

REPORT TO THE TWENTY-EIGHTH LEGISLATURE

2015 REGULAR SESSION

Aloha+ Challenge

Recommendations for Taking Action
and Tracking Progress



Prepared by:

THE STATE OF HAWAII

In response to Senate Concurrent Resolution 69, Senate Draft 1,
Regular Session of 2014

December 2014

Table of Contents

Introduction	3
Update on the Aloha+ Challenge.....	4
Tracking Progress on the Aloha+ Challenge	6
Multi-Target Legislative Priorities	7
Increase Long-Term Funding for Critical Multi-Target Investments.....	7
Build State Capacity to Plan and Implement	7
Aloha+ Challenge Online Dashboard.....	8
ALOHA+ CLEAN ENERGY	9
Legislative Recommendations for Clean Energy	9
Tracking Progress on Clean Energy	10
Recommendations for Government to Lead by Example	11
ALOHA+ LOCAL FOOD	12
Legislative Recommendations for Local Food	13
Tracking Progress on Local Food	14
Recommendations for Government to Lead by Example	15
ALOHA+ NATURE	16
Legislative Recommendations for Natural Resource Management	17
Tracking Progress on Natural Resource Management	19
Recommendations for Government to Lead by Example	20
ALOHA+ SOLID WASTE REDUCTION	21
Legislative Recommendations for Solid Waste Reduction	21
Tracking Progress on Solid Waste Reduction	22
Recommendations for Government to Lead by Example	23
ALOHA+ SMART SUSTAINABLE COMMUNITIES	24
Legislative Recommendations for Smart Sustainable Communities	24
Tracking Progress on Smart Sustainable Communities	25
Recommendations for Government to Lead by Example	25
ALOHA+ GREEN WORKFORCE & EDUCATION	26
Legislative Recommendations for Green Workforce and Education	26
Green Workforce and Education Target	27
Conclusion	28

Introduction

The 2014 Hawai'i State Legislature unanimously passed Senate Concurrent Resolution 69 (SCR 69), "Endorsing and Supporting the Aloha+ Challenge."

The *Aloha+ Challenge* sets six integrated targets for sustainability:

- **Clean Energy:** 70% clean energy, including 40% from renewables and 30% from efficiency
- **Local Food:** At least double local food production with a goal of 20 - 30% of food consumed grown locally
- **Natural Resource Management:** Reverse the trend of natural resource loss mauka to makai by increasing freshwater security, watershed protection, community-based marine management, invasive species prevention, and native species restoration¹
- **Waste Reduction:** Reduce the solid waste stream prior to disposal by 70% through source reduction, recycling, bioconversion, and landfill diversion methods²
- **Smart Sustainable Communities:** Increase livability and resilience in the built environment through planning and implementation at the state and county levels
- **Green Workforce & Education:** Increase local green jobs and education to implement these targets

The *Aloha+ Challenge: He Nohona 'Ae'ōia—A Culture of Sustainability* is guided by and builds upon the sustainability definition, goals, and principles incorporated into the Hawai'i State Planning Act (Chapter 226, Hawai'i Revised Statutes) through Act 181. Act 181 also established sustainability as a state priority.

SCR 69 directs the State Sustainability Coordinator to submit a report to the 2015 Legislature on the launch of the Aloha+ Challenge, and to include recommendations for promoting action and tracking progress on the statewide sustainability targets.

This report is based on input from nearly 100 sustainability leaders, including representatives from non-profit organizations, the private sector, and the six Aloha+ Challenge signatories (state departments, counties, and Office of Hawaiian Affairs). The legislative recommendations reflect priority areas of agreement on funding and policies to support progress on the *Aloha+ Challenge* targets.

¹ Freshwater security was added to the Natural Resource Management Target in the Chief Executives' Aloha+ Challenge Declaration

² The Solid Waste Reduction Target was increased from 50% in SCR 69 to 70% in the Chief Executives' Aloha+ Challenge declaration after the counties spearheaded an effort to make the goal more ambitious.

Inspired by the Department of Business, Economic Development & Tourism's excellent Lead By Example program, the report also includes recommendations on how the State can "Lead By Example" through government operations, purchasing, and practices to support the *Aloha+ Challenge* targets. Many of these recommendations will also help to cut costs.

Last year, the Legislature demonstrated visionary leadership with the 2014 Joint Majority Package investments in climate adaptation and invasive species prevention and control, both of which are major pieces of the *Aloha+ Challenge*. The 2015 Senate has identified Sustainability and Resilience as this year's legislative session theme.

The Hawai'i State Legislature has an important role in helping Hawai'i to build a more sustainable and resilient future. By making strategic, high-leverage investments and passing innovative policies that address enduring and emerging issues, the Legislature can provide continuing leadership on the *Aloha+ Challenge*. The recommendations in this report will support the state and counties to accelerate action on this shared challenge while positioning Hawai'i as an international model committed to integrated sustainability.

Update on the Aloha+ Challenge

Following the Hawai'i State Legislature's unanimous endorsement of the *Aloha+ Challenge*, Hawai'i's Governor, four Mayors and the Office of Hawaiian Affairs (OHA) jointly launched the *Aloha+ Challenge* as an unprecedented statewide commitment in July 2014. More than 125 people attended the event, including over a dozen Senators and Representatives from the Hawai'i State Legislature. When looking at the audience, Mayor Caldwell stated that he had never seen such a diverse set of people come together around one initiative. The event received wide press coverage, including an editorial from the Honolulu Star-Advertiser which noted: "It was encouraging to see Hawai'i's top leadership gathered at the State Capitol auditorium this week to support the *Aloha+ Challenge* initiative, a set of ambitious goals to make life in Hawai'i more sustainable."³

Each of the Chief Executives expressed deep commitment to the *Aloha+ Challenge*. As a State Senator, Governor Ige co-sponsored SCR 69 and identified many *Aloha+ Challenge* target areas as Administration priorities, such as clean energy, local food production, watershed protection, and invasive species control. The Mayor's Offices in the neighbor island counties hosted community briefings about the *Aloha+ Challenge* in 2014, showcasing county-based efforts that are working towards the shared targets. The counties are making impressive strides and are even ahead of schedule on some targets.

³ Green Future Increasingly in Hawaii's Grasp . (2014, July 12). *Honolulu Star Advertiser* .

In addition to Hawai'i's Legislature and Chief Executives, the *Aloha+ Challenge* is strongly supported by Hawai'i Green Growth. Hawai'i Green Growth is a voluntary partnership of more than 60 leaders from government, businesses, non-profit organizations, higher education, and philanthropy that are all committed to the *Aloha+ Challenge* through cross-sector collaboration, building political support, and tracking progress. Hawai'i Green Growth was instrumental in developing the *Aloha+ Challenge* in response to an invitation by the Global Island Partnership (GLISPA).

GLISPA invited the State of Hawai'i to make an international commitment to sustainability as part of their work to recognize island leadership through "Challenges," such as the Micronesia Challenge and Caribbean Challenge. GLISPA identified Hawai'i as an emerging leader in integrated sustainable development and invited Hawai'i to internationally launch the *Aloha+ Challenge* at the United Nations Small Island Developing States (UNSID) Conference on island sustainability. The conference is held once every ten years and was hosted by Samoa in September 2014.

Former Chairperson of the Board of Land and Natural Resources, William J. Aila, Jr. and State Sustainability Coordinator, Jacqueline Kozak Thiel, attended the UNSID Conference as members of the United States delegation and were joined by members of Hawai'i Green Growth and the World Wide Voyage. Chair Aila announced the *Aloha+ Challenge* alongside the U.S. Head of Delegation, Dr. John Holdren, Senior Advisor to President Obama on Science and Technology, at the GLISPA High-Level Event. The U.S. also highlighted the *Aloha+ Challenge* as a domestic model and new partnership during the official international dialogue on sustainable economic development.

The *Aloha+ Challenge* was also recognized at two more major international events. At the invitation of Palau President Tommy Remengesau during the Pacific Island Forum in July 2014 at Koror, Palau, Hawai'i's State Sustainability Coordinator presented to Heads of State at the Small Island States luncheon. The State Sustainability Coordinator was also invited to present the *Aloha+ Challenge* at the Summit for Cities and Sub-national Governments in October 2014, held during the United Nations Convention on Biological Diversity, 12th Conference of the Parties in the Republic of Korea.

Aloha+ Challenge has elevated Hawai'i's international profile as a sustainability leader. As a microcosm of the world's sustainability challenges, Hawai'i has the opportunity to develop innovative, scalable solutions with global relevance. This growing role for Hawai'i is especially salient in the lead up to the World Conservation Congress, which Hawai'i will host in 2016. Organized by the International Union for the Conservation of Nature, the World Conservation Congress is the largest environmental gathering in the world, and this will mark the first time it will convene in the U.S. With continued commitment and investment from Hawai'i's State Legislature, Chief Executives, and partners, Hawai'i can demonstrate early progress on the *Aloha+ Challenge* to an eager

international audience also grappling with many of the same sustainability issues facing Hawai'i.

Tracking Progress on the Aloha+ Challenge

**“For sustainability to have any meaning,
it must have rigorous definitions, milestones and metrics.”**

-Is Sustainability Still Possible? (2013) World Watch Institute

Now that Hawai'i has established an official state definition of sustainability (Act 181) and the 2030 milestones of the *Aloha+ Challenge*, the next step is establishing metrics. As Mayor Bloomberg stated when drafting New York City's sustainability plan, “You can't manage what you can't measure.”⁴ For the past year, the State Sustainability Coordinator and Hawai'i Green Growth have worked together with the Office of Information Management and Technology (OIMT), counties, OHA, several state departments, University of Hawai'i System, and a network of statewide partners to develop an online dashboard for the *Aloha+ Challenge* designed for decision makers and the public. The *Aloha+ Challenge* Dashboard will provide simple, easy-to-understand baseline and monitoring data and graphs to track progress on the *Aloha+ targets* at state and county levels. The Dashboard will also include information on how to get involved and links for more details on the data and related initiatives.

The pilot Aloha+ Dashboard will be beta-launched in early 2015 featuring shared sustainability indicators for the *Aloha+ Challenge* clean energy and solid waste reduction targets. The statewide HGG Measures Team is dedicated to complete the Dashboard by 2017 and will develop indicators for the *Aloha+ Challenge* natural resource management target in 2015. Dashboard meetings have been held in each of the counties, and the process is catalyzing a growing network of statewide sustainability leaders working together to forge partnerships and share best practices to move the needle in the right direction. The *Aloha+ Challenge* Dashboard is also helping to implement the Open Data Act by unlocking and aligning critical data sets through interagency and statewide coordination.

Direct funding for this project has come from the Counties and private sector partners through Hawai'i Green Growth, leveraged many times by in-kind support from more than 50 participating partners. OIMT's online platform and technical assistance have been instrumental in collecting and visualizing the data. Additional significant state support has been through staff participation from various agencies. Continued funding for OIMT and agency staff involvement are highlighted as key recommendations in this report.

⁴ ICLEI—Local Governments for Sustainability (2009). *Sustainability Planning Toolkit*. Lexington: ICLEI.

Multi-Target Legislative Priorities

The *Aloha+ Challenge* reflects an integrated approach to meet or exceed statewide targets in six areas of sustainability: Clean energy, local food production and consumption, solid waste reduction and resource recovery, natural resource management, smart growth and climate change, and green workforce and education. Recognizing the interconnection between these sectors, the following legislative recommendations have the ability to drive progress on three or more *Aloha+ Challenge* targets.

Increase Long-Term Funding for Critical Multi-Target Investments

- **Increase Barrel Tax Allocations** for strategic, long-term funding to support environmental preparedness and response, solid waste reduction, clean energy, food security, and climate adaptation. This includes:
 - \$.40 for food security programs at Hawai'i Department of Agriculture to build agricultural capacity, create industry advantage, and grow markets for local food products.
 - \$.40 for the Hawai'i Clean Energy Initiative program at Hawai'i Department of Business, Economic Development, and Tourism's State Energy Office, including projects that ensure dependable, efficient, and economical energy, promote energy self-sufficiency, and provide greater energy security for the State
 - \$.15 for emergency environmental preparedness and response and key solid waste reduction positions at Hawai'i Department of Health.
 - \$.10 for Hawai'i Natural Energy Institute applied renewable energy research projects
- **Support Invasive Species Management and Watershed Protection** with dedicated or general funding to strengthen natural resource management, food security, and climate resilience via the following mechanisms:
 - Provide \$6M to maintain interagency project funding by the Hawai'i Invasive Species Council.
 - Provide \$7.5M to protect forests that recharge freshwater supplies, reduce climate change impacts, and benefit the health of Hawaii's people and economy

Build State Capacity to Plan and Implement

- **Establish State Sustainability Coordinator** as a permanent position to coordinate priority setting, action and monitoring by state departments, counties, federal agencies, and multi-sector partners to achieve *Aloha+ Challenge* targets.
- **Fund establishment of a Sustainability Office in the University of Hawai'i system** to coordinate implementation of the Board of Regents Sustainability Policy across all 10 campuses and system-wide leadership on *Aloha+ Challenge* targets.

- **Re-establish State of Hawai'i office in Washington D.C.** to foster effective collaboration with federal agencies and national partners and identify funding and policy opportunities in support of Hawai'i's sustainability priorities. This capacity is particularly important in anticipation of the World Conservation Congress in 2016.
- **Invest in improved teleconference communication systems for county, state, and Office of Hawaiian Affairs** offices to decrease interisland travel for staff and residents and increase statewide participation of board meetings and legislative hearings.

Tracking Progress on the Aloha+ Challenge Commitment

As a joint commitment to sustainability, the *Aloha+ Challenge* sets measurable targets for 2030. It is imperative for the state and counties to establish baselines, measure progress, and report results in order to effectively work towards these goals. The 2015 Legislature can support accountability and transparency in tracking progress via the following:

- **Continue funding for Office of Information Management & Technology (OIMT) to support the interagency *Aloha+ Challenge* Sustainability Dashboard and Online System**, which tracks progress on each of the six sustainability targets at state and county levels. To implement the Open Data Act provisions, OIMT collects the necessary data, provides technical assistance, and hosts the computer servers and software for the data aggregation and dashboard maintenance platforms for statewide sustainability indicators.
- **Support lead agency staff to update the online *Aloha+ Challenge* Dashboard at least annually** for institutionalized support for data monitoring and evaluation. Establish an environmental policy analyst position at Office of Environmental Quality Control to coordinate this interagency process.

ALOHA+ CLEAN ENERGY

70% clean energy, including 40% from renewables and 30% from efficiency by 2030 (electricity and transportation)

The clean energy transformation in Hawai'i is key to building a more sustainable, resilient and secure future. Although Hawai'i continues to import the majority of its energy, the Islands serve as an international center of innovation for clean energy transformation. Hawai'i is a recognized national leader in energy efficiency projects and is on track to meet the *Aloha+ Challenge* target in electricity. The County of Hawai'i, for example, has already reached 50% renewables in the electricity sector by 2015. Continued investments in clean energy are needed, particularly as the state aims to meet the transportation target.

The report consultation process revealed some of the major challenges facing clean energy transformation:

- Budget constraints of the Public Utilities Commission
- Technological limitations (e.g. energy storage and load consistency)
- The need to develop a “utility of the future” with a different business model
- Financial barriers to energy infrastructure upgrades and maintenance
- Equal access by consumers to upgrade residential infrastructure

Additionally, some of the following clean energy successes were identified:

- Kaua'i Island Utility Cooperative is on track to have the highest daytime solar penetration of any utility in the U.S.
- Hawai'i State Department of Education's Ka Hei program is a five-year endeavor launched in 2014 that will integrate innovative energy technology with meaningful learning experiences, all while reducing energy costs
- Federal, State, local and community sectors joined together to pass the car-sharing law.
- Hawai'i's 12 airports invested in the largest Energy Performance Contract in the nation to cut energy use by 49%, create hundreds of local jobs, and save at least \$518 million in energy costs over the next 20 years through energy efficient and green technology.

Legislative Recommendations for Aloha+ Challenge Clean Energy Target

- **Increase Barrel Tax Allocations** for strategic, long-term funding to support clean energy. Hawai'i's use of the “barrel tax” as a funding mechanism for the Hawai'i Clean Energy Initiative has enjoyed the broad support of energy stakeholders and the public in Hawai'i. However, roughly 60% of this tax is diverted to the general fund. The following allocations are recommended:

- \$.40 for the Hawai'i Clean Energy Initiative program at Hawai'i Department of Business, Economic Development, and Tourism's State Energy Office, including projects that ensure dependable, efficient, and economical energy, promote energy self-sufficiency, and provide greater energy security for the State.
- \$.10 for Hawai'i Natural Energy Institute for applied renewable energy research projects.
- **Explore the expansion of the Barrel Tax to apply to other fossil fuels** as an additional source of funding for clean energy transformation.
- **Adopt the following clean energy policies:**
 - Procure subject matter expert (including expert witness) to advise the Hawai'i State Energy Office (HSEO) on necessary changes in utility systems planning, incentives, compensation, infrastructure and business structure to drive investments in grid modernization and generation improvements through regulatory proceedings, policy development and technical analysis.
 - Enable grid improvements/modernization toward greater interconnection of renewable resources without compromising grid safety and reliability.
 - Enable deployment of greater amounts of renewable energy and energy efficiency solutions using the GEMS program and other financial structures.
 - Conduct further analysis and implementing solutions that support the advancement of clean transportation.
 - Plan and deploy public education and outreach to facilitate policy and regulatory adjustments, clean energy deployment and test bed investments.
 - Continue exploration and implementation of strategies and financial structure to increase energy efficiency.
- **Adopt community-based renewable energy solutions**, which allows Hawai'i ratepayers to own or lease renewable, or otherwise benefit from energy equipment located anywhere on their island grid. Participants will receive credit for that energy on their electric bill, just as if the panels were located on their own roof.
- **Support Clean Transportation** through strategic analysis, planning and implementing early solutions by State Energy Office, Department of Transportation and the counties.

Tracking Progress on the Aloha+ Challenge Clean Energy Target

To measure and report progress made by state and county offices toward the Clean Energy target, support from the 2015 Legislature is requested via the following:

- **Continue funding for OIMT to support the interagency *Aloha+ Challenge Sustainability Dashboard for Clean Energy***. The pilot *Aloha+ Challenge Sustainability Dashboard* will be launched in early 2015 with clean energy indicators in total energy

use, energy per capita, electricity, and greenhouse gas emissions. OIMT has provided valuable technical assistance to the State Energy Office and Department of Health to track state and county progress on clean energy and greenhouse gas emissions. OIMT also provides the online hosting for public data visualization. Maintaining the dashboard and the development of clean transportation indicators will require ongoing support.

- **Support State Energy Office and Department of Health Clean Air Branch** to continue data collection and sharing for the *Aloha+ Challenge* Sustainability Dashboard for Clean Energy.

Recommendations for Government to Lead by Example

State and county operations have the opportunity to demonstrate leadership and create impact in clean energy by supporting the following:

- Sustainability audits for all government buildings, facilities, and offices to determine baseline and develop roadmap for all state operations to meet *Aloha+ Challenge* Clean Energy Target.
- Electric vehicles or hybrids for new government car purchases, as appropriate and economically or financially viable and cost-effective.
- Solar powered installations on government facilities, where appropriate and cost-effective.

ALOHA+ LOCAL FOOD

At least double local food production with a goal of 20 to 30% of food consumed grown locally by 2030

As the most isolated population center in the world, Hawai'i's food security is of paramount significance. Currently, the state imports roughly 85 - 90% percent of its food—a reliance that is of particular concern considering that a natural disaster could disrupt shipping and place the state in a food shortage. However, given its year round growing season, varied climactic zones, multi-cultural agricultural heritage, and many other beneficial factors, Hawai'i has tremendous potential for increasing its local food production and consumption. Diversified agriculture is growing and consumer interest and demand for local food has increased. Increased investment and support for school garden programs and agricultural education will play a critical role in cultivating future farmers and in addressing current workforce issues.

The report consultation process revealed some of the major challenges facing local food production and consumption:

- Food safety regulations
- Limited agricultural land
- Difficulties in obtaining long-term leases and reasonable rents
- Lack of affordable labor
- The need to improve state irrigation systems
- Lack of a statewide baseline for local food production and consumption (Department of Agriculture (DOA) is currently working with Sustain Hawai'i and partners to reestablish a baseline)

Additionally, some of the following local food successes were identified:

- Veteran / Homesteader to Farmer Program that mentors veterans and homesteaders with an experienced farmer to provide them with the skill to be successful in agriculture.
- Revitalization of the dairy industry through legislative investments in DOA to support the efforts of Big Island Dairy to experiment growing their own livestock feed for their dairy herd as a new cost-effective model.
- Hawai'i Farm to School and School Garden Hui is a statewide network of five island-level school garden and farm to school networks in partnership with the Departments of Health and Education and the U.S. Farm to School Program and the National Farm to School Network to cultivate school gardens as outdoor classrooms and connect schools with farms for healthy, local food

Legislative Recommendations for Aloha+ Challenge Local Food Target

- **Increase Barrel Tax Allocation** for strategic, long-term funding to support food security. The following allocation is recommended:
 - \$.40 for food security programs at Hawai'i Department of Agriculture (DOA) for initiatives to align with three major themes: building agricultural capacity, creating industry advantage, and growing markets, intended to lead towards the creation of a 21st century agricultural economy and an increase in local food production.
- **Amend procurement code to support local food purchases for state-run food programs and in state supported facilities**, including schools, hospitals, and prisons, as well as to allow for the ability to grow and use food on grounds.
 - Exempt the purchase of fresh meats and produce and animals and plants by any governmental body from the Hawai'i Public Procurement Code.
- **Create Farm to School Coordinator positions** at DOA and Department of Education (DOE) to implement greater institutional purchasing of locally produced foods and coordinate a framework and support for local food production and consumption education from pre-school through college.
- **Increase funding by \$5M for the agricultural loan program** within DOA to provide opportunities for new farmers and for existing farmers to expand their businesses, and prepare for the new food safety guidelines as a result of the Food Safety Modernization Act.
- **Fund and establish a Food Self-Sufficiency Coordinator position** at DOA to increase local food production, consumption, and access for consumers and implement Hawai'i Food Self-Sufficiency Strategy through increased interagency collaboration with all departments and counties.
- **Create statewide program to connect farmers and landowners** interested in long-term lease arrangements.
- **Fund and establish an Organic Farming Coordinator position** at DOA to support a robust organic industry, a growing area of agriculture, in Hawai'i and offset the import of organic produce in to the state.
- **Fund and establish an Agriculture Innovation Grant Program and Agriculture Innovation Grant Fund** to fund agribusiness incubator programs to support start-up businesses in Hawai'i focused on feed production, food waste recycling, on-farm energy efficiency, soil health and conservation, and food related agricultural activities.

- **Update the State’s agricultural objectives** to include the perpetuation, promotion, and growth of traditional Hawaiian farming methods and crops, as well as the growth and development of small-scale farms.
- **Support Cottage Food Operations Permitting** to enable small farmers and home food processors to create value-added products for sale to consumers and food distributors as a way to encourage start-up operations and increase local food in a growing value-added industry.
- **Fund Good Agricultural Practices** as a DOA program to support local farmers in reducing potential for contamination of food products on farms through safe farming techniques.
- **Encourage PUC to support off-peak renewable energy for agriculture** by creating a tariff that allows owners to sell disposed energy under this lower rate for moving irrigation water, pumping groundwater, chilling food-storage facilities and other agricultural uses while helping to stabilize the grid.
- **Fund the livestock revitalization program** to administer and disburse funds to qualified producers of local feed to lower costs for Hawai‘i’s livestock producers and consumers.

Tracking Progress on the Aloha+ Challenge Local Food Target

To measure and report progress made by state and county offices toward the Local Food target, support from the 2015 Legislature is requested via the following:

- **Continue funding for OIMT to support the interagency *Aloha+ Challenge Sustainability Dashboard for Local Food*.** The pilot *Aloha+ Challenge Sustainability Dashboard* will be launched in early 2015 with indicators for clean energy and solid waste reduction. Once DOA reestablishes the statewide baseline, local food production and consumption indicators can be added to the *Aloha+ Challenge Sustainability Dashboard* in late 2015 or early 2016. Maintaining the dashboard and the development of local food indicators will require ongoing support.
- **Support Department of Agriculture Marketing and News Branch** to continue data collection and sharing for the *Aloha+ Challenge Sustainability Dashboard for Local Food*.
- **Provide additional funding to enable DOA to continue its Marketing Analysis and News Branch** to collect and track the movement of agricultural commodities in

and out of the state, as well as between islands—which helps to measure the state’s progress towards greater food self-sufficiency.

- **Measure the amount of agricultural land that has been rezoned** from AG-1 to AG-2 and from AG to non-AG in the last 20 years.

Recommendations for Government to Lead by Example

In addition to amending the procurement code to support government local food purchasing, state and county operations have the opportunity to demonstrate leadership and create impact in local food production and consumption by supporting the following:

- **Host farmers’ markets and establish community gardens** on state property.
- **Create food waste programs at public schools** in which students track food streams and develop diversion alternatives to landfill disposal (e.g. composting). This would reduce DOE costs, and the funding could be allocated to the sustainability program at each school.

ALOHA+ NATURE

Reverse the trend of natural resource loss mauka to makai by increasing freshwater security, watershed protection, community-based marine management, invasive species protection and control, and restoration of native species by 2030

Visitors from around the world travel to Hawai'i to experience its natural beauty and unique culture. The annual value of biodiversity on Hawaiian reefs alone is estimated at \$17.84 million. While Hawai'i is home to thousands of plants and animals that are found nowhere else on the planet, the State is also recognized as the endangered species capital of the United States. The 2003 State Legislature declared invasive species as the single greatest threat to Hawai'i's economy, natural environment, and to the health and lifestyle of Hawai'i's people. The Islands' freshwater security depends on the healthy functioning of watersheds. Hawai'i has a cutting-edge biocultural conservation sector that helped to win the bid for the World Conservation Congress—the largest international environmental gathering set to take place in Hawai'i in 2016.

The report consultation process revealed the following as some of the major challenges facing Hawai'i's natural resources:

- Nearshore fisheries have declined by 75% over the last century
- Land and sea enforcement is in need of increased capacity
- The need for stronger biosecurity to prevent invasive species
- Improper coastal development creates sedimentation and pollution
- Climate change is an increased threat to ecosystems
- Underfunding, with less than 1% of the State budget dedicated toward natural resource management.

Additionally, the following are some of the successes identified:

- 11 Watershed Partnerships covering roughly 2 million acres
- 5 Invasive Species Committees statewide
- Community Based Subsistence Fishing Area designations, in which communities are developing rule packages to co-manage their fisheries, based on traditional and customary practices (e.g. Hā'ena)
- First Community Fisheries Enforcement Unit in North Maui, in which Conservation International Hawai'i and Harold K.L. Castle Foundation gifted a new vessel to the Department of Land and Natural Resources in 2013 to enforce a 13-mile stretch of coastline.

Legislative Recommendations for Aloha+ Challenge Natural Resource Management Target

Invasive Species and Watershed Management

- **Provide sufficient general funding or dedicated funding for invasive species management and watershed protection** via the following mechanisms:
 - Provide \$6M to maintain interagency project funding by the Hawai'i Invasive Species Council.
 - Provide funding for watershed protection through the following options:
 - Increase the proportion of conveyance tax revenues allocated to the Natural Area Reserve Fund (NARF) from 25% to 32.5%.
 - Maintain the NARF spending ceiling at FY15 levels to support watershed protection and restoration of native species.
 - Provide general funds for watershed forest protection (\$4M), public trail access (\$1M), natural disaster preparedness and response (\$1.5M), and provide \$1M in Capital Improvement Projects funds for watershed protection infrastructure.
 - Close the Conveyance Tax loophole by deeming transfers of controlling interest in entities holding interests in real property within the State subject to the conveyance tax.
 - Dedicate capital improvement project funds to plan, build, and staff a bio-control research and testing facility.
 - Provide \$300K/year for Department of Transportation to fund interagency monitoring at ports of entry for high-priority invasive species as part of the Hawai'i Invasive Species Council's "*Māmalu Poepoe*" project.
 - Provide \$2M to match county, federal, and private sector funding for albizia control.
 - Create a mechanism by which DOA would be able to hire an emergency workforce on an interim basis as needed to deal with invasive species incursions when they occur.
- **Establish statewide invasive species policy, with the following:**
 - Support the DOA in the creation of rules to implement a restricted plant list for the import or sale of species.
 - Create a compliance agreement system that will allow for regulation of known infested areas without adversely affecting businesses following good pest management practices.

Freshwater Security

- **Invest in Commission on Water Resource Management (CWRM) capacity** to assess, monitor, and regulate water resources and ensure that current and projected use does not exceed sustainable limits.

- **Direct CWRM to establish a statewide fee of 5 to 25 cents per 1,000 gallons on all water users** to support water resource monitoring, hydrologic data analysis, water conservation, long-range planning, and other water resource management and protection programs.
- **Identify and reduce gaps in rainfall, streamflow, and groundwater data collection** networks by installing new monitoring stations and wells where needed.
- **Recommend that CWRM require all water distribution system operators with a pumping permit to develop and periodically update a water conservation plan**, including a leak detection program and report annually on their progress to increase system efficiency.
- Pass state enabling legislation to authorize the establishment of storm water utilities and supporting fees at the county level.
- Provide state tax incentives / rebates to homeowners who install rain barrel/roof catchment systems that replace potable water for landscape watering and other exterior uses.
- Exempt water for bona-fid agriculture / irrigation purposes from Public Utilities Commission regulation. Agricultural water purveyors are currently required to meter and report water use under the Water Code. Relate water fees collected by CWRM to conservation practices to increase efficiency.
- Prepare a comprehensive statewide study (island by island) to map and prioritize sites for the potential installation of R-1 wastewater reuse (“scalping”) plants. Reuse (scalping) plants are small wastewater treatment units that can draw wastewater from large sewer lines, improve water quality to the level necessary for localized use (usually irrigation for golf courses, agriculture, or large public parks) and recycle filtered waste products for other uses or for further treatment and disposal.

Marine Management

- **Reorganize Division of Aquatic Resources (DAR)** to more accurately reflect the current resource needs, legislative mandates, and current staff responsibilities; this would not require additional funds or have an impact to salaries.
- **Fund 12 key Department of Land and Natural Resources (DLNR) positions** essential for marine resource management and community engagement (listed below)

DLNR Chair’s Office

- **State Co-Manager Hawaiian Islands Humpback Whale National Marine**

- **Sanctuary to represent state priorities**
- **State Co-Manager for Papahānaumokuākea Marine National Monument** to represent state priorities
- **Marine Wildlife Program Coordinator** - oversees State efforts to reduce hookings, entanglements, and other disturbances of Hawaiian monk seals and sea turtles in the Main Hawaiian Islands.

Division of Aquatic Resources

- **Community Based Sustainable Fishing Area Coordinator** – facilitates co-management initiatives that meet the state-mandate to protect aquatic resources and traditional and customary fishing practices.
- **Reef Response Coordinator** – ensures efficient response to damaging marine events (i.e. new invasive species, coral bleaching and disease, marine debris) including assessment, monitoring, and responsive management actions.
- **Marine Law Specialist** – serves as in-house aquatic regulation and policy specialist who supports effective rule-making and ensures compliance with State and Federal mandates.
- **Ocean Resource Management Plan (ORMP) Implementation Leader** – ensures implementation of 6 of 11 priorities in the 2013 ORMP, a legislatively mandated plan that identifies marine management priorities and metrics.

Division of Conservation and Resource Enforcement (DOCARE)

- **Three (3) community enforcement unit officers** on Maui.
- **Makai Watch Coordinator** – coordinates department staff training in resource enforcement and works with communities on violation reporting and program compliance.
- **DOCARE Legal Fellow** – supports enforcement by coordinating with rule-writing agencies to ensure resource regulations are enforceable; supports criminal and civil prosecution of violations; tracks violations through final disposition.

Environmental Regulations

- **Add Planner position in Department of Health** for review of land use documents and plans to ensure conformance with environmental regulations.

Tracking Progress on the Aloha+ Challenge Natural Resource Management Target

To measure and report progress made by state and county offices toward the Nature target, support from the 2015 Legislature is requested via the following:

- **Continue funding for OIMT to support the interagency Aloha+ Challenge Sustainability Dashboard for Natural Resource Management.** The pilot *Aloha+ Challenge* Sustainability Dashboard will be launched in early 2015 with indicators for clean energy and solid waste reduction. Indicators for watershed protection,

invasive species prevention and control, community-based marine management, native species restoration, and freshwater security will be developed in 2015. Maintaining the dashboard and the development of natural resource management indicators will require ongoing support.

- **Support the Department of Land and Natural Resources to continue data collection and sharing** for the *Aloha+ Challenge* Sustainability Dashboard for Natural Resource Management.
- **Provide support for a secure, shared water data clearinghouse** at the University of Hawai'i that helps standardize data from multiple users and aggregates data for the long-term tracking of water availability and trends in the Islands; subject to conditions and restrictions that may apply to various data or data sets.

Recommendations for Government to Lead by Example

State and county operations have the opportunity to demonstrate leadership and create impact in natural resource management by supporting the following:

- **Amend the state procurement code** to require that a clear and progressively increasing percentage of all future public-funded landscaping projects utilize native and Polynesian-introduced plants.
- **Adopt LEED green plumbing code** for all state and county building projects including grey water recycling.
- **Convert all state-owned open agricultural irrigation ditches** to piped to prevent leakage and evaporation.

ALOHA+ SOLID WASTE REDUCTION

Reduce the solid waste stream prior to disposal by 70%, through source reduction, recycling, bioconversion, and landfill diversion methods by 2030

As islands with limited landmass, it is necessary for Hawai'i to reduce solid waste production and increase its resource recovery. Many of the materials that are currently sent to landfills are discarded resources that could be reused or recycled by individuals or could create new industries and jobs. Counties serve as leaders to meet the Solid Waste target, and the State has a key role in coordination to ensure progress.

The report consultation process revealed the following additional major challenges facing solid waste reduction:

- Lack of sufficient economies of scale in neighbor islands to justify waste processing
- Need for convenient recycling and composting options
- Increased capacity for diversion programs and efforts
- Lengthy permitting time for waste infrastructure development

Additionally, the following are some of the successes and opportunities identified:

- Beverage container recycling program "HI-5" and the electronic recycling and recovery program, both of which could be expanded
- County of Kauai'i's adoption of a Zero Waste Resolution
- Banning of green waste from landfills in the Hawai'i Administrative Rules.

Legislative Recommendations for Aloha+ Challenge Solid Waste Reduction Target

- **Increase Barrel Tax Allocation** for strategic, long-term funding to support environmental preparedness and response and solid waste reduction. The following allocation is recommended:
 - \$.15 for emergency environmental preparedness and response, which supports 11 positions in Department of Health's Solid and Hazardous Waste Branch, including a Solid Waste Section Engineer and clerical support (total needs \$2.6M/year).
- **Fund \$350K to the Department of Health for the state's Integrated Solid Waste Management Strategy (first since 2000).** An updated plan can be used to analyze and address statewide areas of concerns relating to recycling, composting, and landfills, with inclusion of:

- An economic analysis of waste diversion activities.
 - Identification of the most economically viable diversion opportunities and the barriers to implementation.
 - Policy recommendations for amending Glass Container Advance Disposal Fee/HI-5 law to include wine and liquor containers.
 - Policy recommendations to allow for large-scale composting, residential green bin composting, and establishment of compost centers.
 - Policy recommendations for additional landfill bans.
- **Modify the Electronic Recycling Device Legislation** to require events on Neighbor Islands and expand program to include small appliances.
 - **Increase the Solid Waste Management Surcharge** from 35 cents per ton to a two-tiered fee structure that would charge \$1.25 per ton for waste going to landfills, incinerators, and out-of-state waste facilities, and 60 cents per ton for waste going to waste-to-energy facilities. The surcharge is one of the key funding mechanisms for the Department’s solid waste regulatory functions, and has not been increased since 1994.
 - **Shift Department of Health Solid Waste Management Permit application fees** from deposit into the general fund to the Environmental Management Special Fund
 - Support counties to implement Pay As You Throw programs.
 - Make funds available to Counties that meet State targets of recycling and waste management (similar to the California 1989 AB 939 Law).
 - Support the establishment of Commercial Recycling requirements by all counties.
 - Provide minimum performance standards (designated materials, requirements by Standard Industrial Classification code, size or annual gross revenue).
 - Provide training and assistance to businesses in developing and implementing diversion programs.

Tracking Progress on the Aloha+ Challenge Solid Waste Reduction Target

To measure and report progress made by state and county offices toward the Solid Waste Reduction target, support from the 2015 Legislature is requested via the following:

- **Continue funding for OIMT to support the interagency Aloha+ Challenge Sustainability Dashboard for Clean Energy.** The pilot *Aloha+ Challenge Sustainability Dashboard* will be launched in early 2015 with clean energy indicators in total energy use, energy per capita, electricity, and greenhouse gas

emissions. OIMT has provided valuable technical assistance to the State Energy Office and Department of Health to track state and county progress, as well as providing the online hosting for public data visualization. Maintaining the dashboard and the development of clean transportation indicators will require ongoing support.

- Support Department of Health in coordination with the counties to continue data collection and sharing for the *Aloha+ Challenge* Sustainability Dashboard for Solid Waste Reduction.
- **Fund \$600K Statewide Comprehensive Waste Composition Study** to analyze materials disposed, waste to energy fuel composition, and diversion by material and generator (residential/commercial) to inform Solid Waste Reduction Strategy.

Recommendations for Government to Lead by Example

State and county operations have the opportunity to demonstrate leadership and create impact in solid waste reduction by supporting the following:

- **Expand Senate Paperless Initiative to House** for Capitol-wide waste reduction
- **Expand, clarify, and reinforce recycling requirement** for State and County offices and Capitol building (under HRS 342-G 45).
- **Expand and clarify recycling program requirement** in local schools (under HRS 342-G 45).
- **Conduct sustainability audits** for all government buildings, facilities, and offices to determine baseline and develop roadmap for all state operations to meet *Aloha+ Challenge* Clean Solid Waste Reduction Target.
- **Require recycling containers with rubbish containers** in County and State parks and beaches.
- **Ban the sale of single-use water bottles** in government buildings, schools, state parks, and beaches.
- **Introduce a Zero Waste resolution** to adopt the Zero Waste philosophy as the overarching policy for all government purchasing and planning activities.

ALOHA+ SMART SUSTAINABLE COMMUNITIES

Increase livability and resilience in the built environment through planning and implementation at the state and county levels by 2030

The Hawaiian Islands have a resident population of more than 1.4 million, and in 2013, the island state received a record 8.2 million total visitors. Ensuring Hawai'i's communities, infrastructure, businesses, and towns are resilient in the face of natural, economic and social challenges are a vital component for sustainability. Hawai'i joins other islands on the frontlines of climate change and is especially vulnerable to the impacts of sea-level rise, changing rainfall patterns, coastal erosion, and ocean acidification. This target needs to be further developed to clearly define livability and resilience with measurable targets.

The report consultation process revealed the following as some of the major challenges facing progress on smart growth and climate resilience:

- Lack of sufficient funding for infrastructure, community development and affordable housing
- Overpopulation and urban sprawl
- Communities designed for car travel
- Inadequate bike lanes
- High cost of living and inflated land values

Additionally, the following are some of the successes and opportunities identified:

- The Native Hawaiian Health Consortium and Healthy Hawai'i Initiative
- 2012 Maui Island Plan, which established growth boundaries to help achieve smart growth
- Conversion to LED street lights in counties
- Safe Routes to School program
- Climate adaption planning and Interagency Climate Adaption Committee created by Act 83 "Hawaii Climate Adaptation Initiative" (2014)
- City and County of Honolulu weekly subcabinet meetings to discuss and work through community building and transit oriented development problems.

Legislative Recommendations for Aloha+ Challenge Smart Sustainable Communities Target

- **Fund next phase of Hawai'i Climate Adaptation Initiative** (House Bill 1714) to focus on planning for changing rainfall patterns and freshwater security.

- **Fund bike coordinator position** under the Hawai'i Department of Transportation (DOT) to work closely with counties, federal agencies, and the Bikeshare program to expand bicycling as an alternative form of transportation.
- **Fund implementation of DOT's statewide Pedestrian Master Plan, Safe Routes to Schools, Complete Streets,** and other sustainable transportation projects.
- **Invest in state-owned lands and properties at and around rail station areas** to encourage Transit-Oriented Development.
- **Support a statewide commuter benefit law** to allow Counties to adopt an ordinance requiring employers to offer commuter benefit options and take advantage of available federal commuter benefit tax incentives.
- **Fund planning and building rail extensions** to University of Hawai'i at Mānoa and Kapolei, and for similar infrastructure projects on Neighbor Islands by Extending existing general excise tax surcharge.

Tracking Progress on the Aloha+ Challenge Smart Sustainable Communities Target

To measure and report progress made by state and county offices toward the Smart Sustainable Communities target, support from the 2015 Legislature is requested via the following:

- **Continue funding for OIMT to support the interagency Aloha+ Challenge Sustainability Dashboard for Smart Sustainable Communities.** The pilot *Aloha+ Challenge* Sustainability Dashboard will be launched in early 2015 with indicators for clean energy and solid waste reduction. Indicators for smart growth and climate resilience will be developed in 2016. Maintaining the dashboard and the development of natural resource management indicators will require ongoing support.
- Support the State Office of Planning, in coordination with other Departments and the counties, to continue data collection and sharing for the *Aloha+ Challenge* Sustainability Dashboard for Smart Sustainable Communities.

Recommendations for Government to Lead by Example

State and county operations have the opportunity to demonstrate leadership and create impact in smart sustainable communities by supporting the following:

- Support State Departments and Counties to implement Act 286 (HRS §226-109) by drafting Climate Adaptation Plans in accordance with the priority guidelines.

ALOHA+ GREEN WORKFORCE & EDUCATION

Increase local green jobs and education to implement Aloha+ Challenge targets by 2030

In meeting the *Aloha+ Challenge*, Hawai'i has the opportunity to diversify our economy with green job growth. Hawai'i is one of the top states in the nation for growth in the clean energy job sector, and has the ability to expand new industries in local food production, natural resource management, solid waste reduction, and green design. With its natural outdoor classroom and ideal location in the crossroads of the Asia Pacific region, Hawai'i can also be a leader in sustainability research and education.

The report consultation process revealed some of the challenges facing Green Workforce and Education:

- Additional support is needed for paid internships and fellowships within State departments, private businesses, and non-profits
- Lack of continued funding for sustainability coordination at state and county levels and in University of Hawaii system
- Need for higher paying green jobs

Additionally, the following are some of the successes identified:

- University of Hawai'i West O'ahu Sustainable Community Food System undergraduate concentration
- The University of Hawai'i Board of Regents newly adopted sustainability policy;
- Sustainable Living Institute at Maui and Kaua'i community colleges.

Legislative Recommendations for Aloha+ Challenge Green Workforce and Education Target

- **Create a Green Jobs Working Group** under the Department of Labor and Industrial Relations to increase federal funding for and youth engagement in the green workforce.
- **Fund the establishment of a Sustainability Office in the University of Hawai'i System** to coordinate implementation of the Board of Regents Sustainability Policy across all 10 campuses and encourage system-wide leadership to meet *Aloha+ Challenge* targets.
- **Fund the establishment of Sustainability Coordinator positions in each of the 15 DOE complexes** to support environmental education in K-12 public schools and collaborate with University of Hawai'i.

- **Expand Hawai'i Growth Initiative**, a State equity investment program in the Department of Business, Economic Development and Tourism, to focus on economic development for all *Aloha+ Challenge* targets.
- **Support initiatives in the tourism sector** to increase sustainability as preparation for the World Conservation Congress in 2016.
- **Fund paid internships** in state departments and with community partners in the *Aloha+ Challenge* sectors.
- **Require certain board and commission members to attend an Office of Hawaiian Affairs-sponsored training course** to ensure individuals are familiar with their legal responsibilities regarding Native Hawaiian rights and the public trust doctrine.

Tracking Progress on the Aloha+ Challenge Green Workforce and Education Target

To measure and report progress made by state and county offices toward the Green Workforce target, support from the 2015 Legislature is requested via the following:

- **Fund the establishment of a Research and Statistics position** under Department of Labor and Industrial Relations to track progress and set state milestones on green job growth.
- **Continue funding for OIMT to support the interagency *Aloha+ Challenge Sustainability Dashboard for Green Workforce and Education***. The pilot *Aloha+ Challenge Sustainability Dashboard* will be launched in early 2015 with indicators for clean energy and solid waste reduction. Indicators for green jobs and education will be developed in 2016. Maintaining the dashboard and the development of natural resource management indicators will require ongoing support.

Recommendations for Government to Lead by Example

State and county operations have the opportunity to demonstrate leadership and create impact in clean energy by supporting the following:

- Invest in “green job” positions in state departments and University of Hawaii system that are important to state capacity and leadership on the *Aloha+ Challenge*
- Support Department of Education & the University of Hawaii to strengthen sustainability education

Conclusion

The *Aloha+ Challenge* Report to the 2015 Hawai'i State Legislature articulates some of the key opportunities for legislative leadership to achieve the *Aloha+ Challenge* targets. The Legislature's investments can be leveraged for maximum impact as public-private, cross-sector partnerships continue to support the *Aloha+ Challenge*. The process of drafting the report illuminated the need for continued and increased coordination at every level in order to identify shared priorities that are ready for action, as well as emerging opportunities to be developed over time. There are many challenges to overcome on the way to 2030, but Hawai'i can build upon many existing "bright spots" across the state to inspire and accelerate progress in the next fifteen years. If Hawai'i is successful in meeting the *Aloha+ Challenge*, Hawai'i will be an even better place in 2030.

Please contact Jacqueline Kozak Thiel, State Sustainability Coordinator, with any questions: Jacqueline.m.kozak-thiel@hawaii.gov.

The State Sustainability Coordinator is a newly created temporary position at the Department of Land and Natural Resources with the special purpose of working across state departments and with counties, federal agencies, and community partners to advance Hawai'i's sustainability goals. The State Sustainability Coordinator is the state's lead point of contact on the *Aloha+ Challenge*.

Report prepared by Jacqueline Kozak Thiel, State Sustainability Coordinator, in partnership with Sheila Sarhangi and Hawai'i Green Growth. Mahalo to Hawai'i Green Growth and the many individuals who provided their support and thoughtful input.