

**HAWAIIAN HOME LANDS**  
HAWAIIAN HOMES COMMISSION  
DEPARTMENT OF HAWAIIAN HOME LANDS

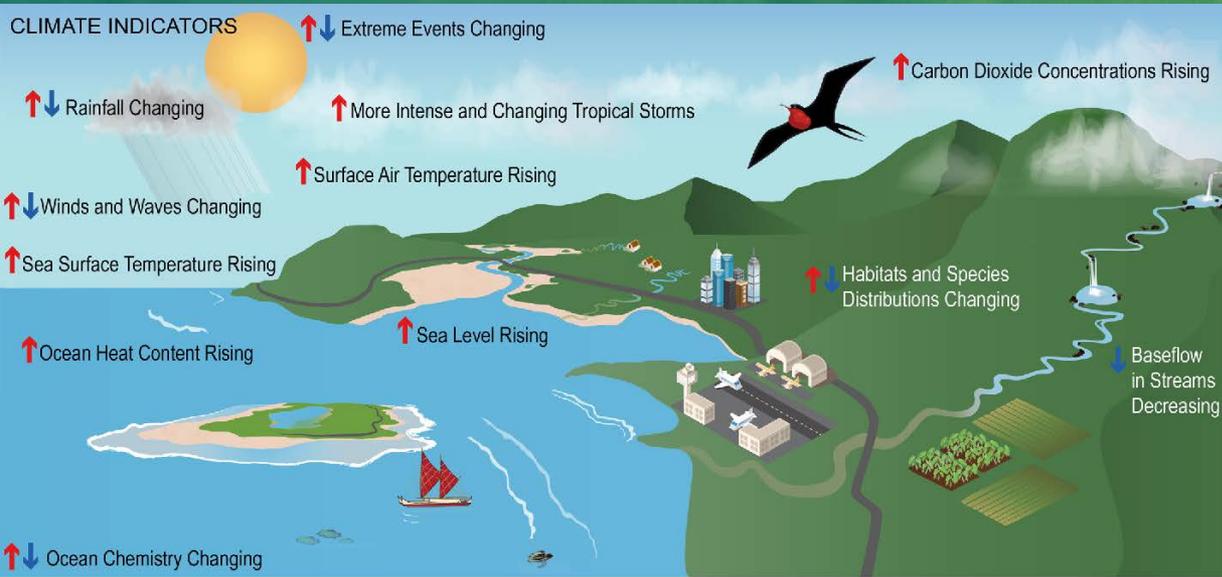
## **Item No. G-1**

**Update on DHHL Efforts: Climate  
Change & Sea Level Rise Adaptation,  
Community Resilience & Hazard  
Mitigation on Hawaiian Home Lands,  
Statewide**

# Updates & Briefings for HHC 2016 - 2018

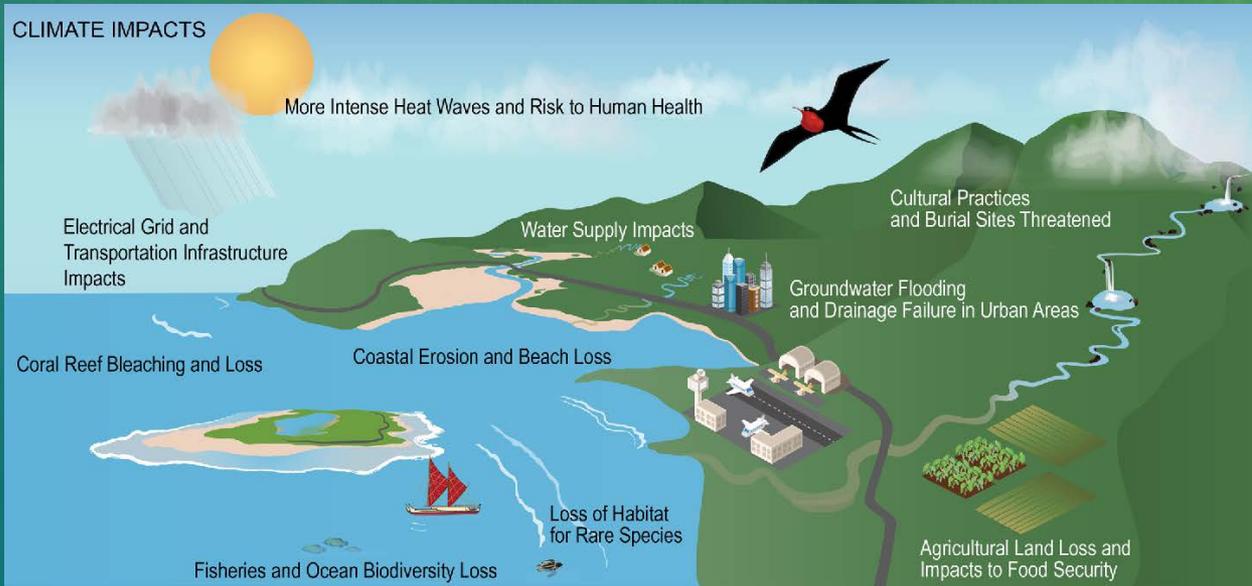
HHC Meeting	Item No. & Title	Topics / Description
April 15-16, 2019 (Moloka'i)	Item G-3, Moloka'i Planning Projects Status (pages 5-15)	So. Molokai Shoreline Erosion Management Plan (SM-SEMP) Phase I; CCA & SLR planning activities at federal, state & county levels.
June 18-19, 2018 (O'ahu)	Item G-4, Update on DHHL Efforts: Climate Change & Sea Level Rise Adaptation, Community Resilience & Hazard Mitigation on Hawaiian Home Lands, Statewide	First update, per HHC request at April 2018 meeting. Reviewed federal, state and county activities Sept. 2016 to June 2018. Continued to recommend integrated, ahupua'a based approach.
September 19-20, 2016 (Maui)	Item G-6, Planning for our Makai Communities - Integrating Coastal Zone Management, Community Resilience & Hazard Mitigation on Hawaiian Home Lands Along the Shoreline, Statewide	Outlined CZM jurisdictional issues, DHHL CZM reviews, CZM, CCA, CRP & disaster preparedness efforts at state, county and homestead community levels; listed potential funding sources.

# NATIONAL CLIMATE ASSESSMENT Vol. 2, "Impacts, Risks, and Adaptation in the United States," released Nov. 23, 2018. Ch. 24 is a regional analysis of Hawai'i & U.S.-Affiliated Pacific Islands.



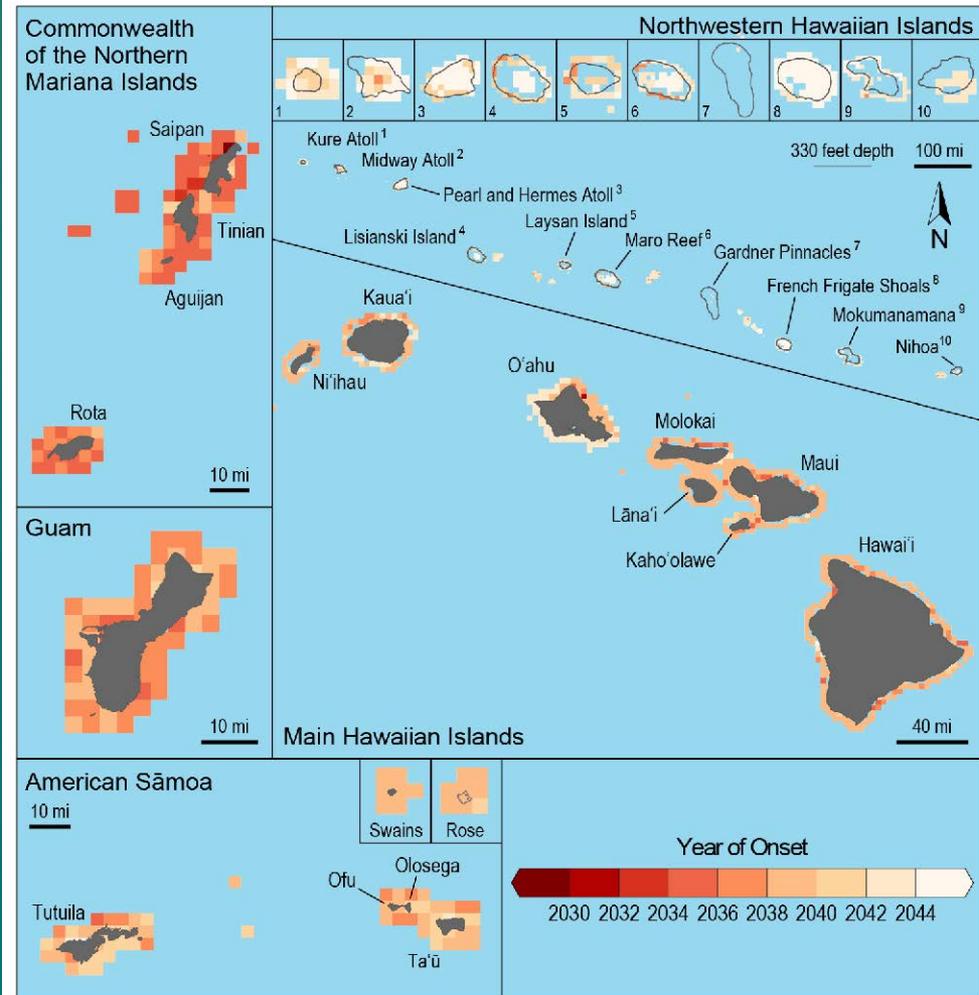
By 2100, increases of 1–4 feet in global sea level are very likely, with even higher levels than the global average in the U.S.-Affiliated Pacific Islands.

Islands are already experiencing saltwater contamination due to sea level rise...Resilience to future threats relies on active monitoring and management of watersheds and freshwater systems.



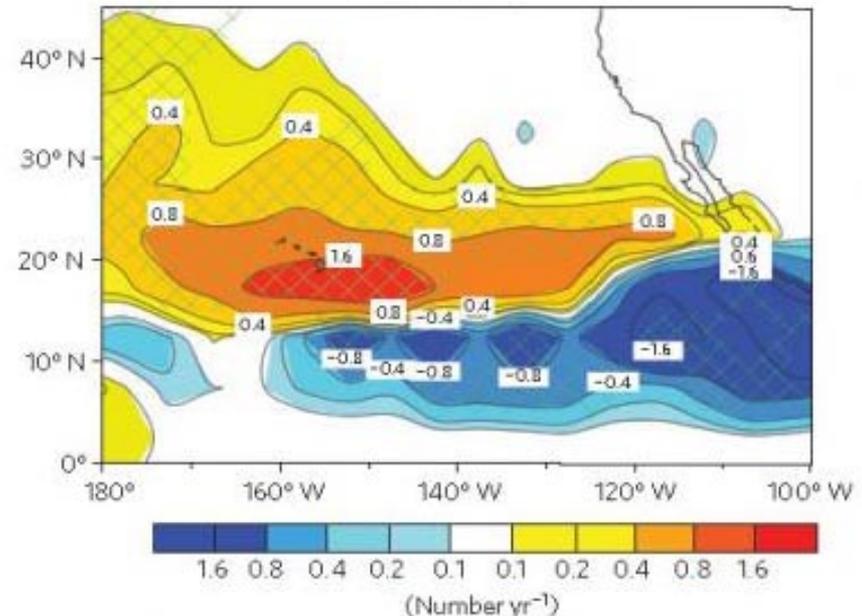
# CHANGES ARE COMING – RESILIENCE PLANNING IS CRITICAL

## Projected Onset of Annual Severe Coral Reef Bleaching



Terrestrial habitats and the goods and services they provide are threatened by rising temperatures, changes in rainfall, increased storminess, and land-use change. These changes promote the spread of invasive species and reduce the ability of habitats to support protected species and sustain human communities.

## Change in Tropical Cyclones by 2075-2099

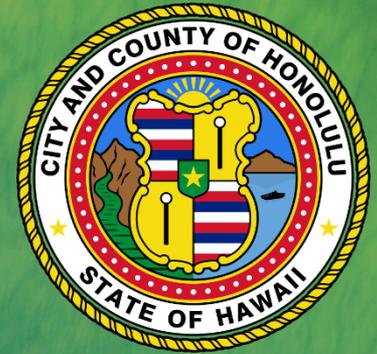
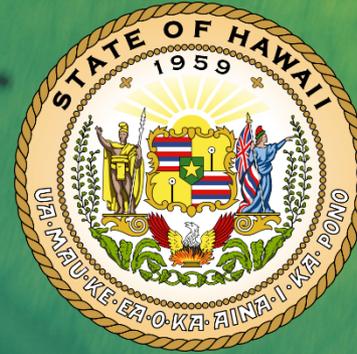


Bleaching & acidification will result in loss of reef structure, leading to lower fisheries yields & loss of coastal protection and habitat.

# RESPONSES AT STATE & COUNTY LEVELS



April 2019 - Governor David Ige, Hawai'i's Congressional delegation, Senate and House leadership, mayors of all four counties, other state leaders sign joint "Declaration of Commitment to Sustainability for Hawai'i"



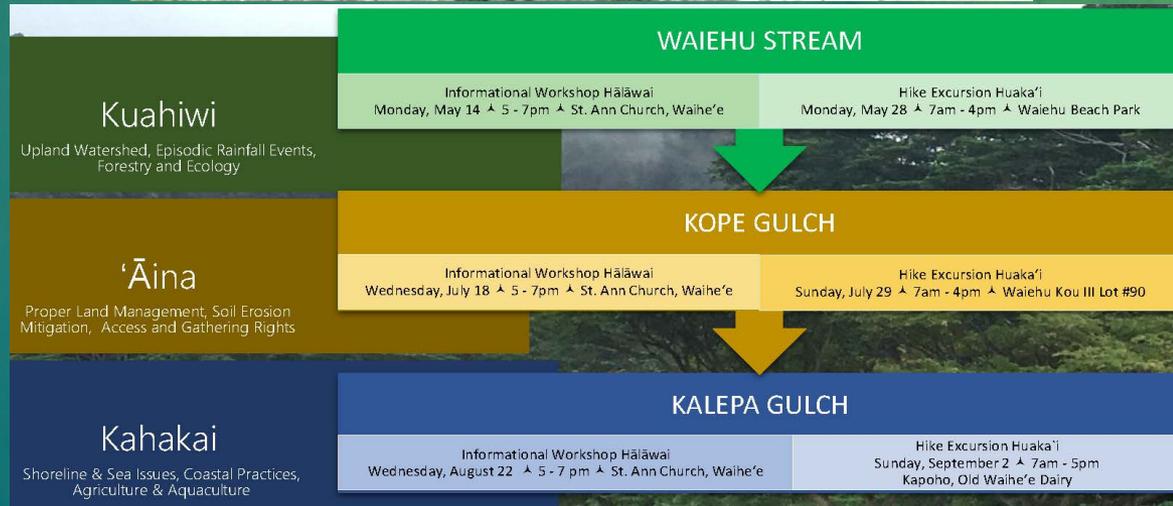
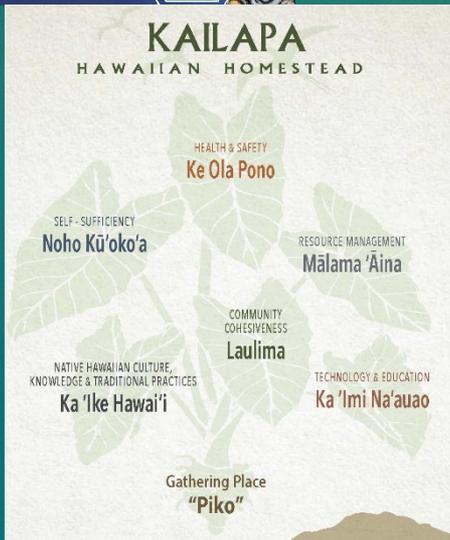
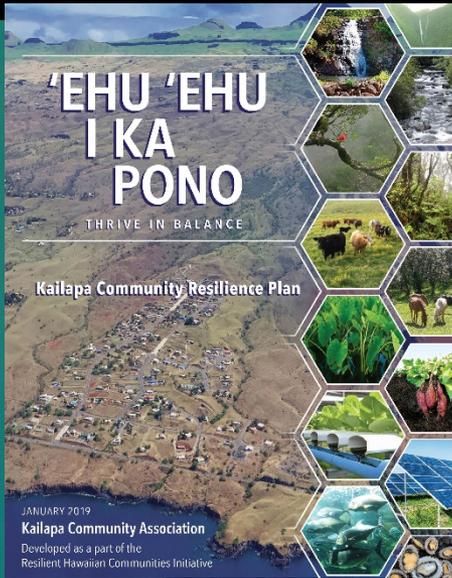
July 2018 - Mayor Kirk Caldwell issues Climate Change & SLR Mitigation Directive

# Major DHHL Activities Since June 2018

## Climate Change & Sea Level Rise Adaptation

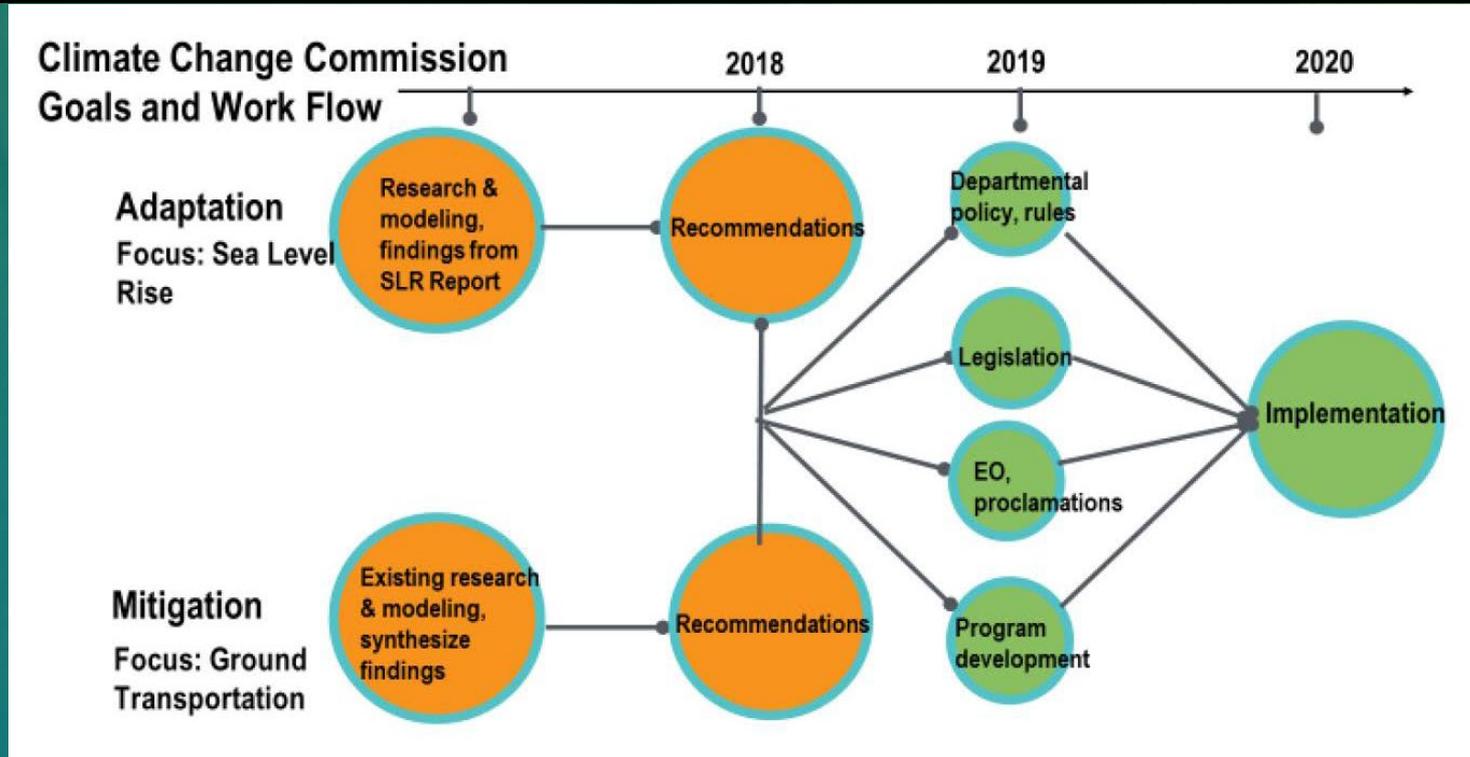
Activity	Dates	Topics discussed
Hawai'i Climate Change Mitigation & Adaptation Commission Meetings	9/4/18, 11/27/18, 4/24/19	Greenhouse Gas inventory; Carbon Offset program; Report on outcome of 2019 Leg Session; agency implementation updates; climate equity; Report on SLR adaptation implementation actions
2019 Hawai'i Climate Conference – Hā O Ke Kai	1/14/19	Highlighted climate change initiatives of State & partners; held three panels on how best to implement climate change mitigation & adaptation actions
Hawai'i Ocean Resources Management Plan (ORMP) - Coordinated Working Group & Council on Ocean Resources	7/5/18, 8/2/18, 10/4/18, 11/1/18, 2/7/19, 3/7/19, 4/4/19, 5/22/19	Updates on ORMP Implementation by OP-CZM & Partners, Managed Retreat, Legislative Initiatives, ORMP Update - Methodology & Proposed Schedule
PICCC Resilient Hawaiian Communities Initiative	2018 to present	Kailapa & Waiehu Kou 3 proposals chosen; projects underway
Honolulu Climate Change Commission Meetings	7/17/18, 10/16/18, 11/26/18, 1/8/19, 3/19/19, 5/28/19	Office of CCSR Reports; Climate Change & Insurance Risk; GHG Emissions; CAP Meetings; Resilient Building & Energy Codes; Legislation
South Molokai Shoreline Erosion Management Plan	July 2018 to present	Project underway; fieldwork, interviews & community meetings being conducted

# PICCC Resilient Hawaiian Communities – Kailapa & Waiehu Kou



# State-Level Initiatives

## State Climate Commission



### Commission Priorities:

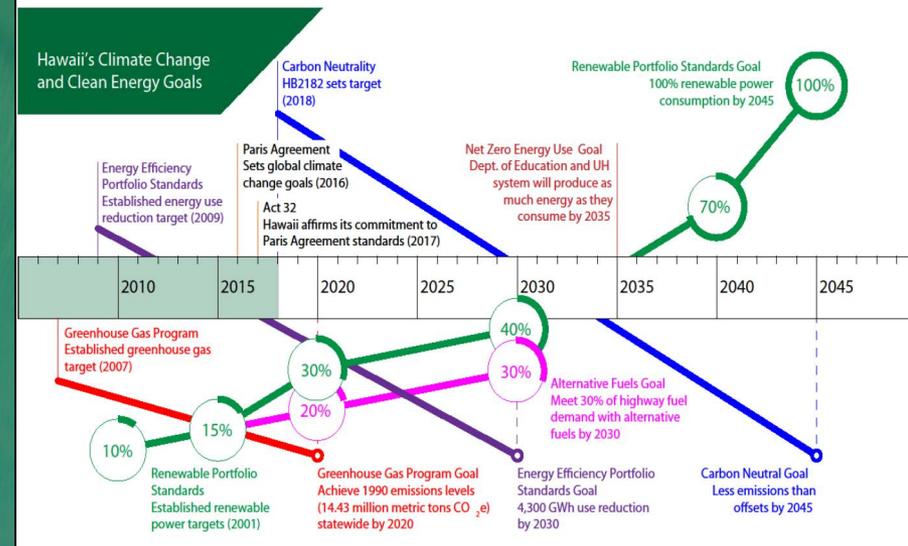
- 1) Understand and develop strategies to reduce greenhouse gas (GHG) emissions, especially from ground transportation;
- 2) Implement the recommendations of the Hawaii Sea Level Rise Vulnerability and Adaptation Report (Dec. 2017)

# State-Level Initiatives

## State Climate Commission

- December 2018: Release of Hawai'i Climate Change Annual Report
- January 2019: Hawai'i Climate Change Conference – Hā O Ke Kai

Figure 1: Act 32, and Hawaii's Climate Change and Clean Energy Goals



2019 HAWAII CLIMATE CONFERENCE

# HĀ O KE KAI

FREE & OPEN TO THE PUBLIC

January 14, 2019

8:30 AM - 4:30 PM

East-West Center  
Imin Conference Center  
1777 East-West Road  
Honolulu, HI

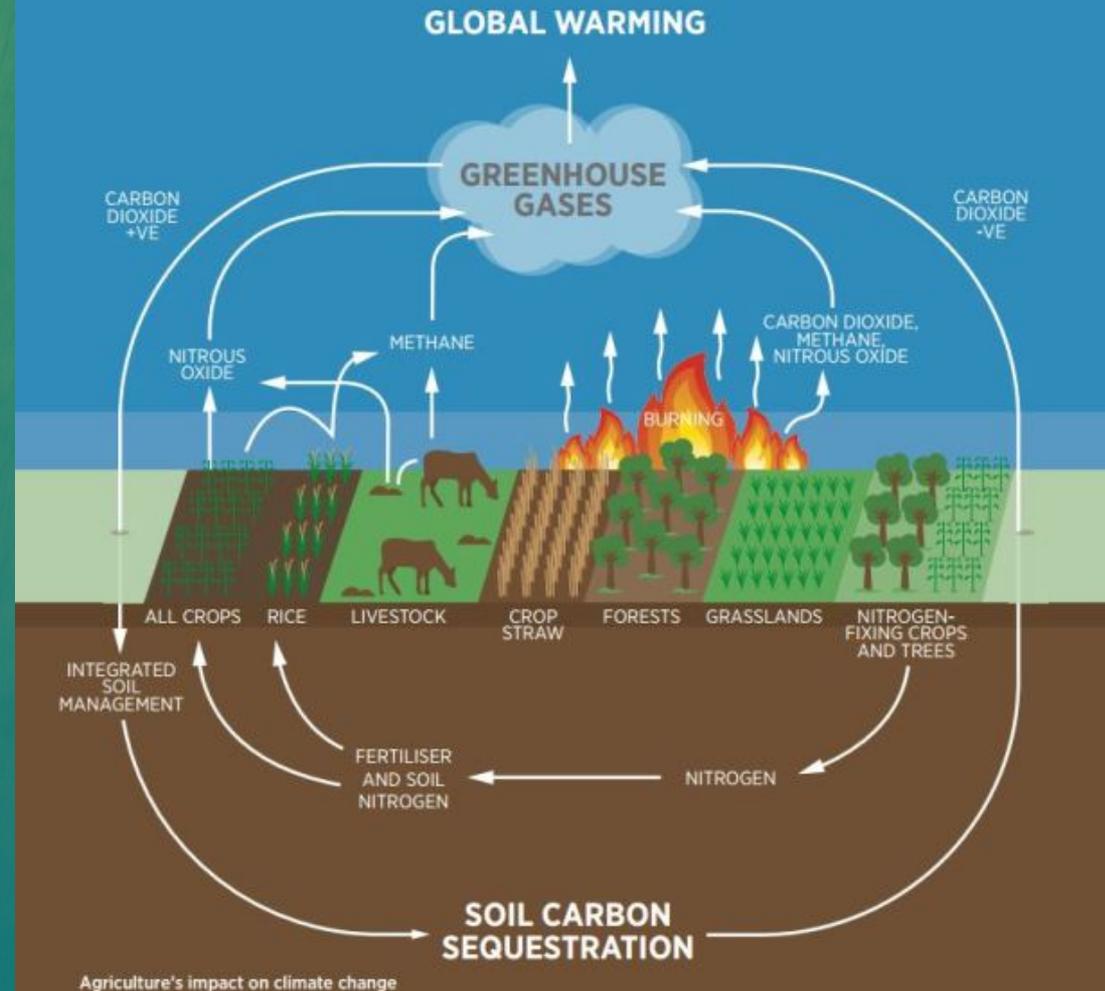
# State-Level Initiatives

## GHG Sequestration & Carbon Farming

GHG Sequestration Task Force seeks to promote greenhouse gas sequestration

- using nature-based solutions,
- by understanding baseline GHG emissions within Hawaii, and
- by identifying policies and practices to achieve enhanced sequestration.

The concept of “carbon farming” via agriculture, agroforestry, and aquaculture may create opportunities for DHHL and HHL beneficiaries in the near future by incentivizing agricultural and aquacultural use of lands for carbon sequestration.



# State-Level Initiatives OP-CZM Reports & Plans



**Hawai'i Ocean Resources Management Plan**  
July 2013

**Hawaii CZM Program**  
Coastal Zone Management  
HAWAII STATE OFFICE OF PLANNING

2013 – 5 year update starting mid-2019

**Hawai'i Sea Level Rise Vulnerability and Adaptation Report**

State of Hawaii, Office of Planning

December 2017 – Implementation is ongoing

**ASSESSING THE FEASIBILITY AND IMPLICATIONS OF MANAGED RETREAT STRATEGIES FOR VULNERABLE COASTAL AREAS IN HAWAII**

**Final Report**

February 2019

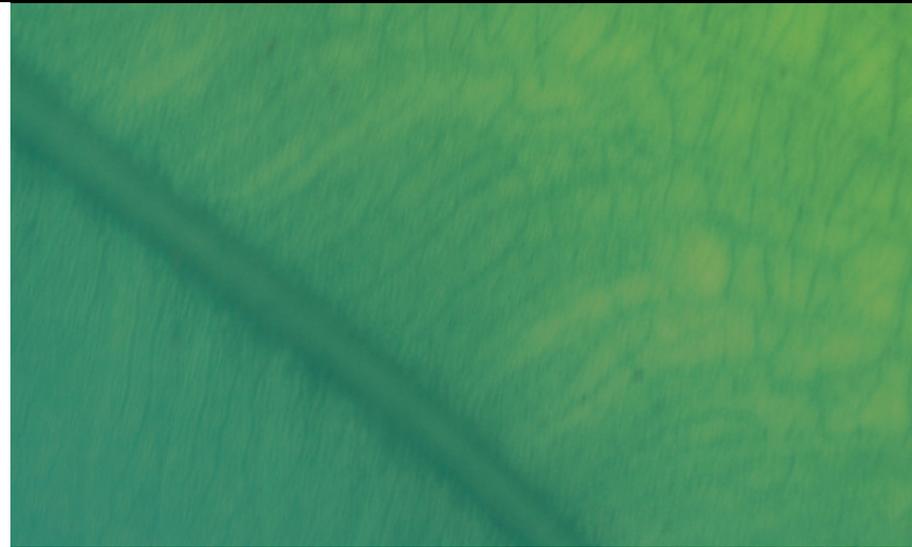
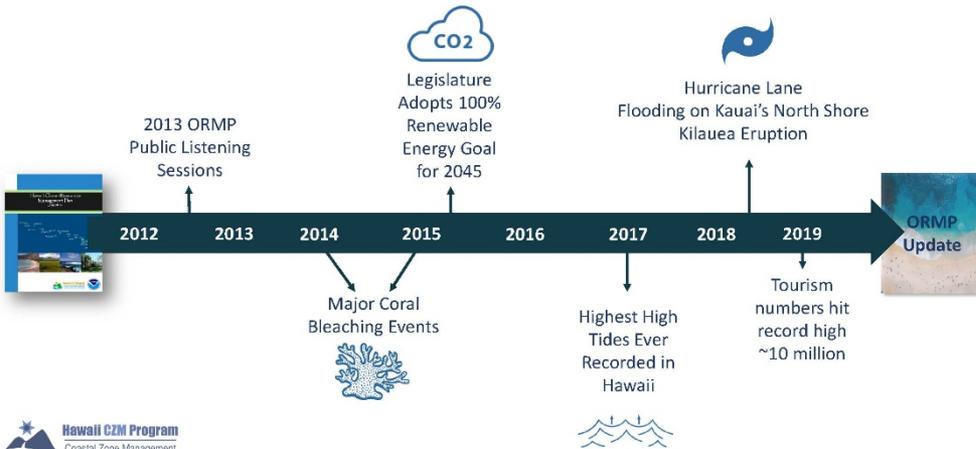
February 2019

# State-Level Initiatives

# ORMP Update



## Why Update? Recent History



# State-Level Initiatives Managed Retreat Report



Resorts, Hotels and Condos



Urban Area



Single-Family Homes



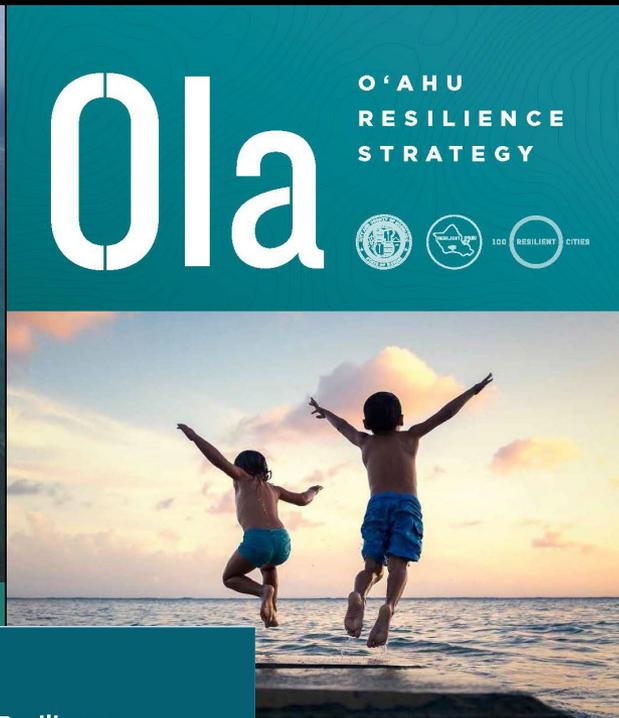
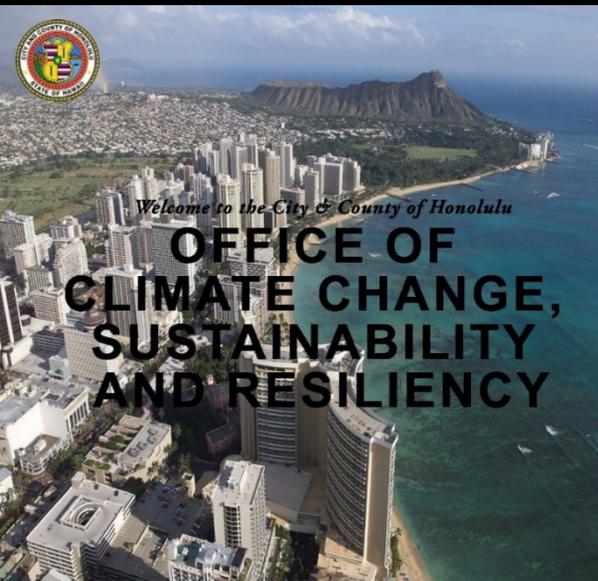
Critical Infrastructure

## Key findings:

- Need community agreement, support
- Do not fracture communities
- Use a local approach
- Retreat is only one option – include accommodation & protection
- Long-range plans must provide for managed retreat

# County-Level Activities

## Honolulu City & County

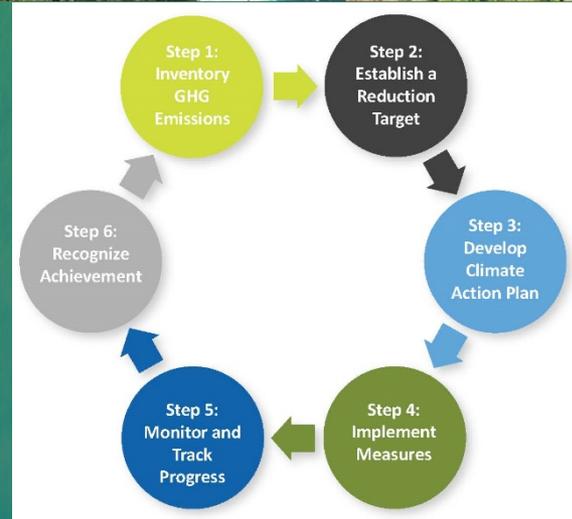


City & County of Honolulu  
Office of Climate Change, Sustainability and Resiliency

### Climate Action Plan Community Meeting



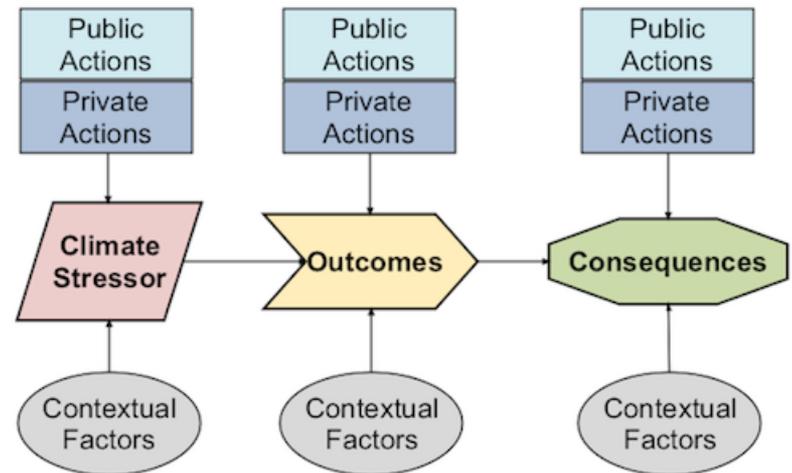
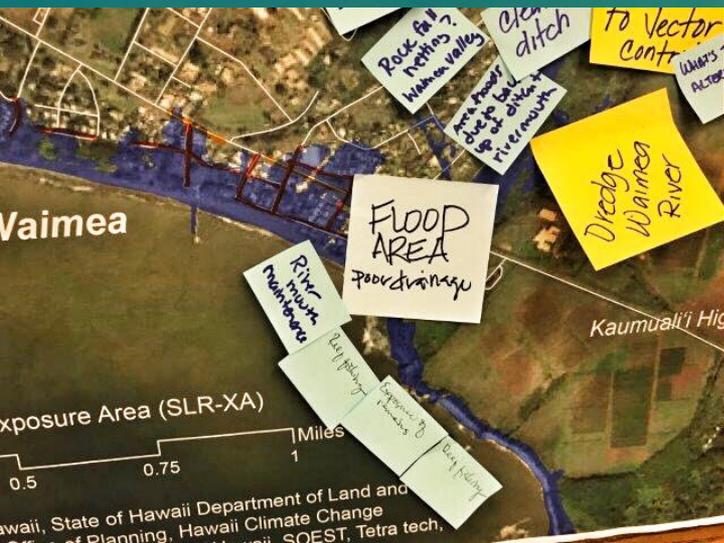
ResilientOahu.org



# County-Level Activities

## Kaua'i County

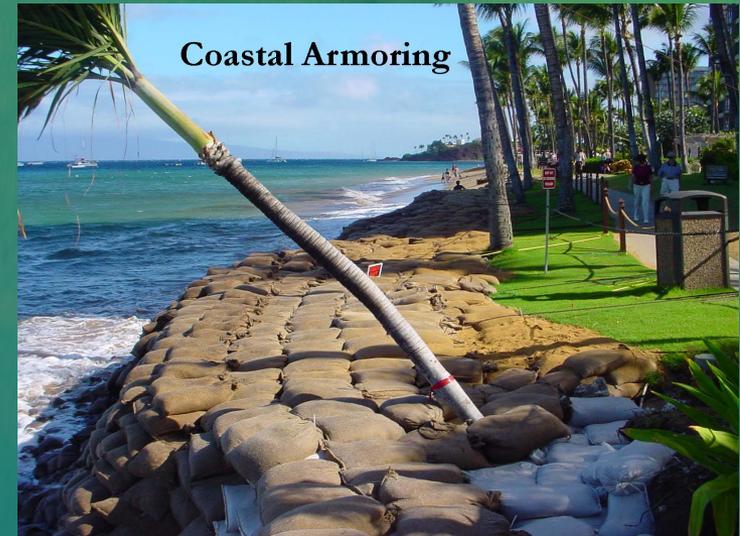
- County is planning for min. 3 feet of sea level rise by 2050
- West Kaua'i Community Plan – Draft out in August
- West Kaua 'i Community Vulnerability Assessment - Vulnerability, Consequences, & Adaptation Planning Scenarios (VCAPS)
- Investigating the use of Sea Level Rise Exposure Area (SLR-XA) data as a planning tool



# County-Level Activities

## Maui County

- West Maui Community Plan Update - Climate Change & Sea Level Rise Technical Resource Paper
- Proposing new shoreline setback rules that incorporate sea-level rise data



# **County-Level Activities**

## **Hawai'i County**

- ❖ **Working toward carbon neutrality**
- ❖ **General Plan Comprehensive Update**
  - **Identify high risk hazard areas & minimize development**
  - **Address CC in all planning programs and capital projects.**
- ❖ **Shoreline Setback Policy Amendments**
  - **Science based analysis, including SLR**
- ❖ **Hazard Mitigation Plan Update 2020**
  - **Include CC impacts with pre disaster and post disaster planning**

# Relationship to DHHL Plans

## General Plan

- Planning Office initiating update in 2020
- Will include discussion of climate change, SLR, community resilience, hazard mitigation

## Island Plans

- Once General Plan is updated, Island Plan updates can include CCA, SLR, CZM, community resilience, hazard mitigation, disaster preparedness etc.
- Reevaluate land use designations based on SLR-XA hazard areas, managed retreat scenarios

## Regional Plans – Various projects

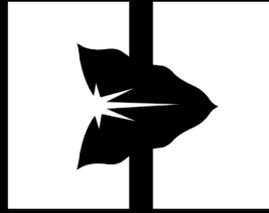
## Water Policy Plan – Implementation of Water Branch

# Current/Ongoing Planning Office activities

- South Molokai Shoreline Erosion Assessment Plan development (through Spring 2020)
- Community outreach & education, e.g. tabling at annual Molokai Earth Day celebration
- Participation in CZM & Climate Change Adaptation planning processes, statewide
- Policy analysis & legal review of HHC authorities in relation to CZM at federal, State & County levels of jurisdiction
- Memoranda of Understanding with all Counties re: zoning and development standards, infrastructure, building permits etc., to reach agreement on procedures related to coastal zone & SMA regulation, climate change adaptation, sea level rise & other coastal hazard mitigations.

# Next Steps

- **Develop an integrated policy framework via the Planning System, starting with the General Plan update in 2020**
- **Develop a more coordinated approach to DHHL representation & involvement in various disaster preparedness & community resilience planning processes, policies, & implementation activities at the federal, state and county levels.**
- **Conduct cross-training on climate change & community resilience planning within the Planning Office**
- **Include considerations of sea level rise, climate change & hazard vulnerability in the criteria for evaluating land exchanges & acquisitions**
- **Conduct a workshop for the Commission in late 2019 or early 2020 to generate recommendations and direction on prioritization of DHHL efforts for the above**
- **Conduct Community Resilience Planning workshops in 2020 for homestead communities interested in developing Community Resilience Plans.**



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*Questions?*

*Mahalo!*