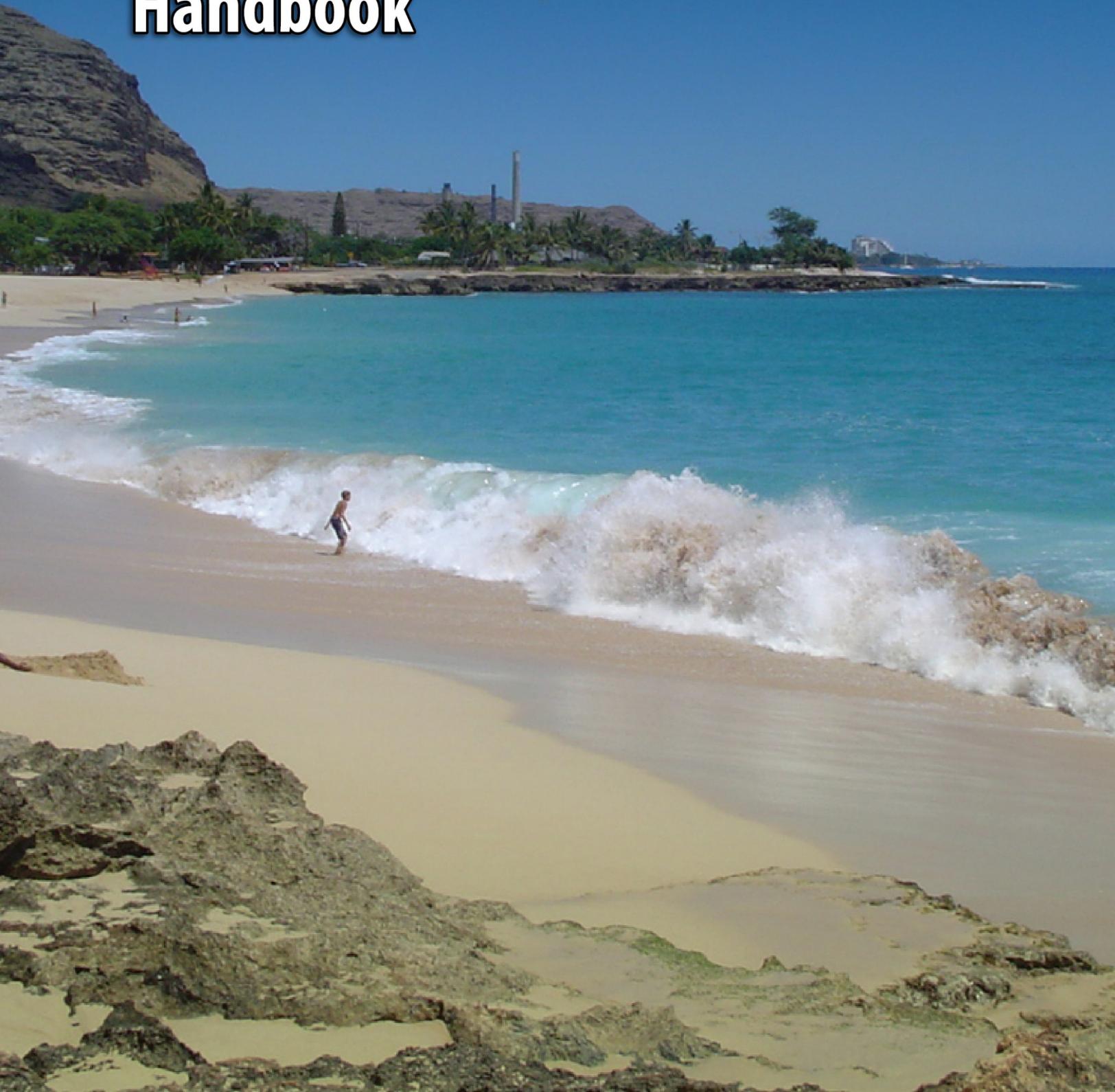


Hawai'i Interagency Climate Adaptation Committee Handbook



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Background

Climate change is anticipated to have profound effects in the Hawaii Islands [1]. Increasing air temperature, decreasing trade winds, overall decline in rainfall, decreasing stream base flow, increasing sea surface temperatures, increasing ocean acidity, and rising sea level pose significant threats to our social and economic wellbeing. Mitigating the effects of climate change will require immediate and unprecedented levels of intergovernmental cooperation amongst world governments to reduce greenhouse gas (GHG) emissions. In the meantime, it is imperative that governments take immediate and unprecedented steps to prepare for climate change, given that changes are already being observed.

In Hawai'i, climate change has the potential to profoundly impact our wellbeing and way of life. The warming of the oceans and land will change our coastal and nearshore marine areas; watersheds may become less productive and less diverse, and public health will generally suffer from the combination of these changes. In particular, rising sea levels will increase the occurrence and severity of coastal erosion and flooding, threatening natural resources and economic sectors concentrated along low-lying shores.

In 2014, the Hawaii State legislature declared, through the passage of the Hawai'i Climate Adaptation Initiative Act (Act 83, Session Laws of Hawai'i) that climate change is the paramount challenge of this century, posing both an urgent and long-term threat to the State's economy, sustainability, security, and way of life. The purpose of the Hawai'i Climate Adaptation Initiative Act is to address the effects of climate change in order to protect the State's economy, health, environment, and way of life. Act 83 notes that, "Hawai'i is one of the few coastal states that has not adopted a statewide climate adaptation plan, yet is among the most vulnerable." Act 83 calls for the establishment of an Interagency Climate Adaptation Committee (ICAC), attached administratively to the Hawai'i Department of Land and Natural Resources (DLNR) and co-chaired by the Board of Land and Natural Resources (BLNR) and the director of the Hawai'i Office of Planning (OP).

The first task of the ICAC is to develop a statewide Sea Level Rise Vulnerability Assessment and Adaptation Report (SLR Report) by December 31, 2017. According to the Intergovernmental Panel on Climate Change, Assessment Report 5, at the current rate of greenhouse gas production, global mean sea level is likely to rise a mean of 1 foot by mid-century and over 2 feet by the end of the century[2]. Hawai'i and other central Pacific islands are expected to experience significantly greater-than-average sea-level rise [3]. The consequences of sea level rise for Hawai'i are severe compared to many other coastal states, as the majority of our population and public infrastructure exist on low-lying coastal plains which are highly susceptible to coastal hazards. The DLNR Office of Conservation and Coastal Lands (OCCL) will lead the development of the SLR Report in coordination with the ICAC. The SLR Report will serve as a framework for the State and ICAC to address other climate-related threats and climate change adaptation priorities, ultimately leading to a Climate Adaptation Plan for the State of Hawai'i, which will be prepared by the OP.

History of Policies and Laws on Climate Change Adaptation in Hawaii

2014: Hawaii Climate Change Adaptation Initiative Act (Act 83) established an interagency climate adaptation committee charged with developing a sea-level rise vulnerability and adaptation report addressing statewide impacts through 2050. The committee is required to issue a report that will be available to the public before the end of 2017. Act 83 also authorizes the Office of Planning to coordinate the development of climate adaptation plans and policy recommendations, and to use the committee's report as a framework for addressing other climate threats and climate change adaptation priorities.

2013: International Majuro Declaration for Climate Leadership. Hawaii signed on as the first sub-national government after Hawaii became one of eight governors appointed by the President to the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience.

2012: Climate Change Adaptation Priority Guidelines (Act 286) created guidelines encouraging collaboration to address climate change and recognizing that it will impact the following: agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy.

2009: A Framework for Climate Change Adaptation in Hawaii. The framework, developed by the multi-stakeholder Ocean Resources Management Plan (ORMP) Working Group, established by the Hawaii Coastal Zone Management Program to ensure implementation and further development of the ORMP, provided initial guidelines on how the State of Hawaii could plan for adaptation to the impacts of climate change.

Purpose and Use of the Handbook

This Handbook describes the goals and objectives, membership, and the roles and responsibilities of the ICAC. It is intended as a working document that can be updated and revised as needed to document the process and procedures used by the ICAC for this initial SLR phase of their work and to provide a foundation for future efforts to develop a statewide adaptation plan.

Committee Goals, Objectives, and Approach

The overarching goal of the ICAC is to plan for and address the effects of climate change in order to protect the State's economy, health, environment, and way of life. Over the next three years (2015 – 2017), the ICAC has been directed to focus on climate impacts related to sea level rise. To achieve this goal, the ICAC will: (1) develop, update, and use knowledge of climate risk to recommend improvements to policies, programs, projects, and business practices that reduce risk, and (2) to work effectively together, sharing information and data and developing innovative sector-specific and cross-cutting recommendations to adapt in a changing climate.

The entities of the ICAC are committed to work collaboratively to achieve results they are more likely to achieve together than alone. Adopting a collaborative approach changes the way we work:

- from competing to building consensus;
- from working alone to including others from a diversity of cultures, fields, and sectors;
- from focusing on single sector activities, services, and programs to integrating multisectoral strategies and results; and
- from addressing short-term needs to affecting large scale changes in policies, programs, and institutions.

Committee Membership

ICAC membership shall include a primary and alternate member. As mandated by Act 83, the ICAC shall include the following members (or their designees):

- Chairs of the standing committees of the legislature with related subject matter jurisdiction;
- Chairperson of the Board of Land and Natural Resources (co-chair);
- Director of the Office of Planning (co-chair);
- Director of Business, Economic Development, and Tourism;
- Chairperson of the Hawai'i Tourism Authority Board of Directors;
- Chairperson of the Board of Agriculture;
- Chief Executive Officer of the Office of Hawaiian Affairs;
- Chairperson of the Hawaiian Homes Commission;
- Director of Transportation;
- Director of Health;
- Adjutant General;
- Chairperson of the Board of Education;
- Directors of the County Planning Departments; and,
- Manager of the Coastal Zone Management Program.

Each primary ICAC member shall designate an official alternate representative. This alternate member may participate fully in meetings if the primary Committee member is unable to attend. Names and contact information for committee members and alternates will be updated as Appendix 1. The primary Committee member shall ensure that his/her alternate is kept apprised of relevant issues.

In addition to those members officially designated in Act 83, the chairs of the committee may request the participation or input of members of the public; experts in the field; and county, state, or federal officials necessary for the formulation of the report.

Work groups of the ICAC may be established as needed to engage in specific tasks. Workgroups will be comprised of both selected Committee members and subject matter experts not otherwise involved in the Committee. The primary role of the Workgroups will be to thoroughly research, discuss and provide recommendations for specific issues identified by the ICAC.

Member Roles and Responsibilities

The ICAC members (and their alternates) will provide input over the short-term on the development of the SLR Report and over the long-term on the development and implementation of a statewide climate adaptation plan. ICAC members (and their alternates) shall:

- Define the goals of the ICAC;
- Represent, to the best of their ability, the interests and opinions of the agency, organization or constituent group which they represent;
- Regularly attend and participate in Committee meetings and webinars;

- Communicate and consult regularly with the organizations and constituent groups which they represent to ensure that the SLR Report meets the diverse needs and interests of all those involved;
- Share information regarding initiatives and projects that may affect the SLR Report and other impacts of climate change adaptation;
- Provide information and data that may be needed for the vulnerability assessment (VA)/socioeconomic impact (SEI) analysis; and
- Review and come to consensus upon recommendations to be included in the SLR Report and action to address other impacts of climate change.

The DLNR will serve as co-chair to the ICAC. Specific responsibilities include:

- Provide management oversight and technical direction of subcontractors (UH SOEST and Tetra Tech) for the development of the SLR Report;
- Provide planning and facilitation support for meetings of the ICAC and workgroups;
- Provide technical and policy advice for meetings and plan development;
- Ensure comments, concerns and recommendations of the ICAC are represented in planning products;
- Provide adequate staff resources for drafting documents; and
- Ensure adequate time to ICAC members to review and comment on information, recommendations and documents;

The Office of Planning will serve as co-chair to the ICAC. Specific responsibilities include:

- Provide planning and facilitation support for meetings of the ICAC and workgroups;
- Provide outreach and education to stakeholder organizations and other interested parties.

The work of the ICAC will be achieved through quarterly meetings and agency-specific work such as information gathering or document review before or after each meeting. The ICAC will establish and update as needed a working agenda for quarterly meetings and other events needed to achieve the Committee goals and objectives.

Committee Tasks

The first phase of work of the ICAC is to develop the SLR Report by December 2017. The SLR Report will expand upon ongoing collaborations with the University of Hawai'i School of Ocean and Earth Science and Technology (UH SOEST), the University of Hawai'i Sea Grant College Program (UH Sea Grant), the Pacific Islands Ocean Observing System (PACIOOS), and the Pacific Islands Climate Change Cooperative (PICCC). SOEST data and mapping products will provide a basis for further analysis of vulnerabilities, socioeconomic ramifications, and recommendations for planning, management and adaptation to reduce vulnerability and increase resilience to SLR hazards. In addition, OCCL has contracted Tetra Tech, Inc. to assist with ICAC coordination and stakeholder engagement, conduct the vulnerability assessment and socioeconomic impact analysis, and assist the ICAC in preparing the SLR Report. Major milestones of this SLR phase are shown in Figure 1.

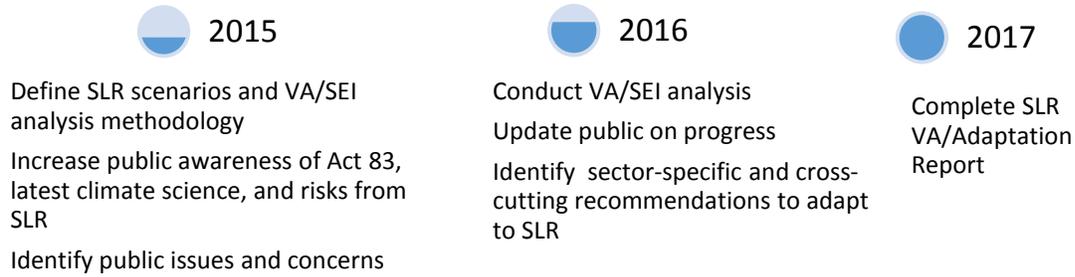


Figure 1. Major milestones of the sea level rise phase of ICAC work

The ICAC working agenda for June 2015 – December 2017 is provided in Appendix 2 highlighting key objectives, inputs, decisions, and outputs of each meeting. This agenda will be reviewed and revised as needed at each quarterly meeting as part of an adaptive management process for achieving the Committee goals and objectives. Ground rules for ICAC meetings are provided in Appendix 3.

Appendix 1. Interagency Climate Adaptation Committee Member List

NAME	AGENCY/ ORGANIZATION	NAME OF ALTERNATE
Suzanne Case, <i>Co-Chair</i>	Department of Land & Natural Resources	Sam Lemmo
Leo Asuncion, <i>Co-Chair</i>	Dept. of Business, Economic Development, & Tourism/Office of Planning/CZM	TBD
Senator Laura Thielen	Senate	Jennifer Barra
Senator Mike Gabbard	Senate	Meg Turner
Rep. Chris Lee	House of Representatives	
Rep. Ryan Yamane	House of Representatives	Danielle Bass
Phyllis Shimabukuro-Geiser	Department of Agriculture	Brian Kau
David Brentlinger	Department of Defense	Tiffany Petersen
Duane Kashiwai	Department of Education	Ken Masden
Nancy McPherson	Department of Hawaiian Home Lands	Kaleo Manuel
Laura McIntyre	Department of Health	Dr. Keith Kawaoka
Jessica Wooley	DOH, Office of Environmental Quality Control	Thomas Eisen
Jade Butay	Department of Transportation	David Rodriguez
Kelii Wilson	Hawaii Tourism Authority	TBD
Keola Lindsey	Office of Hawaiian Affairs	TBD
George Atta	City and County of Honolulu, Department of Planning and Permitting	Bob Stanfield
April Surprenant	County of Hawai'i Planning Department	Bethany Morrison
Mike Dahilig	County of Kauai Planning Department	Jody Galinato
Jeff Dack	County of Maui Planning Department	Pam Pogue

Appendix 2. Interagency Climate Adaptation Committee Working Agenda (2015 –2017)

Year	Month	Activity	Objectives	Inputs	Decisions	Outputs
2015	June 3	Meeting	<ul style="list-style-type: none"> Review mandate established by Act 83 Review tasks and schedule to achieve mandate Review and provide comments on draft ICAC Handbook (goal, roles, responsibilities, and procedures of ICAC) Review and provide comments on illustrative ICAC agenda 	Draft ICAC Handbook		
	September 22	Meeting	<ul style="list-style-type: none"> Introduce SLR modeling and viewer Review Project Work Plan with VA/SEI analysis methodology 	Draft final ICAC Handbook Draft Project Work Plan	Approval of ICAC Handbook	ICAC Handbook Project Work Plan Completed survey
2016	January 26	Meeting	<ul style="list-style-type: none"> Review draft Report annotated outline and VA/SEI analysis test runs 	Draft Report annotated outline	Approval of Report annotated outline	Report annotated outline
	February 1 st week	Climate Science Seminar	<ul style="list-style-type: none"> Present latest climate science and projections 	Presentations by climate scientists		
	March	State-wide Public Listening Session	<ul style="list-style-type: none"> Conduct webinar to provide overview and status of ICAC efforts Solicit public views and concerns 	Presentation		Webinar recorded and posted on DLNR website Public views and concerns documented
	June	Meeting	<ul style="list-style-type: none"> Review and update as necessary ICAC Handbook 			
	September	Meeting	<ul style="list-style-type: none"> Review selected sections of the Report 	Draft sections		
2017	January	Meeting	<ul style="list-style-type: none"> Review 50% draft Report Develop consensus on comments and edits needed 	50% draft report	Approval of draft recommendations	
	April	State-wide Public Listening Session	<ul style="list-style-type: none"> Conduct webinar to provide status of ICAC efforts Solicit public views and concerns 	Presentation		Webinar recorded and posted on DLNR website Public views and concerns documented
	July	Meeting	<ul style="list-style-type: none"> Review 90% draft Report 		Approval of final recommendations	

Appendix 3: ICAC Meeting Ground Rules

- Each Committee member participates
- Members are forthcoming with information and opinions
- Dissenting opinions are valued and respected
- Members listen to ideas without judging
- One person speaks at a time
- Members will not participate in side bar conversations
- Meetings and breaks start and end on time
- Cell phones are set on silent or vibrate
- Unanswered questions will be placed in “parking lot” and will be followed up on at the next meeting

References

1. Keener, V.W., Marra, J. J., Finucane, M. L., Spooner, D., & Smith, M. H. (Eds.). *Climate Change and Pacific Islands: Indicators and Impacts. Report for The 2012 Pacific Islands Regional Climate Assessment*. 2012: Washington, DC
2. IPCC, *Summary for Policymakers*, T.F. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, Editor. 2013: Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
3. Kopp, R.E., et al., *Probabilistic 21st and 22nd century sea-level projections at a global network of tide-gauge sites*. *Earth's Future*, 2014. **2**(8): p. 383-406.