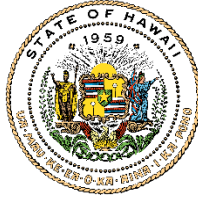
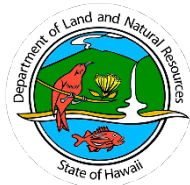


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

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 Senate Committees on
AGRICULTURE AND ENVIRONMENT
and
WATER AND LAND

Wednesday, March 22, 2023
1:00 PM

State Capitol, Conference Room 224 & Videoconference

In consideration of
SENATE CONCURRENT RESOLUTION 41/SENATE RESOLUTION 35
DESIGNATING HAWAII'S CORAL REEFS AS CRITICAL NATURAL
INFRASTRUCTURE AND STRONGLY SUPPORTING NATURE-BASED SOLUTIONS
SUCH AS CORAL REEF RESTORATION FOR RISK REDUCTION

Senate Concurrent Resolution 41/Senate Resolution 35 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

DAWN N. S. CHANG
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STATE PARKS

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.

Senate Concurrent Resolution 41/Senate Resolution 35 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.



Environmental Caucus of The Democratic Party of Hawai'i

AEN-WTL_03-22-23 1:00pm SCR113/SC106 , SCR41/SR35

TO: COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

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

and

COMMITTEE ON WATER AND LAND

Senator Lorraine R. Inouye, Chair

Senator Brandon J.C. Elefante, Vice Chair

CONCERNING: SCR113: Urging the Department of Land and Natural

Resources to minimize human interaction at certain locations during
coral spawning events.

SCR41: Designating Hawaii's Coral Reefs As Critical

Natural Infrastructure and strongly supporting nature-based
solutions such as Coral Reef Restoration for risk reduction

POSITION: STRONG UNCONDITIONAL SUPPORT

The Environmental Caucus strongly supports both of these resolutions as vital to the health of our Islands and as consistent with Native Hawaiian Culture and Marine and Climate Science.

SCR41 Recognizes our Coral Reefs as critical natural infrastructure which are under extraordinary stress due to human interaction, human, industrial and natural pollution, invasive species and climate change.

SCR 113 supports SCR41 by further recognizing the importance of protecting the reefs when the living coral is spawning by forbidding human interference with the process.

The legislature should do everything in its power to protect the reefs especially now when they are and will continue to be fighting to survive to side effects of climate change.

We hope that the individual loyalties of any Senators or Representatives to any persons, industries, or groups will not be allowed to defeat either of these resolutions just to protect any special interests.

SR-35

Submitted on: 3/21/2023 8:49:25 AM

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

Submitted By	Organization	Testifier Position	Testify
Megan Lamson	Testifying for Hawai'i Wildlife Fund	Support	Written Testimony Only

Comments:

WE SUPPORT SR35 DESIGNATING HAWAII'S CORAL REEFS AS CRITICAL NATURAL INFRASTRUCTURE AND STRONGLY SUPPORTING NATURE-BASED SOLUTIONS SUCH AS CORAL REEF RESTORATION FOR RISK REDUCTION.

Hawai'i Wildlife Fund (HWF) is a small nonprofit organization that has been working to conserve native species in Hawai'i since 1996. HWF was founded by two former National Marine Fisheries scientists, and we have been actively involved in coastal and community-based restoration projects, environmental education, advocacy and protected species research for the past 27 years as of this month. We support the designation of coral reefs as critical natural infrastructure and encourage legislators to continue to protect the reefs that already exist through alleviating local stressors like eutrophication (excess nutrients) from sewage and runoff, coastal development, overfishing, and overuse (overtourism). We are also supportive of a certain amount of coral restoration, as / if needed.

The best and most cost-effective solution to sea-level rise and climate impacts to our shoreline (flood events, coastal inundation) is to PROTECT the reefs that are already there. Please use your vote to designate these ecosystems as critical infrastructure and provide the funding needed to state agencies, including DLNR and DOH, and community groups to do what it takes to protect the watershed and allow for corals to recover naturally. We believe coral restoration is not the best solution as it always costs more to restore (versus conserve / protect), and one cannot replicate a natural ecosystem without extreme cost, if at all. However, it could be used in select situations, like a triage category 1 (urgent).

We also hope that you continue to support the Marine Holomua Initiative within the DLNR's Division of Aquatic Resources, that works with community members to establish rules to best protect their marine resources.

Mahalo for your time and consideration!

Best,

Megan Lamson, M.Sc.

HWF President

**Testimony of The Nature Conservancy
Supporting SCR 41/SR 35, 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 Agriculture and Environment
Committee on Water and Land
March 22, 2023, 1:00 pm
Conference Room 224 and via Videoconference**

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

The Nature Conservancy (TNC) supports SCR 41/SR 35, 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 SCR 41/SR 35.

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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SR-35

Submitted on: 3/20/2023 11:36:13 AM

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

Submitted By	Organization	Testifier Position	Testify
Mark Hixon	Individual	Support	Written Testimony Only

Comments:

Aloha. As a professional marine biologist specializing in the conservation and restoration of coral reefs, it is exceedingly clear that our reefs are critically endangered. The time has come for more effective local protections of our reefs, which will enhance their resilience in the face of an ever warming and acidifying ocean. Designating reefs as critical natural infrastructure and promoting coral restoration efforts are key steps to ensure that our children and grandchildren will experience the same benefits of coral reefs as we have: recreation, fisheries, sand production, coastal protection, and a host of other ecosystem goods and services. I urge you to adopt this resolution. Mahalo.

SR-35

Submitted on: 3/20/2023 7:19:26 PM

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

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

Comments:

Please support this important bill. Mahalo.