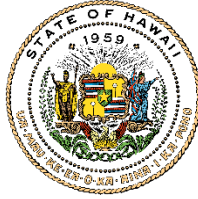


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
OFFICE OF THE CHAIRPERSON
DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. BOX 621
HONOLULU, HAWAII 96809

Testimony of
DAWN N. S. CHANG
Chairperson

Before the House Committee on
WATER & LAND

Tuesday, March 28, 2023
9:30 AM

State Capitol, VIA VIDEOCONFERENCE, Conference Room 430

In consideration of
HOUSE CONCURRENT RESOLUTION 80/HOUSE RESOLUTION 85
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/House Resolution 85 designate Hawai'i coral reefs as critical natural infrastructure. **The Department of Land and Natural Resources (Department) strongly supports these measures.**

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 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.

DAWN N. S. CHANG
CHAIRPERSON
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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/House Resolution 85 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 these measures.

**Testimony of The Nature Conservancy
Supporting HCR 80/HR 85, 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
March 28, 2023, 9:30 am
Conference Room 430 and via Videoconference**

Aloha Chair Ichiyama, Vice Chair Poepoe, and Members of the Committee:

The Nature Conservancy (TNC) supports HCR 80/HR 85, 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/HR 85.

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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To: The Honorable Chair Linda Ichiyama, the Honorable Vice-chair Mahina Poepoe, and members of the House Committee on Water and Land

From: The 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: Tuesday, March 28, 2023, 9:30 a.m.

Aloha Chair Ichiyama, Vice-chair Mahina Poepoe, and members of the House Committee on Water and Land:

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)



March 25, 2023

COMMITTEE ON WATER & LAND

Rep. Linda Ichiyama, Chair Rep. Mahina Poepoe, Vice Chair

Date: Tuesday, March 28, 2023

Time: 9:30 A.M.

Regarding: HCR80/ HR85

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/HR 85. 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/ HR85

HFACT thanks the chair, vice-chair, 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.

Hawai'i Fishermen's Alliance for Conservation and Tradition, Inc.

2015 Leiloke Drive, Honolulu, HI.96822

Sincerely and Aloha,

A handwritten signature in black ink, appearing to read "Edwin Watamura". The signature is fluid and cursive, with the first name being more prominent.

Edwin Watamura

Executive Director.

watafishing @ gmail.com

Hawai'i Fishermen's Alliance for Conservation and Tradition, Inc.

2015 Leiloke Drive, Honolulu, HI 96822