Hawaiʻi Climate Adaptation Initiative Act (Act 83, 2014)

• “Climate change is the paramount challenge of this century.”

• Address the effects of climate change to protect the State’s economy, environment, and way of life.

• Establishes an Interagency Climate Adaptation Committee (ICAC)

• Initial focus of this act is to develop a Sea Level Rise Vulnerability and Adaptation Report for Hawaiʻi

• Authorizes the Office of Planning to coordinate development of a Statewide Climate Adaptation Plan
Hawai‘i Sea Level Rise Vulnerability and Adaptation Report (Act 83)

- Compiling the best science on climate change and sea-level rise.
- Projecting and modeling hazards exposure related to sea level rise.
- Assessing vulnerabilities to hazards related to sea level rise.
- Making recommendations for improving resilience to hazards.
- Providing a framework for further climate adaption planning.
Hawai‘i Climate Adaptation Portal: climateadaptation.hawaii.org
Quarterly ICAC Meetings

ICAC Members (Act 83):
- BLNR Chair (ICAC Co-Chair)
- OP Director (ICAC Co-Chair)
- Relevant Leg. Committee Chairs
- DBEDT Chair
- HTA Chair
- BOA Chair
- OHA CEO
- Hawaiian Homes Comm. Chair
- DOT Director
- DOH Director
- Board of Ed. Chair
- County Planning Dept. Directors
- CZM Manager
Hawaiʻi Sea Level Rise Vulnerability and Adaptation Workshop

February 11, 2016
Hawaiʻi Sea Level Rise Vulnerability & Adaptation Workshop

The Department of Land and Natural Resources, along with their partners, the Office of Earth Science and Technology, and the University of Hawaiʻi Sea Grant, held the first ever Hawaiʻi Sea Level Rise Vulnerability & Adaptation Workshop. The workshop provided an overview of the latest climate and sea level rise science for the Hawaiʻi Climate Adaptation Initiative. In addition, the workshop gave an update regarding the progress of the State Adaptation Report that is being prepared in coordination with the Interagency Climate Adaptation Office. The Sea Level Rise Resilience Working Group recommended actions to address risks from sea level rise.

On a scale of 1 to 5 with 5 being the best, what is your rating of the workshop?

- 5: 58
- 4: 24
- 3: 12
Modelling Future SLR Flooding

Ala Moana –Waikiki: 4 ft of sea level rise
Modelling Future Erosion Hazards
Modelling Future Wave Overtopping (annual high wave event + 3 ft of SLR)
Sea Level Rise Hazard Exposure and Vulnerability Assessment

Projections of Future Coastal Hazards
- IPCC RCP 8.5
  - Sea Level Rise Projections
    - 2030 (0.56 ft)
    - 2050 (1.06 ft)
    - 2075 (1.97 ft)
    - 2100 (3.21 ft)
- UH SOEST
  - Coastal Erosion
  - Seasonal Wave Run-up
  - Static/GW Inundation
- Tetra Tech, Inc.
  - Coastal Floodplain

Risk Assessment
- Vulnerability
  - Social
  - Economic
  - Environmental
- Quantified Losses
  - Social
  - Economic
  - Environmental

Community Data
- Present
  - Demographics
  - Building Stock
  - Utilities
  - Transportation
  - Critical Facilities
  - Environmental Assets
- Planned/Projected*
  - Demographics
  - Infrastructure
  - Environment

*TETRA TECH
# Reporting Scales and Sectors

<table>
<thead>
<tr>
<th>COASTAL HAZARDS</th>
<th>TIME</th>
<th>SCALE</th>
<th>SECTORS</th>
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<td>Task 3: SLR VA &amp; SEI Analysis</td>
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Building Resilience to Coastal Hazards and Climate Change in Hawai‘i

Bradley Romine, Extension Faculty, Hawai‘i Sea Grant
Darren Lerner, Director, Hawai‘i Sea Grant
Tara Owens, Extension Faculty, Hawai‘i Sea Grant
Sam Lemmo, Administrator, Hawai‘i DLNR Office of Conservation and Coastal Lands
Leo Asuncion, Director, Hawai‘i State Office of Planning

Funding from: NOAA NOS FY16 Regional Coastal Resilience Grants Program
Building Resilience to Coastal Hazards and Climate Change in Hawai‘i

- Developed in partnership between UH Sea Grant, DLNR, OP
- $845,000 from NOAA Regional Coastal Resilience Grants Program
- Leveraging State Climate Adaptation Initiative funds (cost match)
- 3-year project: May, 2016 – April, 2019
Overarching Goal:
Increase community resilience to coastal hazards, climate change, and sea level rise in Hawaiʻi
Building Resilience to Coastal Hazards and Climate Change in Hawai‘i

Enhancing ongoing planning efforts under:

- The Hawai‘i Climate Adaptation Initiative (Act 83, 2014):
  - Interagency Climate Adaptation Committee (ICAC)
  - Sea Level Rise Vulnerability and Adaption Report (Hawai‘i SLR Report)

- The Hawai‘i State Planning Act:
  - Climate Change Adaptation Priority Guidelines (HRS § 226-109);

- and other existing plans and policies.
**Sub-Project 1: Web-based Hazard Exposure and Vulnerability Mapping Tool**

**Sub-project goal:**
Build community resilience by providing access to critical hazard exposure data to support planning and sound, science-based decision-making.

**Sub-project objectives:**
1. Provide data visualization supporting the Hawai‘i SLR Report
2. Develop a high-resolution sea level rise hazard assessment tool
Sub-Project 2: Guidelines for Integrating Coastal Resilience into Existing Planning Frameworks

Sub-project goal:
Increase the number of state and county plans and policies that address risks from coastal hazards, climate change, and sea level rise.

Sub-project objectives:

- Identify gaps and opportunities for integrating coastal resilience into current planning frameworks
- Develop implementation guidance for Hawaii’s Climate Adaptation Priority Guidelines and the Hawaii SLR Report
Sub-Project 3: Guidelines and Training for Post-Disaster Rebuilding and Recovery

Sub-project goal:
Increase the capacity of coastal communities in Hawai‘i to “bounce back” and rebuild safer, stronger, and smarter after a coastal disaster.

Sub-project objectives:

- Balancing permitting and recovery speed while protecting environmental resources
- Increase resilience to future hazards through the recovery process
- Conducting post-disaster recovery and resilience workshops and training courses
- Guidance document for implementing resilience-focused post-disaster recovery practices into existing plans and policies
Mahalo!

Brad Romine, PhD
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DLNR, Office of Conservation and Coastal Lands
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808-587-0049

climateadaptation.hawaii.org

Funding from: NOAA NOS
FY16 Regional Coastal Resilience Grants Program