Hawai‘i 2050 Update

Report in Response to Act 225, 2008 Session Laws of Hawaii

Relating to Sustainability

Social Sciences Public Policy Center
University of Hawai‘i at Mānoa
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EXECUTIVE SUMMARY

A. Purpose of the Report

This report is submitted in accordance with Act 225, 2008 Session Laws of Hawaiʻi, entitled “Relating to Sustainability,” which directed the Social Sciences Public Policy Center (“SSPPC”), University of Hawaiʻi at Mānoa, to review the Hawaiʻi 2050 Sustainability Plan (“H2050 Plan”) and to:

1. Develop defined data, data sources, and benchmarks for each of the major goals; and
2. Consult with leaders and organizations relevant to each of the main goals of the H2050 Plan; and
3. Report findings and recommendations to the 2010 Legislature.

B. Development of the Report

The report is based on hundreds of voices of Hawaiʻi’s people who reviewed the Hawaiʻi 2050 Sustainability Plan (“H2050 Plan”) and presented their ideas, suggestions, and recommendations. The voices were diverse yet united in the desire to continue working toward a sustainable Hawaii in 2050 and beyond. The drive to a sustainable Hawaii must include all sectors, across all counties, and supported by collaboration and community-driven actions.

The SSPPC used a variety of data collection methods: an email survey of the stakeholders previously involved in the Task Force processes and of individuals and organizations involved in sustainability efforts; face-to-face dialog sessions with community leaders representing key sectors in all counties; and statements by representative voices from the various sectors—business, labor, government, environment, non-profit, education, agriculture, youth, Kanaka Maoli, health, and the military—to develop a policy framework for implementing the H2050 Plan.

The major themes from all these sources confirm the goals, priorities, and action steps of H2050 Plan. During the last two years, each county has developed its own sustainability planning as have a number of community groups and organizations. Sustainability efforts across the state have grown and continue to expand. It is clearly a community-driven process.

This report documents the common themes we heard from across the counties and across the sectors of our community. Many will require government support and policies as well as the community will to adopt and nurture long-term commitments to
achieve a sustainable Hawaii. To ensure that the work begun to date continues, the following recommendations are offered.

**C. Major Recommendations**

The following recommendations are not listed in priority order; rather they reflect the broad areas of agreement among the hundreds of citizens across the various sectors and counties. They are offered as points from which further discussion and policies can be developed.

**Incorporate the H2050 Plan definition and goals of sustainability as a new section in Chapter 226, Hawai‘i Revised Statutes.**

There was overwhelming support (88%) of survey respondents and a strong consensus among community leaders across the counties that Hawai‘i should place high priority on sustainability as a value. There was also strong support for the definition of “sustainability” as put forth in the H2050 Plan, and the need for a long-range plan for mapping a strategic direction for the State. Based on the foregoing, it is recommended that the State of Hawai‘i take the bold step to put the “stake in the ground” and set the standard for Hawai‘i’s sustainable future. This will provoke more thought and deliberation and provide further clarification on community-driven directions.

While various counties and sectors may have different agendas and priorities, they all agreed on one thing: **We value sustainability ethics and practices.** We should therefore take action to implement this value in the investments we make, in the resources appropriated, and in decisions that we make as a state. To ensure that the residents and decision makers of the state are guided by this ethic, it is recommended a new section be written in Chapter 226, Hawai‘i Revised Statutes committing Hawai‘i to a sustainable future.

**Develop and implement policies based on common themes voiced by citizens across the counties in the cross sector dialogs.**

There was agreement across many sectors and in every county about specific actions that will need to be taken to achieve the H2050 Plan goals. Major actions identified are:

- Creatively educate the community about the importance of living sustainably and launching programs in the schools to teach sustainability strategies, including strengthening early learning initiatives and fostering and practicing sustainable living
- Develop a more diversified economy by increasing production and consumption of local foods and products and providing incentives to foster sustainability-related jobs and industries.
• Support recycling systems and provide incentives for businesses to reduce their energy usage; adopt green building codes and increase the use of renewable energy resources (e.g. wind, waves, sun); provide incentives for renewable energy development
• Provide support (e.g. tax incentives, zoning exemptions, etc) for private developers to build low income and special needs housing (e.g. elderly, persons with mental disabilities, low income); develop a comprehensive health care plan, including long-term care.
• Support and encourage Kanaka Maoli cultural practices and celebrate the diversity of our island culture.

**Support the continuing public-private collaboration, community discussions, and efforts on sustainability initiatives.**

Over 80 sustainability programs and activities were identified over the course of the study review and more are underway. The consensus throughout the counties was the need to share resources, compile the lessons learned, and coordinate the progress being made to ensure that long-term sustainability continues in their organizations, communities, and in the state.

While the current fiscal constraints were acknowledged, the shared vision and hope was that the current situation would not hinder the many on-going efforts nor would the H2050 efforts be abandoned. To keep the momentum alive in the community as well as identify both government and private sector efforts – small or large – it is recommended that a working group of government and community organizations committed to sustainability and representing various interest sectors and counties be convened.

The Hawai`i State Legislature can provide the leadership by convening the various community and government organizations and businesses already involved in various aspects of sustainability to identify next steps for implementation, including adoption of a mechanism such as a website to link with and inform the community of the various sustainability programs and projects. This effort would build support and ensure long-term viability for implementing and updating the H2050 Plan.

**Adopt measures of accountability, including data and data sources, indicators and benchmarks.**

A number of communities and organizations are developing indicators and benchmarks to measure progress, including a beginning set of indicators to measure progress in attaining the priorities and goals of the H2050 Plan. These and others
should be further reviewed by government and community representatives to determine key indicators for the state and could serve as the starting point for identifying benchmarks as milestones of achievement in the near and long term. As with the success in other jurisdictions, it is recommended that the selection of final indicators and benchmarks be community-driven.

**Develop a sustainability coordinating entity to carry forward the H2050 Plan.**

The interest in and commitment to sustainability are evident in all the counties and in the community, e.g., by various organizations such as Mālama Kaua‘i, Focus Maui Nui, the Hawaiian Civic Clubs, etc. These efforts should be supported and expanded; and lessons learned should be shared more broadly.

The H2050 Plan recommended a sustainability council as a continuing government organization to carry forward the H2050 Plan, including measuring performance in achieving its goals and priorities, and building a publicly accessible data bank of knowledge about sustainability. Feedback from the community indicated the need for information sharing and network building but not for a centralized state-run council or office. One suggestion was to establish a H2050 umbrella organization at the state level to coordinate county hubs, which would be comprised of diverse multi-sector representation. Another suggestion was to designate a non-profit entity as a statewide coordinating council with county representation. The structure of such an organization is still to be explored; however, there was consensus on the need for an organization that could provide a long-term coordinating function and support to further implement the H2050 Plan and the recommendations offered in this report.

The above recommendations—and more specific county and state actions detailed in the report—were developed through hundreds of hours of meetings with citizens across the state and from many different sectors of our community. This report attempts to share these community voices so that policymakers and citizens can build on the inspired work of hundreds of committed, community members. We hope it stimulates further work and continuing progress.
I. INTRODUCTION

A. Guiding Legislation

Act 225, 2008 Session Laws of Hawai‘i, entitled “Relating to Sustainability,” directed the Social Sciences Public Policy Center (“SSPPC”), University of Hawai‘i at Mānoa, to review the Hawai‘i 2050 Sustainability Plan (“H2050 Plan”) and submit a report of findings and recommendations to the 2010 Legislature. Requirements of the review include the following:

1. Develop defined data, data sources, and benchmarks for each of the major goals; and
2. Consult with leaders and organizations relevant to each of the main goals of the H2050 Plan.

B. Background

The 2005 Legislature recognized that Hawai‘i’s environment and host culture are unique and beautiful; and the ideal and preferred quality of life of its residents requires long-term stewardship and planning to ensure that Hawai‘i’s assets and resources be available for present and future generations. Thus, through Act 8 (2005), the Hawai‘i State Legislature established the Hawai‘i 2050 Task Force (“Task Force”) to review the Hawai‘i State Plan and other community planning documents and reports, obtain community-wide input, and develop recommendations for creating the H2050 Plan.

After two years of intense work, the State Auditor submitted the H2050 Plan to the 2008 Legislature. The H2050 Plan was the culmination of the Task Force’s concentrated effort to solicit input from citizens as well as community and government leaders throughout the state through community meetings, stakeholder group sessions, and a statewide survey. Over 10,000 people participated in this process and provided input and ideas. The H2050 Plan provided a definition and vision of sustainability, guiding principles, goals, strategic actions, indicators, and priority implementing actions. Figure 1 illustrates the five goals for sustainability identified by the Task Force in the shape of a star, as “all goals are of equal importance, inter-related and inter-dependent on each other.”

The 2008 Legislature acknowledged that the H2050 Plan is an important tool and guiding force for the State and a good first step in creating a guide for government agencies, policymakers, businesses, community organizations and community leaders. However, the Legislators requested further information and data, including con-
consultation with leaders and organizations relevant to the goals of the H2050 Plan. It passed Act 225 (2008) requesting the University of Hawai‘i at Mānoa’s Social Sciences Public Policy Center (“SSPPC”) to review the plan and publish its findings and recommendations, including any proposed legislation, to the 2010 Legislature. More specifically, the Legislature requested the SSPPC to:

- Consult with leaders and organizations relevant to each of the main goals of the Hawai‘i 2050 Plan and
- Develop defined data, data sources, and benchmarks for each of the major goals.

From late summer 2008 to December 2009, the SSPPC sought input from community leaders and organizations to examine more fully the H2050 Plan and to recommend more specific guidance for implementing the goals and prioritizing the objectives of the plan. The SSPPC also reviewed the indicators recommended in the H2050 Plan; and, using the criteria of (1) their alignment with its goals and priority actions and (2) the availability of data sources, they were evaluated as potential benchmarks to measure accountability and progress.

The following details the work completed over the past 15 months to review the H2050 Plan through consultation with community leaders and organizations and assessment of the work of organizations in Hawai‘i and other jurisdictions relevant to sustainability planning.
II. METHODOLOGY

A. Consultation with leaders and organizations on the H2050 Plan goals

Act 225 (2008) directed the SSPPC to consult with community leaders and organizations, emphasizing that community engagement is vital for the development, implementation and longevity of the Plan (Conference Committee Report No. 35-08).

In order to first develop a guiding policy framework for reviewing the H2050 Plan and to identify community leaders and organizations involved in sustainability projects, SSPPC convened meetings with the Task Force, the State Auditor, and its contractor, the Hawai`i Institute for Public Affairs (HIPA), in late summer 2008. As a result, the SSPPC decided to first validate the recommendations set forth in the H2050 Plan and to build upon and refine these recommendations through various consultation methods:

1. Email survey of the stakeholders previously involved in the Task Force processes;
2. Email survey to individuals and organizations to develop an inventory of sustainability resources;
3. Face-to-face dialog sessions among community leaders representing key sectors in all counties;
4. Follow-up requests to submit additional information and ideas from various stakeholders relating to a policy framework for implementing the H2050 Plan; and
5. Pre-test survey results on the Quality of Life from SMS Hawai`i

(1) Stakeholder Survey

In November 2008, seventy-three (73) community leaders representing various organizations across Hawai`i who had been previously involved in the H2050 Plan were asked to participate in an on-line survey (see Appendix 1A for a copy of the survey). The goal of the survey was to develop a policy implementation framework and obtain feedback on the H2050 Plan goals, policies, and priority actions. Stakeholders were asked to (1) describe activities in which they were currently involved that furthered the H2050 goals and objectives, (2) review the H2050 Plan priorities, and (3) prioritize policy strategies to implement those priorities. Key sectors were identified and community organizations and leaders representing these interests were invited to participate in the survey. The sectors and some of the participating organizations are listed below:
• Business – e.g. Chamber of Commerce, Hawaiian Electric Company, American International Group Inc. (AIG) Hawai`i, Maui Land and Pine, First Hawaiian Bank, Bank of Hawai`i
• Labor – e.g. International Longshore and Warehouse Union (ILWU), Hawaii State Teachers Association (HSTA), Hawaii Government Employees Association (HGEA)
• Education – e.g. Hawaii Department of Education (DOE), University of Hawaii System (UH), Hawai`i Association of Independent Schools
• Youth – e.g. high school, college and university students
• Kanaka Maoli – e.g. civic clubs, Office of Hawaiian Affairs (OHA)
• State and local government
• Non-profit organizations – e.g. Girl Scouts, Child and Family Services, National Association of Social Workers (NASW), Kanu Hawai`i
• Environmental organizations – e.g. Sierra Club, Oceanit, Hawai`i Conservation Alliance

(2) Inventory of Sustainability Resources and Activities
In addition to the stakeholder survey, a second email survey was sent to over 3,000 stakeholders and other community leaders and citizens to obtain information on the various organizations and projects that were committed to and/or practicing sustainability. The goal of this survey was to identify organizations involved in sustainability and to gauge the depth and breadth of interest in pursuing the goals and priorities across the state for the H2050 Plan (see Appendix 2A for a copy of the survey).

In order to determine whether these projects and activities were furthering the H2050 Plan goals, respondents were asked to describe the project and organization and how it was furthering one or more of the H2050 Plan goals. The missions of the organizations and activities of the projects were categorized by county and by their alignment with the H2050 Plan goal(s) as follows:

• Sustainability Ethic (SE): Living sustainably is a part of our daily practice in Hawai`i
• Economy (E): Our diversified and globally competitive economy enables us to meaningfully live, work and play in Hawai`i
• Environment & Natural Resources (ENR): Our natural resources are responsible and respectfully used, replenished and preserved for future generations
• Community & Social Well-Being (CSW): Our community is strong, healthy, vibrant and nurturing, providing safety nets for those in need
• Kanaka Maoli & Island Culture (KMIC): Our Kanaka Maoli and island culture and values are thriving and perpetuated.

More organizations were continually added to the resource inventory throughout the data collection process. Appendix 2B provides a copy of the inventory of resources collected through August 31, 2009.

(3) Cross-sector Implementation Dialogs
SSPPC invited community leaders representing various sectors relevant to the goals of the H2050 Plan and from across the counties1 to cross-sector dialog meetings.
The goal of each meeting was to (1) review the definition, goals, and recommended priority actions of the H2050 Plan, and (2) discuss whether and how these recommendations should be prioritized and subsequently implemented. More specifically, attendees were asked to identify (1) what is needed to implement the H2050 Plan priority actions and (2) what specific contributions could be expected from the various sectors to implement the priority actions and intermediate steps.

Six meetings\(^2\) were convened at the following locations across the state: Honolulu and Waianae on O`ahu; Maui; Kaua`i; and Hilo and Kona on Hawai`i. Across the four counties, community leaders representing key sectors\(^3\) agreed to come together to discuss implementation of the H2050 Plan goals and priority actions (see Appendix 3A for a list of invitees and participants). The sessions were approximately four hours and provided an opportunity for community leaders to provide their perspective from their individual sector. Meeting agendas were designed to foster information sharing and in-depth discussion of the goals and priority actions of the H2050 Plan (see Appendix 3B for the agendas and invitations from each meeting).

During the meetings, community leaders discussed their ideas and work related to sustainability and how best to implement the H2050 Plan goals and priority actions. County representatives also provided updates on their respective county plans related to sustainability and the goals of the H2050 Plan (see Appendix 3C for the presentations from the counties). Participants worked together on detailed strategies and actions to implement the goals and priority actions of the H2050 Plan that would/could be supported by at least two sectors. They identified goals and priority actions, as well as specific “next steps” and collaborative networks, for implementing the H2050 Plan. Recommendations were prioritized according to those that had agreement across multiple sectors. Results of the cross-sector agreements are provided in Appendix 3D.

**(4) Essays – Community Leaders Speak on Sustainability and the H2050 Plan**

The input provided at the cross-sector meetings was rich and meaningful. However, the data analyses and results reported could not include all those who were interested in staying involved in this process and could not capture the passion, commit-
ment and the significance that many people place on pursuing sustainability poli-
cies and plans to ensure that future generations enjoy Hawai`i’s uniqueness and as-
sets. Thus, the SSPPC asked various community leaders to write brief essays for
inclusion in this report. We asked them to respond to three questions: (1) What is
your vision and direction for as sustainable Hawai`i and for implementing the
H2050 Plan and goals and plan? (2) What do you think it will take to implement the
plan, given (or in spite of) the current fiscal condition of the state and nation? and
(3) What could your organization or sector contribute toward achieving a sustain-
able Hawai`i and implementing the H2050 Plan? These community leaders from
various sectors across the state provided further guidance for and understanding of
the importance of sustainability as a value and goal for Hawai`i.

B. Defining Data, Data Sources, and Benchmarks
for Sustainability

Previous work by the Task Force identified 55 indicators to measure the overall
economic, environmental, and community well-being of the state, including
achieving a sustainability ethic. It also identified potential data sources to measure
progress in achieving the goals of the Plan.

Selection of Indicators and Benchmarks
Pursuant to Act 225 (2008), SSPPC reviewed the data, data sources and indicators of
the H2050 Plan as well as other existing studies by local counties and agencies to
measure progress and to identify benchmarks for achieving sustainability and other
larger community goals (see Appendix 5 for a more detailed description of the
process for developing statewide indicators and benchmarks). The following reports were reviewed:

**County-Specific Indicator Reports**

- Focus Maui Nui: Our Islands, Our Future: http://www.focusmauinui.com/about/findings.cfm

**Other Indicator Reports in Hawai`i**

- University of Hawai`i Center on the Family & State of Hawai`i Department of Business, Economic Development & Tourism Quality of Life in Hawai`i 2009: Indicators & Most Recent Data (Draft)
- Native Hawaiian Well-Being Survey 2008 (Pending)

While none have developed precise benchmarks to measure sustainability, these counties and organizations are well on their way to establishing strategies to measure progress in achieving many of the sustainability goals identified in the H2050 Plan. The indicators listed in these reports can be useful in assessing progress toward H2050 Plan goals. In addition to sample indicators and benchmarks, methodologies used by Hawai`i County and the Kaua`i Planning and Action Alliance can serve as model processes for selecting indicators and benchmarks.
III. MAJOR FINDINGS

Compiling the Voices of the Community

The SSPPC engaged in a number of efforts to obtain broad input on the H2050 Plan goals and particularly its priority implementing actions. Voices of the community were captured in several different ways. These include (1) an on-line survey of stakeholders, (2) an inventory of organizations and resources on sustainability (3) in-depth dialogs among cross-sector leaders in all counties and (4) community leaders’ essays on the future of sustainability and the H2050 Plan. SSPPC received input from 2,323 individuals through the stakeholder survey, cross-sector dialog meetings and essays, in addition to the over 200 businesses listed on the resource inventory. These voices all consistently point to actions that state and county policymakers, as well as community leaders and organizations, can follow to ensure that the goals of the H2050 Plan are achieved. The inventory of statewide sustainability programs and activities illustrates the efforts currently being undertaken to achieve sustainability goals. The following describes the major findings that have strong support and consensus the major sectors relevant to the goals of the H2050 Plan.

A. Consultation with leaders and organizations on the H2050 Plan goals

Stakeholder Survey

A large majority of the stakeholders:

1. Strongly endorsed the H2050 Plan definition of “sustainability”. Eighty-eight percent (88%) of the stakeholders agreed that Hawai`i should define sustainability as pursuing a balance between a strong diversified economy, a clean environment, and a healthy quality of life.

2. Strongly recommended that Hawai`i should place a high priority on achieving sustainability. Eighty-eight percent (88%) agreed that achieving sustainability should be a high priority for Hawai`i.

3. Strongly agreed that a long-range plan like the H2050 Plan will provide strategic direction toward a sustainable Hawai`i. Eighty-two percent (82%) agreed that a long-range plan like the H2050 Plan is helpful in mapping a strategic direction towards a sustainable Hawai`i and that it should be periodically updated to ensure that the plan is current and relevant to the existing times.

4. Hawai`i needs to establish benchmarks and indicators to measure the State’s performance and mark its progress toward sustainability. The H2050 Plan’s call for in-
icicators to measure progress is critical in achieving accountability by regularly measuring progress toward achieving the H2050 Plan goals and priorities. Eighty two percent (82%) agreed that it is necessary to establish benchmarks and develop indicators to measure the state's performance to mark its progress toward becoming sustainable.

Several distinct policy options were identified: education, housing, reducing reliance on fossil fuels, diversifying the economy, developing a sustainability ethic, increasing the production and consumption of local foods and products, providing access to long-term care and elderly housing, and preserving and perpetuating our Kanaka Maoli and island culture. When asked to prioritize specific action steps that would provide milestones for achievement by 2020, the stakeholders ranked “Developing a more diverse and resilient economy” as the most important priority. “Developing a sustainable ethic” and “Reducing Hawai‘i’s reliance on fossil fuels” were both ranked as the next highest priority actions.

While the responses validated previous community input, the small response rate and written survey format did not provide detailed descriptions of the implementing actions. Thus, the SSPPC designed community cross-sector face-to-face dialogs to provide more specific information on implementing actions and priorities.

The Inventory of Sustainability Resources and Activities

Data gathering began in 2008 and covers Hawai‘i, O‘ahu, Kaua‘i, Maui, Lāna‘i, and Moloka‘i. Because of the growing interest in connecting with other similar efforts across the state, the SSPPC created a Resource Inventory Guide as a beginning effort in showcasing the on-going statewide sustainability efforts. The inventory can also be used as a resource for many people across the state that are engaged in similar sustainability efforts and want to network with and learn from each other (see Appendix 2).

SSPPC found that there is strong interest in implementing sustainable practices throughout the state, from small individual efforts such as building and supporting sustainable gardens and community re-cycling projects to incorporating broad sustainable initiatives in the counties and among other organizations’ plans. Individuals, community groups, businesses, and counties are developing and providing products, services, educational programs, and plans to achieve sustainability. The inventory of projects and activities across the counties related to every one of the H2050 Plan goals. The inventory provides an initial database of organizations, activities, and contact information and can be used to assess the extent and type of growth in sustainability activity in the state. Since it was initiated in 2008, at least 89 activities and programs throughout the counties have been identified. By De-

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4 The inventory provides a brief description of the sustainability organizations and activities aligned by the H2050 Plan goals of: sustainability ethics, economy, environment and natural resources, community and social well-being, and Kanaka Maoli and island culture.
December 2009, more sustainability projects were identified, indicative of the growing number of individuals and organizations getting involved in creating a sustainable Hawai‘i. It seems that sustainability is “bursting out all over!”

The Cross-sector Dialogs
The in-depth community leader cross-sector meetings validated the findings of the H2050 Plan – that there is consensus on the desire to actively work today to ensure Hawai‘i lives sustainably into the future. And, all participants at the cross-sector dialogues agreed that the H2050 Plan’s “People’s Definition” should guide actions for the State:

“A Hawai‘i that respects the culture, character, beauty and history of our state’s island communities; strikes a balance between economic, social and community, and environmental priorities; and meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Some of the community leaders at the cross-sector meetings wanted the State to establish these benchmarks to ensure accountability and focus for government and communities to work toward common goals and keep on track in achieving them. Others felt it should be a collaborative process with county leadership and perhaps coordinated by a statewide non-profit organization.

Statewide actions and county priorities are provided in more detail in Appendix 3D. They demonstrate that there is clear agreement that actions need to be taken now to achieve the five goals of the Plan. There is clear support for action on priority goals and strategies. The top five items ranked as the most important priorities by most respondents, were to:
1. “Develop a more diverse and resilient economy”
2. “Develop (and live) a sustainability ethic”
3. “Support educational efforts in the schools to support green jobs and in the communities towards living a more sustainable lifestyle”
4. “Develop incentives to conserve energy and support alternative to fossil fuel”
5. “Perpetuate Kanaka Maoli and island cultural traditions.”

Although not dispositive, as the number responding was low, the input corroborated other findings from the previous work of the Task Force and the online stakeholder survey.

County Priorities

At each of the county meetings, community leaders discussed sustainability goals for the state; and used the H2050 Plan as a framework for discussing sustainability in their county. The major themes that emerged from the various meetings are summarized below. More in-depth reports are provided in Appendix 3.

Honolulu (urban)

Two meetings were held for O‘ahu, one in downtown Honolulu and the other in Wai‘anae, which invited rural interests. The major theme that emerged from the Honolulu (urban) group was to create a sustainable ethic. This included developing new and innovative school based curriculum; “green” majors and degrees in higher education; and increase the use of television and websites, social networking, etc for public information announcements. The idea was to help people learn and live a sustainable lifestyle which might include eating more local foods; recycling more; reducing their own use of fossil fuels (support alternative transit modalities) reduce energy and the waste stream; and change their behavior and buying habits to help create a sustainable ethic.

Wai‘anae (rural)

The major focus was on creating a sustainability ethic since the participants believed that it was the overarching value that was critical for achieving the goals of the H2050 Plan. They identified Kanaka Maoli values such as “lokahī”(working together), “olu olu” (collaboration) and “aloha” to be used to describe the “sustainability ethic” and recommended that they be incorporated in our lives through teaching in schools and businesses. They also recommended that success stories and a directory or network of sustainability organizations and programs could be posted on a clearinghouse website to foster communication and transmission of sustainability ethic into our lives; and that the long-term view for future decision-making is important, including measures of progress; and that policy makers and leaders can learn from the host culture’s sustainable practices.

Maui

The major idea that came from the Maui group was to establish a H2050 umbrella organization at the state level with county hubs (perhaps satellite offices) comprised of diverse multi-sector representation. This group also focused on strengthening public education by integrating multiple and diverse economic sectors (business, labor, education and culture) that would work to create collaborations and promote activities designed to increase a sustainability ethic. They specifically suggested the creation of a tax for big users of fossil fuel to reduce Hawai‘i’s heavy reliance on non- renewables and strategies to use indigenous resources to build our economy and keep more dollars within or local communities.
Kaua`i
The Kaua`i meeting focused a lot of attention on the use of agricultural lands and establishing a balance between energy and food production. Many saw this issue as the best strategy to develop a more diverse and resilient economy. Several saw the strategy of developing new educational and training programs that connect business, community and schools so new, green jobs can be develop in diversified community clusters and the youth will stay since good jobs will emerge. There was also a strong desire to protect the cultural history of the island and insure that the kanaka maoli cultural values are taught and honored in schools.

Hilo
Developing a diversified economy and creating a sustainable ethic were the most important issues to the Hilo group. Updating the building codes, procurement and permitting processes designed to support new ideas for efficiency and sustainability was also important to this group. Many spoke about respecting the existing resources and re-thinking what has worked in the past, as well as supporting local businesses and agriculture by creating incentives (preferences) for local products and services was discussed as a way to create a sustainable ethic and preserve kanaka maoli culture and values.

Kona
The major agreement that came forward from the dialog in Kona was to seek ways to create sustainable ways of living (more than just creating an ethic) and demonstrate this by example in state and local government. The group was also interested in developing a more diverse and resilient economy by streamlining the bureaucracy (eg barriers to zoning and permitting delays) and of particular concern to this community was the need to increase the diversity of medical care providers and increase access to primary care and long term care medical services.

Statewide Priorities
Over a hundred people from across the state met to discuss the priority actions identified in the H2050 Plan. Specific action recommendations also were identified and categorized within each goal. Of particular interest is that fact that these people reviewed the H2050 Plan and considered each goal and action statement based on their knowledge and the information from their own county. They did not just “redo” the precious plan, but actually developed action plans that confirm the goals, objectives and strategies necessary to move forward. Building on the H2050 Plan, these participants, representing a broad cross sector of the state, identified the necessary actions that must be undertaken to achieve the Plan goals. Sector representatives were asked which policy options would be most effective. For each goal, the highest-ranking options are as follows:
Community Leaders Speak – From Their Perspectives

To provide policymakers with actual statements from community leaders “in their own words” how important sustainability is for Hawai‘i and the commitment and perspective from their sectors, the following individuals share their vision and ideas. While not actively involved in the cross sector dialogs, we wanted to acknowledge the crucial partner that the military plays in many sustainability efforts across Hawai‘i. Howard J. Killian, Hawai‘i Environmental and Sustainability Coordinator, Office of the Deputy

<table>
<thead>
<tr>
<th>GOALS</th>
<th>PRIORITY ACTIONS</th>
<th>SPECIFIC ACTION(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAY OF LIFE</td>
<td>Create a sustainability ethic</td>
<td>1. Creatively educate the community about the importance of living sustainably</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Launch programs in the schools to teach sustainability strategies</td>
</tr>
<tr>
<td>THE ECONOMY</td>
<td>Strengthen public education</td>
<td>1. Support early learning initiatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Increase the development of charter schools</td>
</tr>
<tr>
<td></td>
<td>Develop a more diverse &amp; resilient economy</td>
<td>1. Increase production and consumption of local foods and products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Provide incentives to foster sustainability-related industries, such as</td>
</tr>
<tr>
<td></td>
<td></td>
<td>renewable energy and environmental friendly technologies</td>
</tr>
<tr>
<td></td>
<td>Increase production &amp; consumption of local</td>
<td>1. Provide incentives to grow and buy local products</td>
</tr>
<tr>
<td></td>
<td>foods &amp; products</td>
<td>2. Provide funding or loans to local farmers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Educate the public on why buying local produce is important to building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a sustainable economy</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>Reduce reliance on fossil</td>
<td>1. Increase the amount of electricity generated by renewable resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Adopt green building codes</td>
</tr>
<tr>
<td></td>
<td>Increase recycling, reuse &amp; waste reduction</td>
<td>1. Support recycling systems for bottles, cans and paper in every neighborhood</td>
</tr>
<tr>
<td></td>
<td>strategies</td>
<td>2. Provide incentives for businesses to initiate recycling</td>
</tr>
<tr>
<td>COMMUNITY &amp; SOCIAL</td>
<td>Increase affordable housing opportunities</td>
<td>1. Provide incentives for private developers to build low income housing</td>
</tr>
<tr>
<td>WELL-BEING</td>
<td></td>
<td>2. Adopt inclusionary zoning laws that require all new housing developments to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>include some affordable housing units</td>
</tr>
<tr>
<td></td>
<td>Provide access to long term care and elderly</td>
<td>1. Provide tax credits or exemptions for developers of long term care and/or</td>
</tr>
<tr>
<td></td>
<td>housing</td>
<td>elderly housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Provide funding for developers of elder care housing projects</td>
</tr>
<tr>
<td>KANAKA MAOLI CULTURE &amp;</td>
<td>Preserve &amp; perpetuate Kanaka Maoli and island</td>
<td>1. Celebrate diversity and island cultural practices</td>
</tr>
<tr>
<td>ISLAND VALUES</td>
<td>cultural values</td>
<td>2. Support and encourage Kanaka Maoli cultural practices and support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>subsistence-based businesses</td>
</tr>
</tbody>
</table>
BUSINESS

As one reviews the 2050 sustainability plan, a guiding principle is reflected in the “triple bottom line approach,” where economic, community and environmental goals are in balance. From the business perspective, it is imperative that we have a strong and sustainable economic base into the future. For if we do not improve the business climate how will we and our future generations support the needs of the community and develop and pay for environmental initiatives?

Jim Tollefson, Chamber of Commerce of Hawai‘i

ENVIRONMENT

The road to a truly sustainable Hawai‘i starts by ending the state’s crippling addiction to imported oil. Achieving energy independence for Hawai‘i relies on three catalysts: people, technology and relentless vision. Only a concerted statewide agenda that prioritizes sustainability will be enabled to achieve our clean energy future.

Jeff Mikulina, Blue Planet Foundation

Mālama Kaua‘i is committed to systemic change that will result in a sustainable future. As called out in the Hawai‘i 2050 Plan, we focus on changes in key areas: water, food, energy and economy - using relocalization as a primary strategy. Relocalization means creating and supporting local choices for that which sustains us.

Keone Kealoha, Mālama Kaua‘i
GOVERNMENT

The mission of the Hawai‘i County Resource Center strives to enable the H2050 vision of a sustainable island by encouraging holistic community capacity building to sustain the ecological, social and economic well-being of Hawai‘i Island. Partnership, collaboration and integration are the essential elements to implementation of the H2050 in a resource constraint world. Building key partnerships with state wide and county specific sustainability organizations should enable a cost effective tracking mechanism to measure the progress if sustainability goals, strategic actions and indicators from H2050.

Alex Frost, Department of Research and Development, County of Hawai‘i

Hawai‘i should be the leader among all island communities on integrating core indigenous values for our land, sea, and air with new industries and the ability to modernize and be innovative without sacrificing the natural environment. This entails cooperation, partnerships, and communication between government, business, education, and tourism sectors. A long-range plan with clear goals to preserve our State’s culture, character, beauty and history has been articulated in the Hawai‘i 2050 Sustainability Plan. Adopting such a long-range plan and goals will foster discussions needed today so that action plans can be implemented on a comprehensive scale to achieve our vision for Hawai‘i’s next fifty years and beyond.

Kippen de Alba Chu, Hawai‘i 50th Anniversary Statehood Commission

I see the [Hawai‘i 2050 Sustainability Plan] as a road map providing guidance in how to arrive at a destination, namely a sustainable Hawai‘i...without a concerted and coordinated effort, the goal of a sustainable Hawai‘i will be difficult to achieve. However, without a plan to guide these efforts, the goal will be almost impossible to achieve...the most important step toward implementing the Hawai‘i Sustainability Plan will be the adoption of the plan itself.

Jeffrey S. Hunt, Maui County

MILITARY

The Department of Defense working through the U.S. Pacific Command (PACOM) has devoted considerable effort to addressing Sustainability in Hawai‘i. We applaud the state’s efforts to harness Hawai‘i’s resources and lessen Hawai‘i’s dependence on fossil fuels for its energy needs. We recognize that the success of the Hawai‘i 2050 Initiative depends largely on the cooperation of U.S. military forces stationed here. The goal of PACOM “going green” is to reduce the taxpayers burden while reducing DoD reliance on fossil fuels, increase our energy security, develop renewable energy sources, reduce greenhouse emissions, emphasize sustainability.

Howard Killian, Office of the Deputy Assistant Secretary of the Army
In the Hawai`i 2050 Sustainability Plan, we have the opportunity to anchor our journey towards a sustainable Hawai`i in the ancient wisdom of these islands while exploring new ways to apply it in a modern context. This includes working towards sustainability through a close relationship with the `āina (environmental justice); economic resilience and shared prosperity (economic justice) and inclusive and equitable development (social justice).

**Bob Agres, Hawai`i Alliance for Community Based Economic Development**

Kanu Hawai`i began as a conversation among a group...who worried about the future of our islands. We discussed threats to Hawai`i's natural environment, its economic vulnerability, and the loss of our island culture. Each of us committed to make at least one change in our own lives and behavior to address the concerns we'd identified – to be the change we wanted to see. We view it as Kanu Hawai`i's role to help make the plan “actionable” for all. We view it as our kuleana - both our privilege and our duty – to be a force for the grassroots implementation of the Hawai`i 2050 Plan.

**James Koshiba, Kanu Hawai`i**

The H2050 goal for community and social well-being is “Our community is strong, healthy, vibrant and nurturing, providing safety nets for those in need.” Aloha United Way’s mission fits well with this goal and the strategic actions related to it. We have already set priorities at Aloha United Way and are focusing our efforts on creating long-term improvements in our community, particularly in the areas of crime and drug use, homelessness, early childhood development, financial stability and independence and emergency and crisis services.

**Susan Au Doyle, Aloha United Way**

Today, the State of Hawai`i, long known for its beauty and rich ecosystem is in danger of losing the very resources that makes it unique. Now there is a critical need to protect and preserve the very possessions that make Hawai`i irreplaceable and exclusive. The wealth and opulence of our natural resources must be protected and preserved if the cultural resources are to survive. Native Hawaiians are intimately connected to the land and sea and can never be separated. If one withers and dies, the other does as well. Thus, it is imperative that Native Hawaiians play a strong role in sustaining the resources they depend on.

**Leimana DaMate, `Aha Kiole Advisory Committee**

Participating in the development of the H2050 Sustainability Plan, Native Hawaiian leaders brought to the table these principles...in the triple bottom line, the land is not viewed as a commodity; it is the foundation of our being, our cultural and spiritual identity.

**Leimomi Kahn**
AGRICULTURE

Food and water are two of the most important things for sustainability, without them, we cannot survive! We must learn to balance water needs for everything – domestic, environment, cultural, AND AGRICULTURE needs and use must all be assessed on an even playing field. Decisions on water need to take into account whether the agricultural production is good for Hawaii...we need to sustain these values and goals, which are part of the Hawai'i 2050 Sustainability Plan.

Dean Okimoto, Nalo Farms

EDUCATION

Education will play a key role in meeting the goals of the Hawai'i 2050 Sustainability Plan. By following a meaningful and sustainable blueprint for education reform, Hawai'i’s public schools will be transformed into 21st-century institutions of learning.

Pat Hamamoto, Hawai'i State Department of Education

YOUTH

Our community’s awareness and public’s involvement in the Hawai'i 2050 Plan will be essential for its success. Our islands economic downturn has set the perfect stage to bring more awareness of H2050 to our communities. With the implementation of furlough Fridays across Hawai'i...[and] with unemployment rising,...we have a unique opportunity to bring awareness of the Hawai'i 2050 Plan to our youth and young people with the hope that they will make the Plan their own and help to lead Hawai'i to a prosperous economic, social, and environmental future.

Michael Mendiola, Maui Community College

Hawai'i is a rare setting, where the environment is present in all places, including our urban cities. The government and the people must do their part to help sustain the environment...We should not rely on other places for resources. Instead, Hawai'i should be the leader in creating a state that is fully sustainable. Though technological change will help, above all we need to inspire the people. Respect for the land and being sustainable is deeply woven into Hawai'i's cultural roots. If Hawai'i can work harder to promote these ideas, we can combine this with the 21st century technological flair to maintain a beautiful state, sustainable for the future.

Cameron Dye, 'Iolani School
B. Data, Data Sources, Indicators and Benchmarks for Sustainability

The H2050 Plan identified 55 indicators to measure progress toward its goals and priority actions. To further refine these indicators, the SSPPC consulted with community leaders through stakeholder surveys and cross-sector dialog meetings as well as research of existing reports. We sought to identify indicators which were aligned with the H2050 goals and priority actions AND for which data and data sources are available that could provide ongoing feedback to mark progress toward the goals. We also included other indicators that could measure progress which have been developed and are being used by county and community organizations.

The SSPPC used the following criteria and definitions in identifying and reviewing the indicators and potential benchmarks to mark progress toward the H2050 Plan goals.

Identified in the H2050 Plan were indicators, which are variables that provide measurable information, which can show the direction of change taking place. They can be used to learn if the current efforts being made in the community or by policymakers are indeed resulting in the desired change.5 These indicators point to the data, which are the factual information (measures or statistics) collected from specific data sources which are collected in the field from people (primary) or the documents or available sets of reports, information or findings that provide information (secondary).

Act 225 also asked the SSPPC to identify benchmarks, which are the standard by which something may be judged, measured or assessed; a point of reference against which progress (or lack of it) may be measured over time. Benchmarks are the performance goals, or the agreed upon standard of excellence. For our purposes, benchmarks can provide a numerical value for individual indicators, and are specific data points against which future trends can be compared. For example, one measure of progress toward the H2050 sustainable environment is to reduce our dependence on fossil fuel. The indicator of progress toward the goal of energy independence is the % use of petroleum and the data source would be from the Departments of Taxation and Business, Economic Development and Tourism on the revenues and consumption of oil. Our benchmark or standard to judge how well we do has been set by the State of Hawai`i: 70% reduction in oil consumption by 2030 through energy efficiency and renewable energy.

Research in other jurisdictions suggests that specific indicators should be selected by a community-based selection process. This leads to more constructive deliberation and agreements that allow cooperating agencies and organizations to also develop working relationships, openly voice concerns, and define available assets that can further the plan. Successful benchmarking projects assign specific agencies to be responsible to collect data and monitor the progress towards specific benchmarks. In Hawai‘i, the process to establish meaningful and measurable indicators and benchmarks will require further development through community meetings.

Findings in this portion of the report are meant to be a starting point for the next phase of implementation for the Hawai‘i 2050 Sustainability Plan – initiation of community-driven interaction to select appropriate, measureable indicators and benchmarks.5

For the purposes of this report, the SSPPC examined the indicators identified by the Task Force and, in some cases, realigned them with each of the five cross-sector dialog sessions and these are also included. To ensure that indicators were measurable and data sources are available to measure progress on a continuing basis, SSPPC researched the availability of data sources as well as five county-specific sustainability reports and three sustainability-related studies to confirm which indicators could be measured with currently available data. The following are findings related to a defined data set of potential indicators, documented existing data sources, and a number of potential indicators (and, in the future, benchmarks) for measuring accountability and progress. Indicators are described in tables – unshaded tables list indicators for which data are being collected; while shaded tables list indicators that may be important to measuring progress toward a H2050 Plan goal, but no data are currently being collected. Table columns are organized as follows:

**H2050/Other Indicators**

The first column denotes the indicators that originated from the H2050 Plan, versus the indicators used in other studies that relate to the H2050 Plan goals.

**Indicators**

Variables that provide information about the specific H2050 Plan goal.
(Potential) Data Source

This column lists the agencies that are or may be collecting data relating to the indicator. Acronyms used in this column are defined in Appendix 7: List of Acronyms Used/Suggested By

This column lists the reports and groups that are currently measuring the indicator for their own study or suggest that data be collected for the specific indicator.

The SSPPC, building on the list of indicators developed by the H2050 Plan, (see Appendix 5 for details of data sources and the original list of indicators) collected data from other jurisdictions and offer the following for consideration.

**GOAL: Sustainability Way of Life**

The H2050 Plan offered 9 indicators to measure progress toward these goals set out in the H2050 Plan. Based on information collected in the cross-sector dialog discussions, SSPPC categorized the indicators and offered other indicators to more accurately measure progress. SSPPC offers 5 indicators with data for this goal.

**Sustainability Way of Life Indicators**

Sustainability depends on both individual and institutional actions. Cross-sector dialog discussions suggested a strong support for the view that educating the community about strategies to live sustainably is paramount, with a particular focus on students. Though the indicators to measure community understanding and support of sustainability practices are repeated in other goals, these indicators have been selected as valid ways to objectively measure community sentiment on sustainability.

---

### Table 2. Sustainability Way of Life Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable and alternative energy use (%)</td>
<td>DBEDT, PUC *</td>
<td>UH-COF</td>
</tr>
<tr>
<td>Solar or other alternative water heating sources (%)</td>
<td>HECO</td>
<td></td>
</tr>
<tr>
<td>Per capita water consumption</td>
<td>DBEDT, county water departments</td>
<td>UH-COF</td>
</tr>
<tr>
<td>Per capita energy consumption</td>
<td>HECO, DBEDT</td>
<td>UH-COF</td>
</tr>
<tr>
<td>Households participating in recycling (%)</td>
<td>DOH, county public works agencies</td>
<td>UH-COF</td>
</tr>
</tbody>
</table>

* Acronyms are defined in Appendix 7: List of Acronyms

---

**Sustainability Way of Life Indicators – More Data Needed**

The H2050 Plan and cross-sector dialog discussions suggested the following indicators. These may be helpful in measuring progress, but no data is currently being collected.
GOAL: The Economy

The H2050 Plan offered 11 indicators to measure progress toward the economic goals set out in the H2050 Plan. Based on information collected in the cross-sector dialog discussions, SSPPC categorized the indicators and offered other indicators to more accurately measure progress. SSPPC offers 13 indicators with data for this goal.

Student Preparedness for the Workforce

Economic sustainability depends on a trained, productive, innovate and flexible workforce. Cross-sector dialog discussions suggested that education is an important component for a healthy economy. Therefore, we are listing indicators to measure student’s preparedness for the workforce.

Table 3. Sustainability Way of Life Indicators that Need More Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>POTENTIAL DATA SOURCE</th>
<th>SUGGESTED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools that have adopted sustainability modules (%)</td>
<td>DOE, private schools</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Residents that understand and support sustainability practices (%)</td>
<td>Sustainability Council</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>(proposed by H2050 Plan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government, business, labor and community organizations that adopt</td>
<td>Sustainability Council</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>sustainability practices and policies</td>
<td>(proposed by H2050 Plan)</td>
<td></td>
</tr>
<tr>
<td>New cars purchased that use renewable fuel technology</td>
<td>DBEDT, PUC</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green job training programs at high schools, community colleges and</td>
<td>DOE, private schools</td>
<td></td>
</tr>
<tr>
<td>universities (#)</td>
<td></td>
<td>H2050 CS Dialog participants</td>
</tr>
</tbody>
</table>

Table 4. The Economy: Student Preparedness for Workforce Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People aged 25+ with less than high school education (%)</td>
<td>DOE</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>High school seniors accepted into higher education or training (%)</td>
<td>DOE, private schools</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students meeting Hawai’i standards in math and reading (%)</td>
<td>DOE</td>
<td>Counties</td>
</tr>
<tr>
<td>8th grade students that meet or exceed NAEP proficiency in math, reading and writing (%)</td>
<td>DOE</td>
<td>UH-COF</td>
</tr>
<tr>
<td>Scores on community college entrance exams and standardized tests (ACT, SAT)</td>
<td>DOE, private schools</td>
<td>UH-COF; Counties</td>
</tr>
</tbody>
</table>
Economic Diversity
Participants in the stakeholder survey and cross-sector dialogs indicated that establishing a more diverse and resilient economy is among the highest priorities for action. A diversity of jobs that offer living wages and reasonable income distribution is a good measure of economic sustainability. Also, we need to know if industries like technology, agriculture and healthcare are growing relative to the size of the state economy.

<table>
<thead>
<tr>
<th>H2050 PLAN INDICATORS</th>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment by sector (#, %)</td>
<td>DLIR, DBEDT</td>
<td>UH-COF; Counties</td>
<td></td>
</tr>
<tr>
<td>Living wage jobs in Hawai‘i, relative to total jobs (%)</td>
<td>DLIR, UH</td>
<td>Counties</td>
<td></td>
</tr>
<tr>
<td>Percent of income shared by households in the top 20%</td>
<td>DLIR, DBEDT</td>
<td>UH-COF;</td>
<td></td>
</tr>
<tr>
<td>Science and technology-based workers (%)</td>
<td>DBEDT, UH, DLIR</td>
<td>UH-COF; Counties</td>
<td></td>
</tr>
<tr>
<td>College degrees awarded in science, technology, engineering, and mathematics (%)</td>
<td>UH, private colleges</td>
<td>UH-COF</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OTHER POTENTIAL INDICATORS</th>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%)</td>
<td>DLIR, DBEDT</td>
<td>UH-COF; Counties</td>
<td></td>
</tr>
</tbody>
</table>

Food Self-Sufficiency
Reduced dependence of imported food and incidences of hunger are key indicators of sustainability.

<table>
<thead>
<tr>
<th>H2050 PLAN INDICATORS</th>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food produced and consumed locally (%)</td>
<td>DOA</td>
<td>Counties</td>
<td></td>
</tr>
<tr>
<td>Acres in agricultural production ($value, #)</td>
<td>DOA</td>
<td>Counties</td>
<td></td>
</tr>
</tbody>
</table>

Economy Indicators – More Data Needed
The Task Force and others suggested the following indicators, which may be helpful in measuring progress toward the economic goals set by the H2050 Plan. However, data is not currently being collected on a regular basis for these indicators.
GOAL: The Environment

The Task Force offered 10 indicators to measure progress toward the environmental goals set out in the H2050 Plan. Based on information collected in the cross-sector dialog discussions, SSPPC categorized the indicators and offered other indicators to more accurately measure progress. SSPPC offers 14 indicators with data for this goal.

Diverting Waste from Landfills
Sustainable communities find ways to re-use and recycle waste.

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled solid waste, by selected commodities (% tons)</td>
<td>DOH, county departments of environmental management</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>Treated wastewater reuse (1,000 gal/year)</td>
<td>DOH, county departments of environmental management</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>HI-5 beverage container collection (% tons)</td>
<td>DOH</td>
<td>UH-COF; Counties</td>
</tr>
</tbody>
</table>

Protecting Natural Areas & Water Systems
Monitoring environmental indicators – like shoreline loss and population levels of select invasive species – is an indicator of Hawai`i’s progress in preventing further
erosion and ecological damage to protect our natural resources. Further, maintaining healthy aquifers through monitoring and reuse is fundamental to a healthy environment and sustainable community. Data is available for indicators suggested by the H2050 Plan, and some resonated in other studies as important to measure to mark progress toward sustainable environmental management.

### Smart Growth, Renewable Energy & Energy Efficiency

Use of renewable energy and energy conservation measures reduce Hawai`i’s dependency on fossil fuels. Also, Hawai`i can reduce urban sprawl and protect natural resources by constructing town-centered, transit and pedestrian oriented developments. SSPPCC offers other indicators to measure transportation efficiency, as it can also reduce Hawai`i’s dependency on fossil fuel.

#### Table 9. The Environment: Protecting Natural Areas & Water Systems Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollution level in streams, aquifers and coastal water (%., ppm)</td>
<td>DLNR, DOH</td>
<td>UH-COF</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall stream rating</td>
<td>DOH-Clean Water Branch</td>
<td>Counties</td>
</tr>
<tr>
<td>Acres reserved for parks and historic sites (#)</td>
<td>County departments of finance</td>
<td>Counties</td>
</tr>
</tbody>
</table>

#### Table 10. The Environment: Smart Growth, Renewable Energy & Energy Efficiency Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric power consumption and capacity (MWh sold, peak)</td>
<td>Utility companies</td>
<td>Counties</td>
</tr>
<tr>
<td>Change in annual vehicle miles traveled (%)</td>
<td>DOT</td>
<td>Counties</td>
</tr>
<tr>
<td>Leadership in Energy &amp; Environmental Design (LEED) type building permits issued (%., #)</td>
<td>US Green Building Council</td>
<td>Counties</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric power produced from renewable sources (%., MWh)</td>
<td>Utility companies</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>Energy Star homes (#, %)</td>
<td>US-EPA Energy Star</td>
<td>Counties</td>
</tr>
<tr>
<td>Registered vehicles (#)</td>
<td>County transportation departments</td>
<td>Counties</td>
</tr>
<tr>
<td>Mass transit ridership (#, %)</td>
<td>County transportation departments</td>
<td>Counties</td>
</tr>
<tr>
<td>Gasoline and diesel fuel consumption (gallons, gal/person)</td>
<td>DBEDT</td>
<td>Counties</td>
</tr>
</tbody>
</table>
Environment Indicators – More Data Needed

The Task Force and others suggested the following indicators, which may be helpful in measuring progress toward the environmental goals set by the H2050 Plan. However, data is not currently being collected on a regular basis for these indicators.

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>POTENTIAL DATA SOURCE</th>
<th>SUGGESTED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shorelines threatened, retreating or lost (%, #)</td>
<td>DLNR, county planning departments</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Lands and water protected for native plants and animals (%, #)</td>
<td>DLNR</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Invasive species introduced to Hawai`i annually, including intra-island migration (#, %, types)</td>
<td>US Fish &amp; Wildlife Service, Hawai`i Invasive Species Council</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Water level in streams and aquifers (%, #)</td>
<td>DLNR, DOH</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>New urban developments consistent with “smart growth” principles (%, #)</td>
<td>LUC, county planning departments</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Locally produced renewable and alternative energy (%)</td>
<td>DBEDT, utility companies</td>
<td>H2050 Plan</td>
</tr>
<tr>
<td>Use of ridesharing and alternative transportation (%)</td>
<td>Survey</td>
<td>H2050 Plan ; used by Counties</td>
</tr>
<tr>
<td>Non-motorized trips (%)</td>
<td>DOT</td>
<td>H2050 Plan ; used by Counties</td>
</tr>
</tbody>
</table>

GOAL: Community Well-Being

The H2050 Plan offered 10 indicators to measure progress toward the community well-being goals set out in the H2050 Plan. Based on information collected in the cross-sector dialog discussions, SSPPC categorized the indicators and offered other indicators to more accurately measure progress. SSPPC offers 12 indicators for this goal.

Appropriate & Affordable Housing

Sustainable communities provide housing that is appropriate for its population at affordable prices. Stakeholder survey and cross-sector dialog participants indicated that affordable housing should be among the highest priority for action. Other studies suggest that accounting for the homeless population is another indicator of appropriate and affordable housing.
Health & Long-term Care

Hawai‘i’s elder population deserves to reach and maintain the highest level of dignity, independence and personal well-being. Health insurance is also important to community sustainability. Further, cross-sector dialog participants indicated that employment in all sectors of the healthcare profession is important to monitor to ensure the availability of care to our communities.

Community Health

Health of a community is reflected in its ills, as well as the engagement of its members. Poverty rate and cost of living are also indicators of community well-being.
Community Well-Being Indicators – More Data Needed

The Task Force and others suggested the following indicators, which may be helpful in measuring progress toward the community goals set by the H2050 Plan. However, data is not currently being collected on a regular basis for these indicators.

### Table 14. Community Well-Being: Community Health Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance abuse &amp; drug related arrests ($)</td>
<td>Hawai‘i Attorney General</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>Population engaged in volunteer work (%)</td>
<td>DLIR, Survey</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity of recreational facilities per capita ($)</td>
<td>DBEDT, county parks departments</td>
<td>Counties</td>
</tr>
<tr>
<td>Poverty rate (%)</td>
<td>DBEDT, US Census</td>
<td>UH-COF; Counties</td>
</tr>
<tr>
<td>Cost of living ($)</td>
<td>DBEDT, US-BLS</td>
<td>UH-COF; Counties</td>
</tr>
</tbody>
</table>

### Table 15. Community Well-being: Indicators that Need More Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H2050 PLAN INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population with internet access at their residence (%)</td>
<td>DCCA, Survey</td>
<td>H2050 Plan; used by Counties</td>
</tr>
<tr>
<td><strong>OTHER POTENTIAL INDICATORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment in non-medical healthcare professions ($)</td>
<td>DBEDT, DOH, DHS</td>
<td>H2050 CS Dialog participants</td>
</tr>
<tr>
<td>Persons served through Kupuna Care and case management programs ($)</td>
<td>DOH, county elderly affairs offices</td>
<td>H2050 CS Dialog participants; used by Counties</td>
</tr>
<tr>
<td>Perception of neighborhood safety</td>
<td>Survey</td>
<td>H2050 CS Dialog participants; used by Counties</td>
</tr>
</tbody>
</table>

**GOAL: Kanaka Maoli & Island Values**

The H2050 Plan offered 8 indicators to measure progress toward the Kanaka Maoli & Island Values goals set out in the H2050 Plan. Based on information collected in the cross-sector dialog discussions, SSPPC categorized the indicators and offered other indicators to more accurately measure progress. SSPPC offers 5 indicators for this goal.

**Community Knowledge of Kanaka Maoli Culture**

Knowledge and utilization of the Hawaiian and local culture ensures the perpetuation of our native culture.
Government Protection of Cultural Resources
Protection of resources is important to perpetuating the Hawaiian culture.

Table 16. Kanaka Maoli & Island Values: Community Knowledge of Kanaka Maoli Culture Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2050 PLAN INDICATORS</td>
<td>Hawaiian language students (#) DOE, UH, private institutions</td>
<td>Counties</td>
</tr>
<tr>
<td></td>
<td>Hawaiian language teachers (#) DOE, UH, private institutions</td>
<td>Counties</td>
</tr>
<tr>
<td>OTHER POTENTIAL INDICATORS</td>
<td>Taro grown and sold (lbs) DOA, Hawai`i Agricultural Statistics</td>
<td>Counties</td>
</tr>
<tr>
<td></td>
<td>Cultural events and festivities (# events, # attendees) HTA, county offices of economic development</td>
<td>Counties</td>
</tr>
</tbody>
</table>

Table 17. Kanaka Maoli & Island Values: Government Protection of Cultural Resources Indicators with Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>DATA SOURCE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2050 PLAN INDICATORS</td>
<td>Government spending on culture and arts, per capita ($) SFCA</td>
<td>Counties</td>
</tr>
</tbody>
</table>

Table 18. Kanaka Maoli & Island Values: Indicators that Need More Data

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>POTENTIAL DATA SOURCE</th>
<th>SUGGESTED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2050 PLAN INDICATORS</td>
<td>Hula halau and ethnic dance groups (#) OHA, SFCA, Survey</td>
<td>H2050 Kanaka Maoli Working Group; used by Counties</td>
</tr>
<tr>
<td></td>
<td>Laws that protect kanaka maoli intellectual property, traditional knowledge, cultural expression, and site-specific areas [languages, dialects, place names, resource practices] (#) OHA</td>
<td>H2050 Kanaka Maoli Working Group; used by Counties</td>
</tr>
<tr>
<td></td>
<td>Community programs and projects that promote Hawaiian culture, knowledge and practices using Hawaiian language (#) OHA</td>
<td>H2050 Kanaka Maoli WG</td>
</tr>
<tr>
<td></td>
<td>Capital invested to sustain subsistence-based business and economies ($) OHA, DBEDT</td>
<td>H2050 Kanaka Maoli WG</td>
</tr>
<tr>
<td>OTHER POTENTIAL INDICATORS</td>
<td>Knowledge of culture (genealogy, traditions) Survey</td>
<td>Used by KS</td>
</tr>
</tbody>
</table>
IV. MAJOR RECOMMENDATIONS

The following recommendations are not listed in priority order. They are intending to portray the broad areas of agreement found and are meant to further discussion and dialog. These recommendations are coming from the community after hundreds of hours of meetings among citizens across the state and from many different sectors of our community (for more details, see Section III. Major Findings and Appendices I-IV). This report is a combination of these community voices. It has been inspired by the community, and we acknowledge the hard work put in by hundreds of committed, community members. We hope it stimulates further work and continuing progress.

Incorporate the H2050 Plan definition of sustainability and its goals as a new section in Chapter 226, Hawai‘i Revised Statutes.

There was overwhelming support (88%) of survey respondents and a strong consensus among community leaders across the counties that Hawai‘i should place high priority on sustainability as a value, the definition of “sustainability” as put forth in the H2050 Plan, and the need for a long-range plan for mapping a strategic direction for the State. Based on the foregoing, it is recommended that the State of Hawai‘i take the bold step to put the “stake in the ground” and set the standard for Hawai‘i’s sustainable future. This will provoke more thought and deliberation and provide further clarification on community-driven directions.

While various counties and sectors may have different agendas and priorities, they all agreed on one thing: We value sustainability ethics and practices. We should therefore take action to implement this value in the investments we make, in the resources appropriated, and in decisions that we make as a state. To ensure that the residents and decision makers of the state are guided by this ethic, it is recommended new section be written in Chapter 226, Hawai‘i Revised Statutes committing Hawai‘i to a sustainable future. See Appendix 6 for the proposed legislation and justification.

Develop and implement policies based on common themes heard across the state and counties in the cross sector dialogs.

There was agreement across many sectors and in every county about specific actions that will need to be taken to move towards achieving each goal.
stated in the H2050 Plan (see pp 8-9, 11 and Appendix 3 for a full selection of common themes). Such actions include:

- Creatively educating the community about the importance of living sustainably and launching programs in the schools to teach sustainability strategies; strengthening early learning initiatives; fostering and practicing sustainable living in families and homes;
- Developing a more diversified economy by increasing production and consumption of local foods and products and providing incentives to foster sustainability-related job and industries;
- Supporting recycling systems and providing incentives for business to reduce their energy usage; adopting green building codes and increasing the use of renewable resources (e.g. wind, waves, sun); providing support for renewable energy resources with increased tax incentives;
- Providing support (e.g. tax incentives, zoning exemptions, etc) for private developers to build low income and special needs housing (e.g. elderly, persons with mental disabilities, low income); developing a comprehensive healthcare plan, including long-term care;
- Supporting and encouraging Kanaka Maoli cultural practices and celebrating the diversity of our island culture.

Support the continuing public-private collaborations, community discussions, activities, and work on sustainability efforts.

It is recommended that a website linking the various sustainability programs and projects be created and continued to provide ongoing, real-time information to the public. While many sustainability programs and activities are already underway, there was consensus throughout the counties of the need to share resources, compile the lessons being learned, and coordinate the progress being made to ensure long-term sustainability in their organizations, communities, and for the state. Current fiscal constraints are well recognized. It was a shared vision and hope that this current situation would not hinder the many on-going efforts nor would the H2050 Plan efforts be abandoned. Rather, to keep the momentum alive in the community as well as identify both the government and private sectors efforts – small or large – it is recommended that a working group of government and community organizations be convened committed to sustainability and representing various interest sectors and counties to continue with the implementation of the H2050 Plan. The Hawai‘i State Legislature can provide the leadership for organizing the community-based efforts by convening various community organizations and businesses already involved in various aspects of sustainability. This effort would build support and ensure long-term viability for implementing and updating the H2050 Plan. The Legislature could also pass a concurrent resolution creating a convening entity of interested stakeholder organizations to complete these tasks. The Social Sciences Public Policy Center could provide facilitation assistance.
Adopt measures of accountability, including data and data sources, indicators and benchmarks.

A number of communities and organizations are in the process of developing indicators and benchmarks for measure progress. A beginning set of indicators to measure progress in attaining the priorities and goals of the H2050 Plan. These and others should be further reviewed by a cross-sector of government and community representatives to determine key indicators for the state and the starting point for identifying benchmarks as milestones in the near and long term. As with the success in other jurisdictions, it is recommended that the selection of final indicators and benchmarks be community-driven. The findings section provides model processes for ensuring that the indicators and benchmarks represent shared values and interests and that data are available on a regular basis to evaluate progress.

Develop a sustainability coordinating entity to carry forward the H2050 Plan.

The efforts and interests in sustainability by the counties and by various organizations such as Mālama Kaua‘i, Focus Maui Nui and Hawaiian Civic Clubs have already begun this task in their communities. As discussed previously, the results of these efforts need support so that their lessons learned could be shared more broadly.

The H2050 Plan recommended a sustainability council be developed as a continuing government organization to carry forward the H2050 Plan, measuring results and building a publicly accessible data bank of knowledge about sustainability. Feedback from the community indicated the need for information sharing and network building but not for a centralized state run council or office. One suggestion from Maui was to establish a Hawai‘i 2050 Sustainability umbrella organization at the state level to coordinate county hubs, which would be comprised of diverse multi-sector representation. Another suggestion was to designate a non-profit entity to be a statewide coordinating council with county representation. It is thus recommended that such an organization be developed with the assistance of the working group of community organizations identified in the second recommendation.