



RADIATIVE RESILIENCE: HAWAI'I AS A HUB FOR ISLAND INNOVATION

PROF. MAXINE BURKETT * BURKETTM@HAWAII.EDU









“Strange things
happen on islands.”

Archaeologist **Colin Renfrew**,
“Islands Out of Time,” 2004

Strange things....




Stranger things....



- briar-less greenbriars
- nettle-less nettles
- sumac-less sumac
- thorn-less raspberries
- spine-less hollys



Mint-less Mint
Ulihu



The restricted **scale**,
isolation, and sharp
boundaries of islands
create unique **selective**
pressures, often to
dramatic effect.



Sustainability:
Thriving from
the island's
natural gifts



Innovation



King Kalakaua's telephone service

- King saw Alexander Graham Bell's new telephone at the World's Fair in 1876
- Set up telephone service in May 1878 in Maui and by July in O'ahu





Hawaii's first
car arrived in
1899.

It was
Electric.

Would You Ride On Horse Cars Were They Running Today?

Electricity holds as unquestioned a superiority in the matter of lighting as it does in the matter of transportation.

Don't Be A "Horse Car Man"

Hawaiian Electric Co., Ltd.

KING ST. NR. ALAKEA.

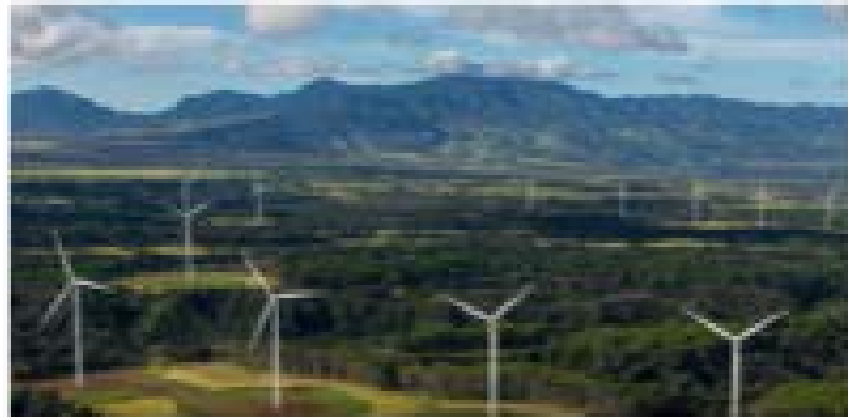
PHONE MAIN 390.

Hawaii Votes to Go 100% Renewable

By Peter Farley

Posted 4 May 2015 | 10:00 GMT

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Follow the Leader: Hawaii Aims for 100 Percent Renewable Energy

By Tina Lacey on Monday, May 18th, 2015

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Hawaii legislature sets 100% renewable portfolio standard by 2045

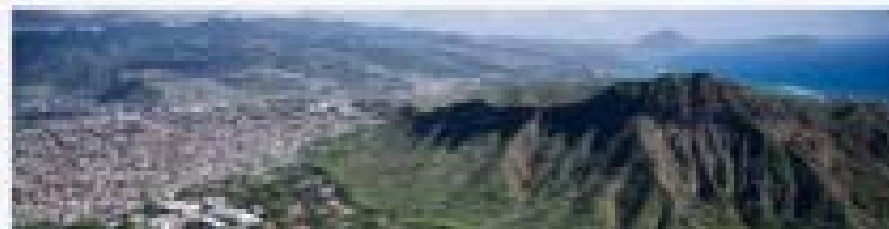
By Davide Savarige | May 6, 2015 [print](#)

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INDUSTRY NEWS - ENERGY

Hawaii legislation sets 100 percent renewable energy goal for the state

May 5, 2015, 4:08pm EDT Updated May 6, 2015, 3:08pm EDT

100% Renewable Electricity Goal Passed By Hawaiian Legislature

May 19th, 2015 by [John Richardson](#)

[Link for this document](#)

Hawaii legislature approves 100% renewables target

JOHN CORRY | 1 MAY, 10:10 PM
CLIMATE | ENERGY MARKETS | POLICY & POLITICS | RENEWABLE ENERGY | SOLAR ENERGY | WIND POWER

Hawaii's legislature has passed a bill calling for a 100% renewable power target by 2045, with interim targets of 70% by 2030 (up from a previously agreed 40%) and 90% by 2035, Energy Matters reports.

Hawaii Will Soon Get All Of Its Electricity From Renewable Sources

BY SAMANTHA PAGE [T](#) POSTED ON MAY 7, 2015 AT 1:20 PM



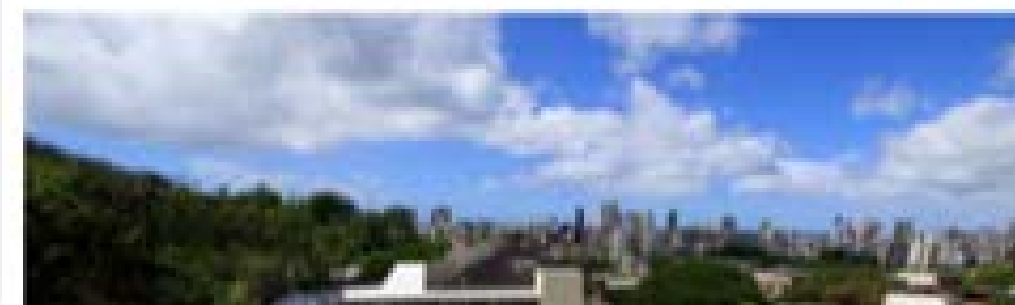
116,813

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ICAP
University of Hawai'i Sea Grant College Program
Center for Island Climate Adaptation and Policy

Climate
and Policy

Brief



LAMA
Loli Aniau, Māka'ala Aniau



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Center for Island Climate Adaptation and Policy

Sea-Level Rise and Coastal Land Use in Hawai'i:

A Policy Tool Kit for State and Local Governments



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SCHOOL OF LAW

college of social sciences

HAWAII'INUIĀKEA
SCHOOL OF HAWAIIAN KNOWLEDGE



Adaptation in Hawai'i:
Policy Framework

SA

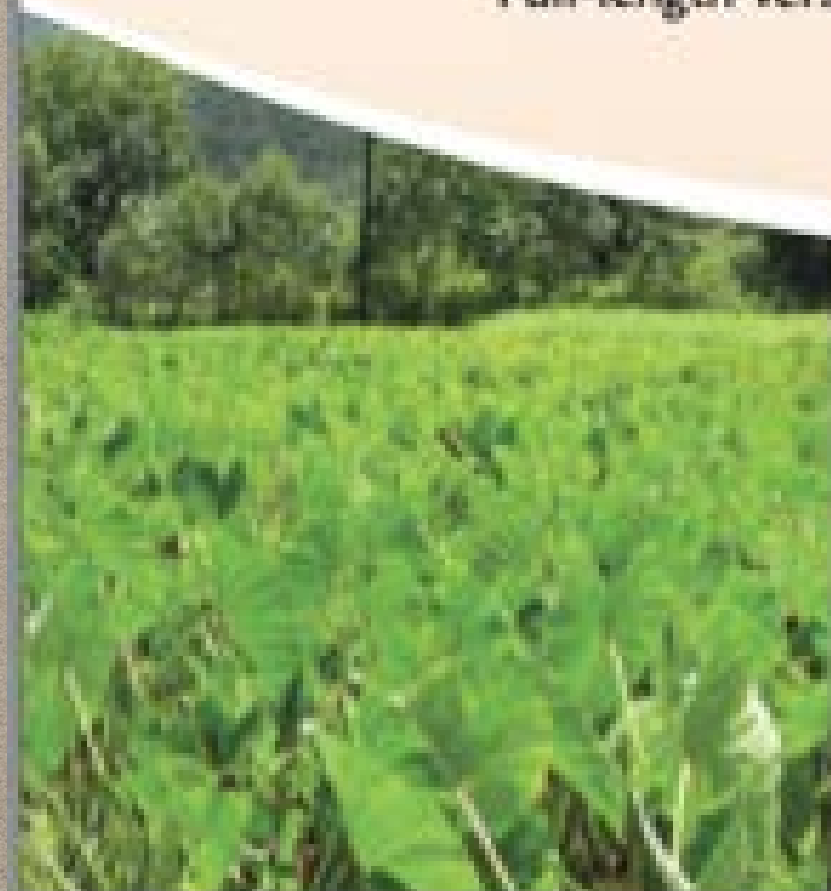
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University of Hawai'i Sea Grant College Program
Center for Island Climate Adaptation and Policy

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

Full-length version available at <http://icap.seagrant.soest.hawaii.edu/icap-publications>




Appendix A-1: Action Matrix – Accommodation

<i>Policy Tool Ranking</i>	<i>Initial Steps</i>	<i>Lead Agency</i>	<i>Time Frame</i>
Pre-Disaster Mitigation Plans	<ul style="list-style-type: none"> • Upon completion of SLR risk and vulnerabilities assessments, seek FEMA funding to develop PDM projects for areas and infrastructure particularly vulnerable to amplified impacts. • Consider a 1-foot-by-2050 and 3-foot-by-2100 SLR benchmark when updating and developing PDM plans and projects. 	State and county civil defense agencies	<ul style="list-style-type: none"> • Immediate • Near-Term
Zoning and Overlay Zones	Develop recommendations for establishing accommodation overlay zones in which local governments will limit the intensity and density of new development and require retrofitting new structures to be more resilient to inundation.	Adaptation Task Force or Lead Agency (as proposed in this Tool Kit)	Longer-Term
Floodplain Regulations	<ul style="list-style-type: none"> • Utilize best-available SLR and coastal hazard data to extend NFIP regulations beyond the historic 100-year floodplain. • Research opportunities for participating in the FEMA CRS program to qualify affected homeowners for discounts on flood insurance. 	County councils	Near-Term
Building Codes	Require amendments to state and county building codes that consider a 1-foot-by-2050 and 3-foot-by-2100 SLR benchmark.	Hawai'i Legislature	Near-Term
NFIP Resilient Design Requirements	<ul style="list-style-type: none"> • Increase NFIP elevation requirements and apply requirements to areas beyond the 100-year floodplain. • Research opportunities for participating in the FEMA CRS program to qualify affected homeowners for discounts on flood insurance. 	County councils	Near-Term
Land Development Conditions – Subdivisions	Develop recommendations for amending HRS ch. 46 to require counties to adopt ordinances that impose development conditions upon subdivisions that mitigate the impacts of a 1-foot-by-2050 and 3-foot-by-2100 SLR benchmark.	ICAP	Near-Term
Land Development Conditions –SMA Permits	Under the authority of HRS § 205A-26, impose development conditions upon SMA permits that minimize the impacts of exacerbated flooding, storm surge, and erosion due to SLR.	County permitting authorities	Immediate
Environmental Review	Amend HRS ch. 343 and applicable administrative rules to explicitly incorporate review of SLR and climate change impacts of a proposed action or development project.	Hawai'i Legislature	Immediate
Capital Improvement Programs	Require consideration of multiple scenarios of SLR when developing and approving CIPs.	Executive Order	Immediate
Tax Incentives	Develop tax incentive program for developers and property owners who retrofit structures to be more resilient to SLR impacts than state and county building codes and floodplain regulations require.	State of Hawai'i Department of Taxation	Longer-Term

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Land Development Conditions – Subdivisions	Develop recommendations for amending HRS ch. 46 to require counties to adopt ordinances that impose development conditions upon subdivisions that mitigate the impacts of a 1-foot-by-2050 and 3-foot-by-2100 SLR benchmark.	ICAP	Near-Term
Land Development Conditions –SMA Permits	Under the authority of HRS § 205A-26, impose development conditions upon SMA permits that minimize the impacts of exacerbated flooding, storm surge, and erosion due to SLR.	County permitting authorities	Immediate
Environmental Review	Amend HRS ch. 343 and applicable administrative rules to explicitly incorporate review of SLR and climate change impacts of a proposed action or development project.	Hawai'i Legislature	Immediate
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happen on islands.”



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Hawaii'i Investment Ready

ENERGY
EXCELERATOR

»XLR8UH



HAWAI'I GREEN GROWTH



blue startups



ENVIRONMENTAL FUNDERS GROUP

The Hawaii Environmental Funders Group (EFG) is a network of philanthropic individuals and institutions engaged in active, substantial grantmaking in the Hawaiian Islands. Convened and organized by HCF, the EFG's purpose is to foster collaboration among members and to steadily increase the amount of philanthropic support for environmental and sustainability efforts in Hawaii. In the past year, EFG partners have awarded more than \$12 million to support projects from environmental education to sustainable agriculture.

he lono moku



The State of the Environment
HAWAII 2016

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Hawai'i Investment Ready

Hawaiian Worldview + Best Enterprise Practices = Impactful Island Enterprise

A Project of the Kamehameha Schools and Social-Impact International

We are recruiting for the next cohort of Hawaii Investment Ready. Is your enterprise:

- in need of capital to scale;
- serving local, regional and/or global customers;
- pioneering solutions to social and/or environmental challenges;
- leveraging the power of the Hawaiian worldview, and;
- creating measurable impact?

Then Hawai'i Investment Ready program may be right for you. To learn more about our program you may want to attend our free "Warm Up" sessions in February. We will be running day long workshops on Hawai'i, Maui, and O'ahu from February 2nd to the 5th. If you are interested, [please tell us more about your enterprise by clicking here](#).

THE INVESTMENT READY PROGRAM – VIENNA



Watch a short promotional video about Social-Impact International's newest program in Vienna, Austria.

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We Help Startups Solve the World's Energy Challenges

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WE INVEST IN

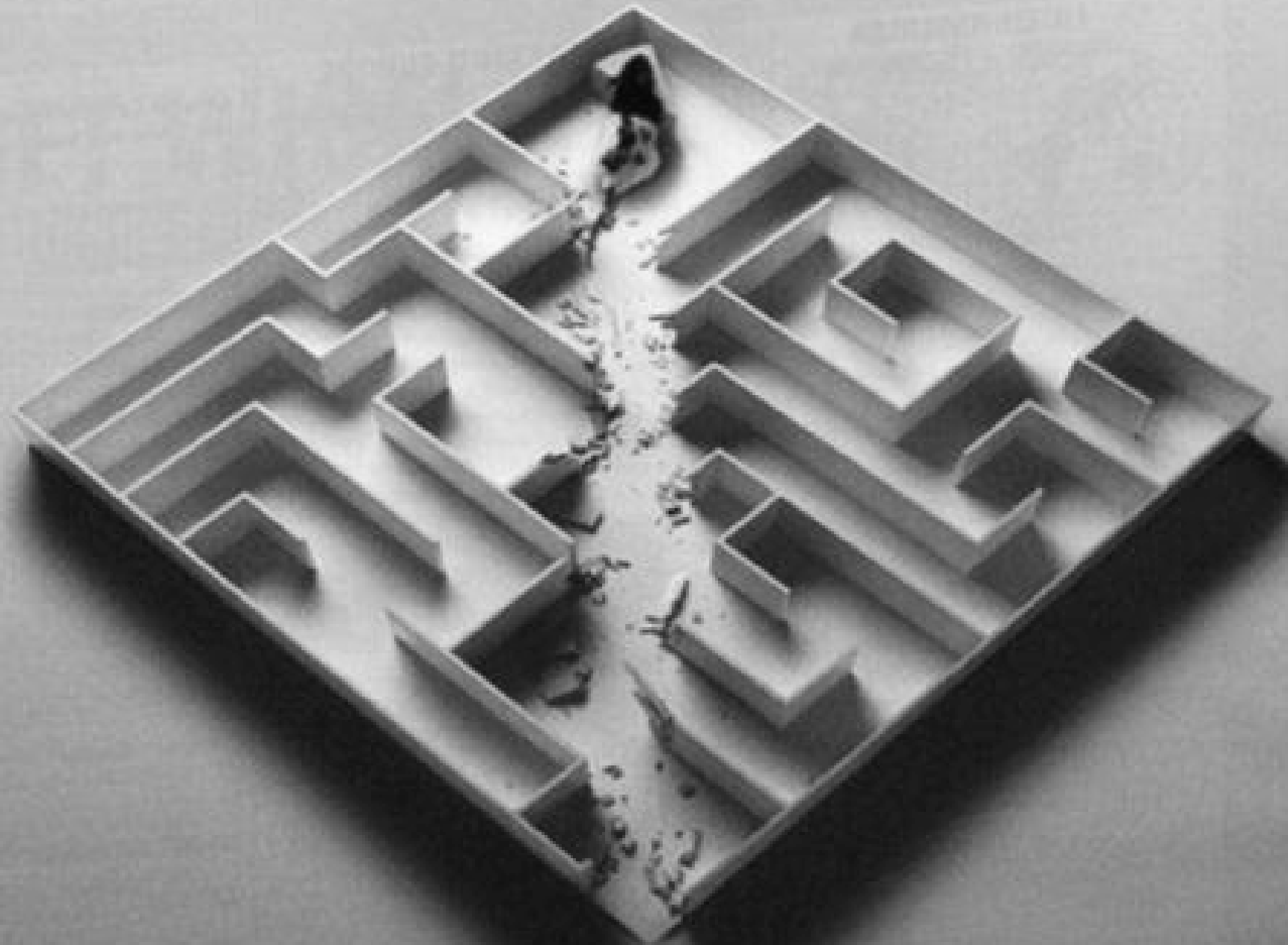
Locally Produced Food

By understanding the needs and challenges of the local food sector, we work with Hawaii's agriculture industry to expand food production and bring more fresh, quality local produce, grass-fed beef and dairy, and more to consumers.

PREV ● ○ ○ NEXT

Investing in a Sustainable Hawaii

We are a Hawaii-focused impact investing firm that uses for-profit, non-profit and social investments to improve the quality of life for island residents in three areas: locally produced food; clean, renewable energy; and waste reduction.



THANK YOU
PROF. MAXINE BURKETT

BURKETTM@HAWAII.EDU