Testimony Presented Before the
House Committee on Water and Land
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HB 1092 – RELATING TO CLIMATE ADAPTATION

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

The University of Hawaiʻi Sea Grant College Program (Hawaiʻi Sea Grant) and the Climate Resilience Collaborative (CRC) support House Bill 1092, provided that its passage does not replace or adversely impact priorities as indicated in the University's Board of Regents approved executive biennium budget.

This measure would expand the authority of the State and the Counties and develops funding to begin utilizing managed retreat as an option for voluntarily moving residential development and associated infrastructure away from critically vulnerable areas to locations outside of the sea level rise and coastal flooding exposure areas.

Hawaiʻi Sea Grant and CRC would like to begin by providing updated information about sea level rise science and projections. Research and modeling by a federal task force (Sweet et al., 2022) indicate the following:

1. Hawaiʻi will experience sea level rise that is 15% to 30% higher than the global average.
2. Sea level around Hawaiʻi is projected to rise about 1 foot by 2050 and about 4 feet by 2100.

I In the Hawaiʻi State Climate Change Mitigation and Adaptation's 2022 update to the Hawaiʻi Sea Level Rise Vulnerability and Adaptation Report to the Legislature as required by Act 32 (2017), the Commission recommended that:

"...the state should set a revised planning and policy benchmark of 4 ft as the minimum scenario for all planning and design based on the report's Intermediate (mid-range) scenario for Hawai'i of 3.9 feet of sea level rise by 2100, and apply a 6 ft benchmark for planning and design of public infrastructure projects and other projects with low tolerance for risk based on the report's Intermediate High scenario for Hawai`i of 5.9 feet of sea level rise by 2100. The latest science suggests that the SLR-XA for 3.2ft of sea level remains valid as a planning overlay for the mid century at this time."

We also draw your attention to the 6th Assessment Report of the Intergovernmental Panel on Climate Change which states with high confidence that:

"Sea level is committed to rise for centuries to millennia due to continuing deep-ocean warming and ice-sheet melt and will remain elevated for thousands of years."

Each year, Hawai'i's coastal communities grow increasingly vulnerable to the dangers of wave impacts, coastal erosion, high tide flooding, and storm surge, all of which are exacerbated by sea level rise. We emphasize - There is nothing we can do to stop sea level rise. We must develop exit strategies for our coastal communities. Sea level rise is an unstoppable reality and without major adjustments to coastal laws and policies, flooding, erosion, and storm dangers will increase - slowly at first, as at present, but by the 2030's sea level rise impacts related to extreme tidal flooding will increase exponentially.

The complex nature of managed retreat requires evolution beyond the narrow binary options of armor or retreat and instead require 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 us now upon 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 than strategic managed retreat as part of a holistic suite of

adaptation policy tools. This measure gives urgency to developing adaptation plans that include managed retreat through a variety of mechanism including buy outs.

House Bill 1092 would allow the Department of Land and Natural Resources to develop a sea level rise voluntary relocation plan and voluntary relocation fund. In addition, it gives the State authority to transfer development rights and execute land exchanges for the purpose of relocation of private development away from areas at high risk of sea level rise impacts. In order to prepare for, react to, and manage the impacts related to sea level rise, the Department must have regulatory every tool available in order to effectively protect Hawai‘i’s coastal communities and public trust beaches. This measure would give the Department additional necessary regulatory tools and financial resources to help facilitate managed retreat.

Land exchanges are a valuable regulatory tool that can enable coastal residents to retain some real estate equity in cases where the state decides it is best to relocate them before the ocean takes their property. In the process, land swaps also save the State money that it would have otherwise had to pay as just compensation. Further, in some cases land swaps may allow relocated residents to remain closer to their original communities where they would have otherwise been priced out or unable to find a new dwelling.

The option to leaseback purchased property to residents in some cases would also be beneficial for the State to recoup some of its cost while retaining the control to determine when a certain property is no longer safe for habitation.

Transfer of development rights another important framework technique that the State may employ to achieve community objectives of voluntarily shifting development away from areas that are imminently threatened by sea level rise to safer, more appropriate areas.

Hawai‘i Sea Grant and the CRC support this measure and offers the following comments and suggestions to strengthen this bill.

1. The bill amends Chapter 171, Hawai‘i Revised Statutes Definitions with five new definitions related to relocation of residential development but fails to identify or define acquisition (buy outs) of private property as a tool to support the voluntary relocation of managed retreat.
2. Acquisition through voluntary buy outs of private property with strong public interest is a prominent and viable tool to support managed retreat and should be identified as such in the definitions.
3. The bill’s description identifies the North Shore of O‘ahu as a site for a sea level rise relocation pilot project for voluntary relocation of critically threatened beach front development, however, the bill itself does not clearly state any specifics regarding such a pilot program. The North Shore, O‘ahu is a high priority area for such an effort and we recommend further refining the geographic scope of this

initial pilot to the “Kammies” area of Sunset Beach as the most urgent need for adaptation responses due to recent severe coastal erosion and beach loss.

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 (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 working to update coastal models with more recent projections of sea level rise and to take account of other variables that impact Hawai‘i’s shorelines.

Hawai‘i Sea Grant and Climate Resilience Collaborative support House Bill 1092 and respectfully asks your House Committee on Water and Land to pass the measure.

Thank you for the opportunity to testify on this measure.