

Finding **Our** Way

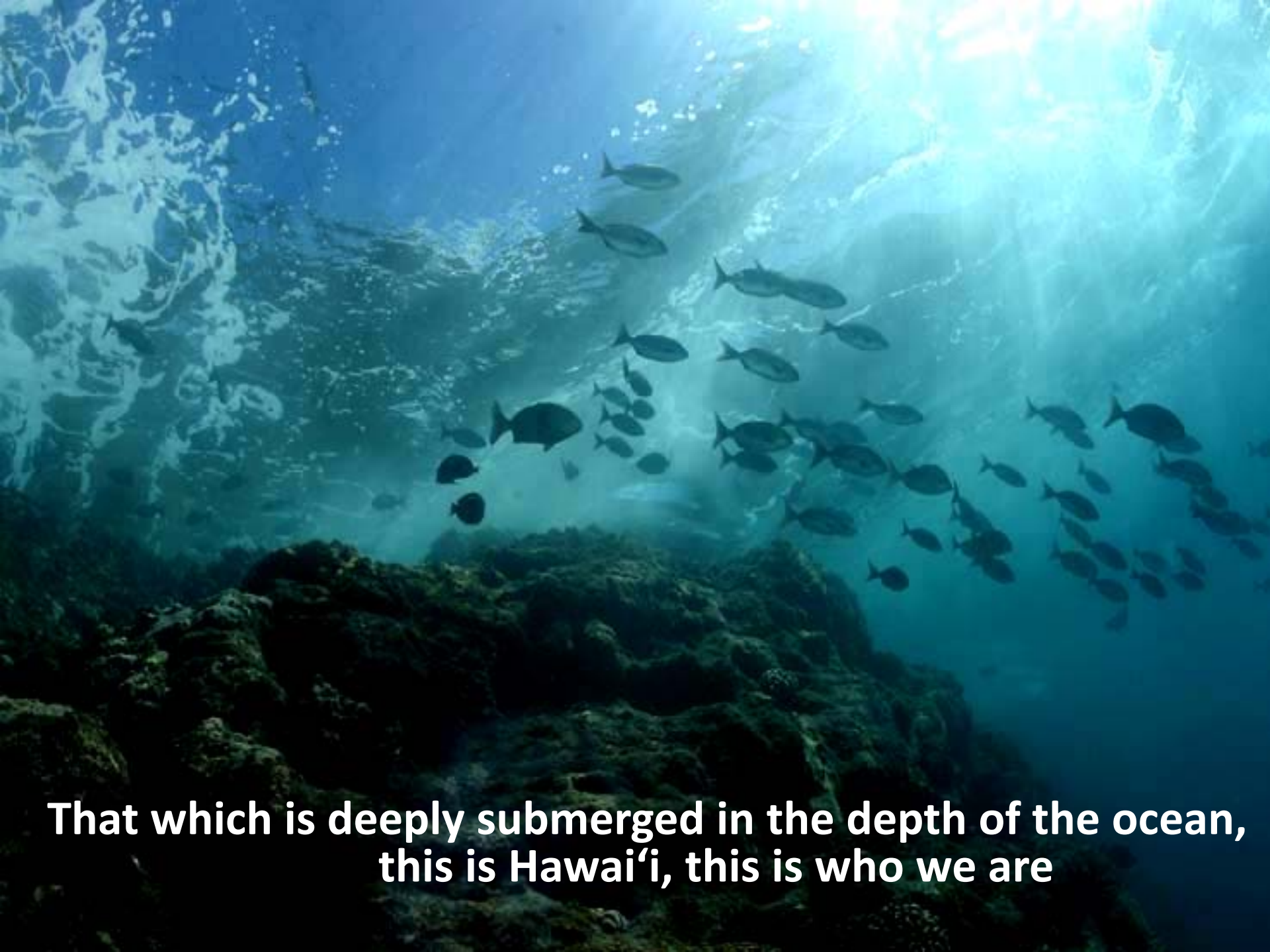
Redefining wealth

Land Assets Division
Kamehameha Schools



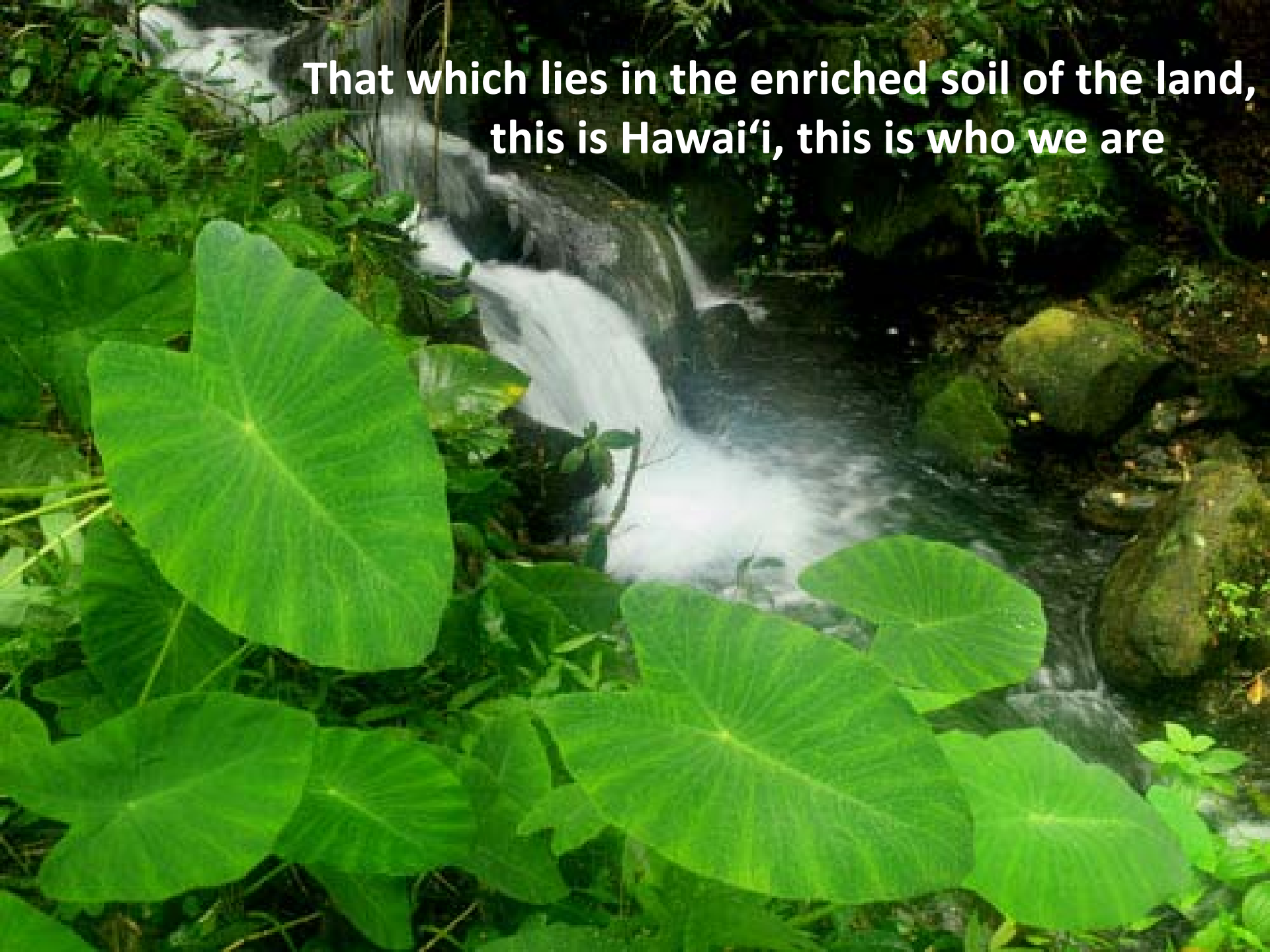
*That which dwells above in the stratum of the firmament,
this is Hawai'i, this is who we are*



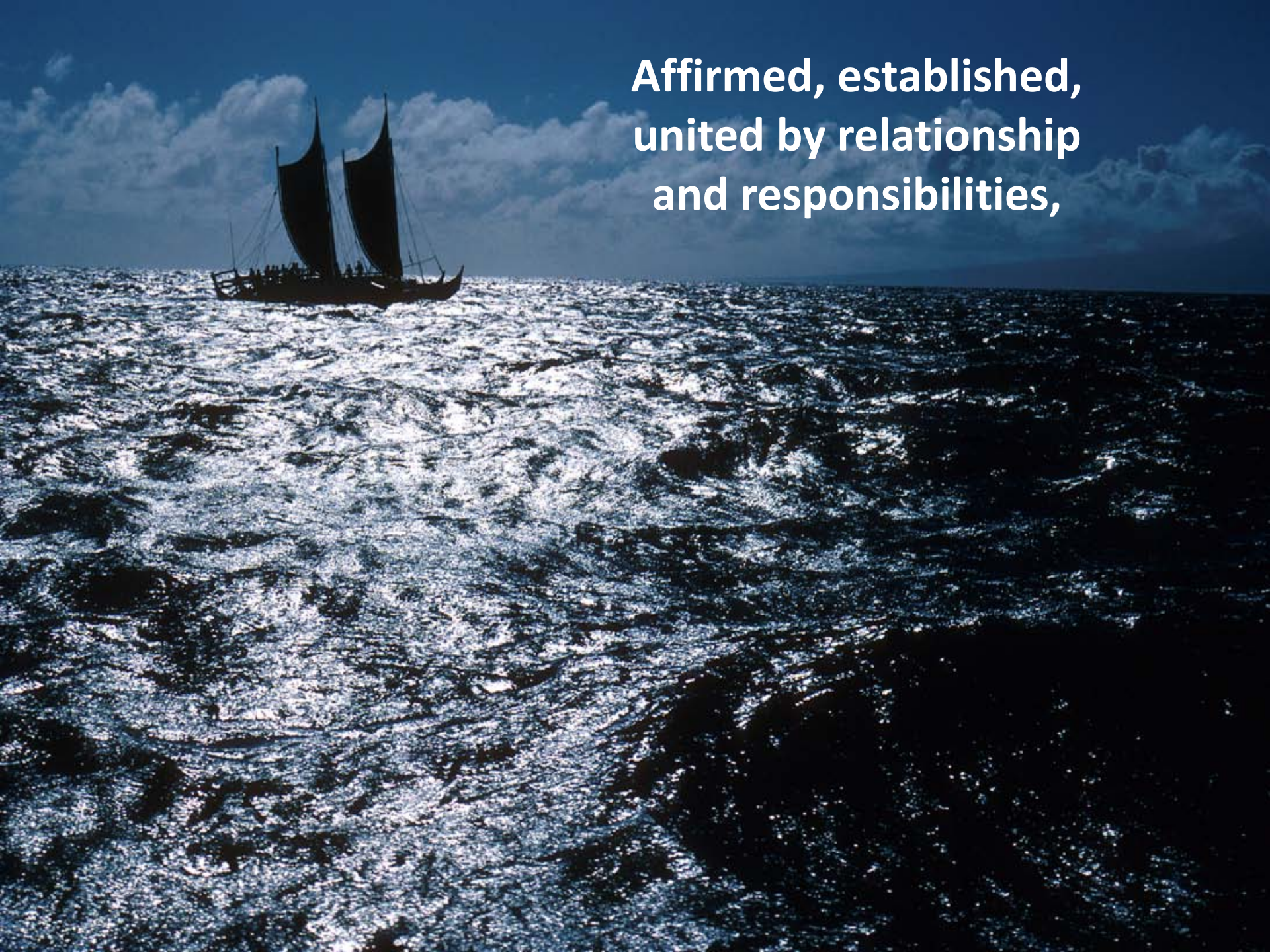


**That which is deeply submerged in the depth of the ocean,
this is Hawai'i, this is who we are**

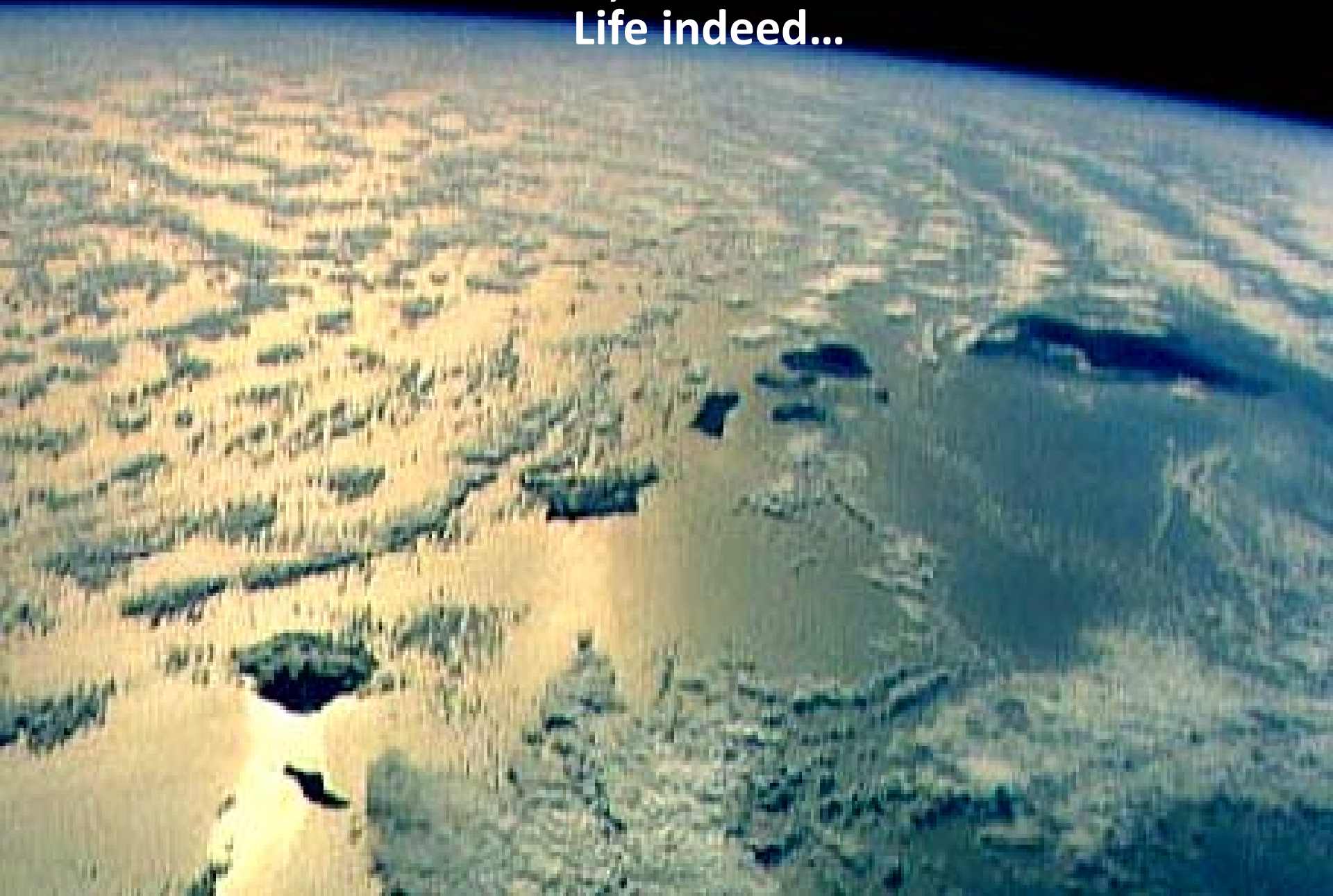
**That which lies in the enriched soil of the land,
this is Hawai'i, this is who we are**



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



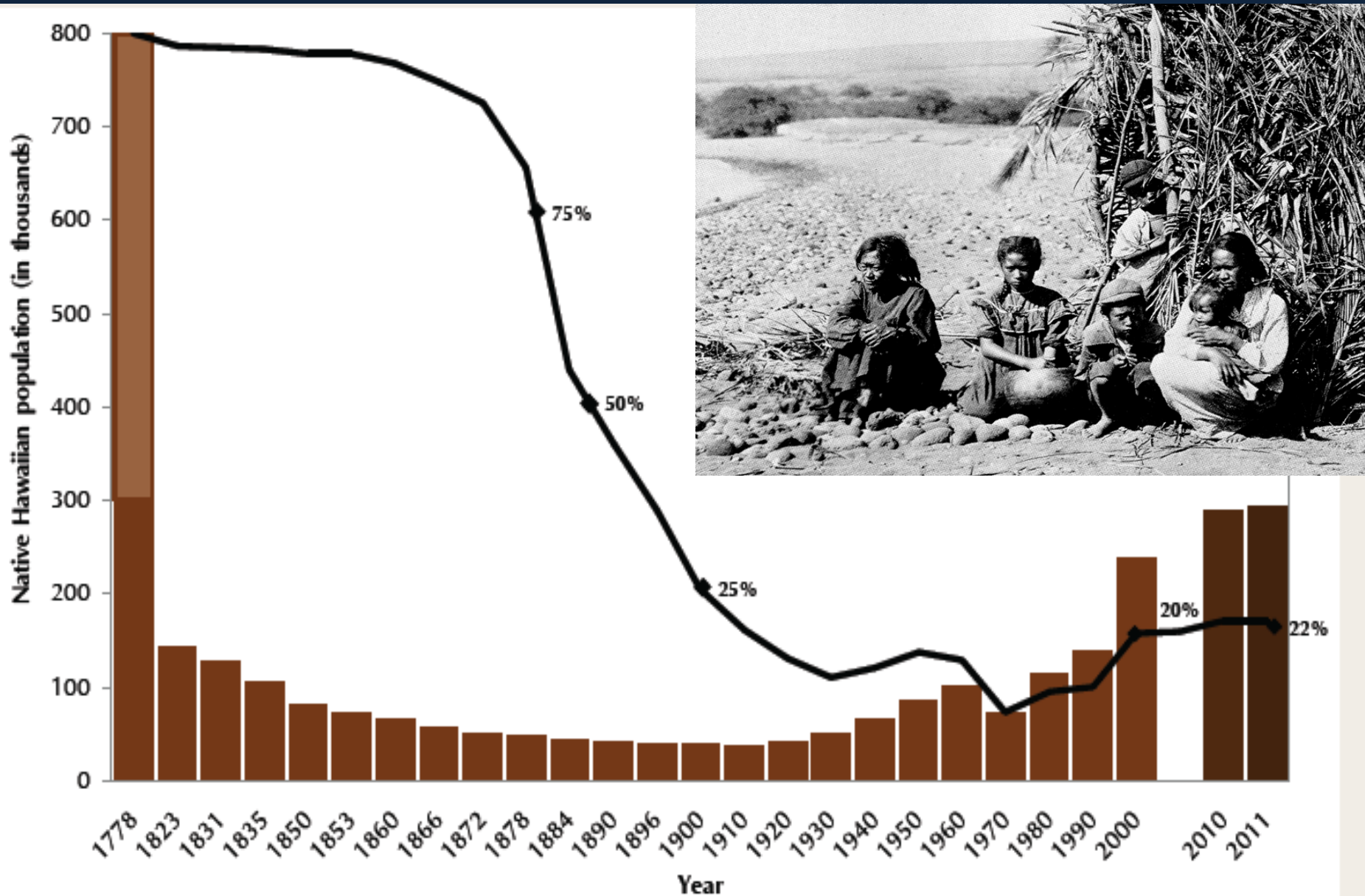
**This is Hawai'i, this is who we are
Life indeed...**





Life supporting services were once paramount

Change was sudden & catastrophic

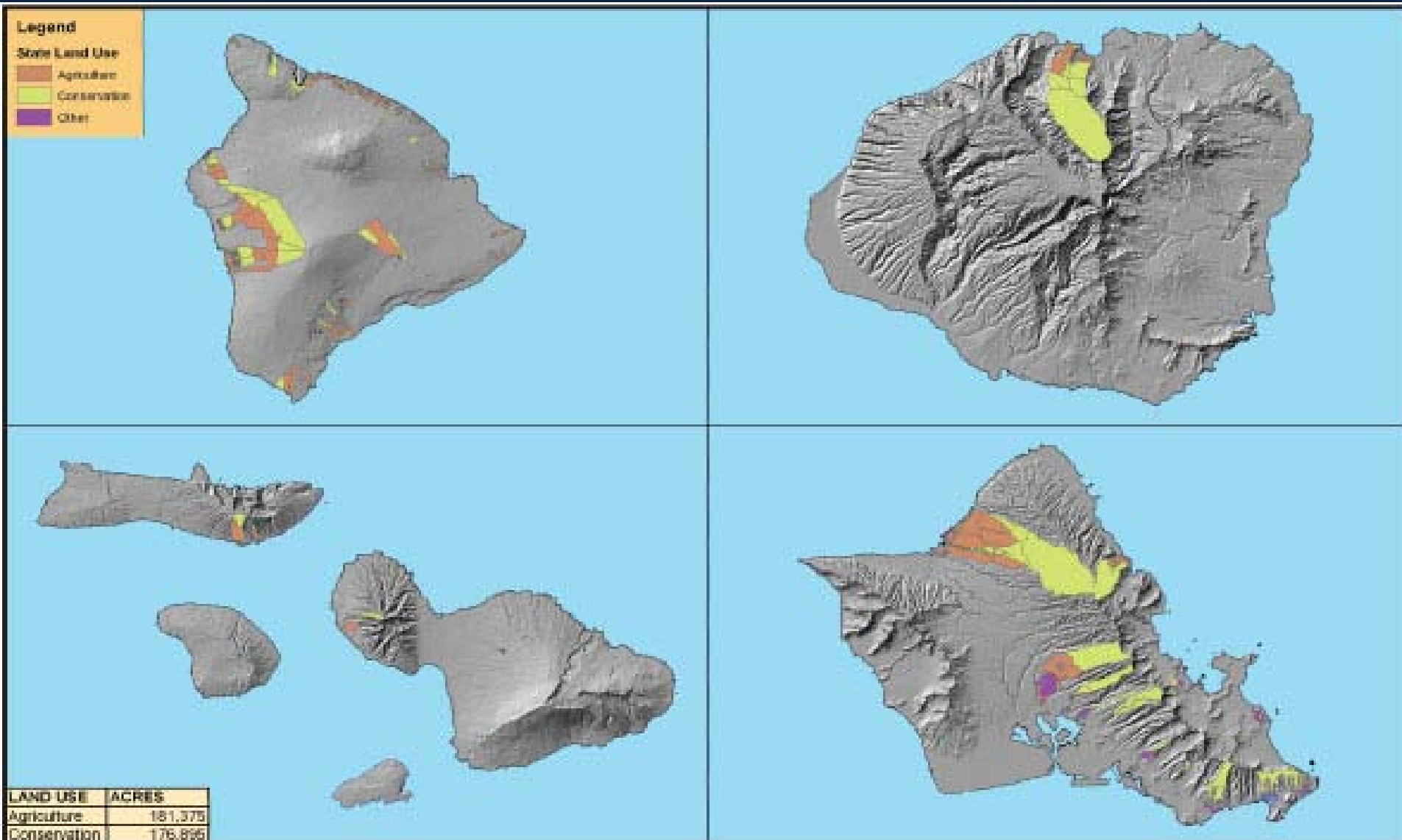


Bernice Pauahi Bishop created a legacy to restore well-being



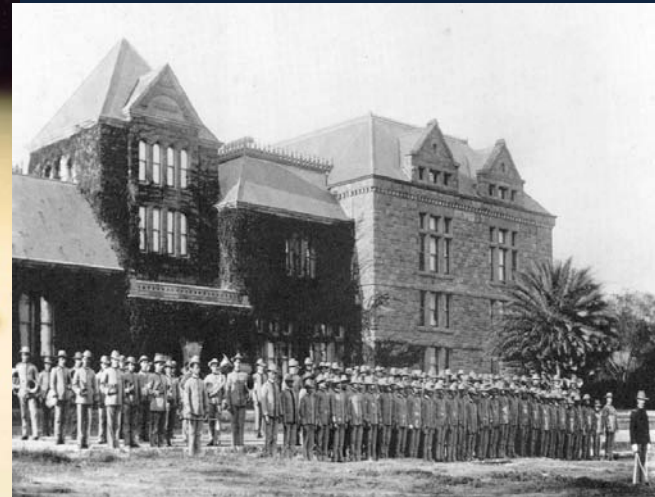
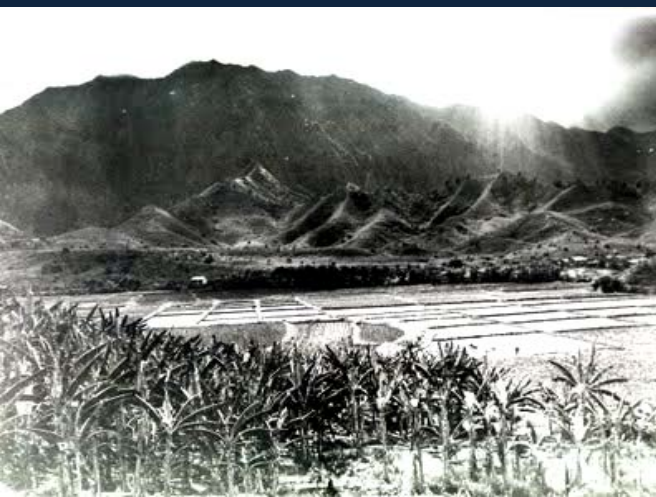
“Kamehameha Schools’ mission is to fulfill Pauahi’s desire to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.”

**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





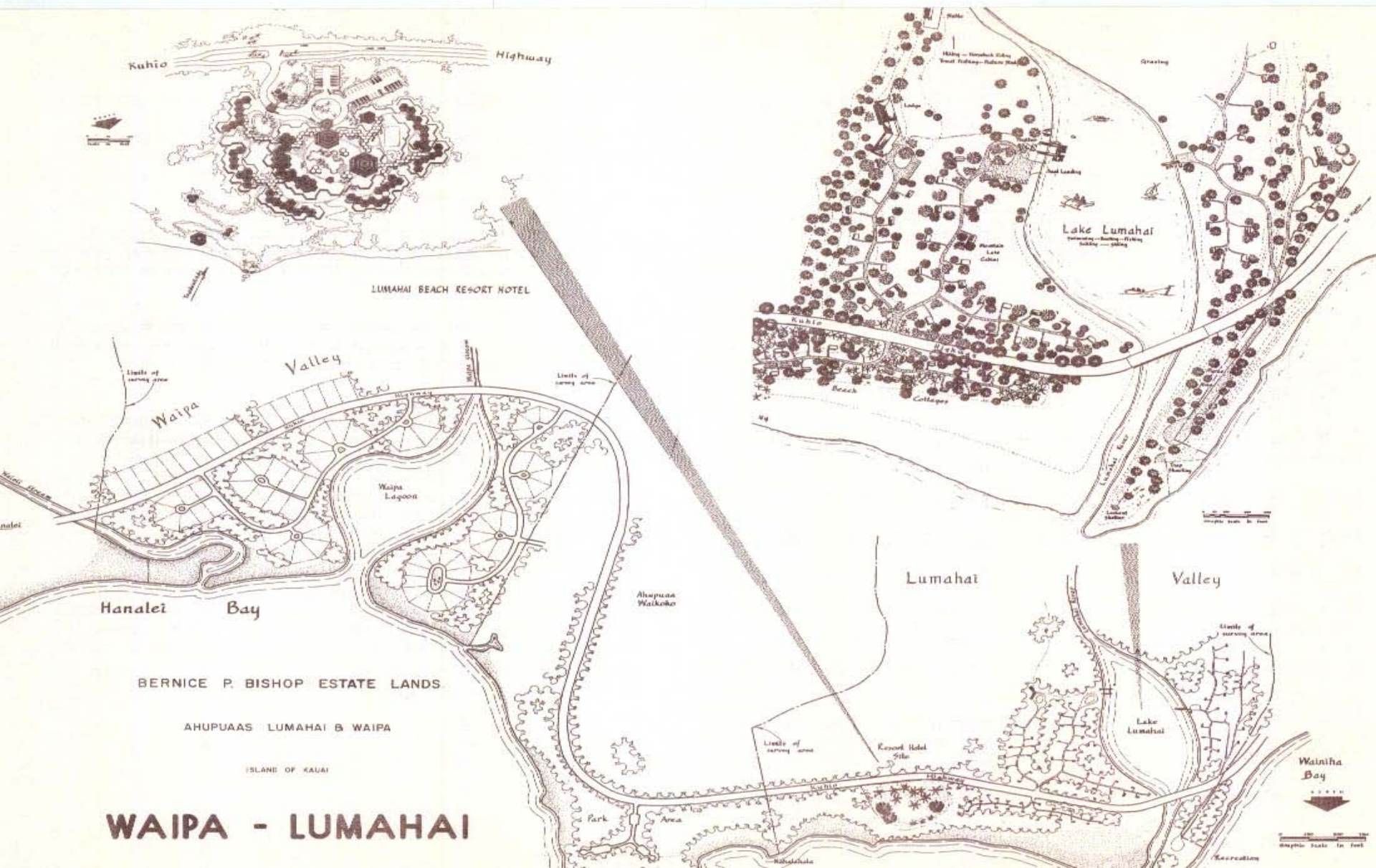
Our balance sheet prospered

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%
Total	\$0.001	100%	\$5.671	100%

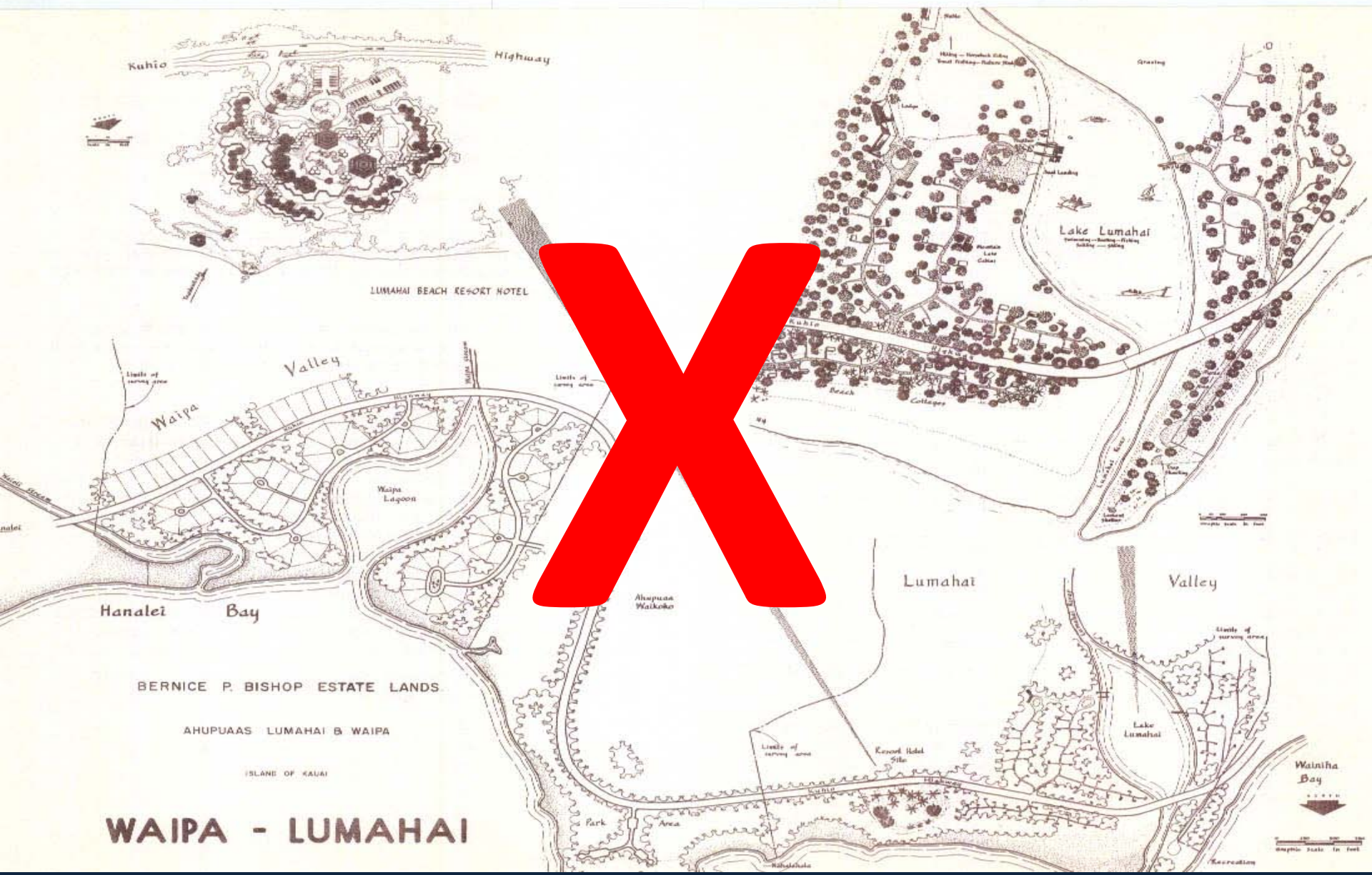
...but we also degraded resources & strained relationships



Developments were planned but did not earn approval



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



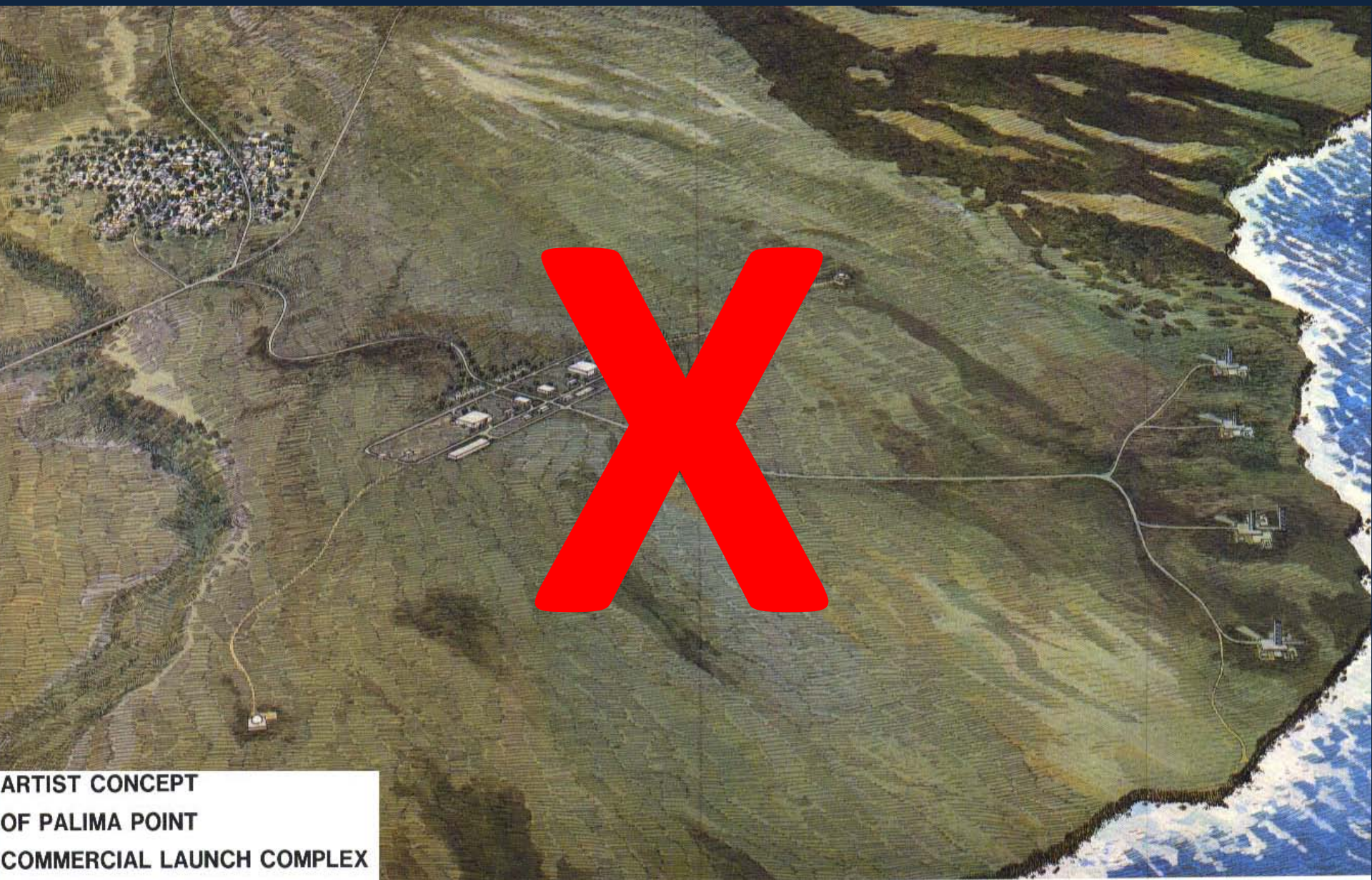
...nor for gentlemen estates in Punalu'u...



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



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



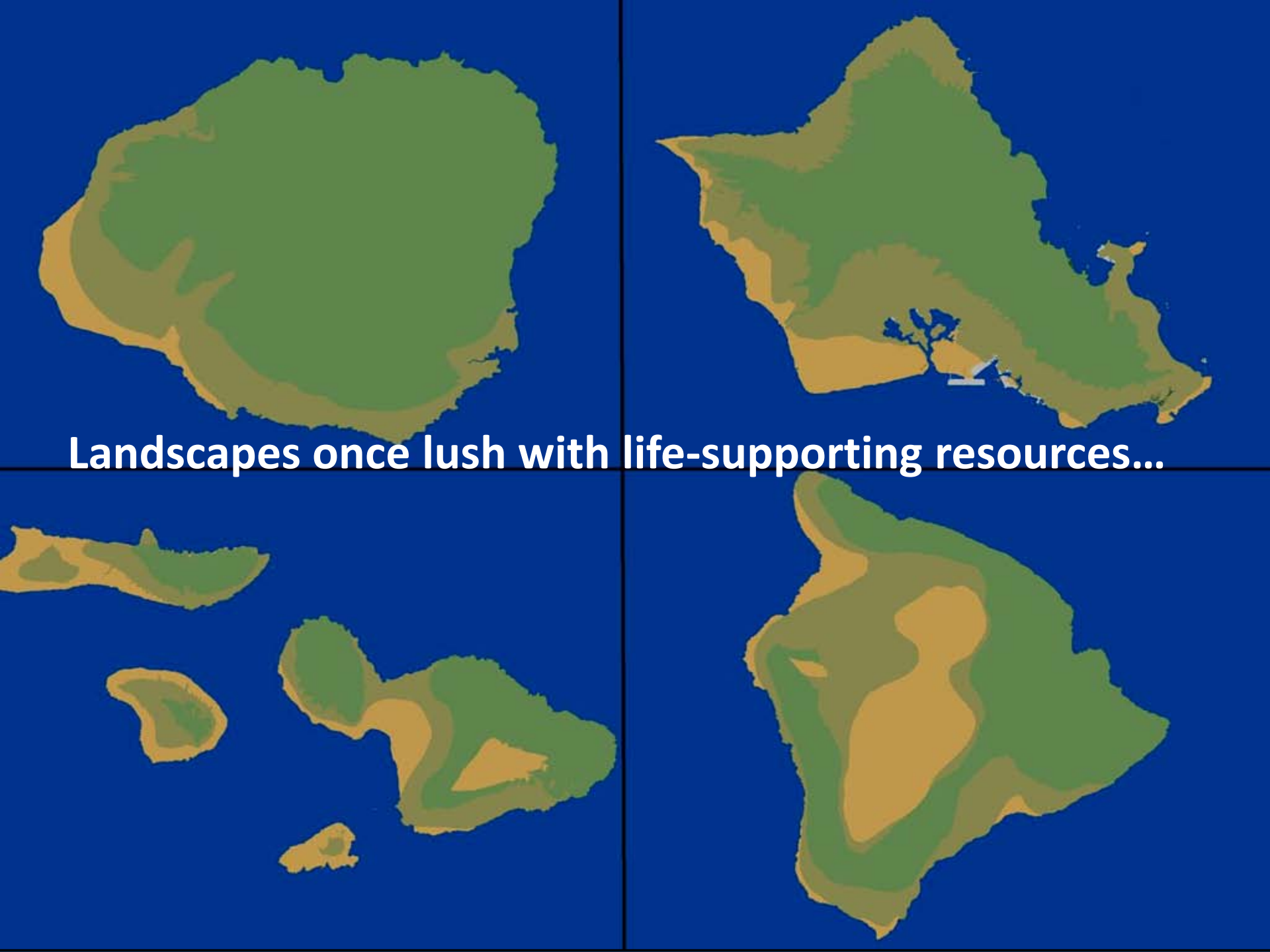
ARTIST CONCEPT
OF PALIMA POINT
COMMERCIAL LAUNCH COMPLEX

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

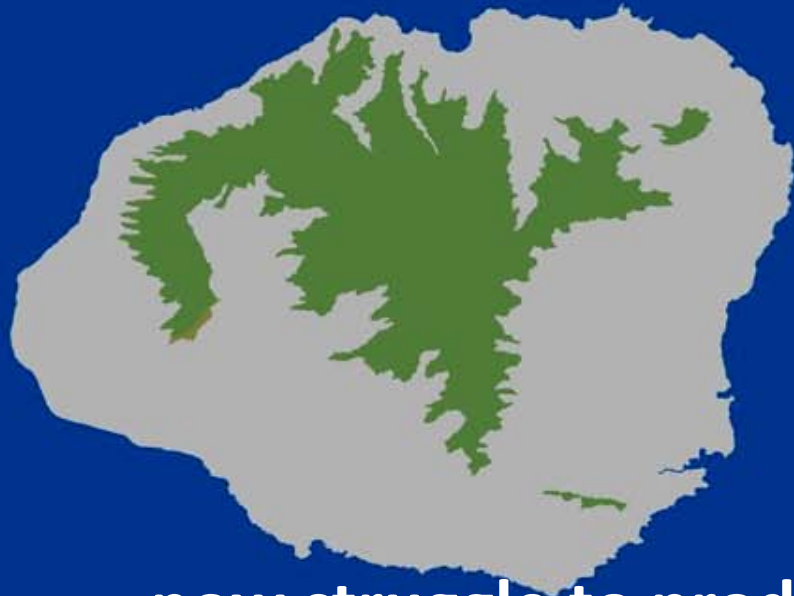


**...nor for golf courses & housing at Waiawa,
that were to be irrigated with water from windward streams**

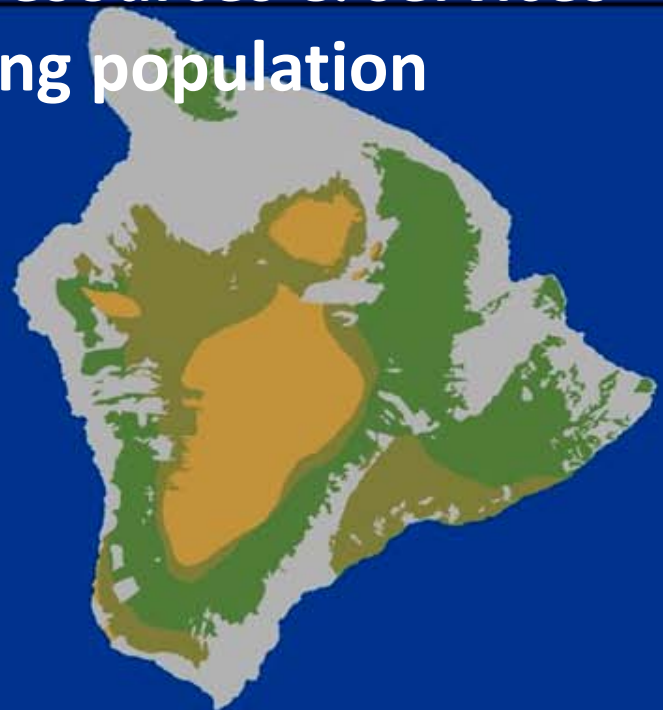




Landscapes once lush with life-supporting resources...



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



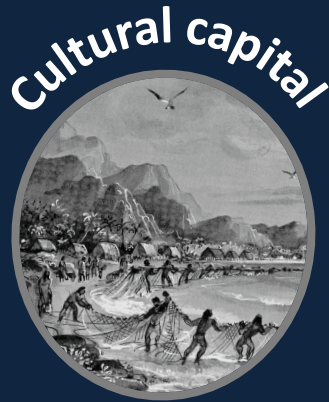
Our flawed approach undermined that which sustains us, diminishing money & mana



Resource depletion



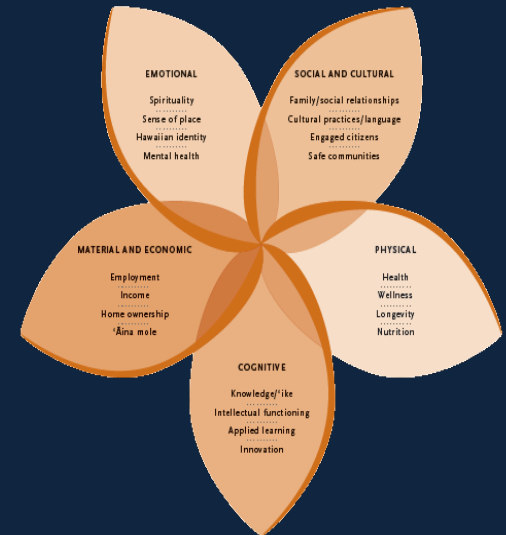
Displacement; service employment



Practices abandoned

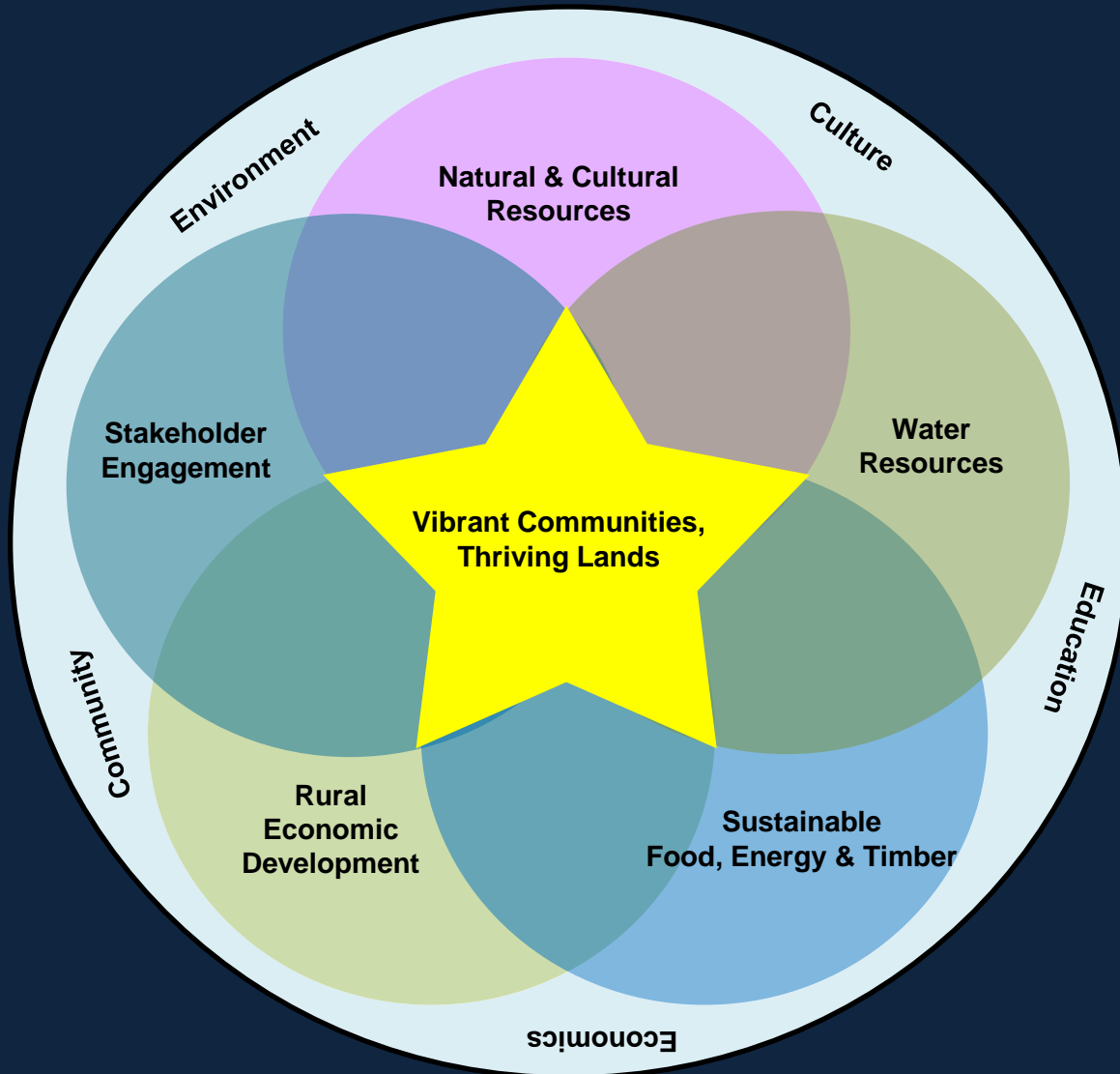


Resources for mission

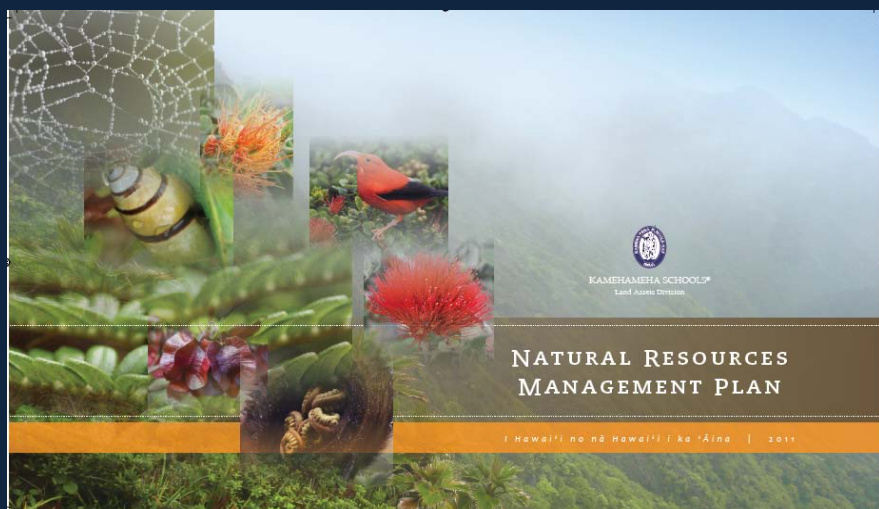
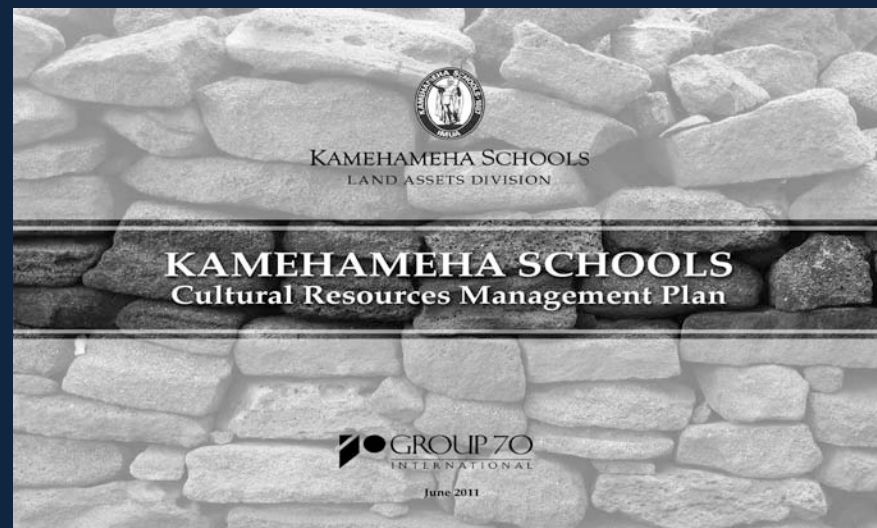


Elements of Well-being

**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 ¹	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 ¹	18,490
Hilo	7,230	2,965	—	4,265
Puna	7,595	570	2,700 ¹	4,325
Ka'ū	62,490	18,020	22,397 ²	22,073
West Hawai'i	176,660	99,145	56,111 ²	21,404
Kohala	6,940	5,170	—	1,770
TOTAL	358,270	176,895	93,408	87,967



Value chains were analyzed to target opportunities

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

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



Kūmukuhali‘i
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

Ho'omau
Foster resource
managers

Ho'omana
Restore &
interpret

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



- 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**

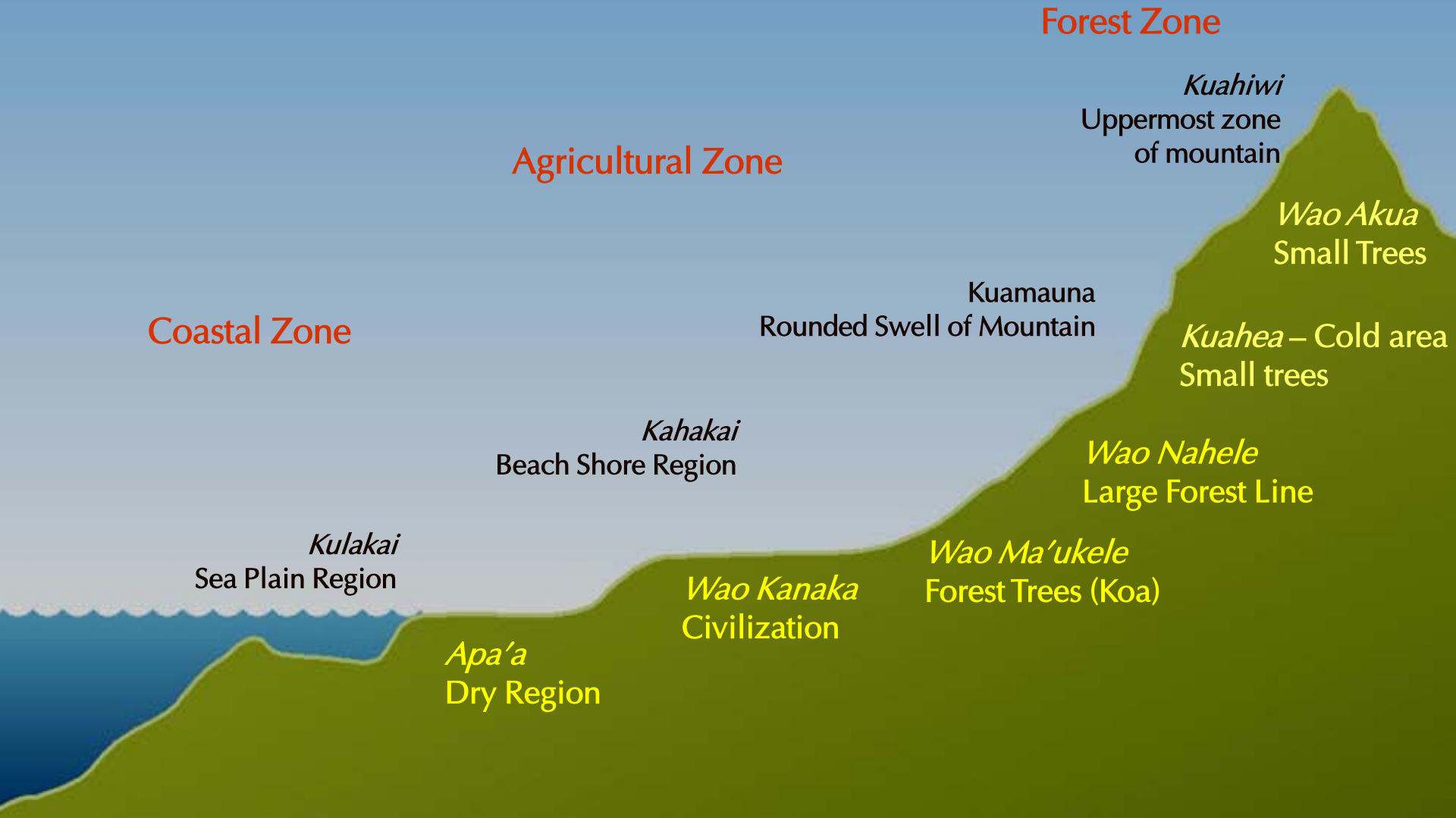




**Resuscitate cultural practices that inspire
& enrich well-being**



Engage ancestral values & practices in land & resource management





KAMEHAMEHA SCHOOLS®
Land Assets Division

NATURAL RESOURCES MANAGEMENT PLAN

I Hawai'i i no nā Hawai'i 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



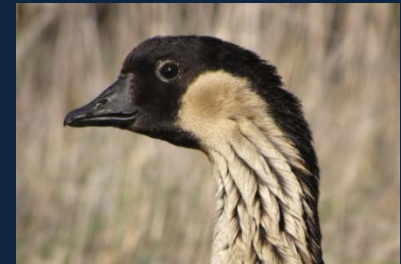
Air Cycling



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



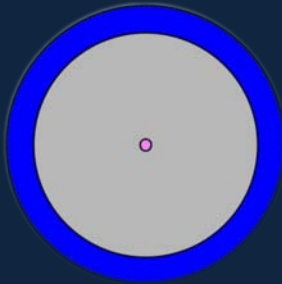
Complete the Cycle

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



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

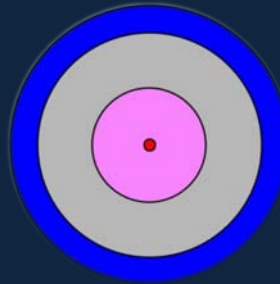
2000



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

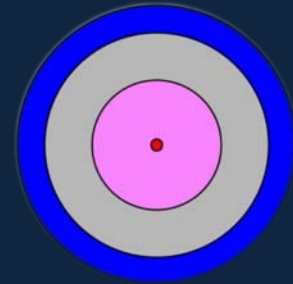
2005



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, dense forest of green trees covering a large portion of the landscape. To the right, there is a distinct, lighter-colored area that appears to be a cleared forest or a field, separated from the main forest by a sharp, dark boundary line. The overall scene is captured from a high angle, looking down on the terrain.

Promote the function of ecosystem services

A photograph of four children standing in a shallow, muddy path through a lush taro field. The children are smiling and posing for the camera. The taro plants have large, heart-shaped green leaves and some yellow flowers. The ground is dark brown mud with some white foam or bubbles.

‘Āina -Based Education Tactical Plan 2012-2015



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

‘Āina-Based Learning

Strategic Ag Plan



CRMP

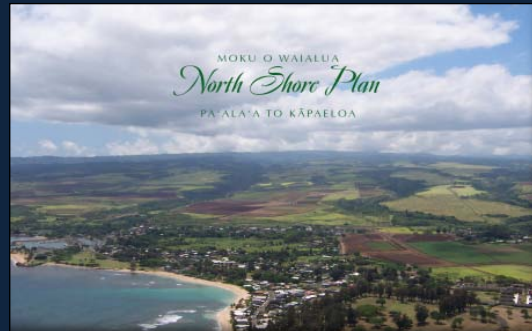


NRMP

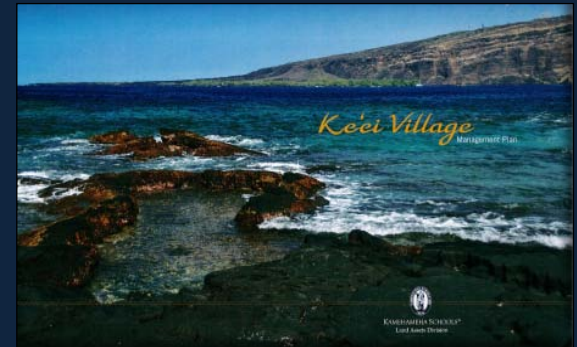


Ahupua'a/Regional Plans

North Shore



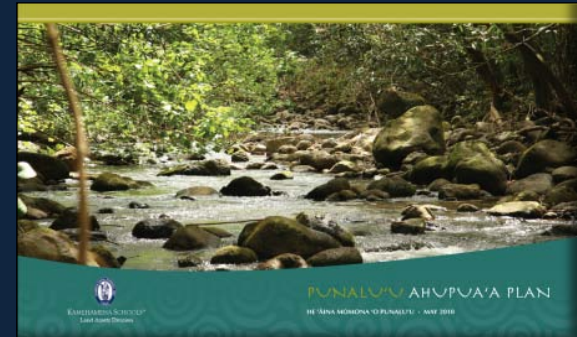
Ke'ei Village



West Hawai'i



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)

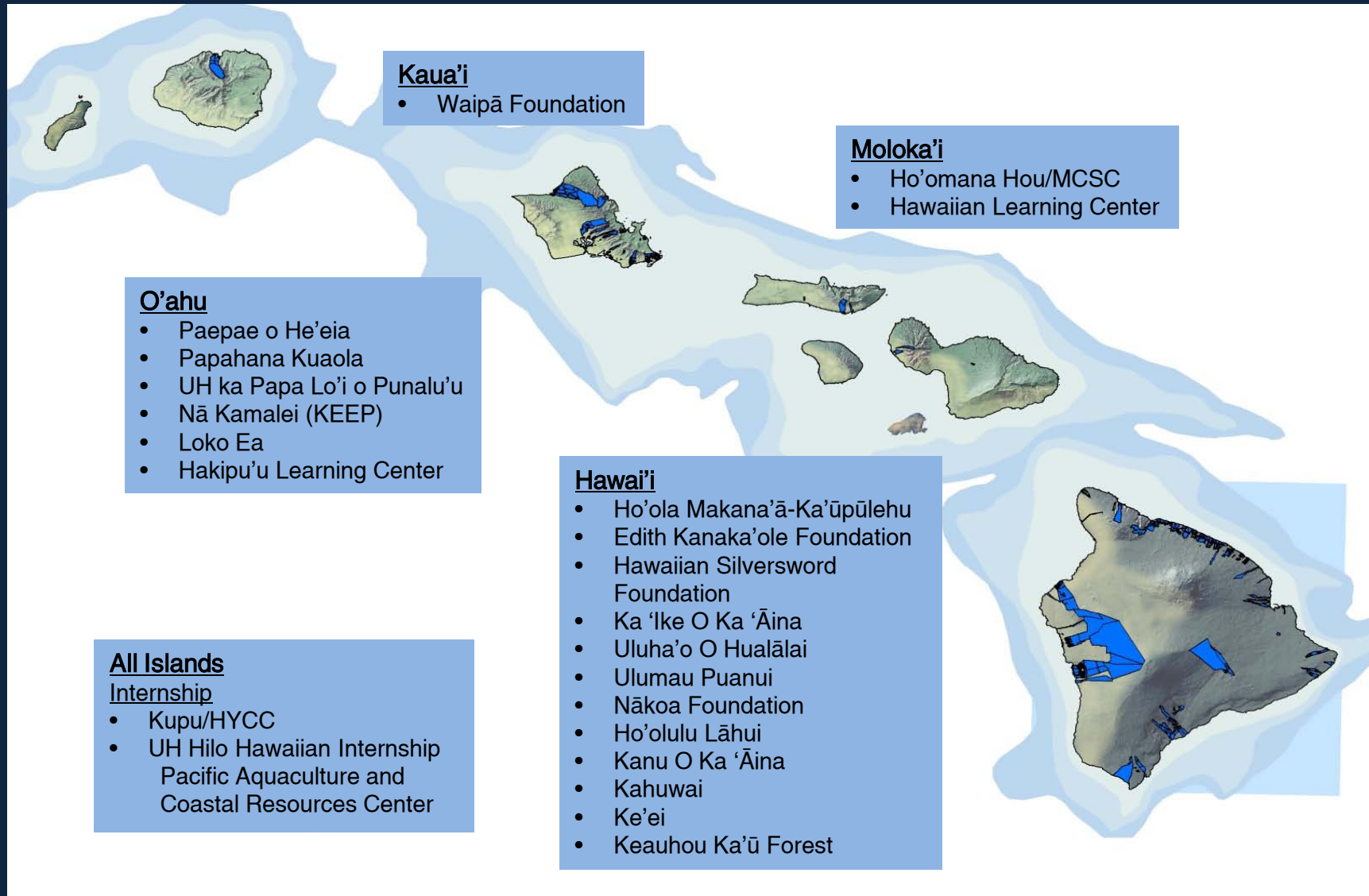


Land & Research Tools

- 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"> History Culture Eco-literacy Leadership Service learning Science, Technology, Engineering, Mathematics (STEM) 21st Century Skills 	Strengthening learners' roots to culture & 'āina so that they branch out to new possibilities		
		<ul style="list-style-type: none"> Sense of place Value of 'āina Engagement in learning 	<ul style="list-style-type: none"> Attachment to place Application of cultural stewardship 21st Century Skills 	<ul style="list-style-type: none"> Learners are college & career ready Learners are prepared to become leaders in their communities
Growing Lands & Communities	<u>Target Learners</u> <ul style="list-style-type: none"> Pre-K K-12 Post-secondary Teachers Staff Families and Caregivers 	Seeding change with community collaborators thru 'āina, education, stewardship, & sustainability		
		<ul style="list-style-type: none"> Establishment of quality 'āina-based learning sites Community access to lands Maximization of resources & mitigation of risk 	<ul style="list-style-type: none"> Community engagement & pride Collaborators with multiyear education & land use plans 	<ul style="list-style-type: none"> Sites become sources of community wealth Restored landscapes & sustainable, community-based economic development



ʻIke mākou i ka moku!



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



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



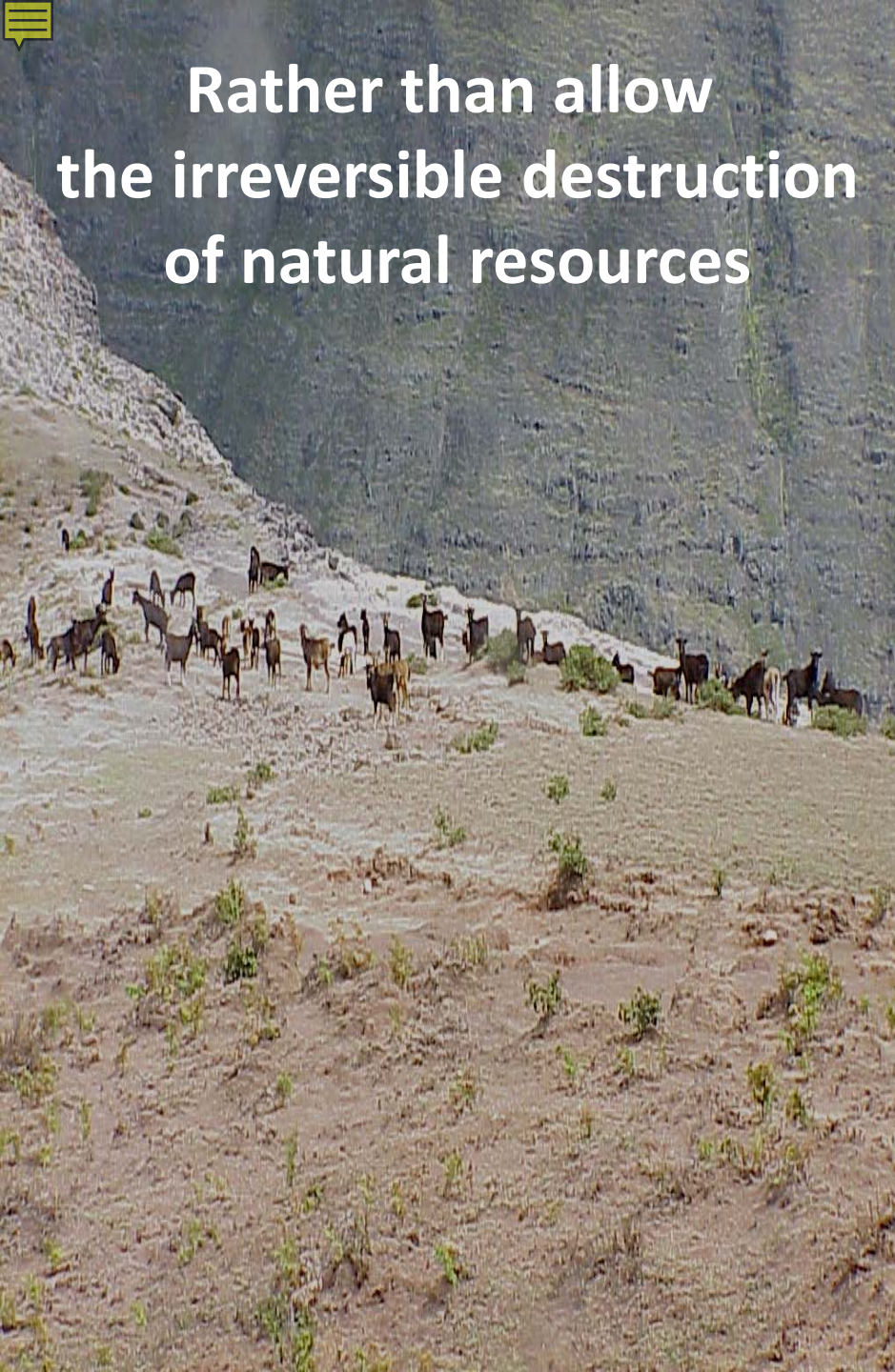


**Rather than bear witness
to the destruction of
cultural treasures**

**Refurbish treasures to
leave for our children**



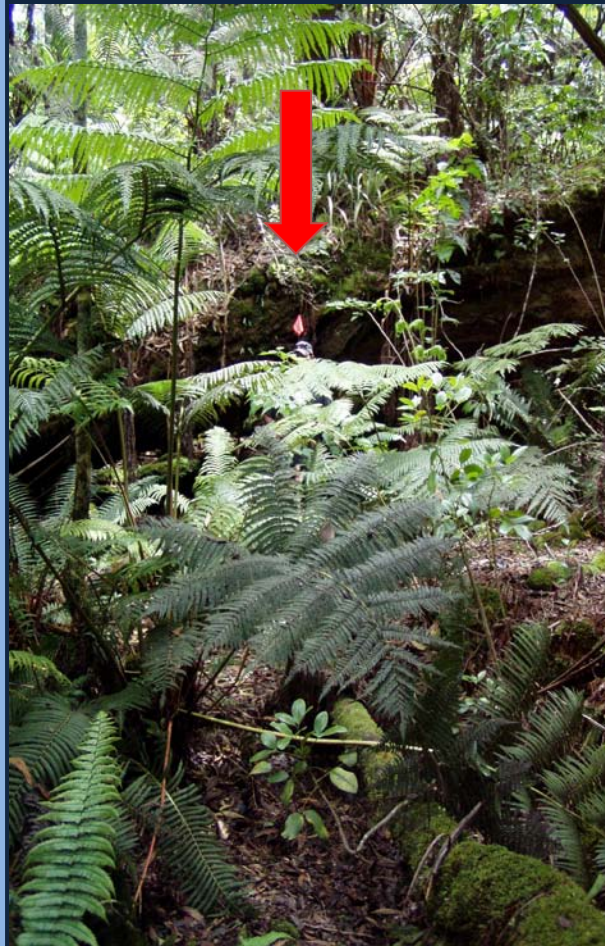
**Rather than allow
the irreversible destruction
of natural resources**



Care for the resources that support our existence



1998 (pig removal underway)



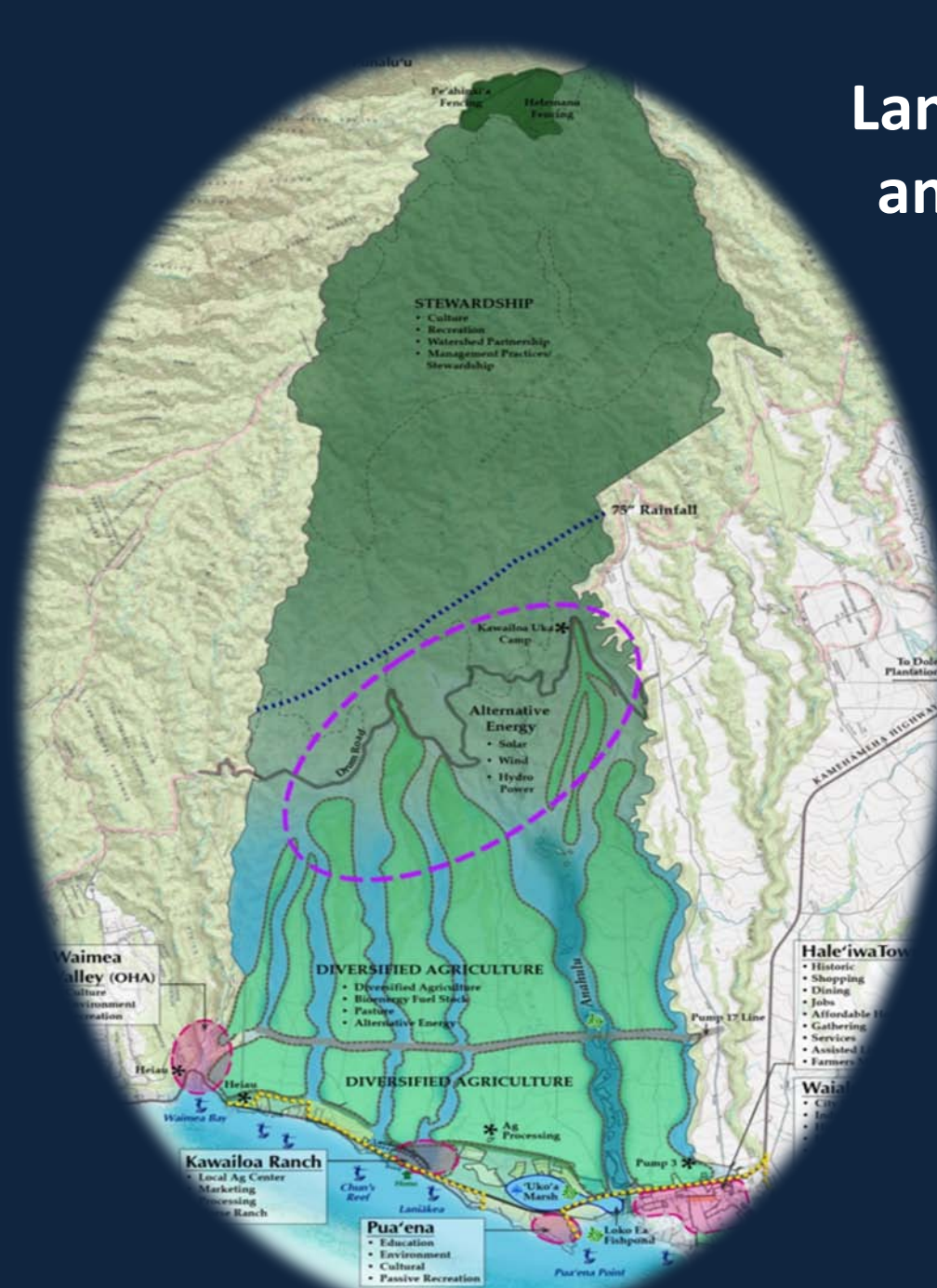
2005 (5- years pig free)



2011 (11 years pig free)

Lands are managed to generate an optimal balance of returns

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



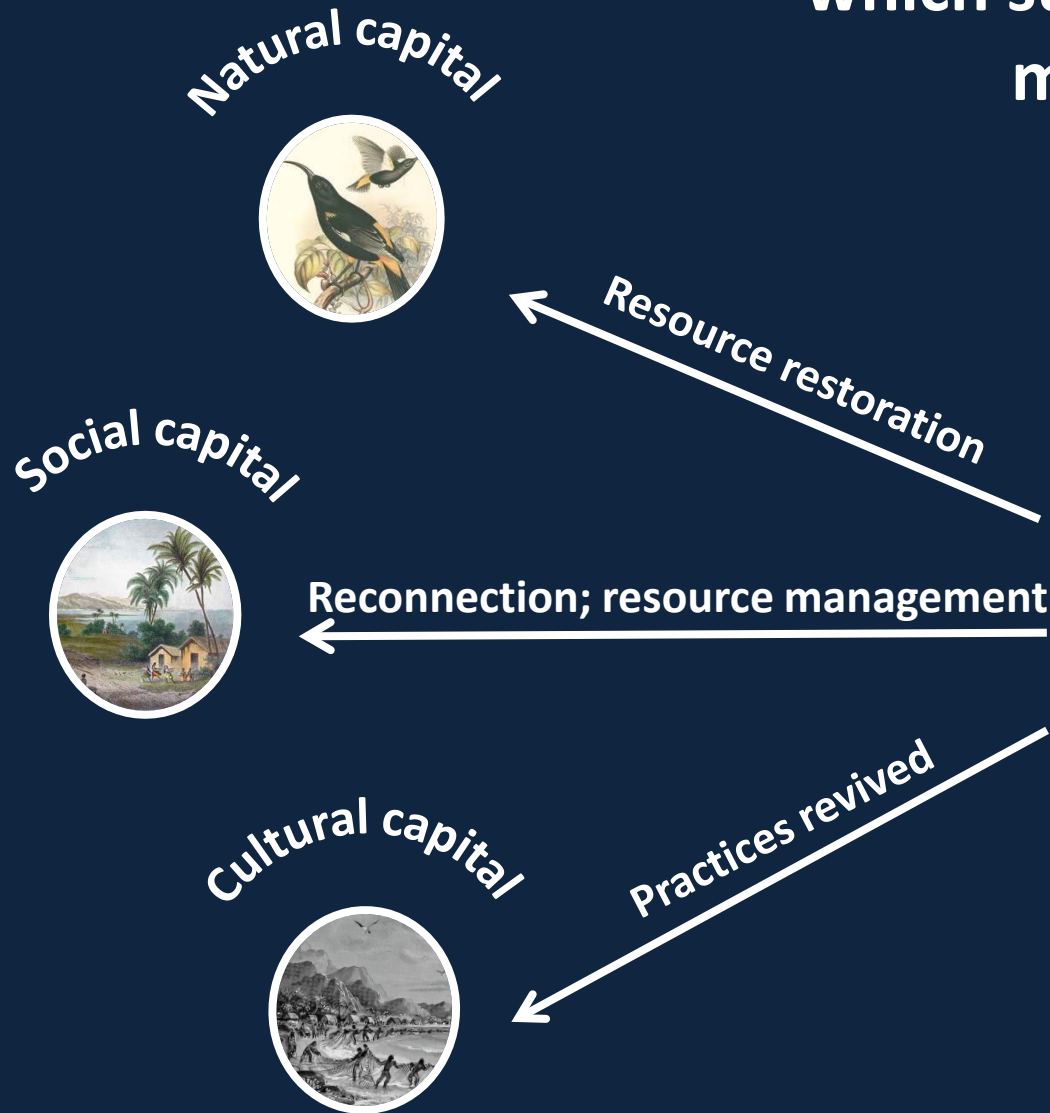
Return metrics capture waiwai (non-material wealth)



...and continued growth of financial portfolio

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U.S. + non-U.S. Equity			\$2.138	38%	\$2.633	29%
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Fixed Income & Cash Equivalents			\$0.871	15%	\$1.011	11%
HI Real Estate	\$0.001	100%	\$1.882	33%	\$3.150	34%
Total	\$0.001	100%	\$5.671	100%	\$9.186	100%

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



Resources for
mission



Elements of
Well-being



ʻIke **kākou** i ka moku!

