

# Finding **Our** Way

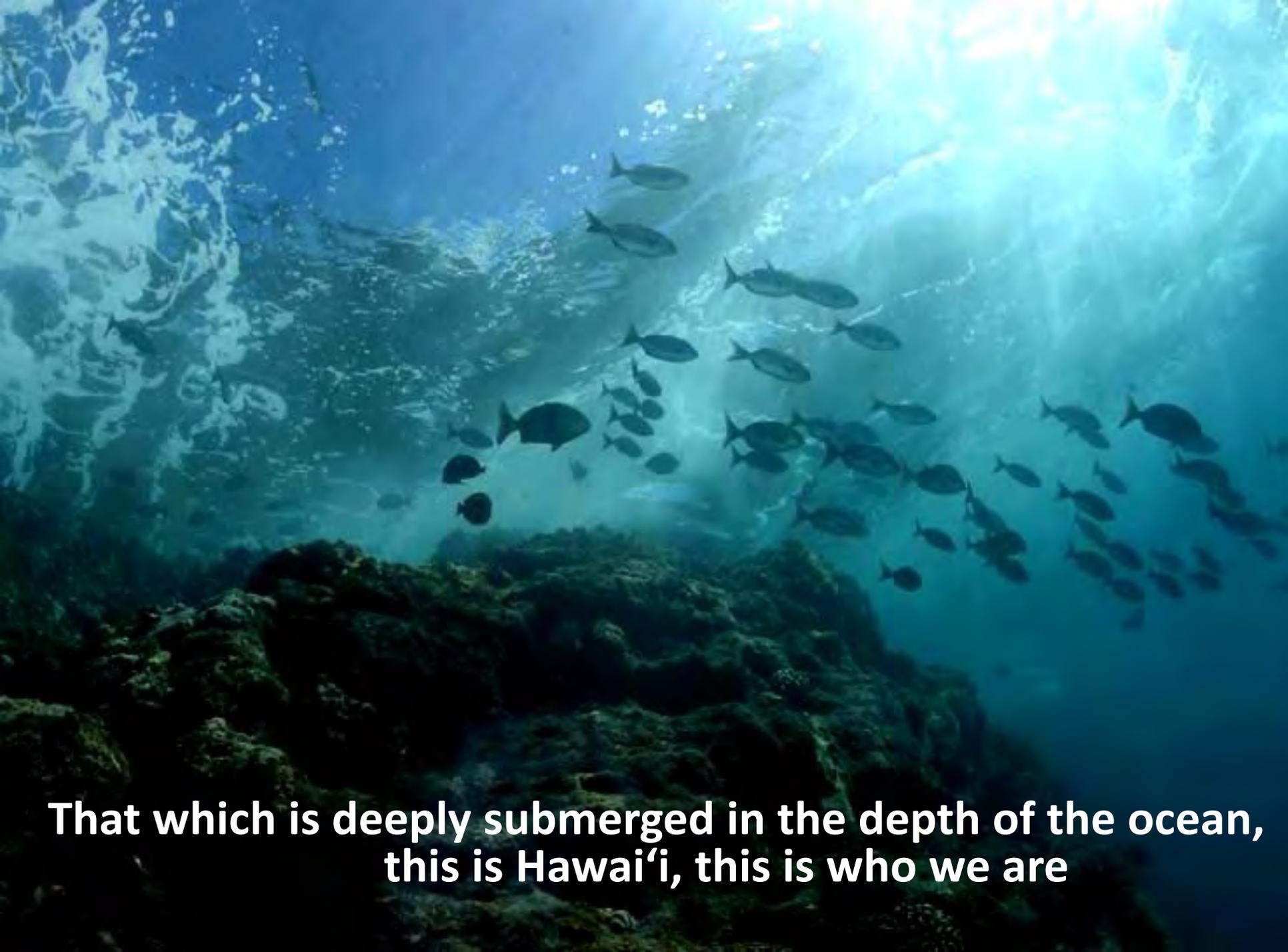
Redefining wealth

Land Assets Division  
Kamehameha Schools



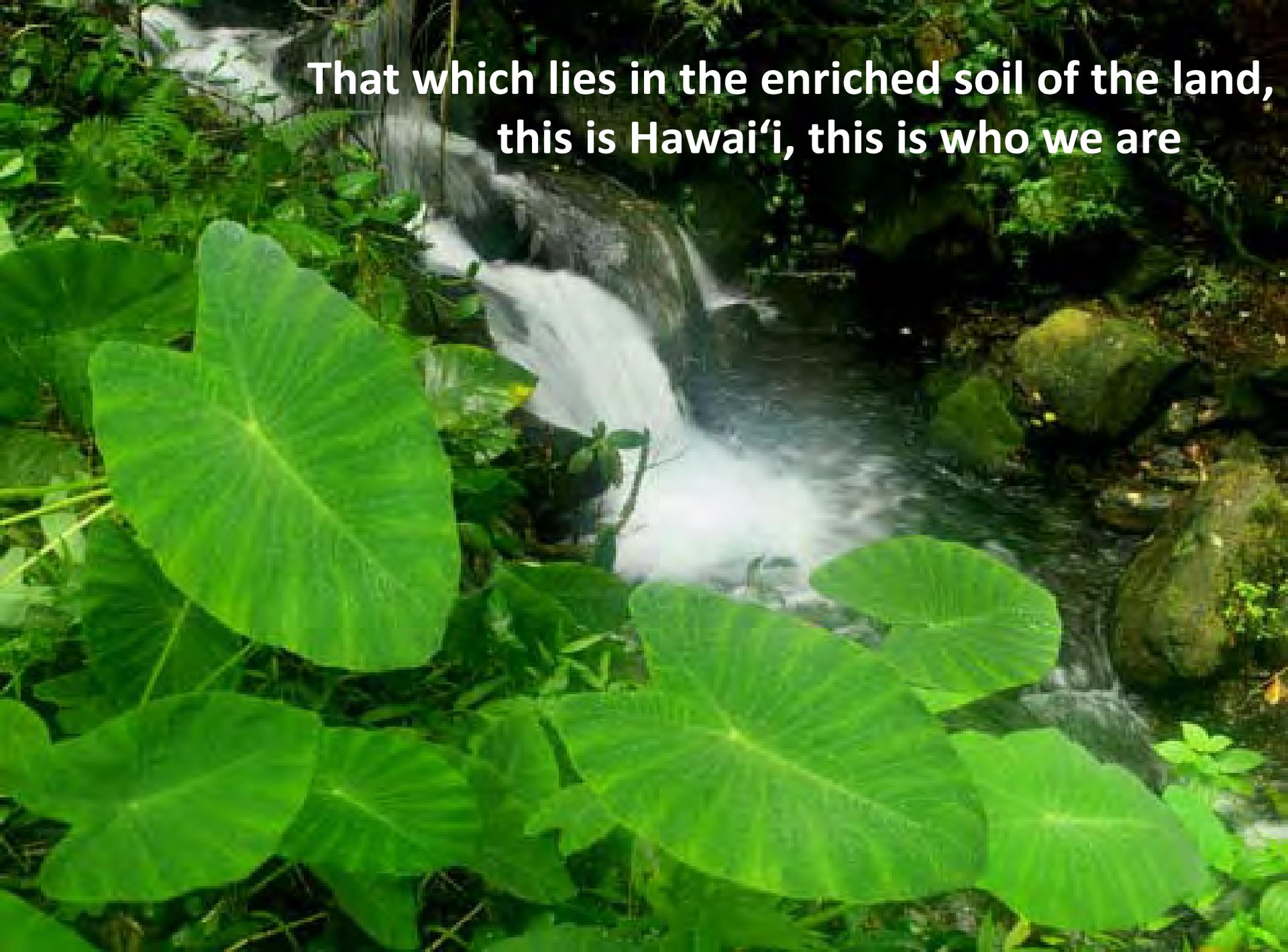
*That which dwells above in the stratum of the firmament,  
this is Hawai'i, this is who we are*





**That which is deeply submerged in the depth of the ocean,  
this is Hawai'i, this is who we are**

**That which lies in the enriched soil of the land,  
this is Hawai'i, this is who we are**

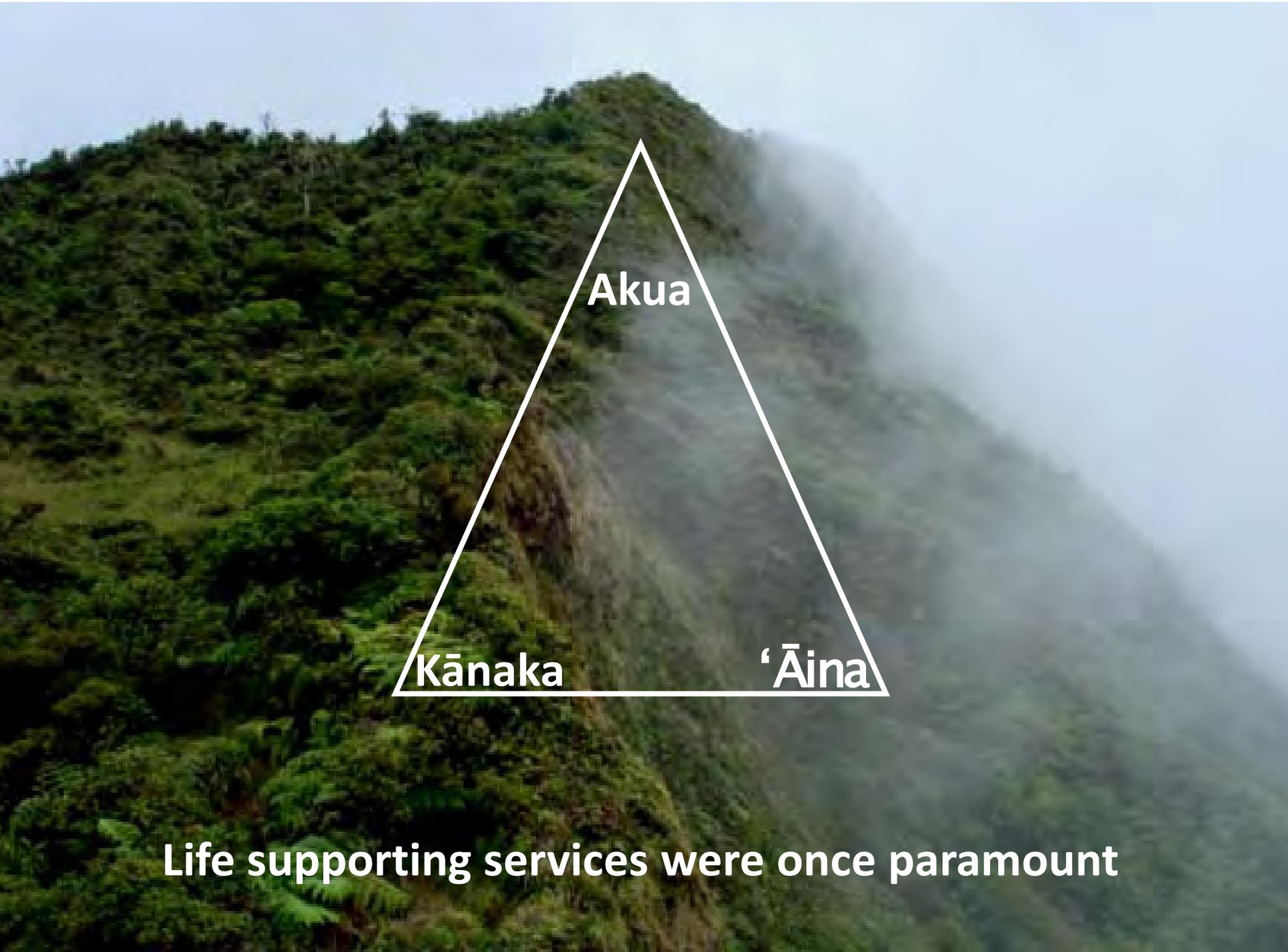


**Affirmed, established,  
united by relationship  
and responsibilities,**



**This is Hawai'i, this is who we are  
Life indeed...**





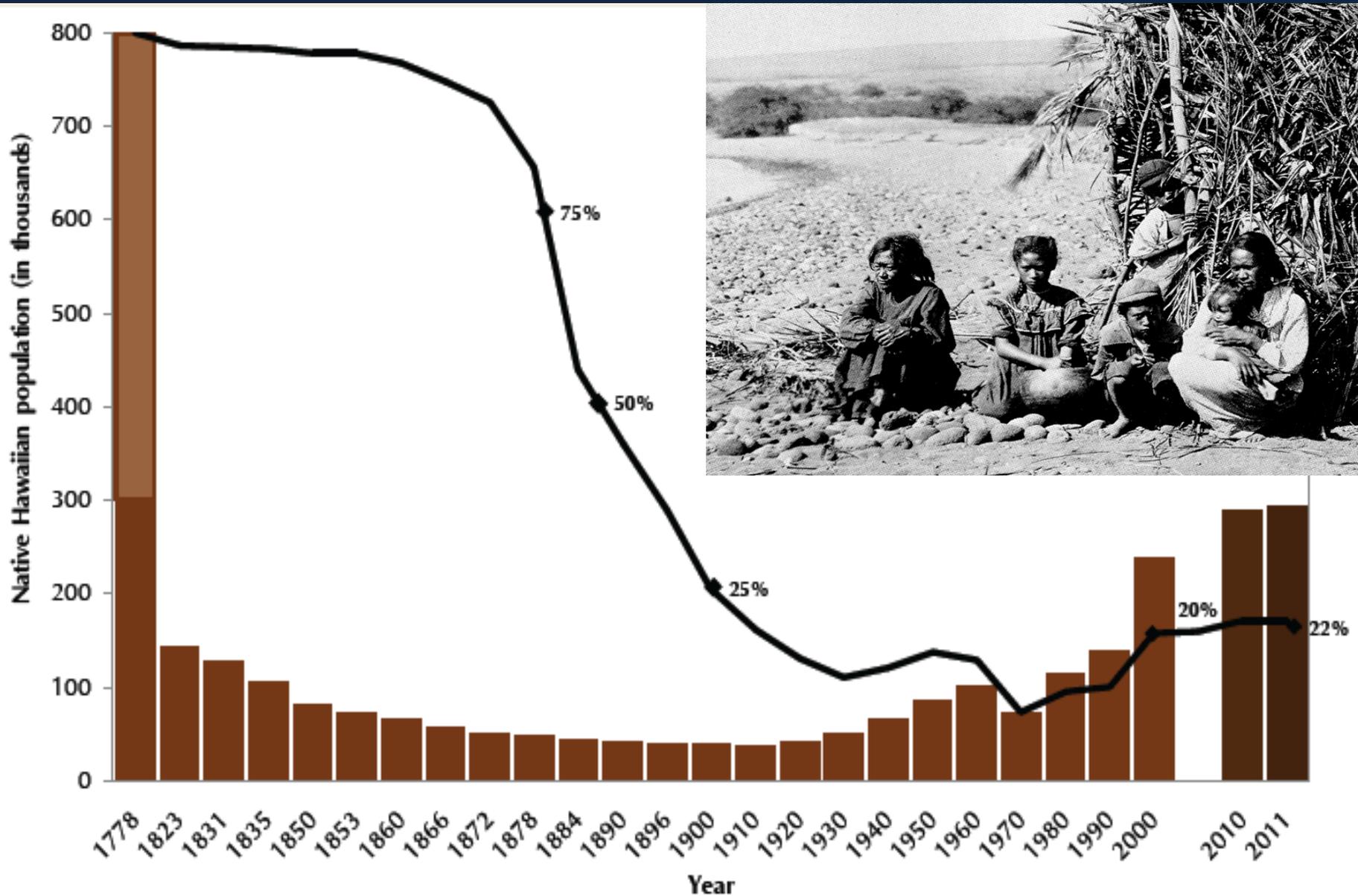
**Akua**

**Kānaka**

**ʻĀina**

**Life supporting services were once paramount**

# Change was sudden & catastrophic

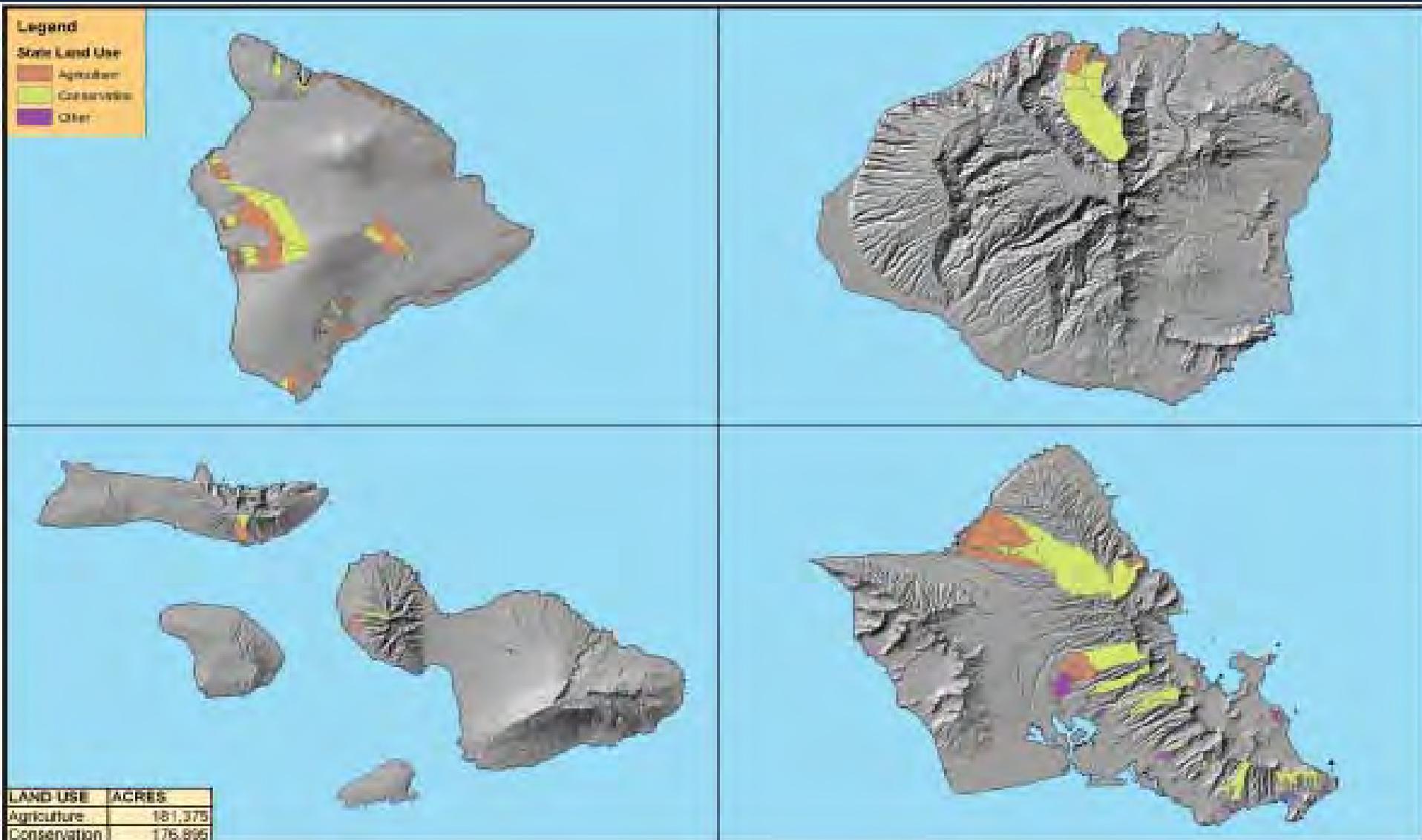


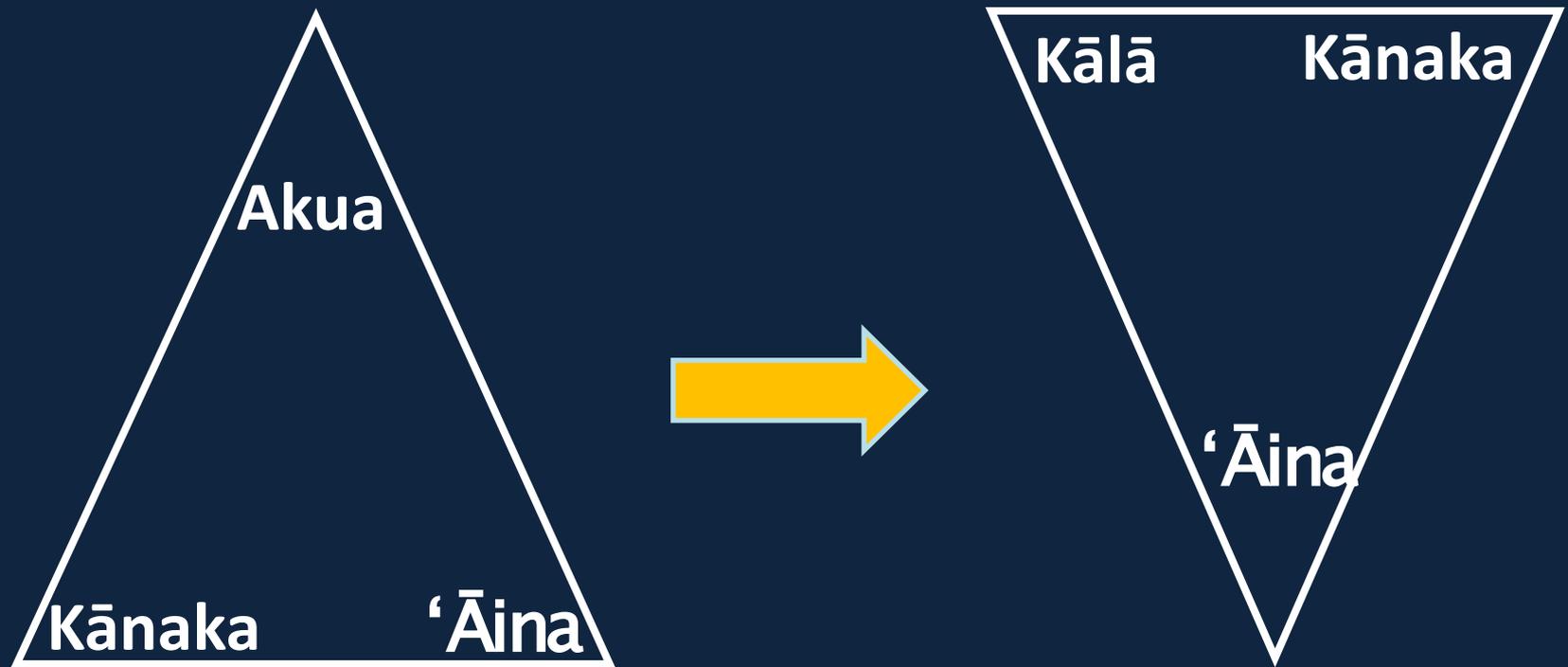
# Bernice Pauahi Bishop created a legacy to restore well-being



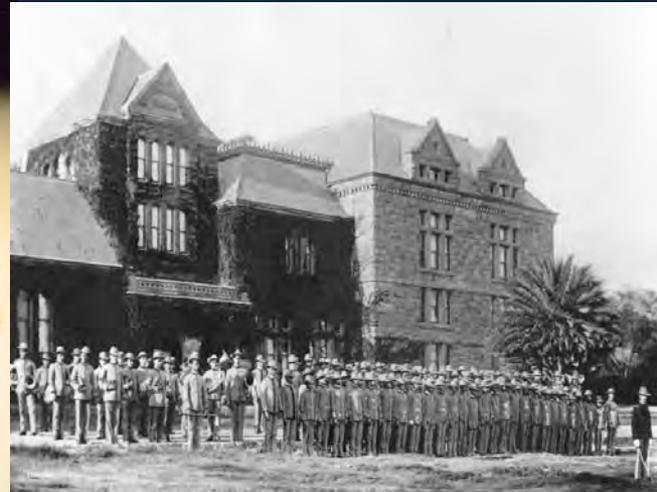
*“Kamehameha Schools’ mission is to fulfill Pauahi’s desire to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.”*

**KS began in 1887 as a land rich, cash poor estate:  
378,500 acres, \$474,000 valuation, \$36,000 annual income**





**Needs of beneficiaries became paramount**



# Leading to dramatic transformations of landscapes





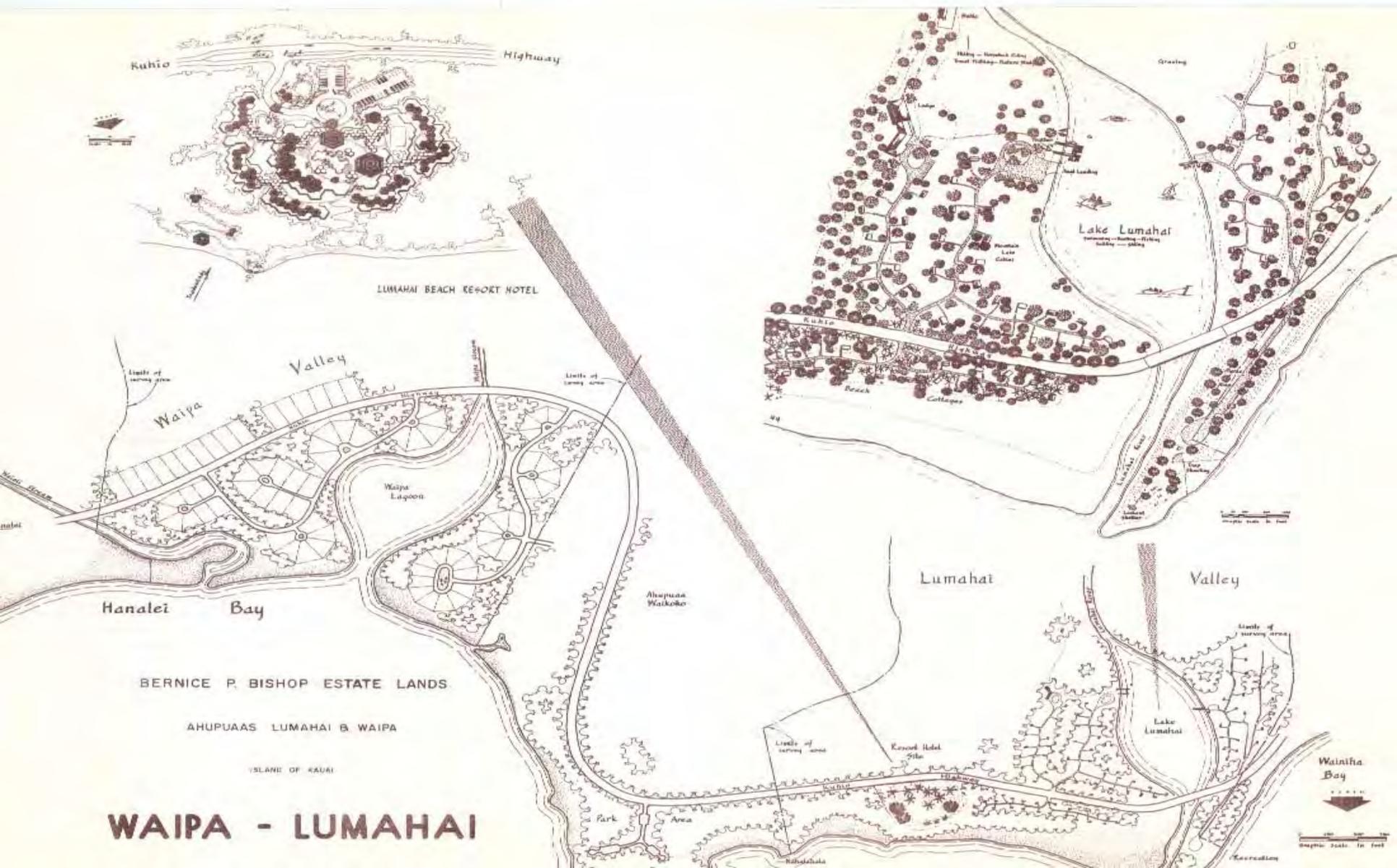
# Our balance sheet prospered

Asset Class	1887 Value (Billions)	Percent of Total	2000 Value (Billions)	Percent of Total
U.S. + non-U.S. Equity			\$2.138	38%
Alternative Investments			\$0.780	14%
Fixed Income & Cash Equivalents			\$0.871	15%
HI Real Estate	\$0.001	100%	\$1.882	33%
<b>Total</b>	<b>\$0.001</b>	<b>100%</b>	<b>\$5.671</b>	<b>100%</b>

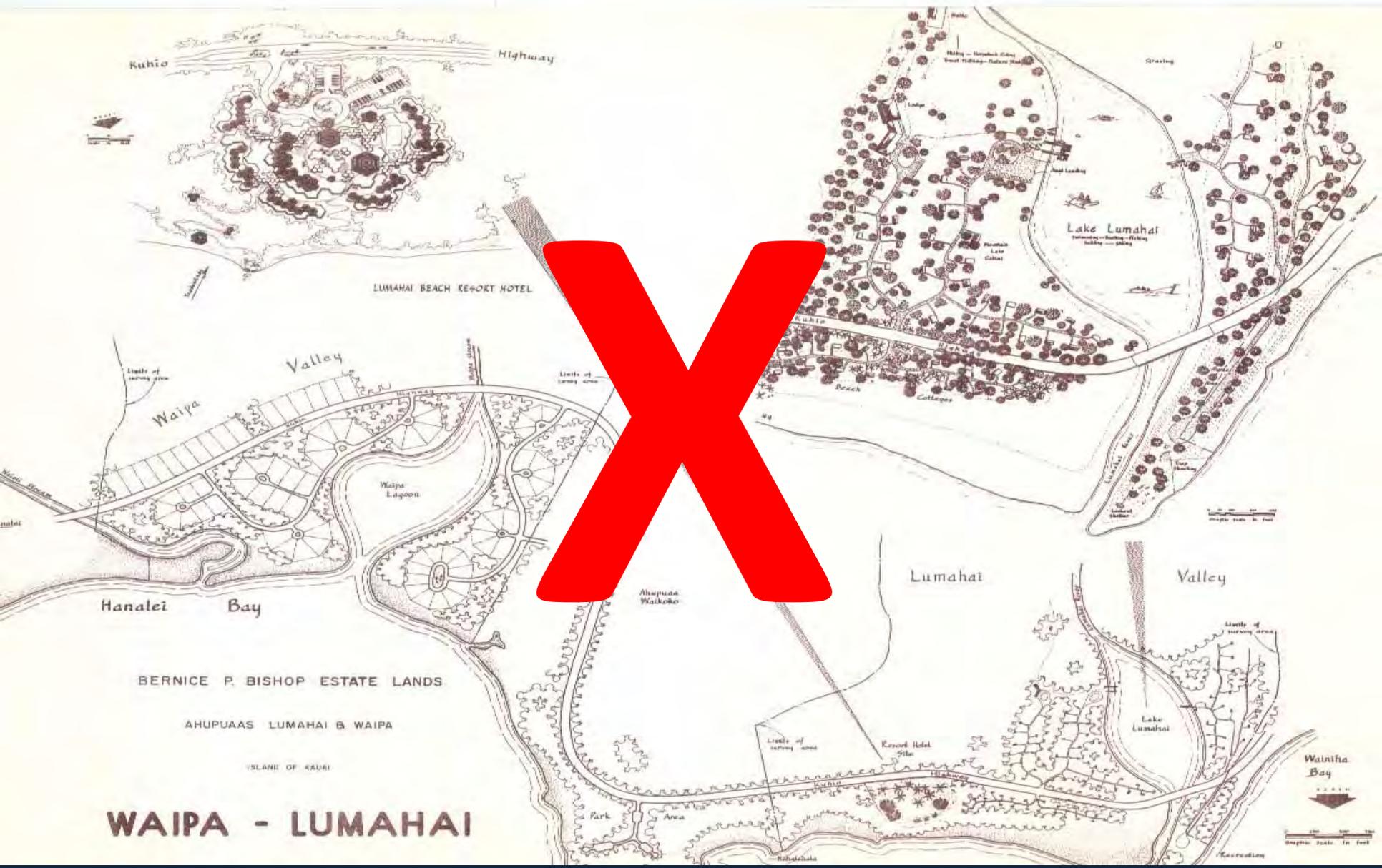
...but we also degraded resources & strained relationships



# Developments were planned but did not earn approval



...not for estate lots & cabins at Waipā & Lumaha'i...

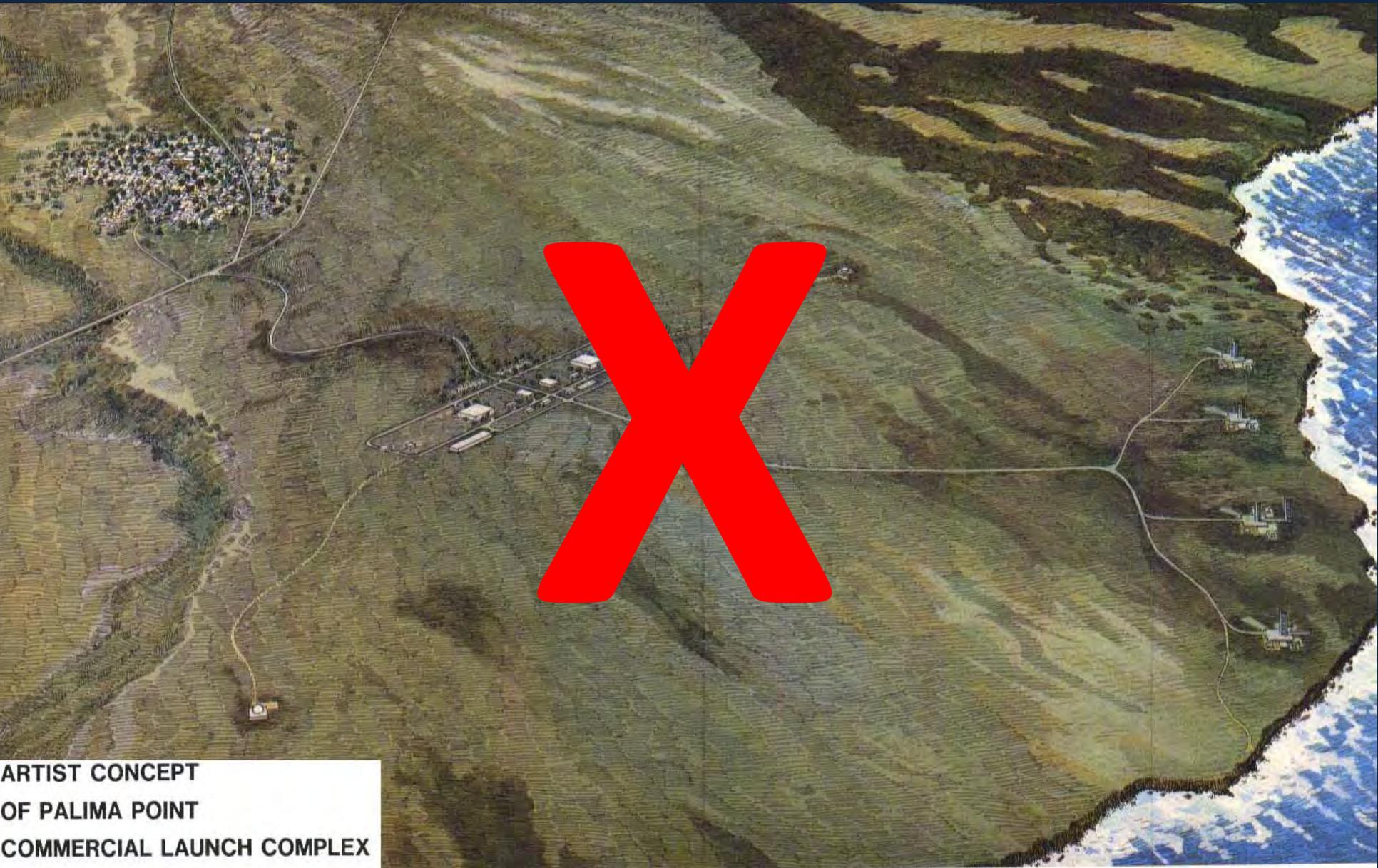




...nor for hotels on Moloka'i...



...nor for a spaceport launch complex in Ka'ū ...



ARTIST CONCEPT  
OF PALIMA POINT  
COMMERCIAL LAUNCH COMPLEX

...nor for a marina development of He'eia Fishpond...





**Landscapes once lush with life-supporting resources...**





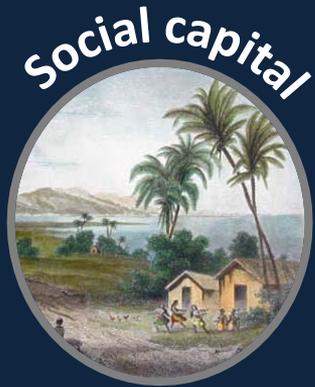
**...now struggle to produce the resources & services  
to sustain an ever-growing population**



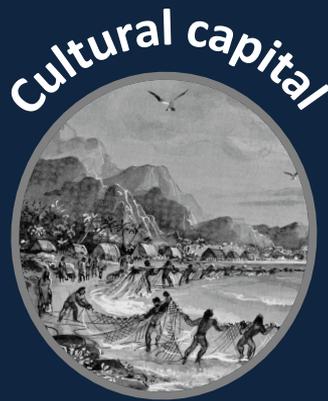
# Our flawed approach undermined that which sustains us, diminishing money & mana



Resource depletion



Displacement; service employment



Practices abandoned

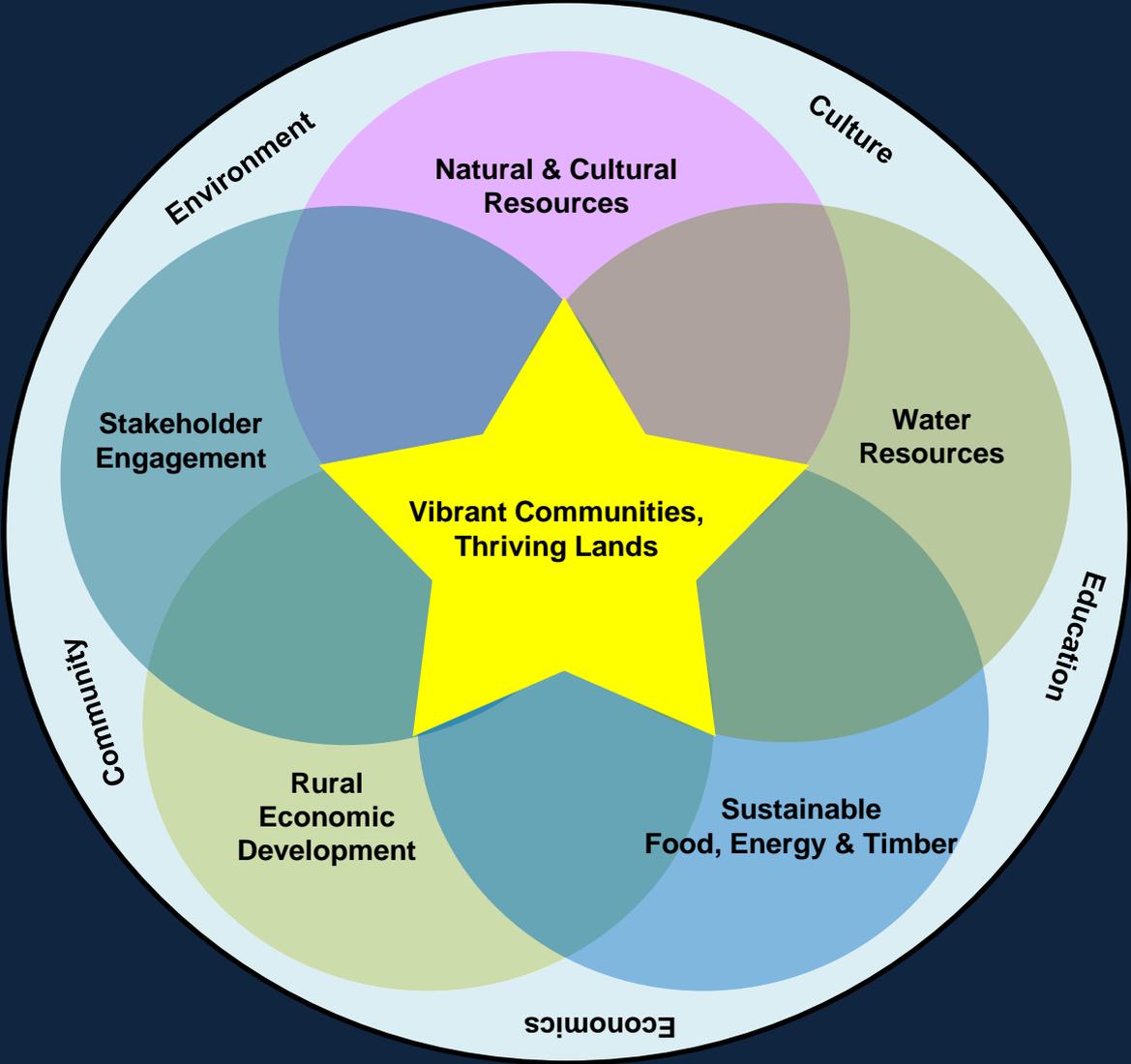


Resources for mission

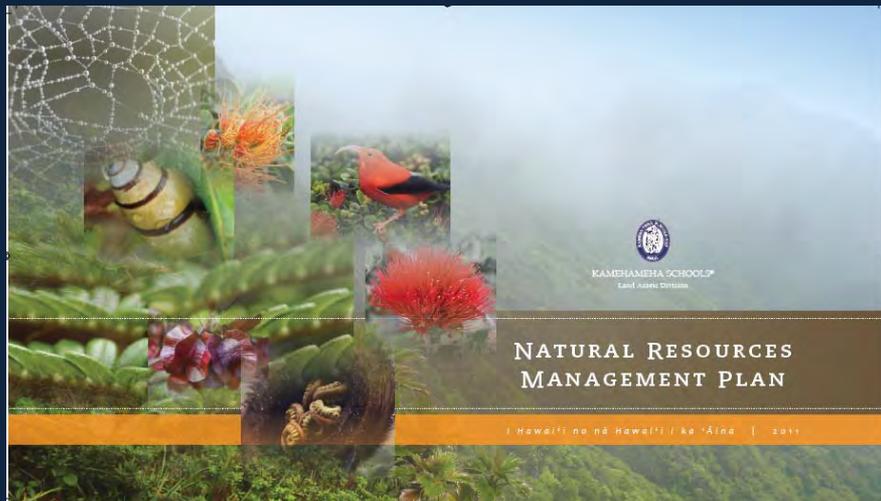
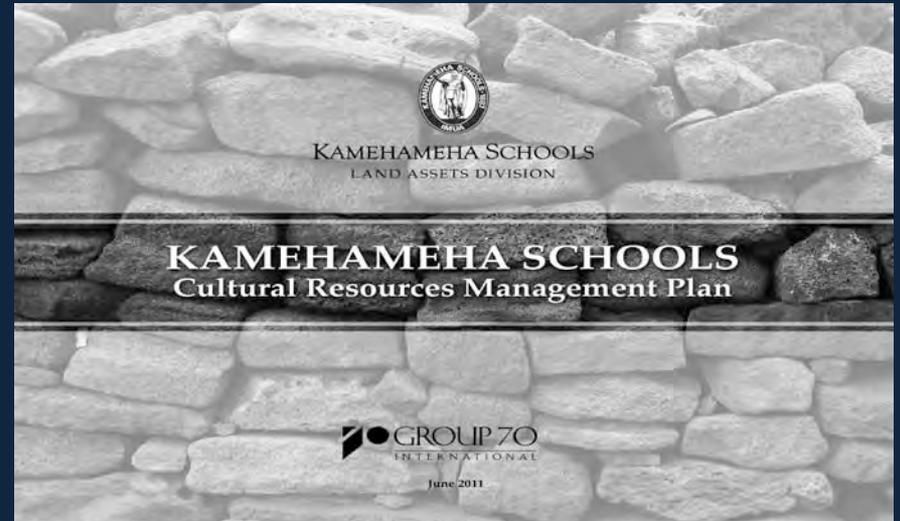
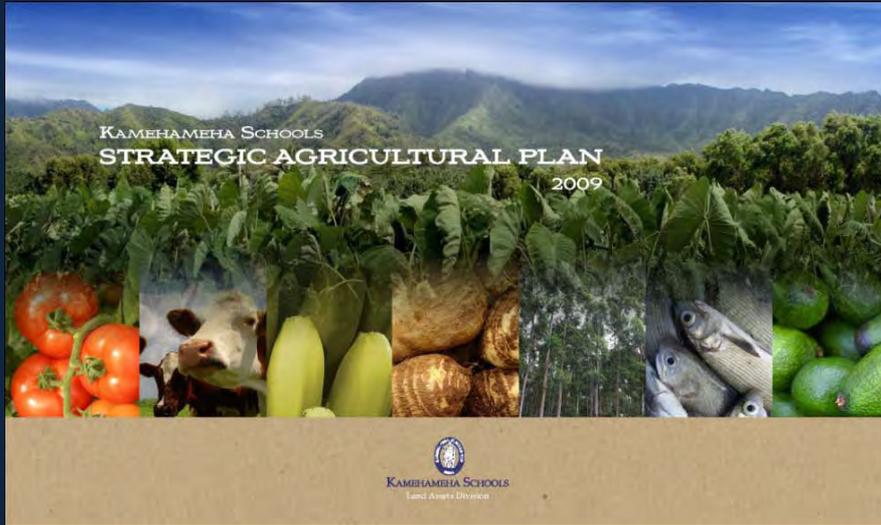


Elements of Well-being

In 2000, with mission spending funded through other assets, we could adopt a new vision & goals for AG & CON lands



# Four plans set forth our strategies



# KAMEHAMEHA SCHOOLS STRATEGIC AGRICULTURAL PLAN

2009



KAMEHAMEHA SCHOOLS  
Land Assets Division

# 88,000 acres have high agricultural potential

REGION	STATE LAND USE TYPE			
	TOTAL	CONSERVATION	AGRICULTURE	
			LOW AGRICULTURE POTENTIAL	HIGH AGRICULTURE POTENTIAL
Kaua'i	10,855	9,640	—	1,215
North Shore	26,170	15,000	4,800 <sup>1</sup>	6,370
Windward O'ahu	3,955	3,450	—	505
Leeward O'ahu	16,860	13,780	—	3,080
Moloka'i	4,900	1,630	—	3,270
Maui	2,465	1,265	—	1,200
Hāmākua	32,150	6,260	7,400 <sup>1</sup>	18,490
Hilo	7,230	2,965	—	4,265
Puna	7,595	570	2,700 <sup>1</sup>	4,325
Ka'ū	62,490	18,020	22,397 <sup>2</sup>	22,073
West Hawai'i	176,660	99,145	56,111 <sup>2</sup>	21,404
Kohala	6,940	5,170	—	1,770
<b>TOTAL</b>	<b>358,270</b>	<b>176,895</b>	<b>93,408</b>	<b>87,967</b>



# Value chains were analyzed to target opportunities



	Situation	Opportunity	Challenges / Needs
Forest	<ul style="list-style-type: none"> <li>• Untapped resource</li> </ul>	<ul style="list-style-type: none"> <li>• Power or veneer project</li> </ul>	<ul style="list-style-type: none"> <li>• Securing purchasing agreements</li> </ul>
Cattle	<ul style="list-style-type: none"> <li>• Dependence on mainland</li> </ul>	<ul style="list-style-type: none"> <li>• New grazing system</li> </ul>	<ul style="list-style-type: none"> <li>• HI rancher participation, water, slaughter</li> </ul>
Dairy	<ul style="list-style-type: none"> <li>• Disappearing industry</li> </ul>	<ul style="list-style-type: none"> <li>• Large scale project(s)</li> </ul>	<ul style="list-style-type: none"> <li>• Capital, site selection (water, environment)</li> </ul>
Orchards	<ul style="list-style-type: none"> <li>• 50% self-sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Expand to 80% sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Capital, attracting farmers, labor access</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• 41% self-sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Expand to 80% sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Water, attracting farmers, labor access</li> </ul>
Taro	<ul style="list-style-type: none"> <li>• High cost and stagnating</li> </ul>	<ul style="list-style-type: none"> <li>• Explore new farming methods and markets</li> </ul>	<ul style="list-style-type: none"> <li>• Financing and leadership</li> </ul>
Aquaculture	<ul style="list-style-type: none"> <li>• Limited profitability</li> </ul>	<ul style="list-style-type: none"> <li>• Explore new proprietary raising methods and markets</li> </ul>	<ul style="list-style-type: none"> <li>• Financing and leadership</li> </ul>
Biotech	<ul style="list-style-type: none"> <li>• Profitable</li> </ul>	<ul style="list-style-type: none"> <li>• Capture higher rents</li> </ul>	<ul style="list-style-type: none"> <li>• Water availability, competing uses for land and water</li> </ul>

# By 2015 we will invest ~\$20M in water & infrastructure

## KAWAILOA

- Ag water rehabilitation
- Modern metering & control systems
- Fencing (4000 acre pasture)



## PUNALU'U

- Ag storage facility
- Land clearing
- Ag residence demolition
- Stream restoration
- Flood control



## HILO-HĀMĀKUA

- South Hilo farm improvements
- Ag wash station
- New intake at Kalalau



## OTHER

- Puna ag access road
- Ka'ū timber resource storage
- Waipā facility
- North Shore: Kapaeloa Beach Lots, Matsumoto



# Returns will be measured on a balanced scorecard

- **Contribute to Sustainable Food System**

- **Diversified Agriculture:** Increase market share of locally grown fruits & vegetables from 45% today to 65%
- **Beef and Dairy:** Catalyze 30% increase in grass-fed beef & restore local dairies
- **Traditional Agriculture:** Dedicate lands to traditional agricultural systems to perpetuate heritage crops & practices

- **Generate Renewable Energy & Biomass:**

- **Electricity:** Host a mix of renewable energy projects to increase the State's renewable energy mix from 15% to 23%
- **Carbon:** Reduce carbon emissions by 1 million tons annually
- **Biomass and Timber:** Expand value chain opportunities for biomass & timber

- **Create Community Benefits:**

- **Rural Employment:** Provide some 4,600 new jobs in rural communities & position beneficiaries for these opportunities
- **Well-being:** Improve the quality of life for our people through healthy food, reduced fossil fuels & sustainable livelihoods

- **Improve Financial Returns:**

- **Farm Gate:** Increase farm gate of KS lessees now at ~\$63M
- **Land Revenue:** Grow revenue by 300%
- **Return on Invested Capital:** Yield 7% IRR on invested capital





KAMEHAMEHA SCHOOLS  
LAND ASSETS DIVISION

# KAMEHAMEHA SCHOOLS

## Cultural Resources Management Plan



June 2011

# Cultural resources manifest in many forms

**‘Āina Pele**

**Volcanic landscapes**



**‘Āina Kahakai**

**Coastal & marine environments**



**Kūmokuhalī**  
**Native forests**





**Loko I'a  
Fishponds**

**Lo'i Kalo  
Wetland terraces**

**'Āina Malo'o  
Rain-fed agricultural systems**



## Ceremonial Sites



## Trails



## Habitation Sites



# By 2015, we will invest ~\$5M in 4 strategies

- Conduct ethno-historical studies
- Build Land Legacy Database
- Acquire ancestral knowledge of place & kūpuna practices



**Ho'oma'a**  
Collect & manage  
knowledge

**Ho'omalu**  
Ensure protection  
& stewardship

- Mitigate risks to resources
- Ensure protection & stewardship
- Invoke sense of responsibility & inter-generational knowledge transfer

**Ho'omau**  
Foster resource  
managers

**Ho'omana**  
Restore &  
interpret



- Develop resource professionals
- Foster community stewardship
- Support place-based education
- Document findings
- Perpetuate cultural identity & well-being

- Restore cultural sites
- Interpret wahi kupuna & landscapes
- Resume traditional agriculture
- Promote sustainable use
- Restore connections between kānaka and 'āina

**Returns will be measured by impact on mission**

**Restore relationship  
between kānaka and 'āina**





**Resuscitate cultural practices that inspire  
& enrich well-being**



# Engage ancestral values & practices in land & resource management





KAMEHAMEHA SCHOOLS®  
Land Access Division

# NATURAL RESOURCES MANAGEMENT PLAN

| Hawai'i no nā Hawai'i | ka 'Āina | 2011

# Natural resources support life & cultural uniqueness

## Biodiversity



Native Plants



Native Animals



Native Snails &  
Insects

## Aquatic Resources



Wetlands



Anchialine Ponds



Streams

## Ecosystem Processes & Services



Water Cycling



Air Cycling



Nutrient Cycling



Pollination



Seed Dispersal



Existence Value

# By 2015, we will invest ~\$13M in 4 strategies

## Our focus:

### Ho'olono

Assess natural resource integrity & threats

### Ho'oma'ema'e

Manage priority threats to regeneration

### Ho'ōla

Restore ecosystem integrity

### Ho'oulu

Integrate & enable sustainable use

## Our strategies:

### Know Our Lands

- Baseline knowledge
- Informed strategies
- Return on investment



### Maintain the Kumu Wai

- Maintenance of watersheds on 194,000 ac

### Hold the Line

- Decreased habitat loss on 179,000 ac

### Turn the Tide

- Very high quality habitat on 15,000 ac

### Recruit Allies

- Increased efficiency & effectiveness



### Complete the Cycle

- Opportunities for interaction w/ healthy native ecosystems
- Development of future stewards



# Returns will be measured by growth of stewardship footprint...

2000



**Stewardship Footprint -  
3,500 ac**

Habitat Protected –  
**0 ac.**  
nHabitat in Restoration –  
**3,500 ac**  
 Unmanaged Habitat -  
**250,500 ac**  
nAG & COM Lands –  
108,000 ac

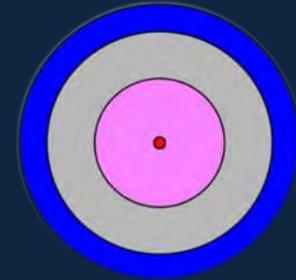
2005



**Stewardship Footprint -  
82,100 ac**

nHabitat Protected –  
2,100 ac  
nHabitat in Restoration –  
80,000 ac  
nUnmanaged Habitat –  
174,000 ac  
nAG & COM Lands –  
108,000 ac

2011



**Stewardship Footprint -  
136,100 ac**

nHabitat Protected –  
**2,100 ac**  
 Habitat in Restoration -  
**134,00 ac**  
 Unmanaged Habitat -  
**117,900 ac**  
nAG & COM Lands –  
108,000 ac

...and impacts upon key elements of well-being



Attract & capture rainfall

**Provide habitats for rare species**



**Photo by Jack Jeffrey**

An aerial photograph showing a vast landscape. The left side is dominated by a dense, dark green forest. A sharp, diagonal boundary separates this forest from a bright green, grassy field on the right. In the far distance, a blue body of water is visible under a clear sky. The text "Promote the function of ecosystem services" is overlaid in white on the forest area.

**Promote the function of ecosystem services**

A photograph of four children standing in a field of large green plants, possibly taro. The children are smiling and appear to be engaged in an activity. The ground is covered with white mulch.

**‘Āina -Based Education Tactical  
Plan  
2012-2015**



# Lands serve as a “campus” for place-based learning

## ‘Āina-Based Learning

### Strategic Ag Plan



### CRMP



### NRMP

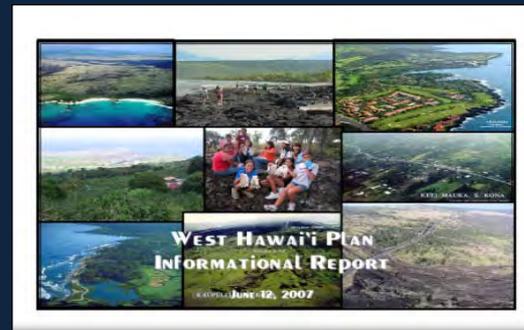


### Ahupua'a/Regional Plans

#### North Shore



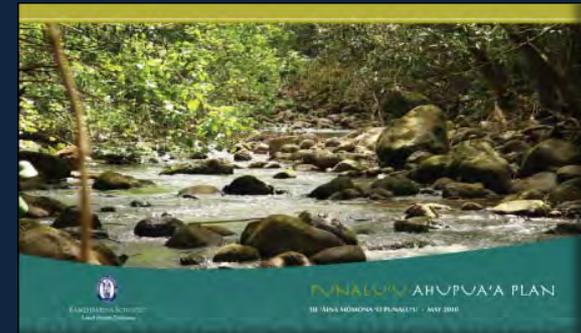
#### West Hawai'i



#### Ke'ei Village



#### Punalu'u



# By 2015, we will invest ~\$15M through 25 collaborations



## Learning & Assessment Tools

- iPads, Laptops
- iPods, Smartphones, Apps
- Digital cameras
- Wi-fi hotspots at Aina-based sites
- Distance Learning (Video conferencing, facetime, skype, ooVoo, etc.)



## Information & Resource Tools

- Social Media (Facebook, Twitter, Blogs)
- Education support/networking websites (Edmodo, Blackboard, etc.)
- DVD, Viral Video (Youtube)
  - 'Ōiwi TV
  - Google Tools
- Apps for mobile devices (ABL app for Educators)

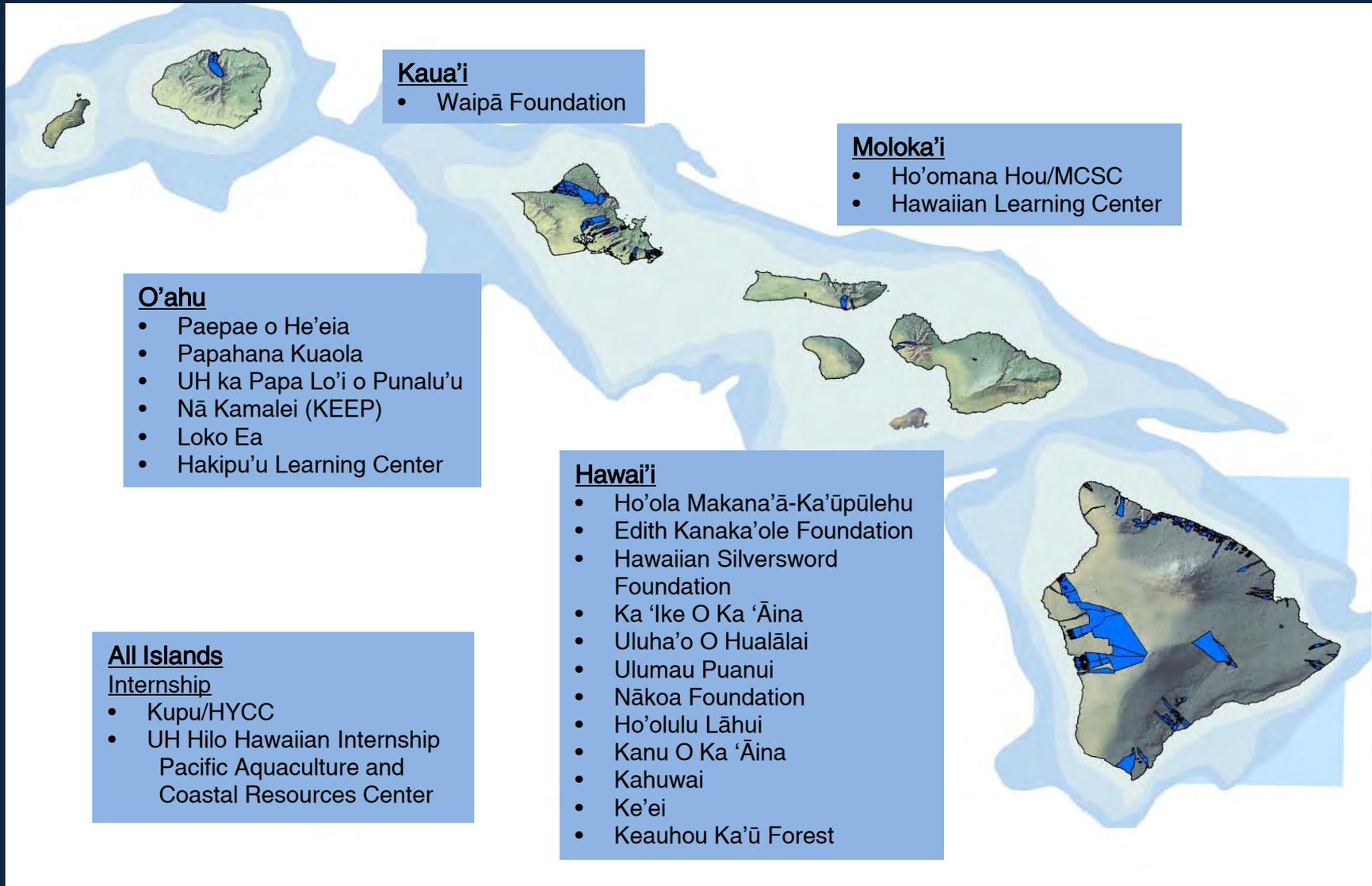


## Land & Research Tools

- GIS Software
- GPS
- Remote Sensing
- (LIDAR, Satellite imagery)
- Weather monitoring stations
- Topographic survey



# Engaging ~55,000 learners each year



# Returns will be measured by learner outcomes, community engagement & land stewardship

Objectives	Elements	Short-Term Outcomes (e.g., after one-time visit) <i>Pu'uhonua</i>	Mid-Term Outcomes (e.g., after several return visits) <i>Kīpuka</i>	Long-Term Outcomes (e.g., years of program engagement ) <i>Pūnāwai</i>
Growing Learners	<u>Curriculum</u> <ul style="list-style-type: none"> <li>History</li> <li>Culture</li> <li>Eco-literacy</li> <li>Leadership</li> <li>Service learning</li> <li>Science, Technology, Engineering, Mathematics (STEM)</li> <li>21<sup>st</sup> Century Skills</li> </ul>	<b>Strengthening learners' roots to culture &amp; 'āina so that they branch out to new possibilities</b>		
		<ul style="list-style-type: none"> <li>Sense of place</li> <li>Value of 'āina</li> <li>Engagement in learning</li> </ul>	<ul style="list-style-type: none"> <li>Attachment to place</li> <li>Application of cultural stewardship</li> <li>21<sup>st</sup> Century Skills</li> </ul>	<ul style="list-style-type: none"> <li>Learners are college &amp; career ready</li> <li>Learners are prepared to become leaders in their communities</li> </ul>
Growing Lands & Communities	<u>Target Learners</u> <ul style="list-style-type: none"> <li>Pre-K</li> <li>K-12</li> <li>Post-secondary</li> <li>Teachers</li> <li>Staff</li> <li>Families and Caregivers</li> </ul>	<b>Seeding change with community collaborators thru 'āina, education, stewardship, &amp; sustainability</b>		
		<ul style="list-style-type: none"> <li>Establishment of quality 'āina-based learning sites</li> <li>Community access to lands</li> <li>Maximization of resources &amp; mitigation of risk</li> </ul>	<ul style="list-style-type: none"> <li>Community engagement &amp; pride</li> <li>Collaborators with multiyear education &amp; land use plans</li> </ul>	<ul style="list-style-type: none"> <li>Sites become sources of community wealth</li> <li>Restored landscapes &amp; sustainable, community-based economic development</li> </ul>



ʻIke mākou i ka moku!



**Rather than take  
all the water we can**



**Invest in systems  
to take prudently  
what we need**



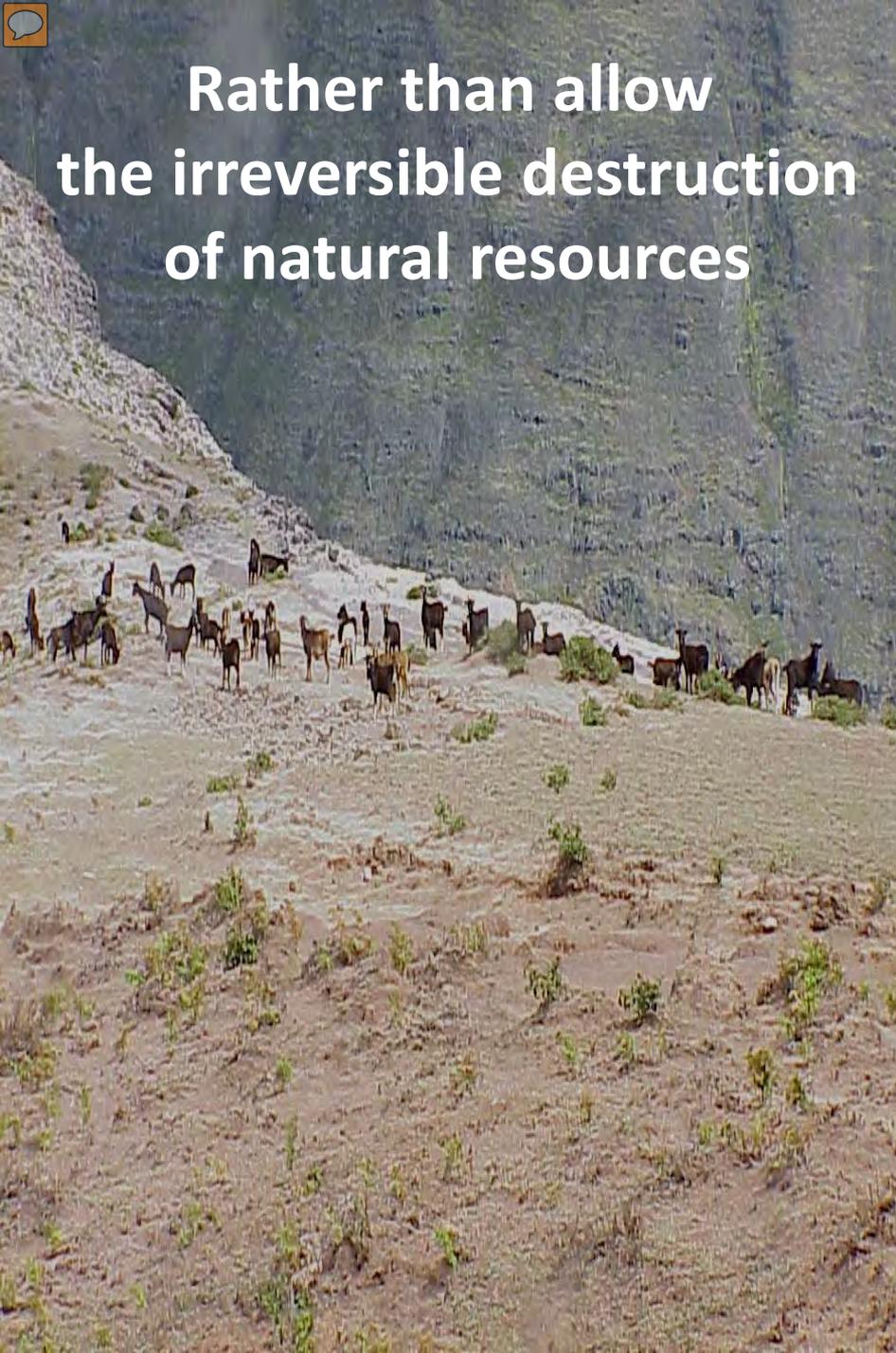


**Rather than bear witness  
to the destruction of  
cultural treasures**

**Refurbish treasures to  
leave for our children**



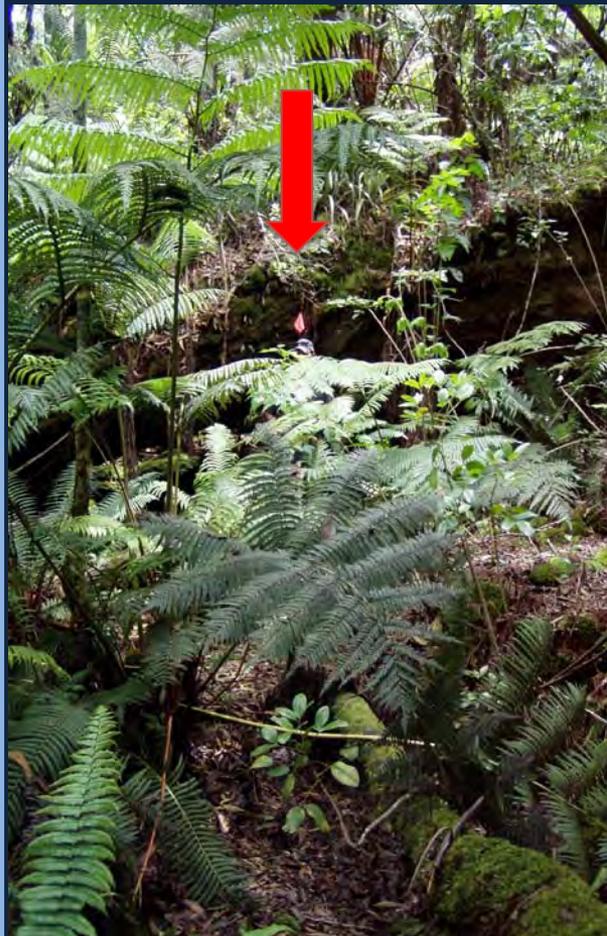
Rather than allow  
the irreversible destruction  
of natural resources



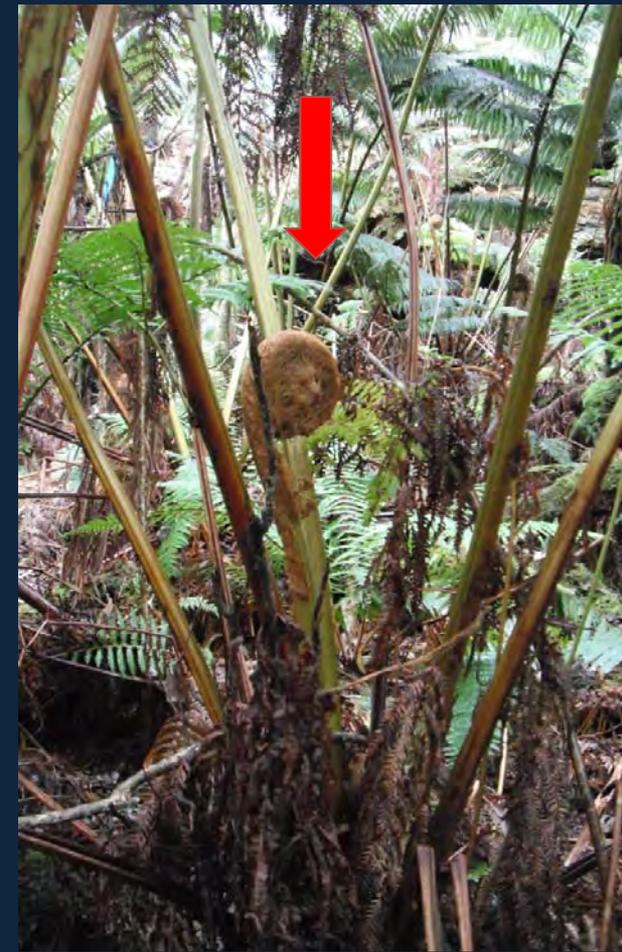
# Care for the resources that support our existence



1998 (pig removal underway)



2005 (5- years pig free)

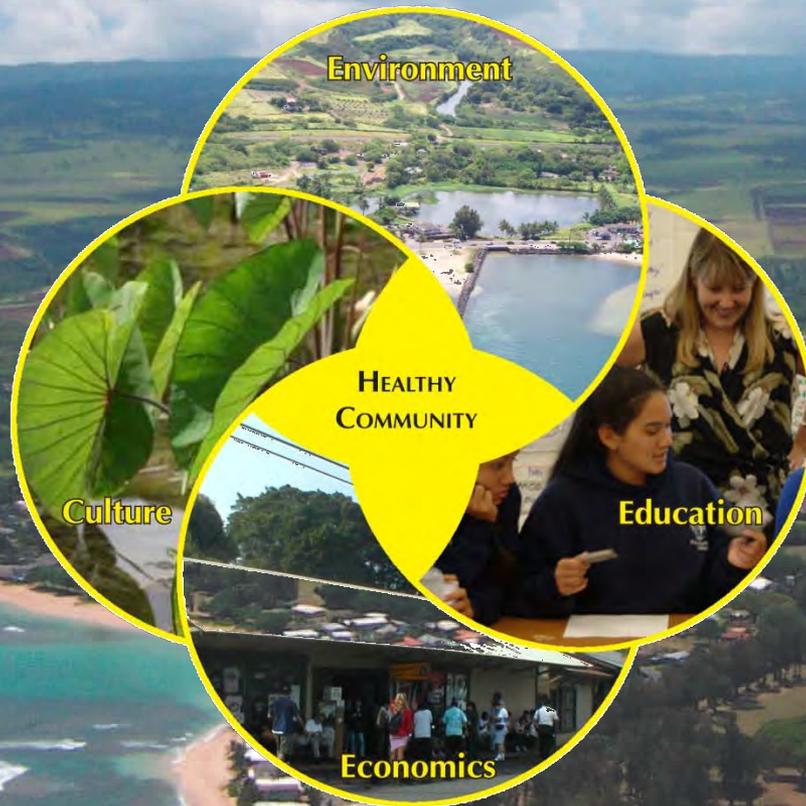


2011 (11 years pig free)

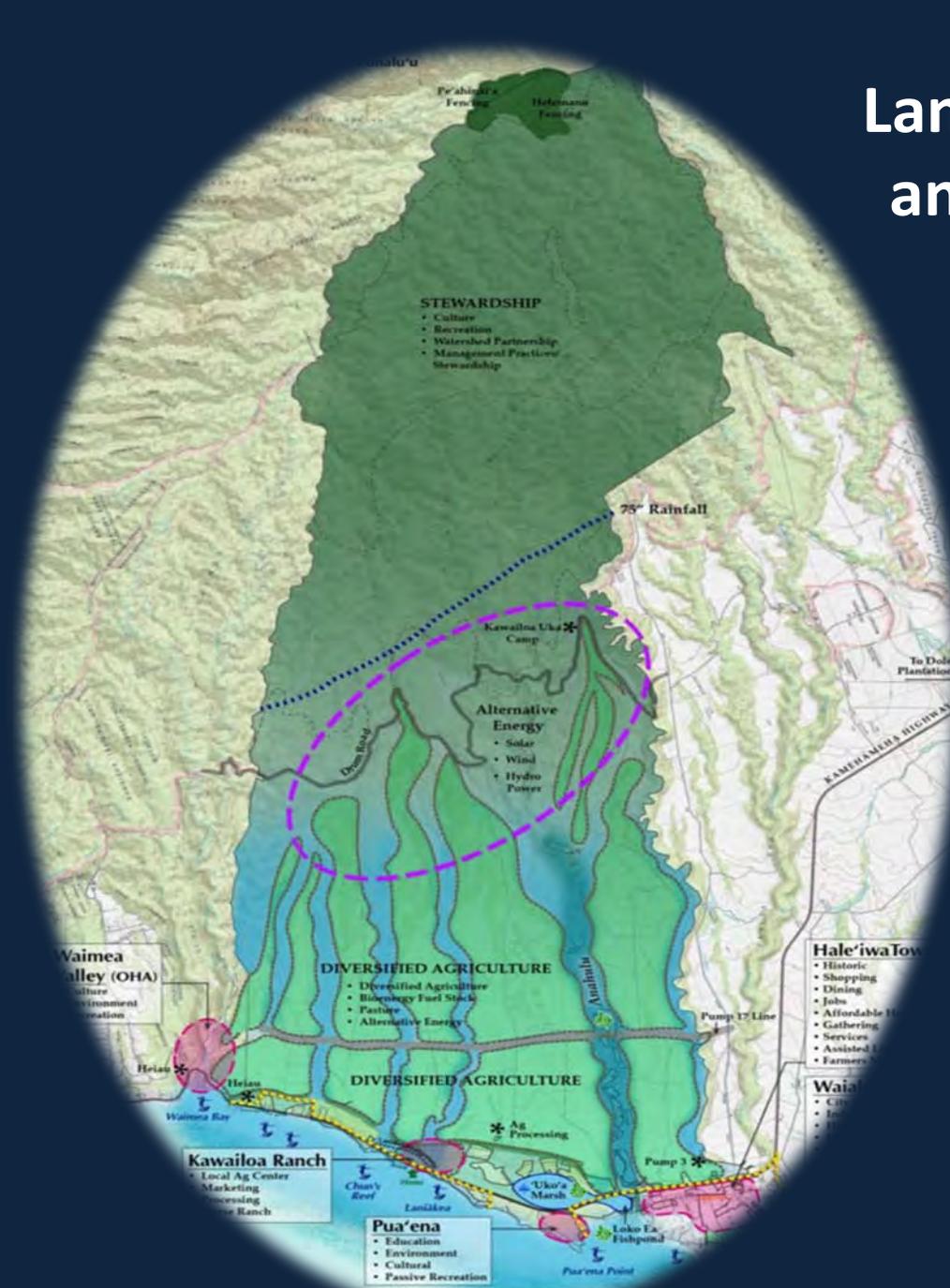


MOKU O WAIALUA  
*North Shore Plan*

PA'ALA'A TO KĀPAELOA



# Lands are managed to generate an optimal balance of returns



- Increase resource stewardship
- Expand educational opportunities
- Enhance diversified agriculture
- Generate renewable energy
- Develop/redevelop rural commercial

Increase resource  
stewardship & expand  
educational  
opportunities



# Increase resource stewardship & expand educational opportunities



KS North Shore Beachfront Parcels  
Waimea Side Parcel

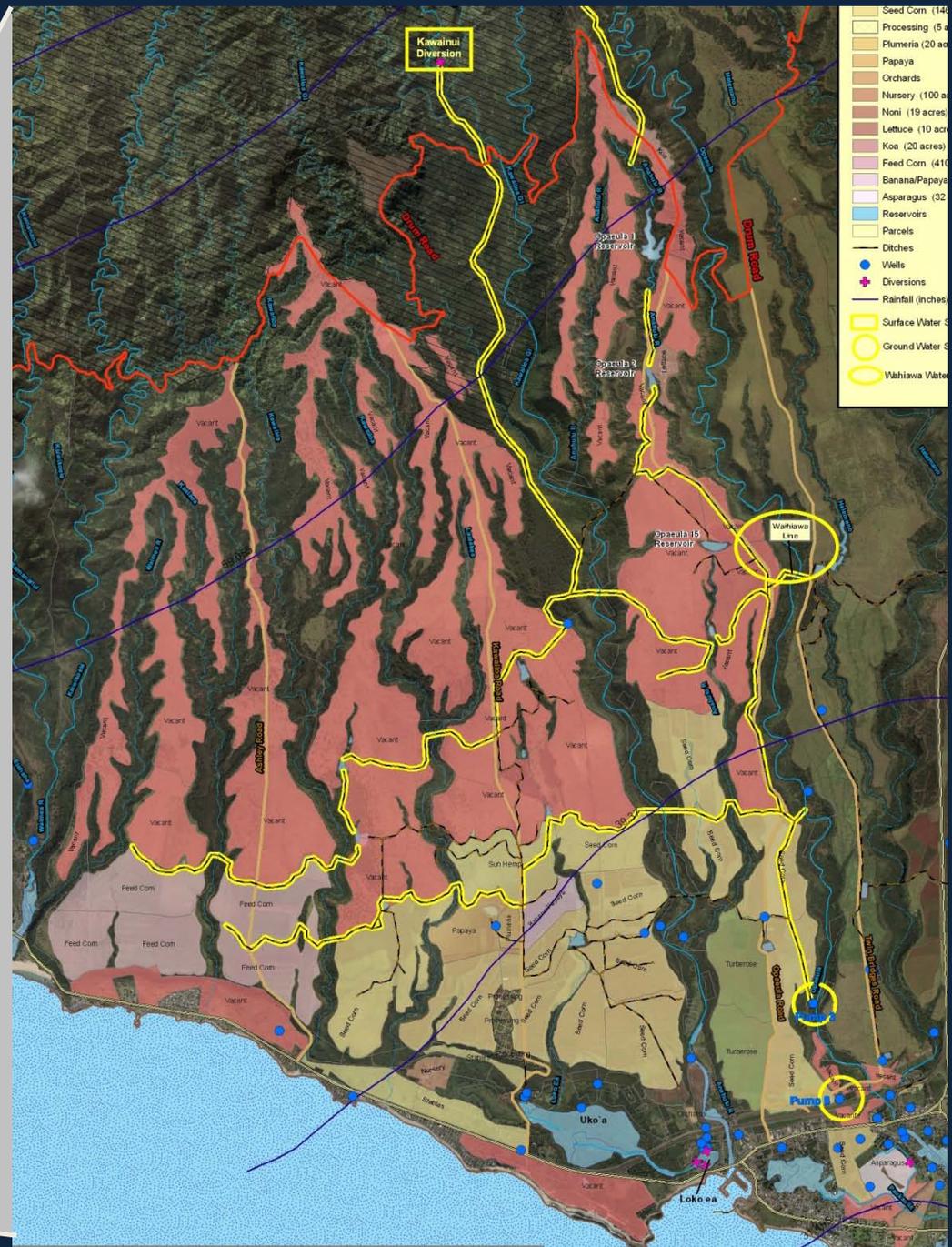
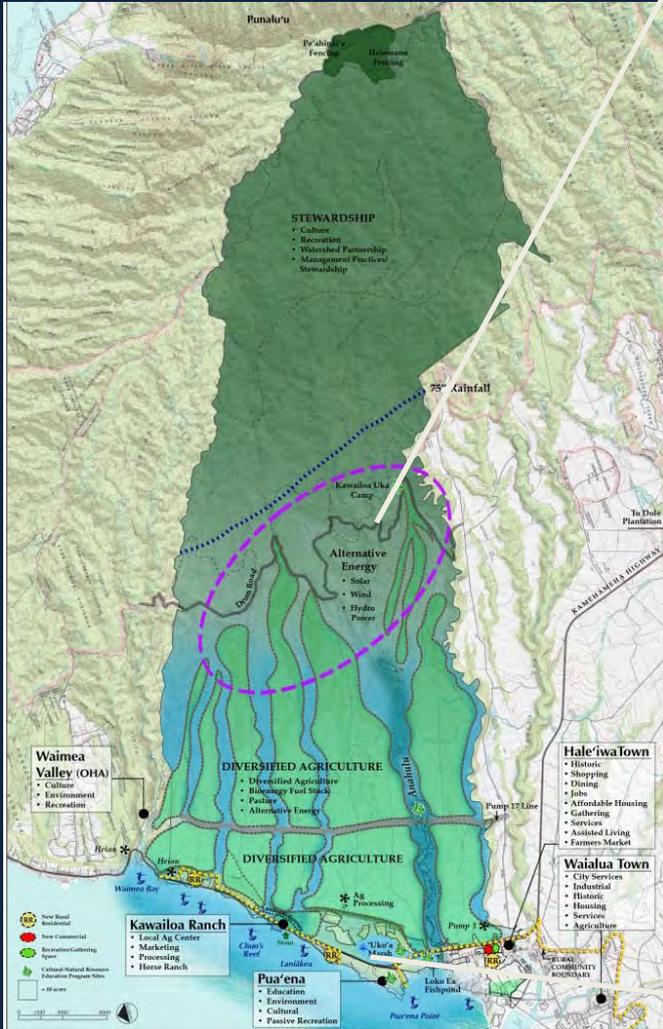
Education Pavilion: View towards Waimea  
Coastal Native Plant Nursery/Agricultural Use Area

 GROUP 70  
INTERNATIONAL

16 June 2009

**Kapaeloa Education Site**

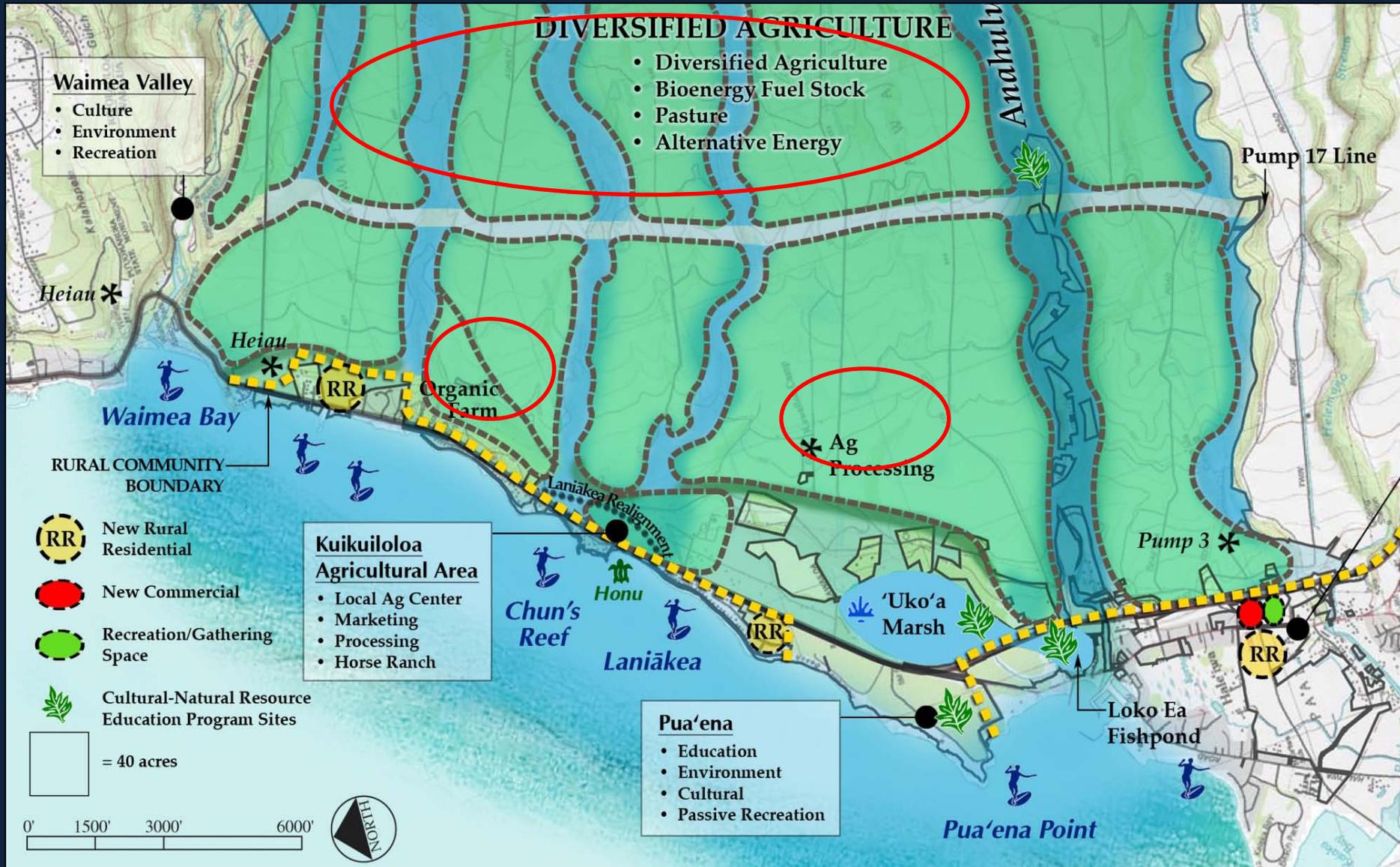
# Enhance diversified agriculture



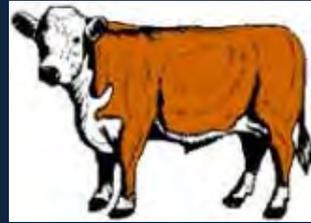
# Enhance diversified agriculture



# Enhance diversified agriculture



# Enhance diversified agriculture

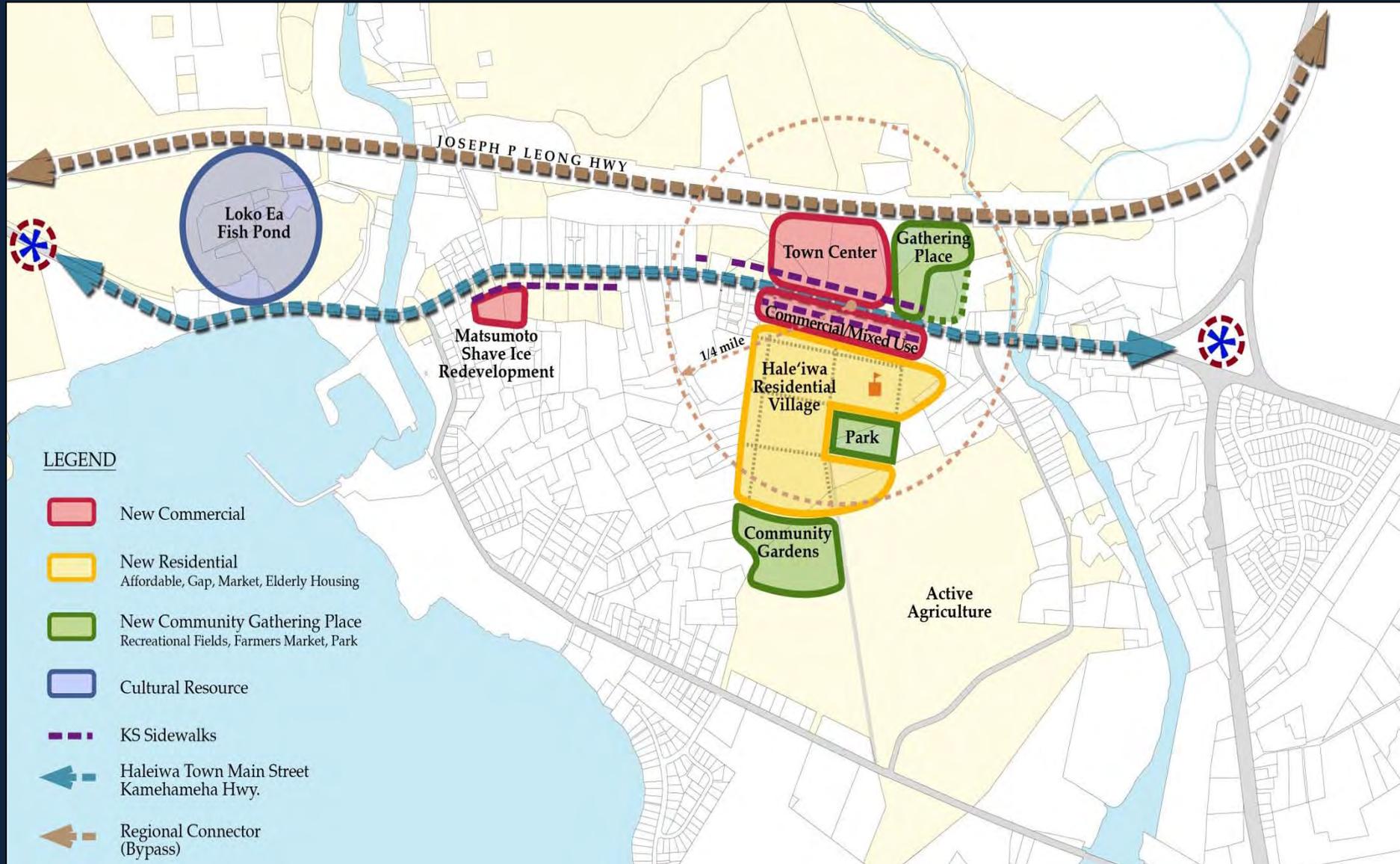


4,000 acre pasture  
RFP



Generate  
renewable energy

# Develop/redevelop rural commercial



# Develop/redevelop rural commercial



# Develop/redevelop rural commercial



# Develop/redevelop rural commercial



Hale'iwa Commercial  
Redevelopment

Proposed Courtyard and Matsumoto Building

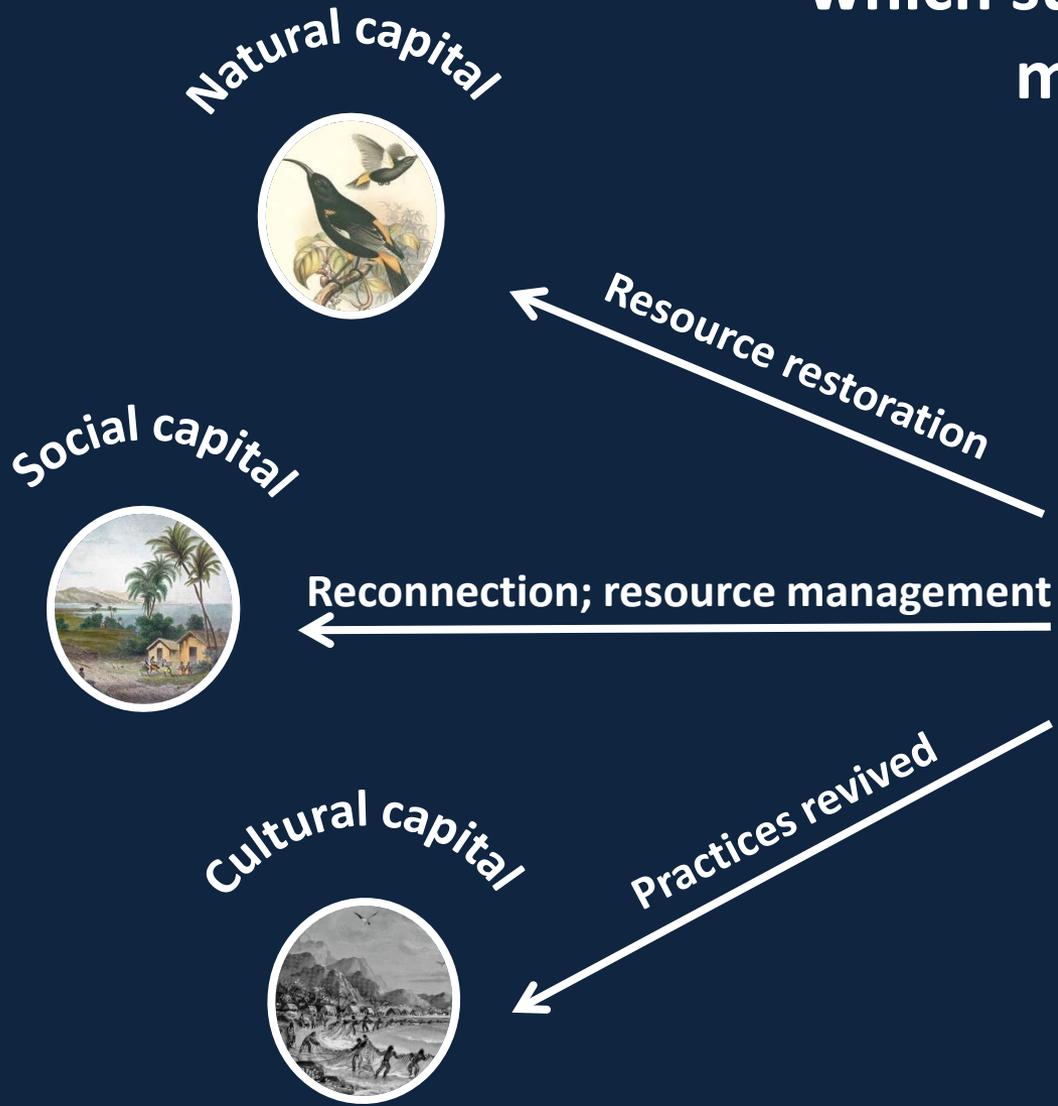
**These strategies seek waiwai (non-material wealth)**



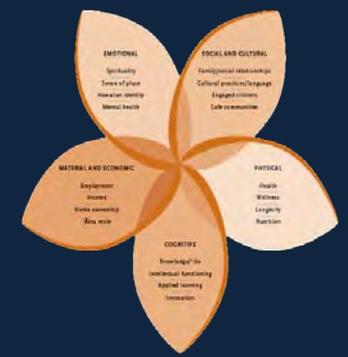
## ...and continued growth of financial portfolio

Asset Class	1887 Value (Billions)	Percent of Total	2000 Value (Billions)	Percent of Total	2012 Value (Billions)	Percent of Total
U.S. + non-U.S. Equity			\$2.138	38%	\$2.633	29%
Alternative Investments			\$0.780	14%	\$2.392	26%
Fixed Income & Cash Equivalents			\$0.871	15%	\$1.011	11%
HI Real Estate	\$0.001	100%	\$1.882	33%	\$3.150	34%
<b>Total</b>	<b>\$0.001</b>	<b>100%</b>	<b>\$5.671</b>	<b>100%</b>	<b>\$9.186</b>	<b>100%</b>

# Our new approach invests in that which sustains us, increasing money & mana



**Resources for mission**



**Elements of Well-being**



`Ike **kākou** i ka moku!

