Hawaii and to assist in the conservation of Hawaii's natural resources.

Sincerely and Aloha,

Edwin Watamura
Executive Director.
watafishing @ gmail.com

Hawai'i Fishermen's Alliance for Conservation and Tradition, Inc.
2015 Leiloke Drive, Honolulu, HI.96822

HCR-80

Submitted on: 4/7/2023 7:24:31 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Kevin Chang	Testifying for Kua'aina Ulu Auamo (KUA)	Support	Written Testimony Only

Comments:

We strongly support this resolution!

HCR-80

Submitted on: 4/6/2023 4:44:24 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Uilani Naipo	Individual	Support	Written Testimony Only

Comments:

I strongly support HCR80.

Mahalo,

U'ilani Naipo

HCR-80

Submitted on: 4/6/2023 5:14:24 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Cards Pintor	Individual	Support	Written Testimony Only

Comments:

Aloha,

I support this resolution.

Mahalo nui,

Cards Pintor

HCR-80

Submitted on: 4/6/2023 6:30:59 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Barbara Barry	Individual	Support	Written Testimony Only

Comments:

Aloha,

I strongly support this important legislation!

Mahalo,

HCR-80

Submitted on: 4/6/2023 8:18:00 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Dana Keawe	Individual	Support	Written Testimony Only

Comments:

Support

HCR-80

Submitted on: 4/6/2023 9:54:22 PM

Testimony for AEN on 4/12/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
B.A. McClintock	Individual	Support	Written Testimony Only

Comments:

Please support this important bill. Mahalo.



Restore the Commons

Thursday, April 13, 2023, 2:00 pm

Senate Committees on Water and Land and on Agriculture and the Environment

HOUSE CONCURRENT RESOLUTION 80/ HOUSE RESOLUTION 85:

DESIGNATING HAWAII'S CORAL REEFS AS CRITICAL INFRASTRUCTURE AND
STRONGLY SUPPORTING CORAL REEF RESTORATION FOR RISK REDUCTION

Position: Strong support

Me ke Aloha, Chairs Inouye and Gabbard, Vice-Chairs Elefante and Richards, and Members of the Senate Committees on Water and Land and on Agriculture and the Environment:

Hawaii's indigenous and kama'āina are all-too-familiar with the crucial role of coral in our fragile habitat, particularly the importance of the fragile fishery and the several land-based threats to its sustainability by careless land management practices. Fewer may be aware of the importance of live corals to the resilience of reefs against storm impacts. Dead reefs become brittle and no longer provide the wave-absorbing attributes we take for granted. Of course, dead reefs do not support an important number of staples in the island diet, including migrating pelagic species in this freshwater oasis in the vast saltwater desert of Moana Nui.

We recognize that our reefs have been poorly managed since the usurpation of native Hawaiian practices, even though we nominally recognize these as somehow important. We have allowed overfishing, cesspool contamination, contaminant spills, and land runoff of sediments and other contaminants. It is remarkable that ocean currents have helped dilute and disperse these contaminants, but the state of our reefs is not healthy. If we are to persist much longer into this century, we need to cultivate greater respect for the great qualities they represent, and begin to manage more intelligently. This will require key research, maintenance, wise rules of use, and better land management.

This pair of resolutions provides for greater attention to these matters, by identifying them as critical infrastructure against violent wave action and for an essential food sources and refuge for pelagic species, provided by nature, and by encouraging greater efforts for research and understanding of better management practices to protect and to encourage the flourishing of coral reefs.

Mahalo for the opportunity to address this issue,

/s/ Charley Ice, Hoa'āina;

Retired Hydrologist, Commission on Water Resource Management (25 years), protecting the nearshore environment with the Division of Aquatics, Aha Moku, and Department of Hawaiian Home Lands
Acting Chair of the Food Security and Agriculture Committee of the Environmental Caucus of the Democratic Party; Co-chair of the Energy & Climate Action Committee of the Environmental Caucus

**Building the new normal with People and Land: Food Security Health Care Public Banking
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