

CLIMATE CHANGE AND THE VISITOR INDUSTRY
People, Place, Culture, and the Hawai'i Experience

Stakeholder Outreach Workshop Summaries and Risk Perception Analysis

Matthew J. Gonser
Dolan Eversole



University of Hawai'i Sea Grant College Program
Center for Sustainable Coastal Tourism

A report for the Hawai'i Tourism Authority



The Center for Sustainable Coastal Tourism

The University of Hawai‘i Sea Grant Center for Sustainable Coastal Tourism (Center), established in 2009, is a collaboration between the School of Ocean and Earth Science and Technology (SOEST), the College of Social Science, the School of Travel Industry Management, the Hawai‘inuiākea School of Hawaiian Knowledge, and the School of Architecture at the University of Hawai‘i at Mānoa. In partnership with local businesses, government, and the community, the Center conducts research, education, and outreach activities on sustainable coastal tourism in Hawai‘i and various economic, cultural, and environmental impacts of the visitor sector. The Center acknowledges tourism as a central driver of the economy in Hawai‘i and recognizes the inseparable link between the environment and the economy – that is, the environment is the economy. The Center’s primary focus is to conduct science, economic, and policy extension and outreach efforts that support: 1) Improve the quality of Hawai‘i’s natural environment, 2) Maintain habitats and ecosystems, and 3) Reduce energy and water resources needed to support the tourism sector resulting in positive impacts for Hawai‘i’s economy and the quality of life for its residents. For more information on the Center, please visit: <http://sct.seagrant.soest.hawaii.edu/>.

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Table of Contents

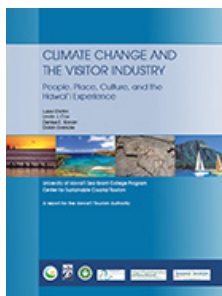
Executive Summary.....	1
Project Outreach	2
Outreach Meeting Sessions.....	3
Participant Voices.....	4
Participant Theme: Strategies and Actions	5
Participant Theme: Perceived Role of Tourism and Community.....	6
Participant Theme: Relevance for HTA Plans and Initiatives.....	7
Participant Theme: Adaptation Priorities and Concerns	8
Discussion of Stakeholder Survey Results.....	11
Moving Forward.....	14
Appendix A: Climate Change and Impacts to the Visitor Industry in Hawai‘i	
HTA Workshop Participant Survey.....	16
Appendix B: Description of HTA from Strategic Plan: 2013-20141.....	18
Appendix C: Hawai‘i State Planning Act as it relates to Climate Change Adaptation Hawai‘i Revised	
Statutes Chapter 226.....	19
Appendix D: Additional UH Sea Grant Resources.....	20
References.....	21

Executive Summary

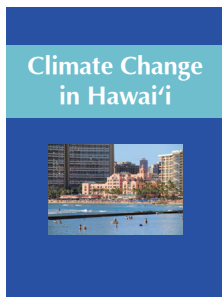
The impacts from climate change are being observed in Hawai‘i. Detailed scientific studies are being conducted to enhance prediction of future conditions.¹ Climate-related impacts to public safety and health may be compounded by impacts to the natural and cultural assets and infrastructure we depend upon and value. Hawai‘i’s tourism industry, the main driver of the state’s economy, is heavily dependent on these assets for its marketing and visitor experiences and satisfaction. As the primary generator of employment in the state, including direct (travel related) and indirect (tourism related businesses), and its extension through all sectors of Hawai‘i’s economy, there is an urgency to educate the visitor industry about the potential impacts of climate change.² Strategic plans should be developed for preparing and adapting tourism infrastructure and assets to present and projected climate change impacts. Identifying these climate change impacts also offers an opportunity to consider sustainable resource use strategies for energy, water, transportation, and other critical resources utilized by the visitor industry.

This report details stakeholder outreach activities conducted by the University of Hawai‘i Sea Grant College Program’s Center for Sustainable Coastal Tourism as part of this project. The overarching project goals include:

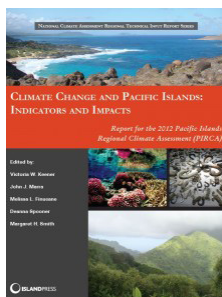
- **Summarize the state of knowledge of current and potential impacts of climate change on Hawai‘i’s tourism industry and coastal communities;**
- **Identify opportunities for adaptation and sustainability of the tourism industry;**
- **Inform Hawai‘i’s decision-makers in the public and private sector of the potential impacts of climate change, and;**
- **Provide an opportunity for visitor industry stakeholders to provide feedback on the findings and assist in the identification of priority sectors for adaptation.**



This outreach summary report is one of three *companion documents* as part of the Hawai‘i Tourism Authority (HTA)-funded project. The *Climate Change and the Visitor Industry: People, Place, Culture, and the Hawai‘i Experience* report (HTA report) is a literature review research report which explains the expected impacts of global climate change on Hawai‘i’s tourism industry based on the current literature; the report also contains information about economic considerations and provides targeted strategies of climate adaptation for the various tourism sectors.



Climate Change in Hawai‘i, one of the three companion documents, was conceived as a simplified summary of the state of climate impacts for Hawai‘i. This summary is being developed in response to an identified need of legislators, policy makers, resource managers, governmental agencies, and public citizens who are interested in knowing about issues related to climate change in Hawai‘i and have requested a non-technical summary of climate impacts in Hawai‘i.



The completion and publication of these three companion documents follows the timely release of the *Pacific Islands Regional Climate Assessment (PIRCA)*.³ The *PIRCA* report “is aimed at assessing the state of knowledge about climate change indicators, impacts, and adaptive capacity of the Hawaiian archipelago and the US-Affiliated Pacific Islands (USAPI).” The *PIRCA* report is the Pacific Islands region’s integrated contribution to the 2013 National Climate Assessment (NCA).

Project Outreach

The outreach component of this project involved activities that disseminated the findings from the HTA report and analyzed stakeholder perceptions of climate change and risk statewide. The outreach component also provided stakeholders across the state an opportunity to ask questions and better understand the potential impacts of climate change. These informational and listening sessions served as an important venue for both outreach and inreach, where participants provided feedback, asked questions, and voiced concerns and recommendations for research, policy, and action.

As would be expected while engaging communities in our culturally and geographically unique islands, feedback and information was in some cases particular to that island, or region of an island. However, across the eight sessions, certain commonalities emerged. The most prevalent discussion points and/or recommendations from the listening sessions and participant surveys are summarized as follows:

Stakeholder Comment Themes

- ***Discussion, Outreach, and Education*** – National trends show an increase in the percentage of Americans that feel more informed on and convinced of climate change.⁴ Session participants generally expressed the belief that it is important to continue to present climate change, explain the science, as well as the consequences, impacts, and need for adaptation. Stakeholders recommended “more education for all,” to include the public, the private sector, elected officials, and governmental departments and agencies. Regarding the visitor industry specifically, participants noted a need to better connect with hoteliers and associations directly within the visitor industry, and pointed to HTA’s role to bring together all necessary stakeholders and share information.
- ***Planning and Action*** – “You can’t just tell us the problems.” Beyond reaching levels of shared understanding, participants expressed the desire for “what to do” and “how to” guidance, recommendations, strategies, and solutions. Stakeholders recommended that an interdisciplinary approach for civil engineering, design and construction, financing, land use planning policy, and legal alternatives be provided to help private citizens, private business, and public agencies act. There are however, concerns over political leadership and professional capacity to articulate and develop such options, as well as the costs of implementation.
- ***“No Regrets” Investments*** – participants expressed the need to address existing environmental and natural hazard concerns, which will also address impacts from climate change. Stakeholders recommended that critical infrastructure needs for the visitor industry that are in line with the infrastructure needs of the state be identified, and “sectors” that are important for both the visitor industry and Hawai‘i’s citizens alike be targeted for improvement (e.g., energy and transportation assets). That is, “what’s good for residents is good for visitors,” and *vice versa*.
- ***Relationship between Tourism and Communities*** – An apparent “love-hate relationship” with tourism exists in Hawai‘i, with a general recognition of its benefits. However, if natural resources that contribute to our unique culture and quality of life are lost, we will “lose the ‘Aloha Spirit’ and smiles on employees’ faces.” Stakeholders recommended that a balance be sought between assets used by visitors and assets needed by residents through a reinvestigation of our dependency on a highly-sensitive industry. Discussion of the need to conduct a resource carrying capacity analysis for the visitor industry was frequently mentioned. This common stakeholder sentiment highlights a perceived need to diversify our economy, whereby tourism becomes a byproduct driven by other healthy economic sectors.
- ***Interdependencies*** – One of the outreach survey questions asked participants to rank “priority sectors” for climate adaptation for the visitor industry. Stakeholders recommended identifying linkages across sectors, along with agency responsibilities and regulatory authority influencing those sectors, rather than assigning absolute rankings. In looking at connections, participants alluded to a desire for comprehensive state and county climate adaptation assessments and plans that incorporate traditional

ecological knowledge (TEK), and that recognize the linkages between HTA strategic plans and other state and county plans (e.g., state functional plans, county general and community plans, transportation plans, etc.).

A seven question *survey* (see *Appendix A*) was distributed toward the end of each session. Participants were asked to submit a completed version before departing that session. The survey results indicate that individuals and organizations are not yet prepared to take proactive climate change adaptation measures. And even though a vast majority of respondents (89%) believe that the state of Hawai‘i should develop new climate adaptation policies, only 45% say they are informed enough to support government adaptation planning and/or action.

In general, participants were pleased to see HTA taking efforts to investigate climate change impacts on the visitor industry and posed the question, *How does HTA wish to engage in the state’s position on climate change?*⁵

Outreach Meeting Sessions

Over three months, eight informational and listening sessions were held throughout the state.

Meeting Dates	Location
29 October 2012	Hilo, Hawai‘i
30 October 2012	Kona, Hawai‘i
02 November 2012	Ke‘ālia Pond National Wildlife Reserve, Maui
05 November 2012	Waikīkī, O‘ahu
09 November 2012	Po‘ipū, Kaula‘i
06 December 2012	Kona, Hawai‘i
11 December 2012	Waikīkī, O‘ahu
22 January 2013	Honolulu, O‘ahu

Total number of participants: 108

The general structure of each three hour session was two informational presentations with questions and answers during and after each presentation, followed by an open participant discussion. The session agendas were:

- Project background and climate science introduction
- Project climate impacts assessment on Hawai‘i’s tourism industry
- “Listening Session,” stakeholder survey, and community discussion

Our intent was to present the project background and a general “state of climate science,” followed by the methodology and findings from the HTA study and report. Then the floor was opened to participants, who were equally informed (in addition to any prior understandings and positions on the subject), to discuss priorities and concerns, ideas for strategies and actions, and to communicate their stories and knowledge with each other and the project team. *The content of this report is largely commentary from this portion of the sessions and sheds light on stakeholders’ varied perceptions of climate change impacts and recommendations for adaptation.*

The stakeholder notes and comments were coded and grouped based on the most recurring themes:

- Strategies and actions
- Perceived role of tourism and community
- Relevance for HTA plans and initiatives
- Adaptation priorities and concerns

A seven question *survey* (see *Appendix A*) was distributed toward the end of each session to gauge participant understanding and perceptions of climate change and impacts on the visitor industry. Participants were asked to submit a completed version before departing that session. Findings from the survey can be found in both the *Discussion of Stakeholder Survey Results* and *Moving Forward* sections of this report.

Participant Voices

Notes were taken during the question and answer portions and listening sessions of each outreach session. These participant comments were coded into four prominent themes:

Current Actions	Future Plans
• Strategies and actions	• Relevance for HTA plans and initiatives
• Perceived role of tourism and community	• Adaptation priorities and concerns

Analysis of the participant comments was focused on how best to convey stakeholder feedback to HTA as it embarks on the development of a new *Hawai‘i Tourism Strategic Plan (TSP)*. HTA is currently operating within its *TSP: 2005-2015*.

...in Hawai‘i, tourism is everyone’s business. As the lead economic activity in the State, tourism impacts nearly all private businesses, community organizations, government, unions, visitors and residents.

A true partnership between the community, business and government to oversee tourism marketing and development from a statewide perspective is critical (TSP, p. 8).

The HTA is guided by the nine “Strategic Directions” outlined in the *TSP*:

- Access
- Communications and Outreach
- Hawaiian Culture
- Marketing
- Natural Resources
- Research and Planning
- Safety and Security
- Tourism Product Development
- Workforce Development

Participants from nearly all eight of the outreach sessions were aware of these Strategic Directions. However, confusion exists about the authority and power of HTA as a state agency to develop, invest, and implement climate adaptation projects, and assist private businesses to make changes to address the participants’ concerns outlined above (for a brief description of HTA’s position and role, see *Appendix B*). Suggestions that HTA should take the lead on implementing climate adaptation projects throughout the state were made, but no clear nexus to the mission and authority of HTA as defined in the *TSP* exists.

The following four sub-sections summarize the common participant themes identified from the outreach sessions. Each table below identifies where a comment is addressed in the current *TSP*, or if the current *TSP* does not address the comment. Some comments cut across multiple themes. Additionally, portions of the sessions were more general discussions of perceptions and concerns for the state as a whole, not necessarily specific to the visitor industry, nor the ability and/or obligation of HTA to take action on certain comments. This is further explained in the *Moving Forward* section of this report.

Participant Theme: Strategies and Actions

Participant Comment	Addressing the Comment within the 2005-2012 TSP
<p>Adaptation: Develop tangible and demonstrable climate adaptation measures</p>	<p>Not a focus of the current <i>TSP</i>. Design and construction alternatives will require a mix of research, private industry and business innovation, governmental policy guidance, and design standards. Additionally, adaptation measures include supporting and enhancing current and ongoing resource management and preservation of those assets, which can help mitigate impacts from climate change (e.g., State of Hawai'i Department of Land and Natural Resource's (DLNR) <i>Rain Follows the Forest</i>⁶). Federal adaptation guidance exists at the national level (e.g., U.S. Environmental Protection Agency, US Army Corps of Engineers, Federal Emergency Management Agency, etc.) that can serve to support local initiatives.</p>
<p>Education: Extension of climate change information that explains the science, and honestly discusses what is known, what is probable, and what is possible should continue; a need to connect with and inform the appropriate audience exists</p>	<p><i>TSP: 2005-2015 – Strategic Direction: Communications and Outreach.</i> Select objectives include: to increase stakeholders' knowledge and understanding of tourism issues, and support efforts that involve stakeholder participation, collaboration, interaction and discussion on tourism issues and efforts.</p> <p>HTA identifies itself as a lead agency in this area.</p>
<p>Priority Project Implementation: Link priority adaptation sectors to relevant government agencies and others for action; develop a matrix of sectors and opportunities as steps towards a larger statewide effort</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Communications and Outreach and Research and Planning.</i> Select objectives include: to raise the awareness of stakeholders' concerns about tourism among the various players and develop programs to address concerns; identify, monitor, and address tourism trends, including their impacts and benefits and to encourage participation in tourism planning and public policy development by all stakeholders.</p> <p>HTA identifies itself as a lead agency in these areas and could serve as a critical distributor of climate information and adaptation guidance to industry stakeholders.</p>
<p>Resilience: A focus on island resiliency and self-sufficiency is needed</p>	<p>Not a focus of the current <i>TSP</i>. Within the current <i>TSP</i>, the concept of <i>resilience</i> was not prominent in discussions of planning and design. It could be considered in future strategic planning efforts.</p>
<p>Traditional Knowledge: Restoring traditional infrastructure and practices (e.g., ahupua`a) to preserve and enhance natural assets and ecosystem services</p>	<p>Not a direct focus of the current <i>TSP</i>, however, the <i>TSP</i> does describe the importance of natural resource areas and the connection to cultural knowledge and practices (<i>Strategic Directions: Hawaiian Culture, Natural Resources, and Tourism Product Development</i>).</p> <p>HTA identifies itself as a lead agency in certain respects to the above Strategic Directions.</p>

Participants recognized that the audience at the outreach sessions was missing certain key stakeholders, including: hoteliers, realtors, engineers, designers, and contractors. HTA identifies itself as a lead agency for communicating with all stakeholders. The message of climate change impacts and adaptation is new for many, not just HTA, and so; communications and outreach will require focused efforts to bring all stakeholders together, to collectively and collaboratively work through the interrelated and cross-agency issues in response to pressing climate adaptation needs.

Participant Theme: Perceived Role of Tourism and Community

Participant Comment	Addressing the Comment
<p>Carrying Capacity: Community capacity and islands' carrying capacities</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Access, Natural Resources, and Workforce Development.</i> Select objectives include: to improve inter and intra-island transportation and supporting systems; raise awareness of all stakeholders about the responsible use of natural resources; and, ensure a well-trained and educated visitor industry workforce.</p> <p>Though these areas partly address the participants' comment, the comment is more directed toward the state's general sustainability with respect to water, food, population, energy, etc., of which HTA has a vested interest.</p>
<p>Community Interactions: Positive experiences with people of Hawai'i brings visitors back</p>	<p>The <i>TSP</i> identifies "aloha" as a present strength of Hawai'i's visitor sector, a core Native Hawaiian value, and a component of the following Strategic Directions: <i>Access, Communications and Outreach, Hawaiian Culture, Tourism Product Development, and Workforce Development.</i></p>
<p>Local Outreach: Marketing the tourism industry to the community and creating better neighbors</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Hawaiian Culture, Marketing, and Natural Resources.</i> Select objectives include: to strengthen the relationship between the visitor industry and the Hawaiian community, and support Hawaiian cultural programs to perpetuate Hawaiian culture; provide for stability in the visitor industry; and, increase collaboration among government agencies, the visitor industry, and the community.</p>
<p>Quality of Life: Improving the quality of life of residents will enhance the visitor experience</p>	<p>The <i>TSP</i> is acutely concerned with residents' perceptions of visitors' and the visitor sector's impacts on their lives and communities. It also points to focused opportunities for enhancements through the Strategic Directions of <i>Hawaiian Culture, Natural Resources, and Tourism Product Development</i> that describe mutually beneficial investments for residents and visitors.</p>
<p>Sense of Place: What is the role of Hawai'i's local sense of place and position in the global travel industry?</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Communications and Outreach, Hawaiian Culture, and Natural Resources.</i> Select objectives include: to provide and promote opportunities that involve resident and visitor interaction; strengthen the relationship between the visitor industry and the Hawaiian community, and strive to nurture (mālama) the Hawaiian culture by creating visitor experiences, activities and marketing programs that are respectful and accurate; and, explore innovative means to repair, maintain and improve Hawai'i's natural resources, and raise awareness of all stakeholders about the responsible use of natural resources. HTA seems to take the lead on showcasing a Hawaiian sense of place as a leader in cultural identity in the international travel industry.</p>

“It also should be noted that Hawai'i's 'tourism product' is where we live. Therefore, the focus should be on improving the quality of life for residents with the assumption that what is good for residents, is good for visitors” (TSP, p. 52).

The idea of climate change education is integrated into the previous theme related to the perceived role of tourism and is specifically noted on the previous page when considering a more inclusive view of Workforce Development that addresses standard of living, quality of life, housing, transportation, and residents' time. During the outreach sessions, debate occurred about whether "culture" or "nature" was the main draw for visitors. Regardless, positive experiences with the people of Hawai'i do draw visitors back. The TSP cites an approximately 60%/40% split for return visitors and first-time visitors to Hawai'i (for the year 2003; p. 34).

Participant Theme: Relevance for HTA Plans and Initiatives

Participant Comment	Addressing the Comment
<p>Agency Role: Demonstrate comprehension of linkages between HTA's plans and other state and county plans</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Research and Planning.</i> Select objectives include: improve, coordinate, and share tourism research; encourage participation in tourism planning and public policy development by all stakeholder; and, develop and implement county tourism plans.</p> <p>HTA identifies itself as a lead agency in this area. However, it should be asked if other agencies and departments share these objectives and if the structure for collaboration exists.</p>
<p>Agriculture: Agriculture serves the visitor industry both in products as well as aesthetically</p>	<p><i>TSP: 2005-2015 – Strategic Direction: Hawaiian Culture and Tourism Product Development.</i> Select objectives include: support Hawaiian programs and cultural practitioners to preserve and perpetuate Hawaiian culture where appropriate; identify, support, and develop new and strengthen existing experiential visitor activities and products.</p> <p>HTA identifies itself as a lead agency in these areas. It would seem there is also an opportunity to include agricultural considerations in the <i>Marketing, Natural Resources, and Workforce Development Strategic Directions.</i></p>
<p>Culture of Aloha: People of Hawai'i and "Aloha Spirit" enhance the visitor experience</p>	<p>The <i>TSP</i> identifies "aloha" as a present strength of Hawai'i's visitor industry, a core Native Hawaiian value, and a component of the following Strategic Directions: <i>Access, Communications and Outreach, Hawaiian Culture, Tourism Product Development, and Workforce Development.</i> However, the <i>TSP</i> does not explain what HTA's role is in the perpetuation of the Aloha Spirit.</p>
<p>Outreach: Utilize all avenues of communication and networks to extend climate and sustainability research results (e.g., not just workshops, but newsletters, programs, etc.)</p>	<p><i>TSP: 2005-2015 – Strategic Direction: Communications and Outreach.</i> Select objectives include: to increase stakeholders' knowledge and understanding of tourism issues, contributions and impacts, and, support efforts that involve stakeholder participation, collaboration, interaction, and discussion on tourism issues and efforts.</p> <p>HTA identifies itself as a lead agency in this area.</p>
<p>Traditional Culture: Go back to the roots and culture: enhancement of traditional cultural practices, which are intimately linked with the natural assets, is what makes Hawai'i unique.</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Hawaiian Culture and Natural Resources.</i> Select objectives include: strengthen the relationship between the visitor industry and the Hawaiian community, and support Hawaiian cultural practitioners to perpetuate Hawaiian culture; raise awareness of all stakeholders about the responsible use of natural resources.</p>

The TSP acknowledges that the “Native Hawaiian culture and state’s natural resources” (p. 13) are attributes that make Hawai‘i unique and special. Climate change impacts may alter many of these assets, impacting the current visitor industry’s ability to significantly contribute to the local economy.

Additionally, participants asked, “what communication vehicles do HTA influence,” recognizing the importance of utilizing all outlets for stakeholder education and engagement. Lastly, the *TSP Strategic Direction, Workforce Development*, could take a more inclusive view to consider housing and transportation needs, choices, and impacts on the workforce. This addition would connect participants’ desire to link HTA, with state and county plans.

Participant Theme: Adaptation Priorities and Concerns

Participant Comment	Addressing the Comment
<p>Natural Hazards Resilience: Community engagement and a “whole of society” approach to hazard resiliency and disaster recovery planning</p>	<p>The <i>TSP: 2005-2015</i> does not specifically address natural hazards considerations, sea-level rise, and/or climate change. It is evident, however, that the visitor industry has a role to play in these emerging trends including resiliency and recovery planning. With its cumulative physical structures, social and business networks, economic importance, environmental impacts, and usage of public infrastructure, the visitor industry will be an important stakeholder in state and county adaptation planning.</p> <p>While natural hazard preparation and response falls squarely on other federal, state and local agencies, the concept of community resilience is much broader and can be integrated into the HTA <i>TSP</i>. There are elements within the <i>TSP: 2005-2015</i> that can be interpreted to support HTA engagement in these areas. These objectives are found within the Strategic Directions of <i>Communications and Outreach, Natural Resources, Research and Planning, Tourism Product Development, and Workforce Development</i>.</p>
<p>Natural Resources: Water, Land Use, and Energy</p>	<p>Though the <i>TSP</i> indirectly addresses this comment through the <i>Access, Hawaiian Culture, Natural Resources, Research and Planning, and Tourism Product Development</i> Strategic Directions, the comment is more directed toward the state’s general sustainability and survivability with respect to water, food, population, energy, etc., of which HTA has a vested interest.</p> <p>Through its communications and outreach, HTA can directly serve to enhance and support climate adaptation and sustainability outreach efforts with respect to the environmental impacts of the visitor industry’s resource use, transport operations, and land development practices. Adaptation and sustainability alternatives will require a mix of science, economics, and policy research with private industry and business innovation partnerships, through technical guidance and demonstration projects. Additionally, adaptation measures include supporting and enhancing current and ongoing resource management and preservation of those assets, which can help mitigate impacts from climate change (e.g., DLNR’s <i>Rain Follows the Forest</i>). Federal adaptation guidance exists at the National level (e.g., US Environmental Protection Agency, US Army Corps of Engineers, Federal Emergency Management Agency, etc.) that can serve to support local initiatives.</p>

Participant Comment	Addressing the Comment
<p>Priority Adaptation Actions: Identify linkages, connections, and interdependencies. What are mutually beneficial “priority sectors” and who’s the responsible/regulatory agency, authority, or community group?</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Access, Marketing, Natural Resources, and Research and Planning.</i> Select objectives include: to improve inter and intra-island transportation and supporting systems; coordinate marketing and tourism product development efforts to maximize performance; raise awareness of all stakeholders about the responsible use of natural resources; and encourage participation in tourism planning and public policy development by all stakeholders.</p> <p>The <i>TSP</i> alludes to this form of comprehensive planning and implementation framework when discussing how it should operate (p. 8). Additionally, this comment is with respect to climate change adaptation: language in the <i>TSP</i> could be updated to say “to prepare for...”, “to be resilient against...”</p>
<p>Priority Assets: Natural Assets and Cultural Assets and Practices</p>	<p><i>TSP: 2005-2015 – Strategic Directions: Hawaiian Culture and Natural Resources.</i> Select objectives include: strive to nurture (mālama) the Hawaiian culture by creating visitor experiences, activities, and marketing programs that are respectful and accurate; support Hawaiian programs and cultural practitioners, craftsmen, musicians, and other artists to preserve and perpetuate Hawaiian culture, where appropriate; improve value-added amenities at natural resource sites; raise awareness of all stakeholders about the responsible use of natural resources; and increase collaboration among government agencies, the visitor industry, and the community.</p>
<p>Social Change: Social climate change – where we are, were, and are going?</p>	<p>Though not a focus of <i>TSP: 2005-2015</i>, several Strategic Directions could be expanded to provide this sort of reflective and visionary adaptive planning and management for the visitor industry. Those Strategic Directions include: <i>Communications and Outreach, Hawaiian Culture, Marketing, Natural Resources, Research and Planning, Tourism Product Development, and Workforce Housing.</i> Select relevant objectives include: to support efforts that involve stakeholder participation, collaboration, interaction, and discussions on tourism issues and efforts; support Hawaiian programs and cultural practitioners to preserve and perpetuate Hawaiian culture; coordinate statewide and island specific marketing efforts; increase collaboration among government agencies, the visitor industry, and the community; encourage participation in tourism planning and public policy development by all stakeholders; identify and support niche products with potential for successful market development; ensure a well-trained and educated visitor industry workforce.</p>



It should be noted that to many residents in Hawai‘i, there is little or no distinction between natural and cultural resources (TSP, p. 37).

These participant comments speak to a comprehensive understanding of our island communities and a need to plan for and manage them accordingly. It also speaks to a need for interagency cooperation and community participation in planning of the visitor industry.

This project is in support of at least two of the nine Strategic Directions of the *TSP*, namely: *Communications and Outreach*, and *Research and Planning*. Additionally, work such as this bears relevance beyond the single agency of the HTA and provides useful information for the state as it moves forward in the arena of climate change adaptation.

With such importance to the state, Hawai‘i’s visitor industry must perform ongoing research to identify and understand the impacts and benefits of emerging trends and developments before they happen, establish appropriate policies to address these impacts, and develop long-range plans to manage these changes (TSP, p. 41).



Discussion of Stakeholder Survey Results⁷

In total, 108 people participated in the eight outreach sessions. Of the 108 attendees, 60 people (55%) completed a participant survey. For a list of survey questions, see *Appendix A*. Survey questions note the “% reporting,” which is a measure of the percentage of responses for that question from the 60 surveys, not the total number of outreach session participants. The low reporting numbers limits the conclusions that can be drawn from the presented results; however, the results are helpful for development of future outreach and survey materials, as well as for HTA’s development of its next strategic plan.

Survey Result Highlights

1. 53% of respondents rated their level of understanding of climate-related impacts in Hawai‘i as “high” (39%) or “very high” (14%) (Figure 2).
2. 83% of respondents cited human activity as the major contributor to the current rapid change in global climate (Figure 3).
3. 79% of respondents said it is “very important” (79%) and a further 10% said it is “important” for the state of Hawai‘i to develop new climate adaptation policies (Figure 4).
4. Respondents were asked to rank a list of priorities for climate adaptation for the visitor industry from most to least important: Natural Assets-Ecosystem Services ranked highest (with a ranking of 2.31 out of 6); followed by Public Health (3.23); Economic, Business and Infrastructure (3.27); Natural Hazard Mitigation (3.60); Recreational Assets (3.95); and, Transportation (4.14) (Table 1).
5. When asked whether they as individuals or their organizations are sufficiently informed to take proactive climate change adaptation measures – such as Business Model Alternative Assessment, Adaptation Planning and Hazard/Risk Assessment, Energy/Infrastructure Investment, Business Market Analysis, and Support of Government Adaptation Planning and/or Action – the majority of respondents indicated that they are not sufficiently informed (77%, 55%, 53%, 79%, and 55%, respectively) (Figure 5).

The results of the survey suggest that:

- Individuals and organizations are not yet prepared to take proactive climate change adaptation measures. And even though a vast majority of respondents (89%) believe that the state of Hawai‘i should develop new climate adaptation policies, only 45% say they are informed enough to support government adaptation planning and/or action (Figure 5).
- More education and information is needed before new laws and policies are proposed and adopted. This conclusion is consistent with the participants comment that there needs to be “more education for all!” That said, there existed little knowledge among workshop participants of Governor Abercrombie’s signing into law of Act 286 (2012), which amended the Hawai‘i State Planning Act (HRS §226-109) to include “Climate change adaptation priority guidelines” (see *Appendix C*). Local climate policy clearly needs to be a component of any future outreach efforts regarding climate change impacts and/or adaptation.
- Respondents identified Natural Assets-Ecosystem Services as the greatest priority climate change adaptation area for the visitor industry (Table 1). This is consistent with the participant comments acknowledging the dependence of residents and visitors alike on the natural resources of the islands. The survey also provided space for respondents to add other priority areas/issues. Six people suggested cultural assets/practices and two mentioned the need for more diversified and incorporated agricultural practices. Five respondents also noted that all the options were linked and could not be separated.

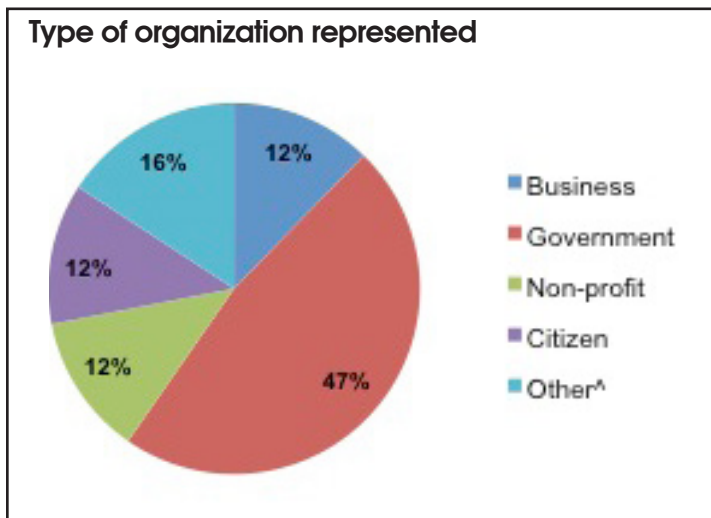


Figure 1. Respondent affiliation: 95% reporting (n = 57)⁸.

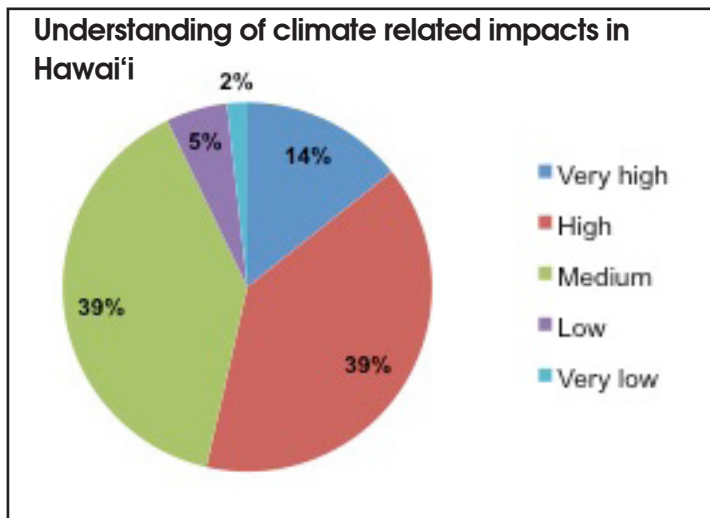


Figure 2. Understanding of climate impacts: 93% reporting (n = 56).

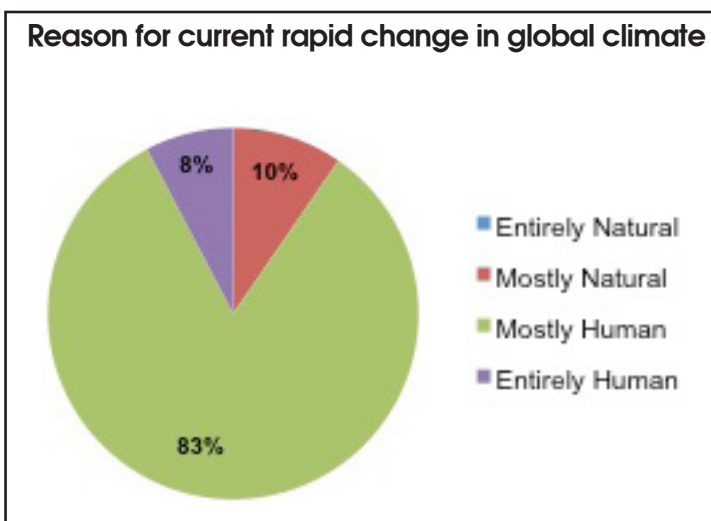


Figure 3. Cause of climate current climate change: 87% reporting (n = 52).

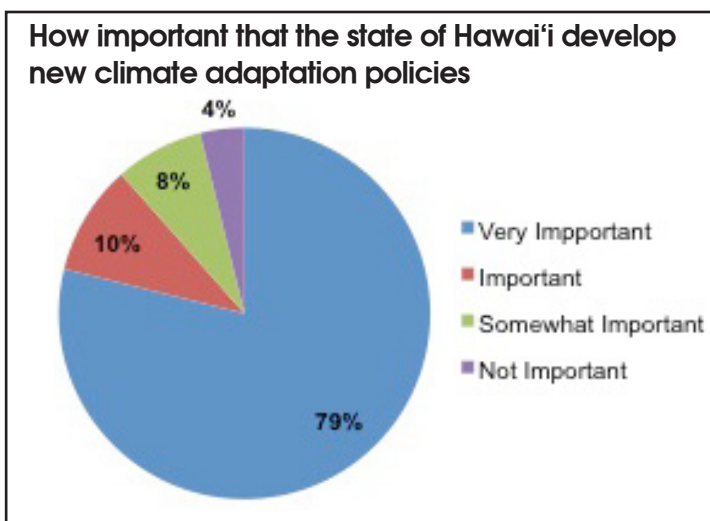


Figure 4. Importance for state to act on climate change: 87% reporting (n = 52)⁹.

Table 1. Climate adaptation priorities rankings (1-6; high-low): 83% reporting (n = 50)¹⁰.

Priority	Rank
Natural Assets-Ecosystem Services	2.31
Public Health	3.23
Economic, Business and Infrastructure (Direct) Impacts	3.27
Natural Hazard Mitigation	3.60
Recreational Assets	3.95
Transportation	4.14

Insufficiently informed on climate change impacts to take proactive climate adaptation measures

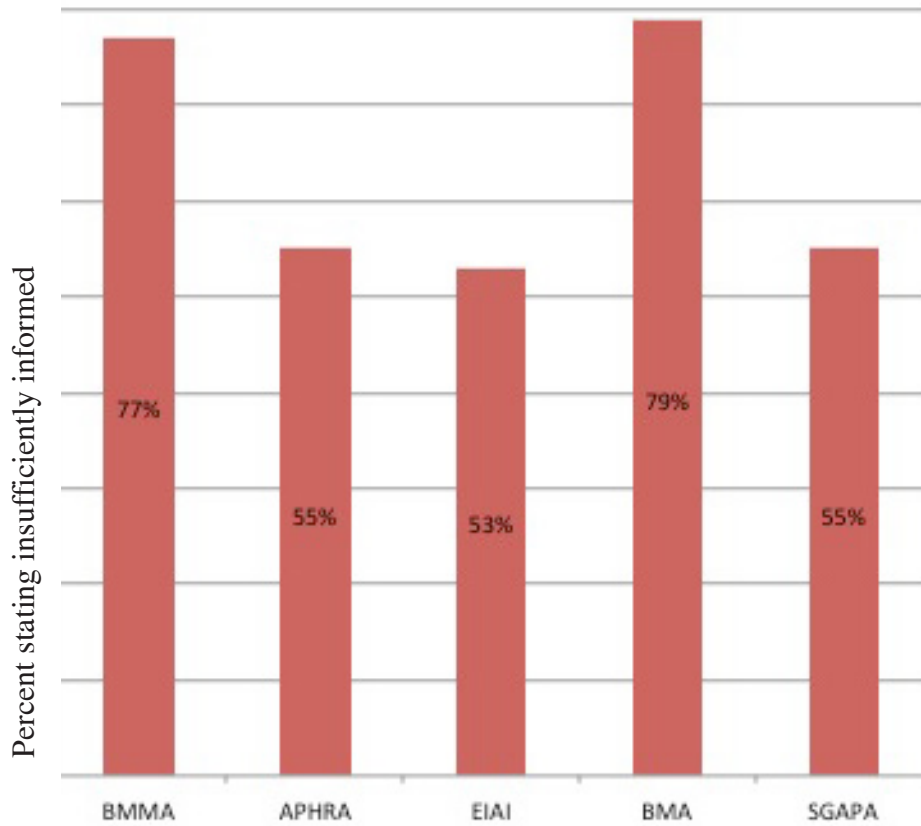


Figure 5. Lack of confidence to take proactive climate adaptation measures: reporting for each category – BMMA (Business Model Alternatives Assessment) – 72% (n = 43); APHRA (Adaptation Planning and Hazard/Risk Assessment) – 78% (n = 47); EIAI (Energy/Infrastructure Alternatives Investment) – 78% (n = 47); BMA (Business Market Analysis) – 72% (n = 43); SGAPA (Support of Government Adaptation Planning and/or Action) – 78% (n = 47).



Moving Forward

The outreach sessions were targeted to inform business and visitor industry representatives of the potential impacts of climate change and further assess the community's level of awareness and concern. Session announcements, with encouragement to spread the word, were sent to legislators, state and county agencies (including HTA), county council members, hoteliers and other lodging associations, businesses and chambers of commerce, and environmental and conservation organizations. The outreach workshops were largely underrepresented by the target audience (visitor industry stakeholders) throughout the outreach sessions. In many cases local community and environmental group members made the largest percentage of attendance at the workshops. However, the outreach was successful in both extending information and gathering important feedback from communities, if not industry stakeholders across the state. Thus, the discussions and gathered feedback at times focused on a more general discussion about climate change as it relates to the state, with less direct commentary about impacts to and concerns of the visitor industry and what HTA can do. The outreach results still provide important information for a state agency that recognizes the need for coordinated efforts, supported leadership, and its industry's prominence in the lives and economy of the state.

The TSP is intended to form the foundation upon which Hawai'i's future as a visitor destination will be built. The plan is intended to be a primer for Hawai'i's visitor industry in particular but has potential impact on other segments of Hawai'i's total economy and future. It represents an effort to take better control of Hawai'i's future, but the TSP will only be successful if all stakeholders participate and take on the tasks that fall under their areas of responsibility, as the lead organization or as a supporting partner. Cooperation, collaboration, and participation by all stakeholders will help attain the vision for Hawai'i's visitor industry into the next decade (TSP,¹¹ p. 9).

The HTA does not identify itself as a lead agency for all of its nine Strategic Directions.¹¹ This is consistent with the agency's position in state government (*Appendix B*). It is also an astute acknowledgment of the connections and interdependencies amongst agencies, departments, private businesses, community groups, and individuals in the implementation of the TSP and ultimate realization of its goals. As an attached agency to the state Department of Business, Economic Development, and Tourism (DBEDT), HTA reports up and across multiple levels of government, while being one of the more conspicuous state agencies in the public's eye.¹² For government agencies, expectations and realities exist and the two may not always walk in parallel. The TSP cites that during the period of 1993-2003, the Hawai'i State Department of Land and Natural Resources' budget decreased 30% (\$35M to \$24.5M), in General Fund appropriations, while at the same time, its scope of responsibility increased (p. 36). A similar story can be told for the state Office of Planning: from 1994-2012, its General Fund appropriations decreased from nearly \$4.5M to just over \$1M, and, generally funded positions declined from nearly 80 to 12, though the scope of work as legislated in the State Planning Act ("expectations") remains the same.¹³

*As HTA notes a need to work with these and other agencies, and as we embark on a new reality of impacts from natural hazards and climate change with expectations to acknowledge them and adapt, it should be asked, **How does HTA wish to engage in the state's position on climate change?***

The survey participants asked several common thematic questions:

- Where can HTA dedicate resources and finances (staff, grant awards, education, and outreach)?
- Can HTA be proactive in demonstrating climate adaptation measures?
- Can HTA use this and future research and outreach as a marketing tool to promote the state's initiatives to act on climate change adaptation policies?
- What additional tools, information, and research does HTA need to make informed decisions?

As reported through the workshop participant survey, the majority of respondents do not feel they, as individuals, nor their organizations are sufficiently informed to take proactive climate change adaptation measures, including supporting government adaptation planning and/or action. Additionally, question seven of the survey asked, *what additional climate change information would be useful to you or your organization in considering or implementing climate adaptation measures?* Responses included:

- Knowledge to conduct independent risk and vulnerability assessments of properties and structures
- Necessary legislation to effectuate and/or encourage adaptation and change
- How sea-level rise effects erosion rates, flood zones, and groundwater resources
- Quantifiable job loss predications from climate change impacts to the visitor industry
- Benefit-cost analyses of adaptation alternatives
- Health and environmental planning and impacts on human resiliency (physical and mental)
- Impacts to ocean resources from rising sea levels and sea temperatures, and ocean acidification
- Downscaling of impacts research to understand local phenomena
- Identifying who has what regulatory authority to effect changes
- Collecting existing work that is already taking place

Outreach Conclusions

Feedback from all the outreach sessions across the state, as well as responses from Question 7 of the survey, pointed to the need for further communication of this HTA effort and other state initiatives to investigate climate change impacts to the visitor industry and adaptation measures. Resoundingly, “more education for all” – through more presentations and workshops, agency briefings, multi-media outlets, etc. – is a message participants believe is critical to relay in order to increase awareness and help facilitate adaptation measure and ultimate strategic implementation. As one comment notes: without yet knowing what information is available, identifying what is needed is difficult (*Appendix D*).

Lastly, participants' voices echoed much of the commentary from HTA's initial planning and outreach efforts documented in the *Hawai'i Tourism Strategic Plan: 2005-2015*. With this project's focus on the impacts of climate change to the visitor industry, **resiliency and adaptation** emerged as a new theme. In thinking critically about how we can support linkages and relationships – connect knowledge with users, research with application, and people with people – it is important to first look internally before considering how to restructure our organizations and rules. Is the adaptive resilience objective identified in the mission and operations of the entity?^{14,15} That is, the notion of resilience cannot be limited to the scope of hazards and disasters, but must be approached more comprehensively with a goal of just, safe, healthy, and livable communities. Climate change adaptation and resilience cannot sweep away other priorities, but like sustainability, should be incorporated into the missions and operations of government agencies, supported by avenues for outreach and in-reach. With state actions, most notably the recent adoption of Act 286 (2012), it should be asked, ***How does HTA wish to engage in the state's position on climate change?***

Appendix A

Climate Change and Impacts to the Visitor Industry in Hawai'i HTA Workshop Participant Survey

This survey is an initial attempt to gauge levels of understanding of targeted stakeholders of:

- The state of climate science in Hawai'i,
- The relevance of this information to stakeholders' area of practice,
- The ability to respond to and move forward with this information,
- Priority sectors and areas of concern for future action(s).

1. What type of organization do you represent? (Pick one)

- a Business Association or Industry
- b Government or elected official
- c Non-profit
- d Private Citizen
- e Other _____

2. Please rate your level of understanding of climate-related impacts in Hawai'i.

- a Very high
- b High
- c Medium
- d Low
- e Very low

3. What do you think is the reason for the current rapid change in global climate (e.g., average global temperature increase, altered atmospheric concentrations, sea-level rise, etc.)?

- a Climate change is attributed entirely to natural processes. (Humans have not influenced climate change)
- b Climate change is mostly from natural processes, but partly attributed to human activity.
- c Climate change is partly from natural processes, but mostly attributed to human activity.
- d Climate change is entirely attributed to human activity.

4. Please rank the areas you think are the most important priorities for climate adaptation for the visitor industry, with '1' being the most important. (Please rank all categories)

- ___ Economic, Businesses and Infrastructure (Direct) Impacts
- ___ Natural Assets-Ecosystem Services (terrestrial, water, coastal and marine)
- ___ Natural Hazard Mitigation
- ___ Public Health
- ___ Recreational Assets (beaches, reefs, waterfalls, golf, sightseeing, etc.)
- ___ Transportation
- ___ Other _____

5. Are you or your organization sufficiently informed on climate change impacts to take proactive climate adaptation measures? Mark yes or no for each adaptation action.

<i>Yes</i>	<i>Action</i>	<i>No</i>
___	Business Model Alternatives Assessment (BMMA)	___
___	Adaptation Planning and Hazard/Risk Assessment (APHRA)	___
___	Energy/Infrastructure Alternatives Investment (EIAI)	___
___	Business Market Analysis (BMA)	___
___	Support of Government Adaptation Planning and/or Action (SGAPA)	___

6. How important is it to your organization that the state of Hawai‘i develops new climate adaptation policies?
- a Very important
 - b Important
 - c Somewhat important
 - d Not important

Why? _____

7. What additional climate change information would be useful to you or your organization in considering or implementing climate adaptation measures?



Appendix B

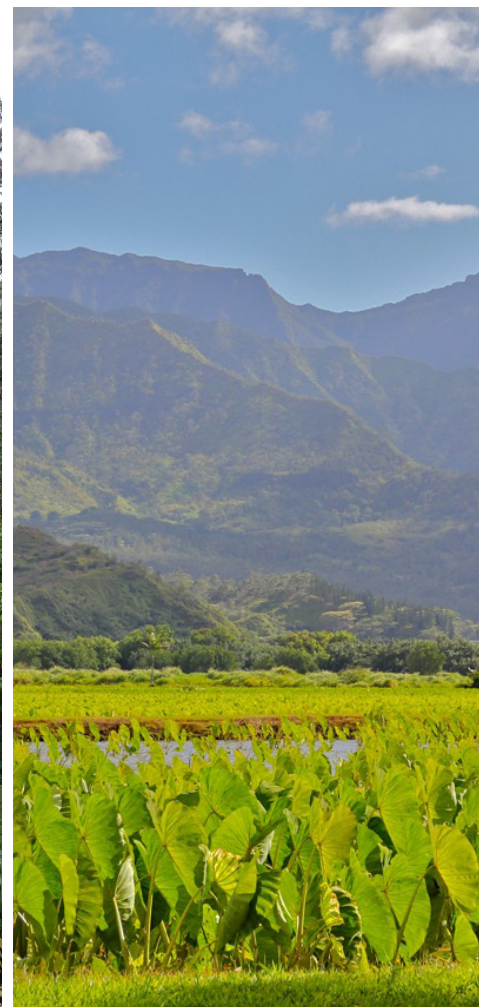
Description of HTA from Strategic Plan: 2013-2014¹⁶

What We Do:

The Hawai‘i Tourism Authority (HTA) is the state’s tourism agency responsible for setting tourism policy and direction; developing and implementing the state’s tourism strategic and brand management plans; managing programs and activities to sustain a healthy tourism economy, including maintaining sufficient air and cruise access; the global promotion of leisure and business travel; management of the Hawai‘i Convention Center; and coordinating tourism-related research, planning, promotional, experiential and outreach activities across the state. The agency serves as a critical bridge linking government and private sectors, the visitor industry, visitors and island communities, and aims to contribute successfully to a good quality of life for residents through tourism.

Guiding Principle:

Inspired by Hawai‘i’s natural environment, world renown hospitality and aloha spirit, the HTA will honor and perpetuate our Native Hawaiian and multi-cultural traditions and culture, and continue to support Hawai‘i’s island communities. We will invest in Hawai‘i’s people, place and culture to ensure our Hawaiian Islands remain a uniquely special place to live, work and visit.



Appendix C

Hawai'i State Planning Act as it relates to Climate Change Adaptation Hawai'i Revised Statutes Chapter 226

PART III. PRIORITY GUIDELINES

§226-101 Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern. [L 1978, c 100, pt of §2; am L 1984, c 236, §14]

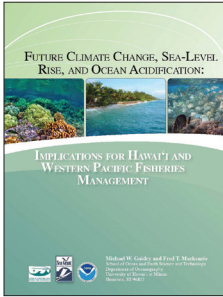
§226-102 Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation. [L 1978, c 100, pt of §2; am L 1986, c 276, §29; am L 2011, c 181, §4; am L 2012, c 286, §3]

§226-109 Climate change adaptation priority guidelines. Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of 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 shall:

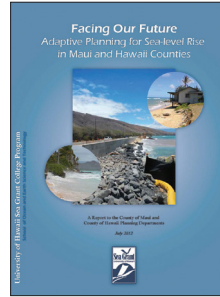
- (1) Ensure that Hawaii's people are educated, informed, and aware of the impacts climate change may have on their communities;
- (2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;
- (3) Invest in continued monitoring and research of Hawaii's climate and the impacts of climate change on the State;
- (4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;
- (5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;
- (6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;
- (7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;
- (8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other non-governmental entities, including nonprofit entities;
- (9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and
- (10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy. [L 2012, c 286, §2]

Appendix D

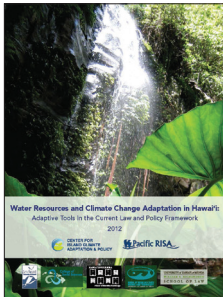
Additional UH Sea Grant Resources¹⁷



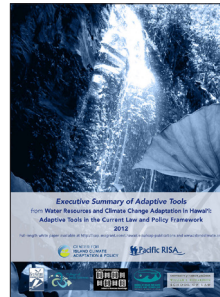
Future Climate Change, Sea-Level Rise, and Ocean Acidification: Implications for Hawai'i and Western Pacific Fisheries Management (2013)



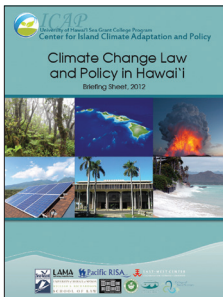
Facing Our Future: Adaptive Planning for Sea-level Rise in Maui and Hawai'i Counties (2012)



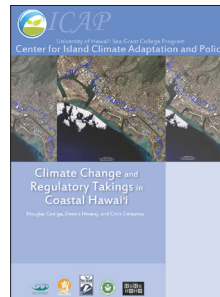
Water Resources and Climate Change Adaptation in Hawai'i: Adaptive Tools in the Current Law and Policy Framework (2012)



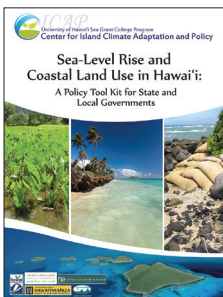
Executive Summary of Adaptive Tools for Water Resources and Climate Change Adaptation in Hawai'i (2012)



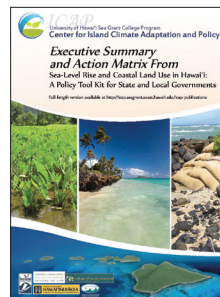
Climate Change Law and Policy in Hawai'i (2012)



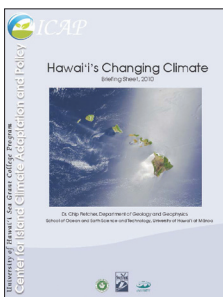
Climate Change and Regulatory Takings in Coastal Hawai'i (2011)



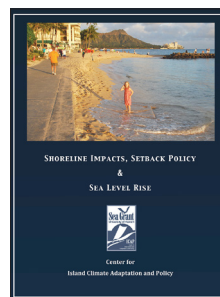
Sea-Level Rise and Coastal Land Use in Hawai'i: A Policy Tool Kit for State and Local Governments (2011)



Executive Summary and Action Matrix from Sea-Level Rise and Coastal Land Use in Hawai'i: A Policy Tool Kit for State and Local Governments (2011)



Hawai'i's Changing Climate, Briefing Sheet, 2010 (2010)



Shoreline Impacts, Setback Policy, and Sea Level Rise (2009)

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- ¹Fletcher, C. 2010. *Hawai‘i’s Changing Climate -Briefing Sheet*. UH Sea Grant College Program. http://seagrant.soest.hawaii.edu/sites/seagrant.soest.hawaii.edu/files/publications/ClimateBriefing_web.pdf
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- ⁴Leiserowitz, A., Maibach, E., Roser-Renouf, C. & Hmielowski, J. 2012. *Global Warming’s Six Americas in March 2012 and November 2011*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/files/Six-Americas-March-2012.pdf>
- ⁵In 2012, Governor Abercrombie signed into law Act 286, which amended the Hawai‘i State Planning Act (HRS Ch. 226) to include climate change adaptation priority guidelines (*see Appendix C*).
- ⁶Department of Land and Natural Resources – State of Hawai‘i. 2011. *The Rain Follows the Forest, Hahai no ka ua i ka ululā‘au: A Plan to Replenish Hawai‘i’s Source of Water*. <http://hawaii.gov/dlnr/chair/pio/nr/2011/The-Rain-Follows-the-Forest.pdf>
- ⁷Comments from question #7 have been incorporated throughout the report (37% reporting; n = 22).
- ⁸Reporting of “Other” includes: Scientist; Education/Outreach; Consultant (x2); Education; Landowner; Architect; Tourism/Marine Resource Industry; Kula Community Association.
- ⁹Reporting of “Why” has been incorporated into the notes from the listening sessions.
- ¹⁰Reporting of “Other” includes: Cultural Assets/Practices (x6); Lifestyle changes to residents and culture; I think retreat is essential – curbing development to protect remaining natural assets; Good will of the people; Education; Supporting the building of a viable agriculture economy (x2); Hawai‘i values; Community (residents’) resilience; Other public assets including roads, sewers, water, drainage, systems, ports; All are important and connected (x5); Address land use and future development.
- ¹¹In the *Hawai‘i Tourism Strategic Plan: 2005-2015*, HTA is identified as a lead agency for four of its nine Strategic Directions: Communications and Outreach, Marketing, Research and Planning, and Tourism Product Development.
- ¹²Other attached agencies within DBEDT include the Hawai‘i Community Development Authority (HCDA), Hawai‘i Film Office, Hawai‘i Housing Finance & Development Corporation, Hawai‘i Strategic Development Corporation, High Technology Development Corporation, Land Use Commission (LUC), Natural Energy Laboratory of Hawai‘i Authority (NELHA), and the Office of Planning (OP).
- ¹³Souki, Jesse. Director of the Hawai‘i State Office of Planning. Presentation: “What is the Role of State Planning?” (09 January 2013), Honolulu, HI.
- ¹⁴The National Academies. 2012. *Disaster Resilience: A National Imperative - Summary*, Committee on Increasing Nation Resilience to Natural Hazards and Disasters, Committee on Science, Engineering, and Public Policy, The National Academic Press: Washington, D.C.
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- ¹⁷All publications are available as pdfs and can be found at the University of Hawai‘i Sea Grant College Program’s website: <http://seagrant.soest.hawaii.edu/publications>



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