



# UNIVERSITY OF HAWAII SYSTEM

## ‘ŌNAEHANA KULANUI O HAWAII

### Legislative Testimony

### Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the  
House Committee on Finance  
Tuesday, February 28, 2023 at 10:00 a.m.

By

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And

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#### HB 756 HD2 – RELATING TO LAND USE

Chair Yamashita, Vice Chair Kitagawa, and Members of the Committee:

The University of Hawai'i Sea Grant College Program (Hawai'i Sea Grant) and the Climate Resilience Collaborative (CRC) support the intent of HB 756 HD2, provided that its passage does not impact priorities as indicated in the University's Board of Regents approved executive biennium budget.

This measure requires the department of land and natural resources to prepare plans and a program to facilitate voluntary relocation of residential development away from areas at risk of sea level rise. Establishes the sea level rise relocation special fund. Allows the exchange of public land for private lands for the transfer of development rights or land exchanges to relocate private development away from high-risk areas and appropriates funds.

Sea level rise is accelerating globally and increasing coastal erosion and flooding are inevitable, even in the most optimistic scientific projections. A 2022 multi-agency report led by the National Oceanic and Atmospheric Administration (NOAA) based on best-available science finds that sea level will rise as much in the next 30 years as it has in the last 100. These increasing coastal hazards are described and mapped in detail in the State of Hawai'i Sea Level Rise Vulnerability and Adaptation Report, Hawai'i Sea Level Rise Viewer, and related peer-reviewed research. The NOAA 2022 report projects about four feet of sea level rise by 2100 in an Intermediate scenario for Hawaii. The Intergovernmental Panel on Climate Change in its Fifth and Sixth Assessment Reports finds that Sea level rise will not stop at 2100 but will continue to rise for thousands of

years, even if future carbon dioxide emissions are reduced to zero and global warming halted.

Adapting to sea level rise will take a range of forms in Hawai'i. Managed retreat (e.g. voluntary relocation) is one essential tool in the state's "adaptation toolbox," particularly along beaches, other areas of high natural resource value, and in the most flood-prone backshore areas. Severe coastal erosion, as it is presently occurring along O'ahu's North Shore, in West Maui, and elsewhere, is best described as "unmanaged retreat" as shorelines roll back into properties and undermine structures; negatively impact coastal ecosystems and public shoreline access. This legislation is a critical step forward to establishing a framework and funding for the state to begin implementing managed retreat as one vital approach for sea level rise adaptation in close cooperation with the counties and federal entities.

The complex nature of managed retreat requires evolution beyond the narrow binary options of armor or retreat and instead requires evaluation of broader adaptation options in the context of hazard risk and vulnerability, socio-economic factors and place-based and community driven considerations for a variety of phased adaptation options that include managed retreat. Managed retreat has significant advantages over shorter-term mitigation responses, especially over longer time frames. While there may be significant opposition to this approach, especially in regard to the use of public funds to acquire coastal lands, the strategy may be best suited when protection of the natural beach resources are the highest priority and are economically justified for public investment into acquisition.

Historically, coastal retreat has taken the form of mandatory relocation of development or communities through government buyouts or incentives but future methods of retreat may include broader planning options such as down zoning and rebuilding restrictions, transferable development rights, increased coastal setbacks, and limitation of ownership transfers. Climate change-driven coastal adaptation will require some phased combination of retreat along with protection and adaptation. Disaster management literature reveals an unprecedented number of major natural disaster events around the world, this suggests a modern era of unmanaged or forced retreat is now affecting many of the low-elevation coastal communities around the world. Unmanaged retreat is often a default reactive response due to a lack of viable adaptation options, and is fundamentally different from strategic managed retreat as part of a holistic suite of adaptation policy tools. This measure will support developing comprehensive adaptation plans including managed retreat along with other adaptation approaches through a variety of mechanisms.

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 NOAA that promote better understanding, conservation, and use of coastal resources.

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 and the Climate Resilience Collaborative support HB 756 HD2.**

Thank you for the opportunity to testify on this measure.