WATER IS LIFE

CONTEMPORARY AHUPUA'A

ALOHA!

What is this book?
This book briefly describes the history and culture of Hawai'i and the Ala Wai ahupua'a, the sustainability challenges the ahupua'a currently faces, and suggestions for moving towards systemic, ahupua'a-wide sustainability solutions based on indigenous Hawaiian culture in a contemporary setting. It includes both conceptual and practical guides to processes and strategies that communities may implement to move towards their goals.

What is the intention?
This book is intended to be an aid to communities and groups to create, organize, and move their communities towards their visions of sustainability.

How can it be used?
Details on guiding principles and a design process based on indigenous Hawaiian culture, design methods, and sustainability science can help users through the process of creating more sustainable, vital, and prosperous communities. Embedded examples and links to useful resources can help users understand the thinking this book is helping to create and possible strategies to implement in communities and throughout the ahupua'a.

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ARIZONA STATE UNIVERSITY

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TABLE OF CONTENTS

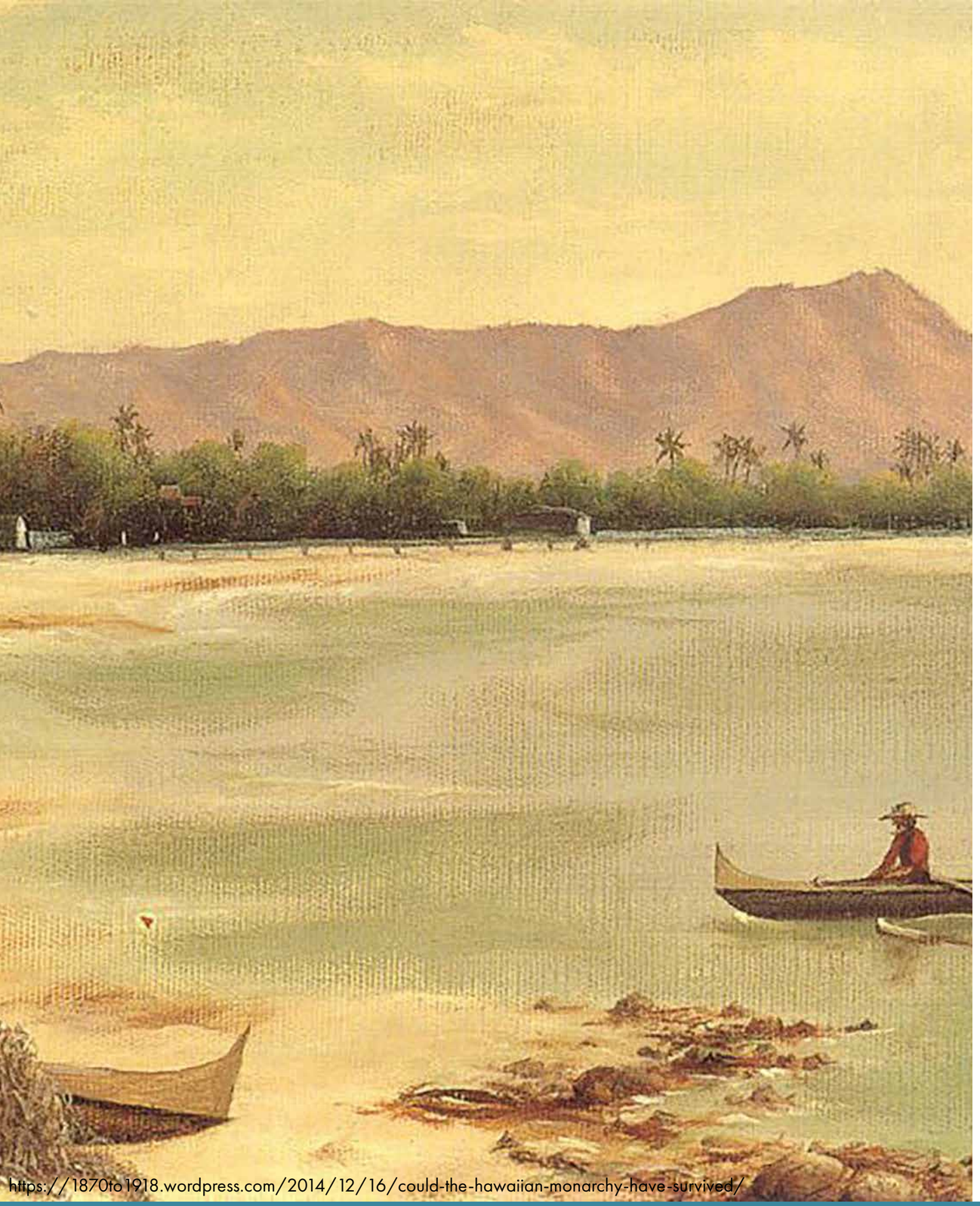
Executive Summary

This Community Toolkit was created for Hawai'i Green Growth to support the Aloha+ Challenge Goals. Although this Toolkit focuses on the key challenge of Honolulu's stream systems, it could be used to address other challenges in a systemic way. It developed out of a collaboration among Hawai'i Green Growth, Arizona State University's LightWorks, and Arizona State University's Design School. A statewide sustainability assessment (embed link) preceded this document and provides more detail about the sustainability challenges facing Hawai'i. A video summarizing this document is available here (**embed link, TBD**). Listening sessions with more than twenty groups across Hawai'i shaped the statewide assessment, video, and this Community Toolkit.

The Community Toolkit is structured into six sections to address the health of our streams, from ridge to reef. The first section summarizes the history of the Ala Wai watershed, illustrating the changing relationships between people and the land over the last 150 years starting with the indigenous Hawaiian's concept of ahupua'a. Ahupua'a are a traditional Hawaiian division of land based on the flow of water and the interconnection of agricultural, ecological, and social systems. The second section briefly describes the challenges facing the Ala Wai Watershed since urbanization, the context in which this Toolkit was produced. Building on the principles of ahupua'a, the third section presents five principles to guide regeneration and perpetuation of well-being. This is similar to Hawaiian's concept of mauō, the perpetuation of well-being. Section four lays out simple steps that community groups can follow to heal stream based on the five principles. Alongside the steps are demonstrations of the process meant to show how each step contributes to a project. One of the demonstrations, waterhoods, is outlined in section five as both an example of the principles and process in action and as a potential organizational structure to promote regeneration and mauo. Section six further details how the waterhoods might function and provides resources and tools for communities to implement the process outlined in section four.

Although this Community Toolkit is centered on the Ala Wai Watershed as an example, it is meant to be flexible and adaptable to other goals and contexts in Hawai'i. This Toolkit also provides a more generalizable approach that combines deep cultural connections to the land and innovative technologies to spur regenerative types of development. Additionally, the demonstrations and examples provided throughout are meant to catalyze desirable change and show what could be, not prescribe what ought to be. This Toolkit should be improved and informed as new knowledge is acquired through actions. Throughout the Toolkit are suggestions for reflecting on its strengths and weaknesses to promote improvement.

Ahupua'a are a traditional Hawaiian division of land based on the flow of water and the interconnection of agricultural, ecological, and social systems.

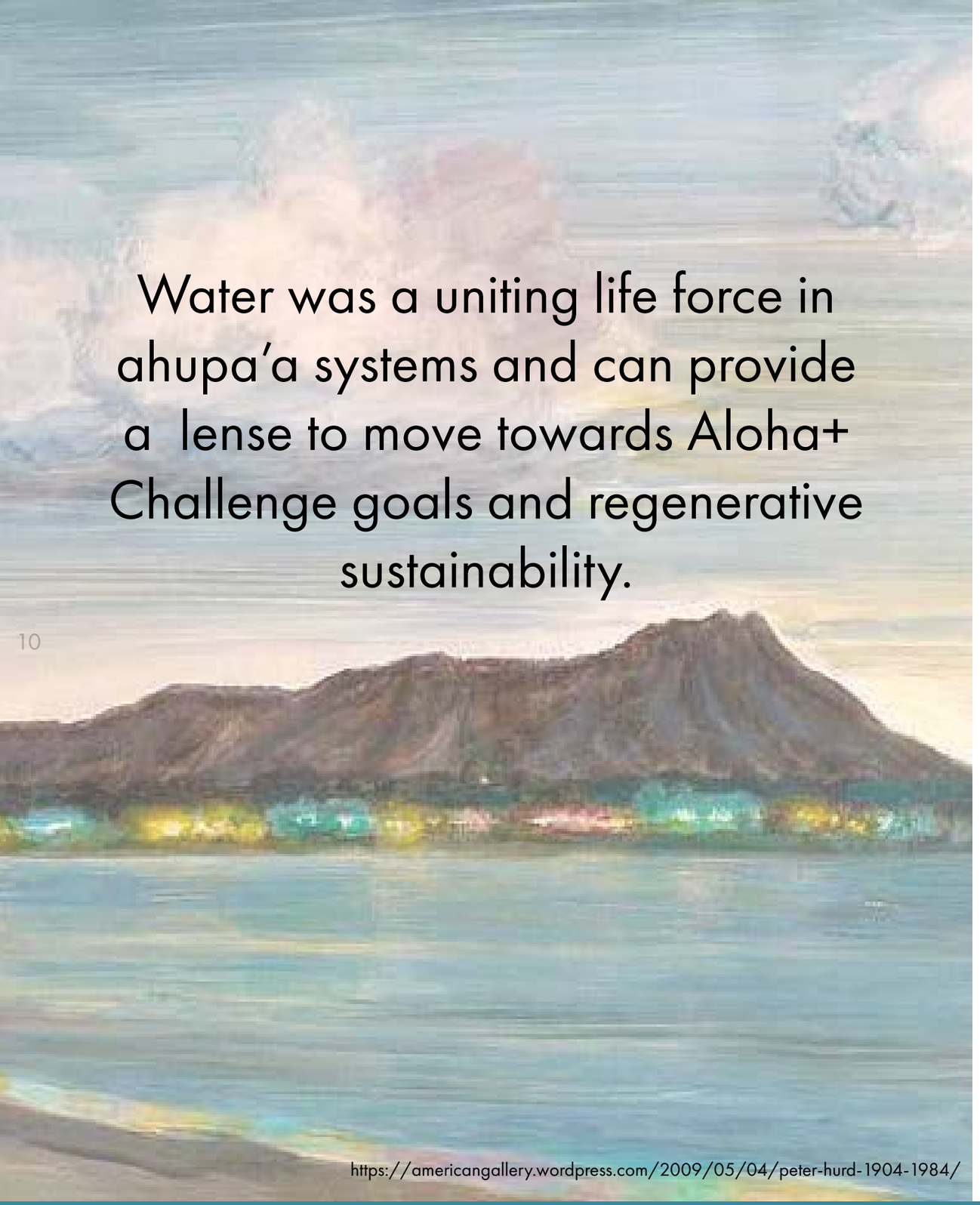


https://1870to1918.wordpress.com/2014/12/16/could-the-hawaiian-monarchy-have-survived/

History:

Human-Land Relationship & Changes Overtime

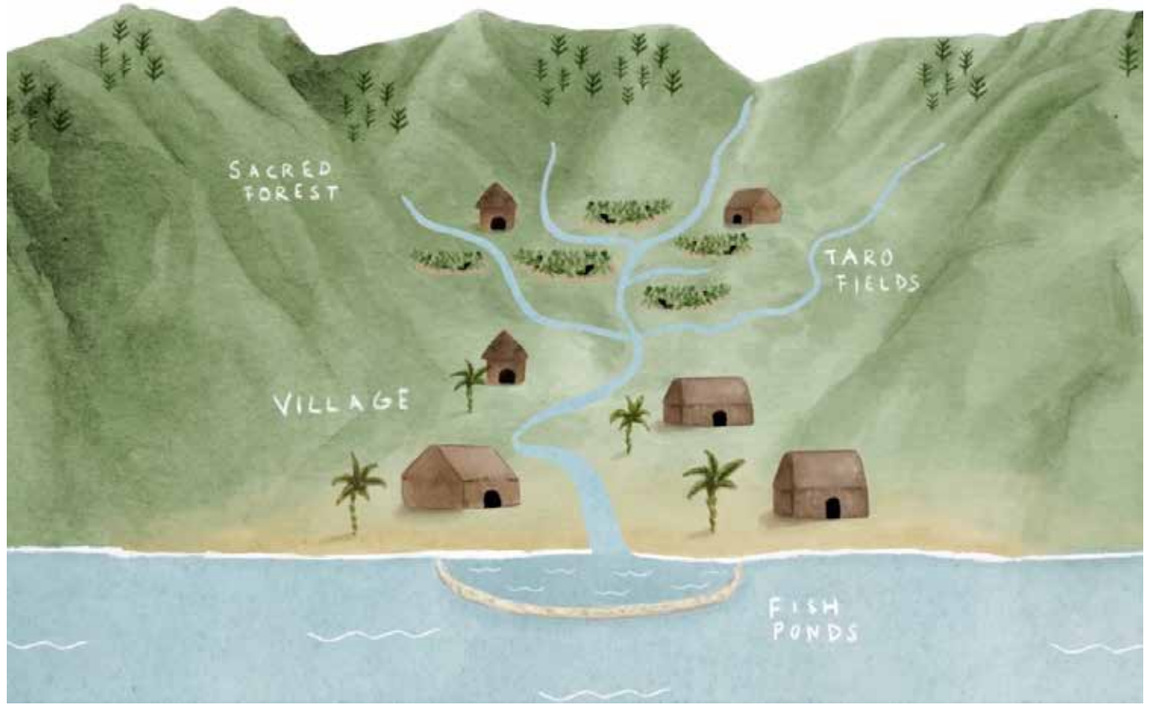
Water was a uniting life force in ahupa'a systems and can provide a lense to move towards Aloha+ Challenge goals and regenerative sustainability.



https://americangallery.wordpress.com/2009/05/04/peter-hurd-1904-1984/

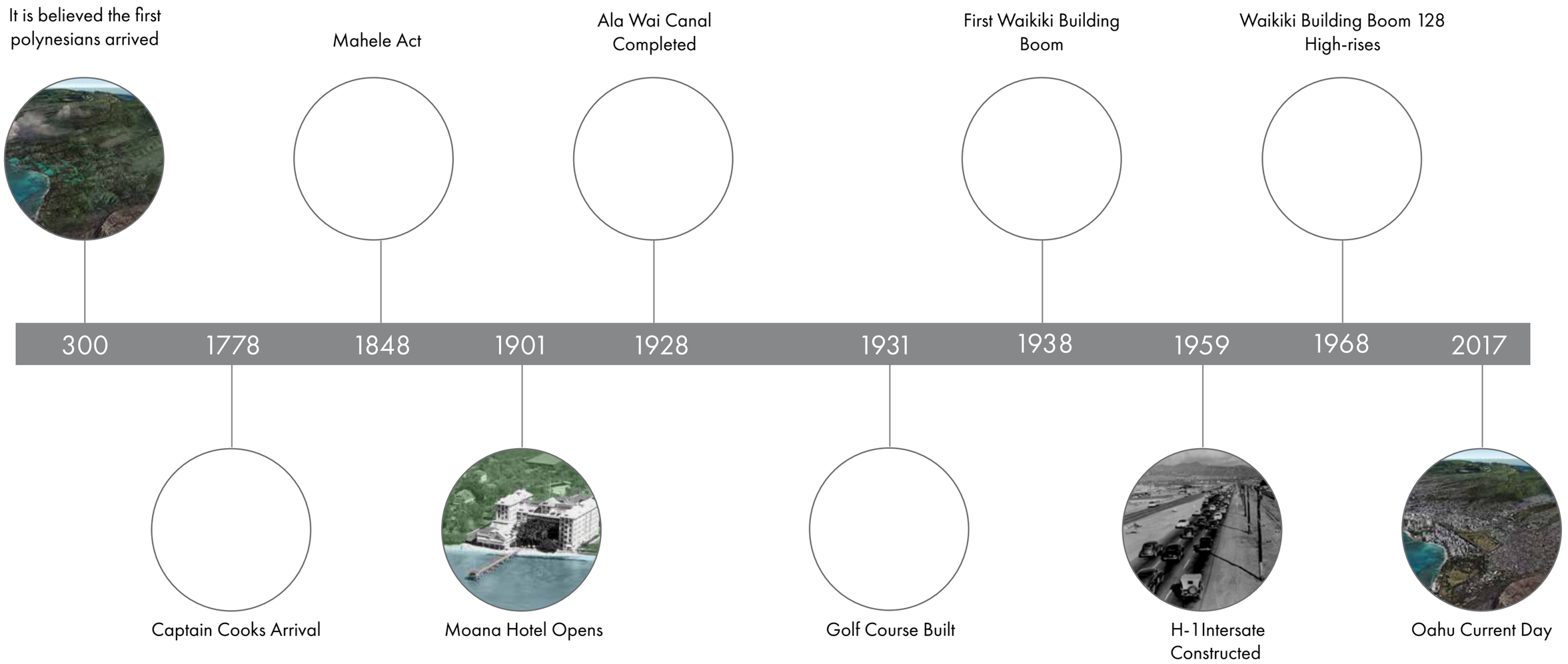
Indigenous Ahupua'a

Pre-industrialization, the indigenous ahupua'a was a watershed prosperity system. Indigenous Hawai'ians lived sustainably here for almost two millennia. It was organized physically and socially mauka to makai, people worked cooperatively and responsibly with nature. Everyone's needs were fulfilled within the ahupua'a. A rich culture based on love for others and for the land was developed.



https://vimeo.com/205385494

Changes Overtime



Challenge:
Catalyzing Ahupua'a Regeneration

Water is life…it is a sacred global resource, water in a stream runs in one direction, from mauka to makai, ridge to reef. In between, humans and nature play out their stories.

The largest inland body of water in Waikiki is toxic to human health.

https://www.tripadvisor.com/LocationPhotoDirectLink-g60982-d4154091-i236762071-Ala_Wai_Canal-Honolulu_Oahu_Hawaii.html

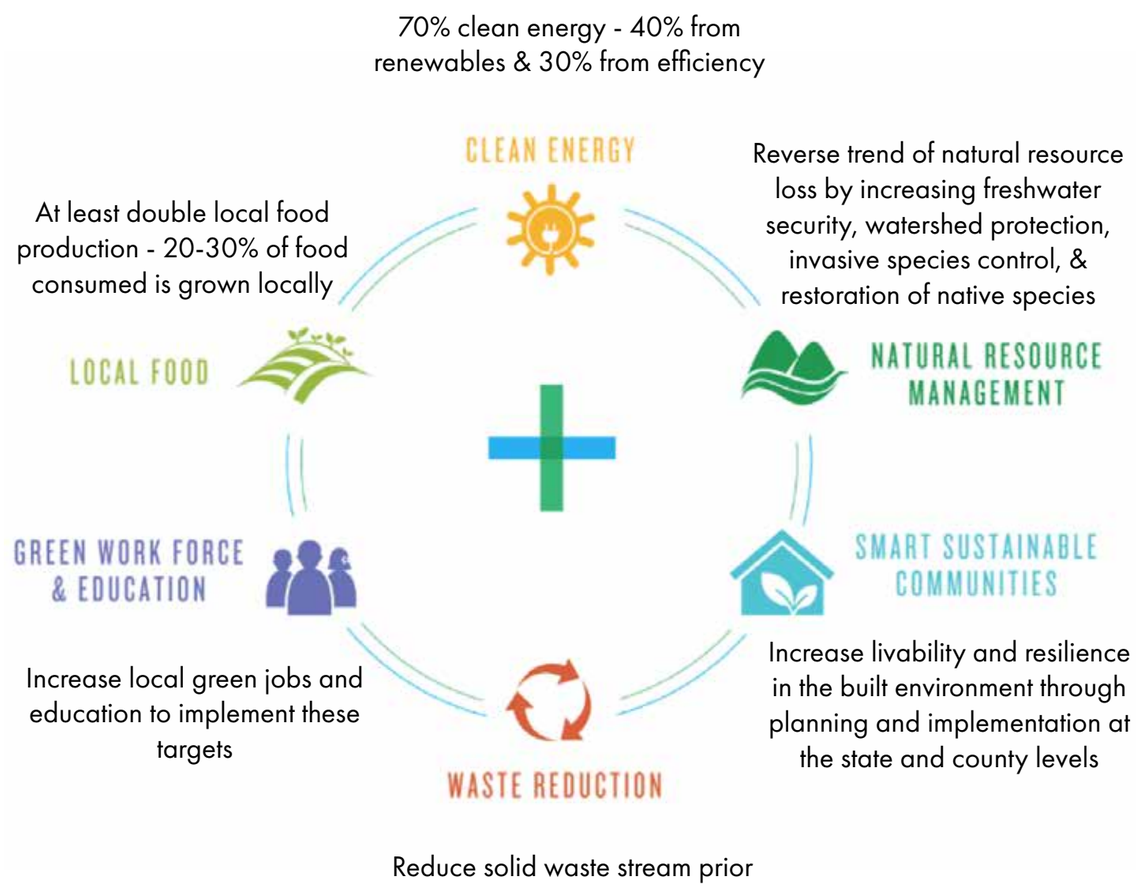
A 100-year rainfall event would flood nearly 40% of the Ala Wai ahupua'a's population.

Army Corp of Engineers

Numerous organizations work to restore the watershed but they are not working together.

Will create the call outs!

Hawai'i created statewide goals to address these problems:

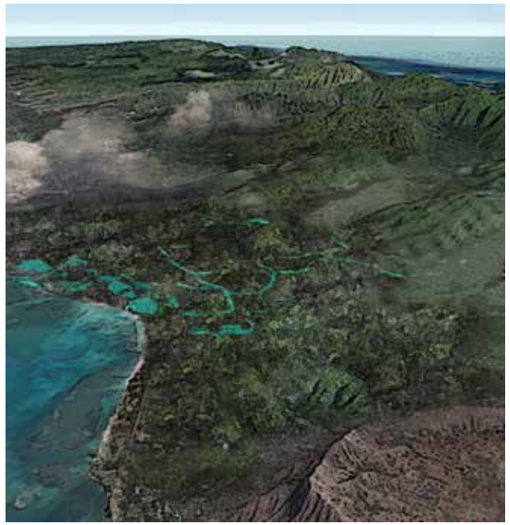


http://www.hawaiigreengrowth.org/aloha-challenge/hawai-i-2030-goals

Aloha+ Challenge

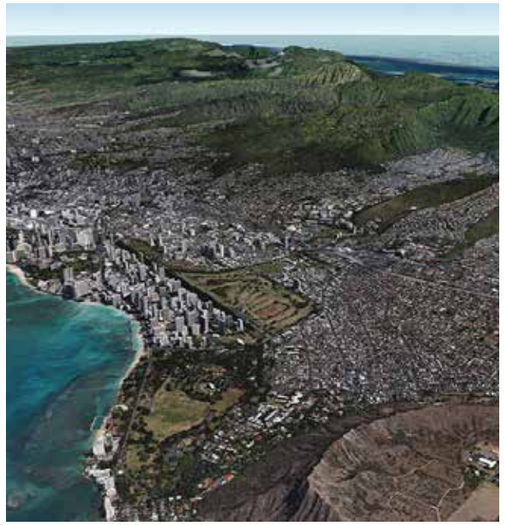
Hawai'i and the Ala Wai watershed faces these sustainability challenges and more. Understanding the need for systemic transformation, the State of Hawai'i created state-wide sustainability goals for 2030 and codified them in the Aloha+ Challenge. Hawai'i Green Growth is the backbone organization coordinating stakeholders to reach these goals. Water quality and quantity issues span all of the Aloha+ Challenge focus areas and can serve as a lens for creating and integrating systemic, whole systems solutions for sustainability.

What if...



Indigenous
Practices

+



Industrial
Development

=

Contemporary
Ahupua'a

Indigenous Hawaiian culture could merge with contemporary development practices?

"We know where we are because we know where we've been. We know where we're going because we can see it clearly in our minds."

-John Defires

Principles: Contemporary Ahupua'a

Five principles for a regenerative ahupa'a can serve as a guide for the design process and a filter for proposals.

What guided ingidenous Hawaiians?

The ahupua'a system was a prosperity system for human and more-than-human life that, through ***spirituality*** and the resulting values of ***reciprocity*** and ***responsibility***, perpetuated ***vitality*** throughout the system. It is through the interconnectedness of all life and the discovery and fulfillment of meaning and purpose within this context that vitality and, thus, ***prosperity*** throughout the system occur and mauō--the perpetuation of well-being--is created.

Principles Create Regeneration:

These principles can still guide us in a contemporary context. The concepts of regenerative sustainability and development link indigenous Hawaiian culture and mauō with sustainability approaches.

Regenerative sustainability: Very similar to the concept of Mauō, the perpetuation of well-being. Seeks to continually increase the vitality and prosperity of living systems (human and more-than-human life in a system) from a local to a global scale by:

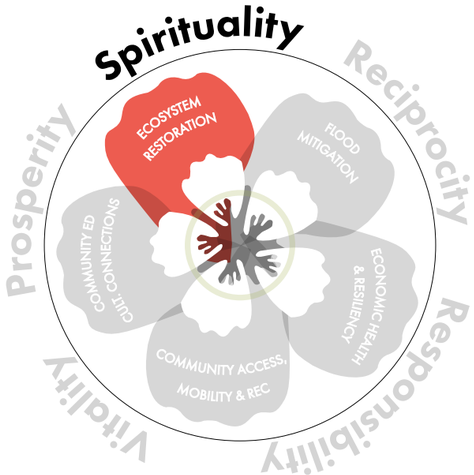
1. using locally-appropriate ecological design and engineering practices
2. creating reciprocally beneficial human-nature relationships
3.increasing capacities of coupled human-natural systems to rise to ever higher levels of vitality and prosperity for all life. (duPlesis 2012).

Regenerative development: A development and design methodology that aims to create and manifest designs, plans, and capacities in coupled human-natural systems to move towards regenerative sustainability. Creates the conditions and capacities necessary for the self-perpetuating, positive evolution towards increasingly higher states of vitality and prosperity of the system. (Mang & Reed, 2012).

These concepts are localized to the 5 guiding principles.

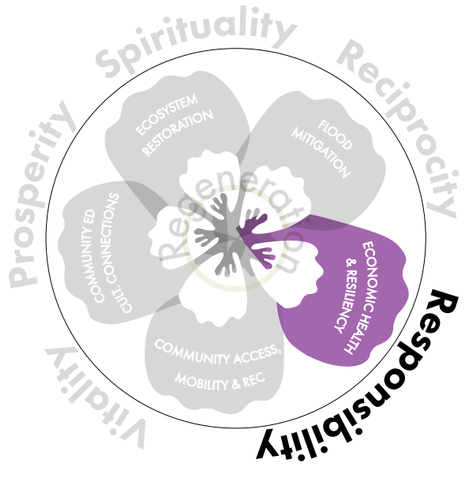
Principles:

Spirituality



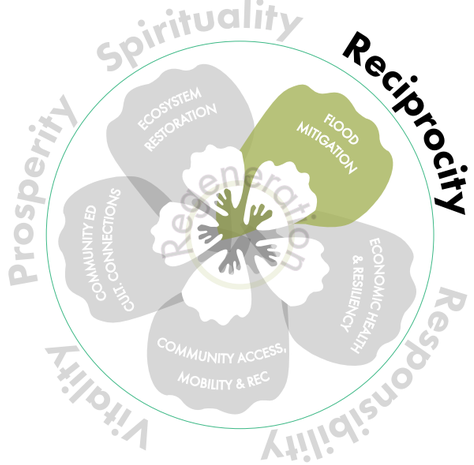
awareness & experience of belonging to the larger, interconnected community of life, purpose & meaning of life within this context, & the development of personal and community values & actions out of these.

Responsibility



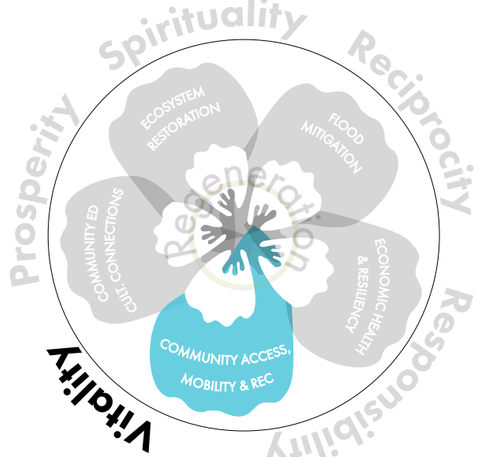
the state or act of being responsible, answerable, or accountable for something within one's power, control, or management

Reciprocity



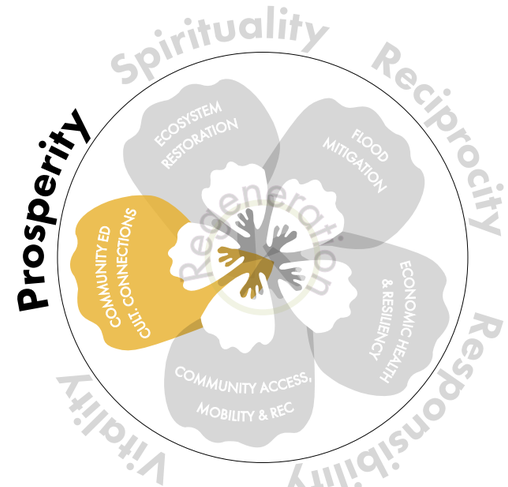
mutual exchange, dependence, action, or influence.

Vitality



life force and capacity to live and develop with meaning and purpose

Prosperity



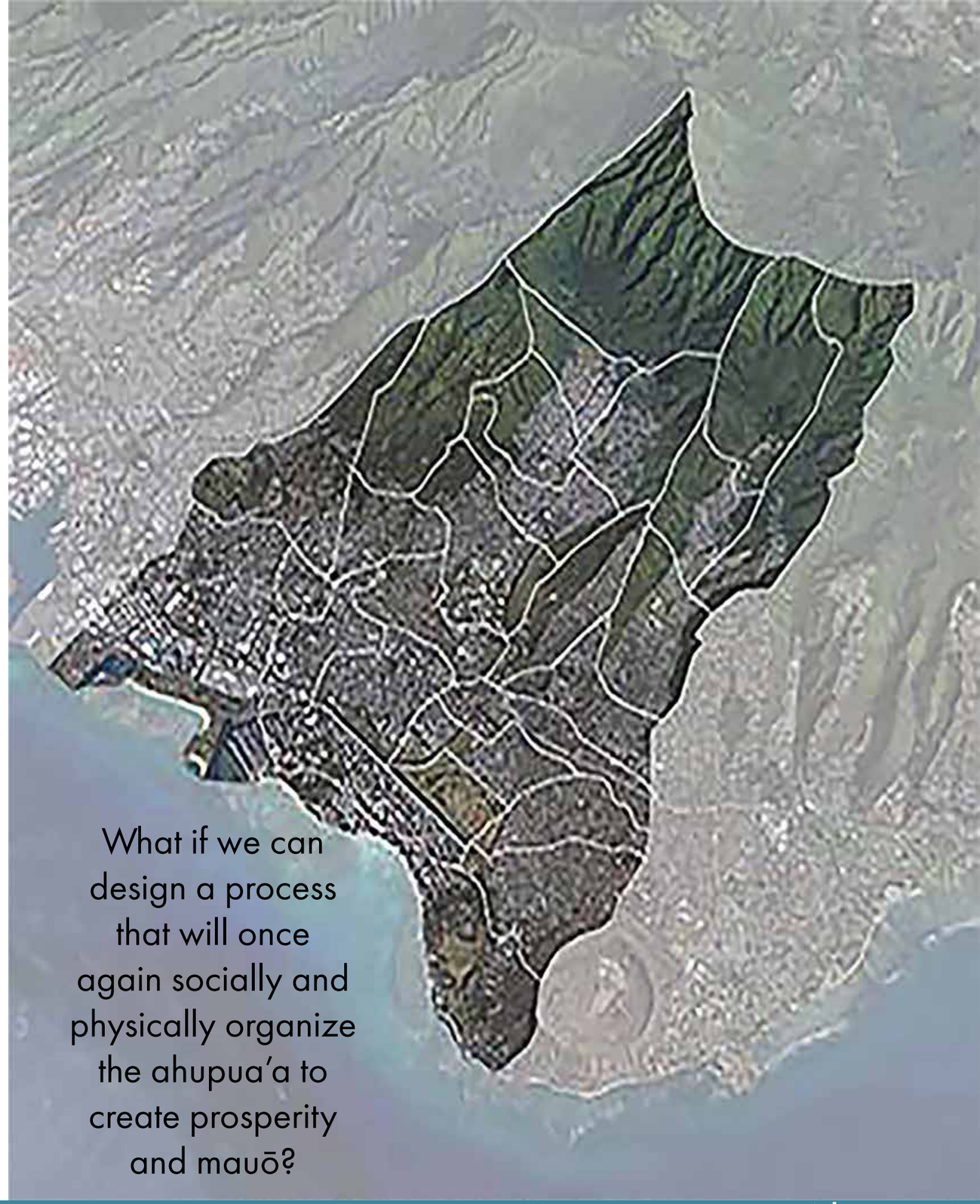
the condition of thriving, growing and developing vigorously

These principles can guide efforts to achieve Aloha+ Challenge goals (and more) and regenerate the Ala Wai ahupua'a.

Localization to Hawaii:

Citizens, organizations, and leaders building off of Hawaii's rich cultural traditions recently charted a path to the Contemporary Ahupua'a. The Aloha+ Challenge Goals catalyze socio-cultural, ecological, and economic change to promote the Aloha Spirit and create a global model for sustainability.

1. Guide actions, goals, process
2. Use principles with Aloha+ Challenge to create regenerative sustainability in AWW and beyond



http://ecotippingpoints.org/our-stories/indepth/usa-hawaii-heeia-fishpond-watershed.html

Designing the process to empower diverse communities for mauō

An overview of a process to empower diverse communities for mauō and its application in the Ala Wai Ahupua'a. Embedded demonstration projects provide detailed accounts of the process in action.

Guiding Actions:

Guiding actions translate the principles into ideas and projects:

1. Combine infrastructures and systems

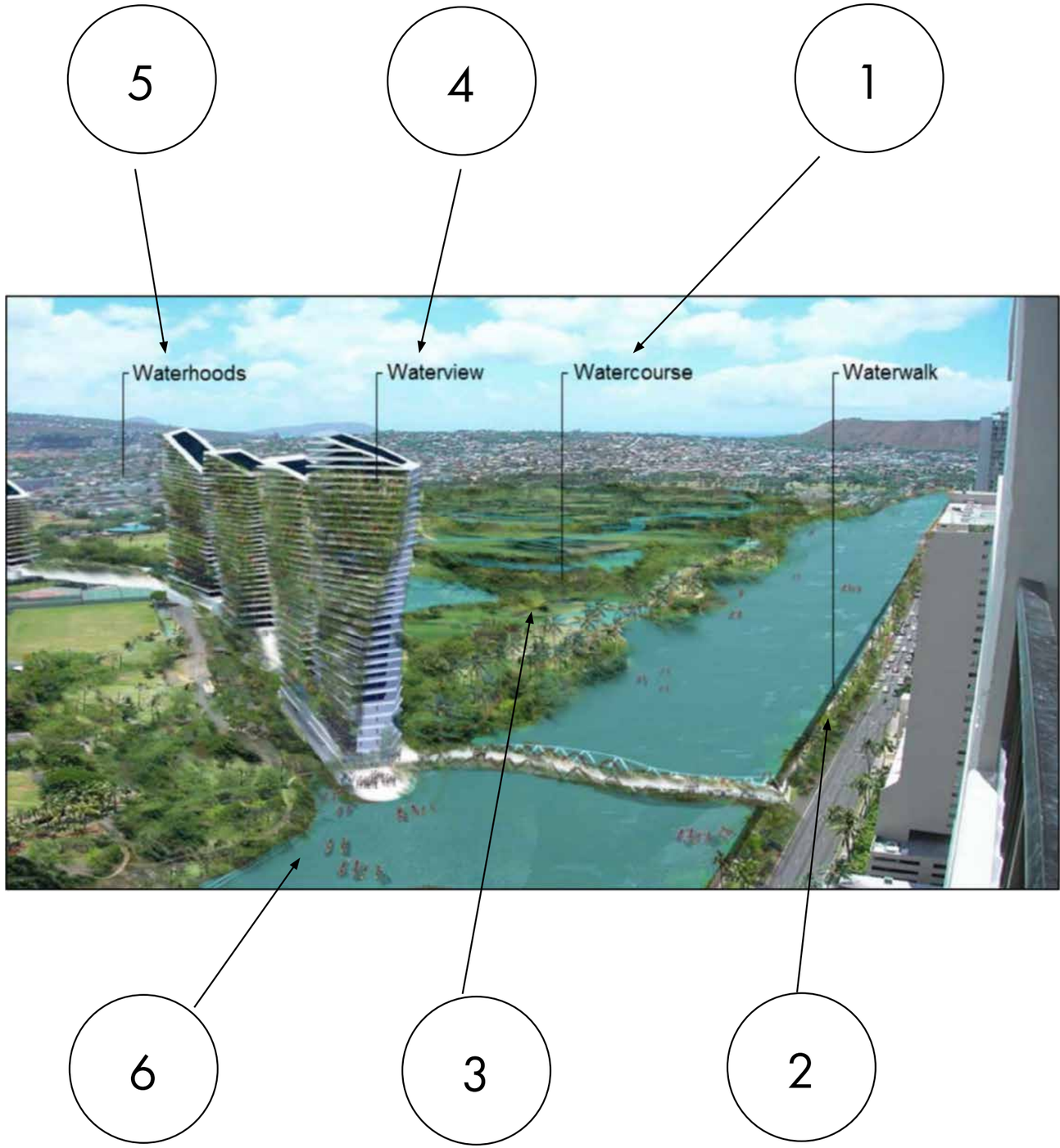
2. Leverage the space created through combining infrastructures

3. Capture social and ecological value for communities and to pay for projects

4. Create replicable processes and function, rather than products, to advance impacts

5. Grow capacities (see capacities in principles section)

6. Leverage intersections of elements and create synergies



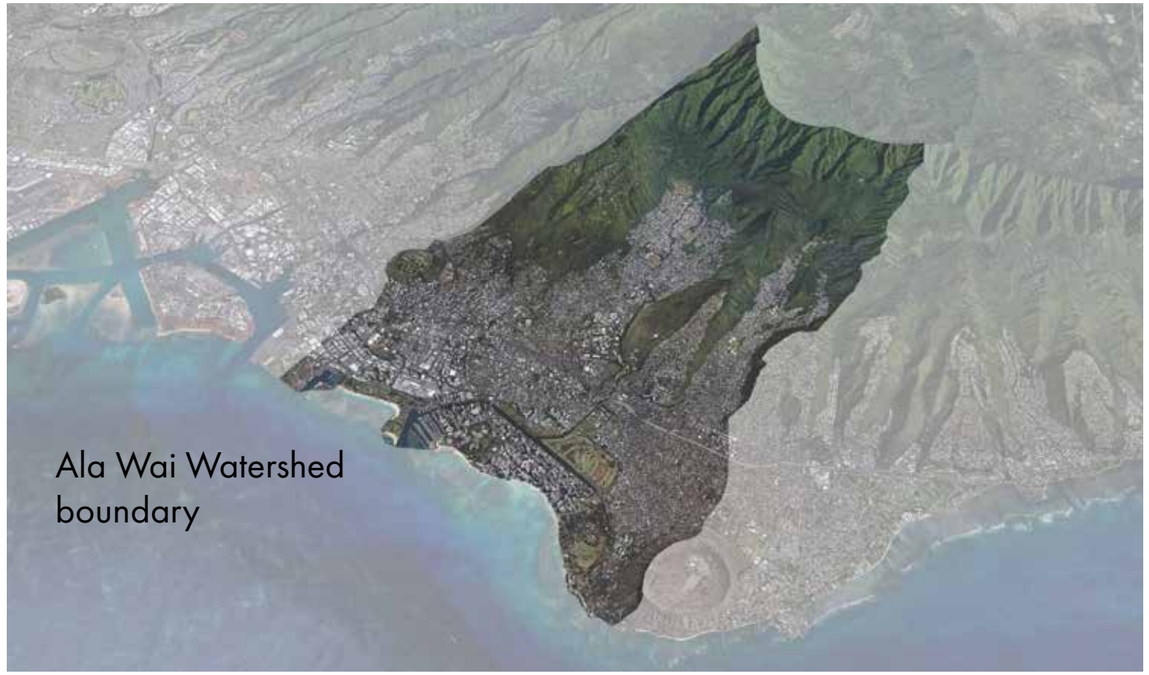
Step 1: Bound your system--what is your community? How big is "here"?

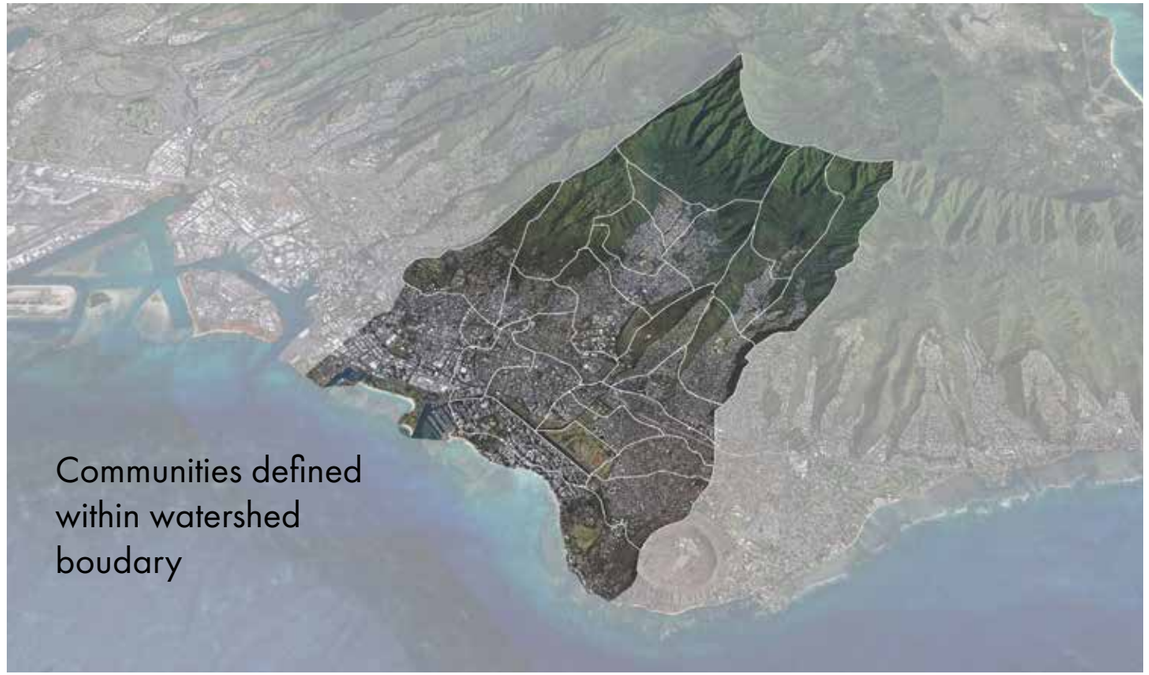
Goal: Be explicit about what your community is. Physical and social boundaries give clarity about where and how to work in later steps.

- Include yourself and household as one level in which to work. Then think about the communities of which you are a part.

- To get there, talk with fellow community members and address the following questions:
    - Who is part of the community?
    - What defines the community, physically and socially?
    - Where does the community end?
    - Why do people like the community?

- Some tips:
    - Be conscious aout excluding people and nature--practice inclusion
    - Draw on maps to show where the community is, who is in it, and what is in it
    - Share stories about the community and what makes it special
    - Consider events, initiatives, and activities that connect the community





Step 2: Characterize/understand historical conditions & current trends

Goal: Identify patterns of change, problems, and opportunities

To get there, document conditions and change of:
Must include:

-**Valued community assets**

- What do people love about this community? Where are these places? Why are they valued?

- Power dynamics

- What are the formal and informal power dynamics? Who has power and who doesn't? Who or what is overlooked or underserved?

-Who generally makes decision for the community? Who's left out of those decisions? Who faces more hardships in the community and why? Are there formal and informal conflicts?

-Ecological conditions

- Is the water in streams clean? Are there lots of native birds and plants or few?

-Hydrologic conditions

-What parts of the community floods during storms? Are the local storm drains main tained?

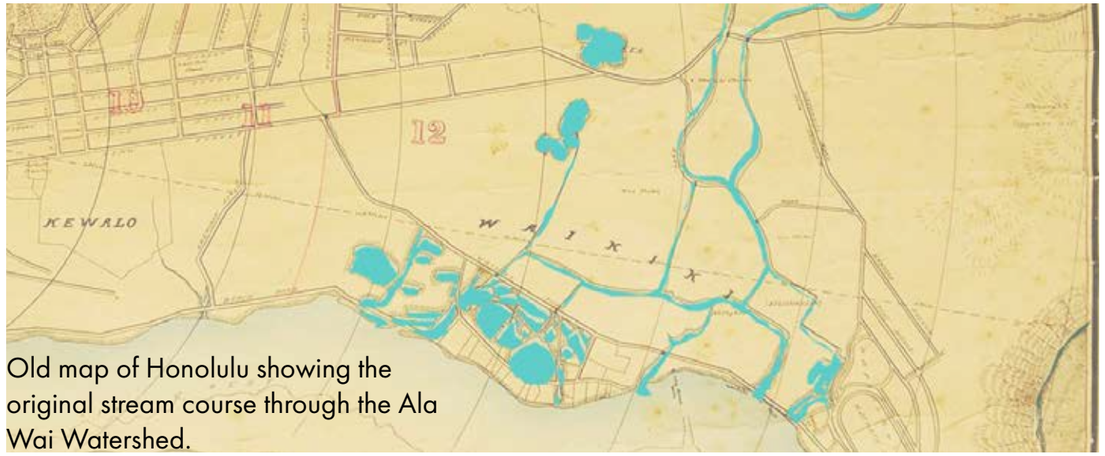
- Demographics

-Who lives here? Are there a lot of young people? Elderly people? Families? Are many people poor? How many people live in each apartment or house? Are many people Hawaiian?

Might include:

- What are the existing actions, project, policies, and community efforts?
- What are the economics of our community? What attracts investment in the community?
- What/who are key organizations and people playing important roles?
- What are the various perspectives on problems & solutions within the community? Are they in conflict?
- What are our community's existing social, economic, &ecological capacities?
- What is the urban form of our community? Is the community mostly houses, apartments, or commercial buildings? Is there lots of greenspace? What cultures are present?
- How equitable is our community?
- How do most people get around? Is transportation affordable? Are there some people who cannot get around easily?
- Is affordable healthy food easily accessible? Are there many grocery stores?
- Are there schools? How do the schools interact with the community?

Historical Conditions:



Old map of Honolulu showing the original stream course through the Ala Wai Watershed.

Opportunities:

Diagram 1 shows how hydrolic/flooding situation will be in a 100 yr storm.

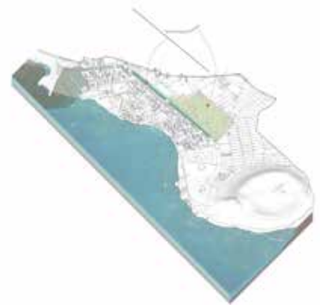


Diagram 2 depicts realigning of the of Manoa-Palolo Stream to orginal course

Diagram 3 shows wetland retention ad filtration system in golf course to help with future flooding.

Example of opportunites coming to life within the golf course after understanding current conditions.

Step 3: Identify potential relationships between inventory items

Goal: Illustrate relationships among current conditions and trends

To get there:

- **Use maps to look for hotspots**
  - Example relationships:
  - Low-income area that is also in a flood zone or is a food desert,
  - Need of ecological restoration and a school close by that could use the restoration as part of its curriculum.
- **Build diagrams that show the relationship between certain present and past conditions. Use the diagrams to ask questions and explore 'unknowns'**
  - Example relationships:
  - The development of a neighborhood created 50 years ago degraded water quality in the stream.
  - There are few grocery stores in the neighborhood--everyone drives.
- **Ask questions about how the conditions and elements identified above interact and affect the vitality and prosperity of your community.**
  - For example:
  - Does the flow of water bring vitality and prosperity to our community for all life? Are there any places where it decreases vitality and prosperity? Are there places it could be improved?
  - Which relationships stand out as most important to creating vitality and prosperity for your community?

Original image of golf course. Shows disconnected Waikiki, minimal water flow that impacts the water quality and how this is a flooding hotspot.

Rendering shows how flooding can be mitiagated because of relationships identified with inventory.

Step 4: Identify relevant case studies

Goal: Prepare for creating proposals. Find relevant case studies that provide examples of strategies and tactics implemented to address problems and manifest potential.

To get there:

- What case studies are relevant? What are people doing here or elsewhere that might work here? Are there parts of these solutions that may work here?
- What current case studies provide examples of partial or complete solutions that may work here?
- What did people do in the past that may work here again?
- How can we adapt these examples to work here?
- How could/would these potential solutions contribute the the vitality and prosperity of our community?
- Use case studies to discuss the tradeoffs of different relevant examples.

To find case studies:

- for example, www.asla.org, www.lafoundation.org, www.100resilientcities.org

Portland Case Study:

Can use case studies sucha a Portland to get ideas for proposals and designs like for the rendering done for the Ala Wai Canal

http://www.werf.org/liveablecommunities/studies_port_or.htm

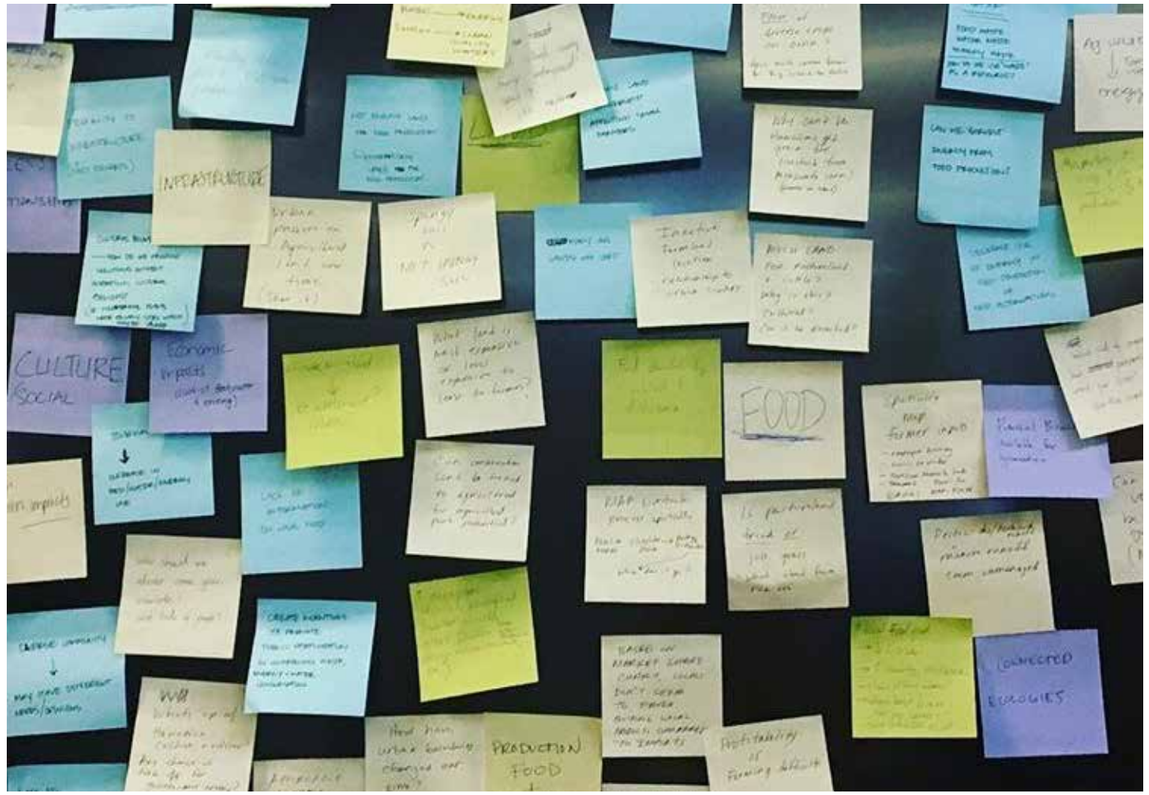
Ala Wai Canal Rendering:

Step 5: Create proposals

Goal: Use steps 1-3 to create ideas for multifunctional projects throughout the watershed.

To get there:

1. **Envision futures (starting from potential vs. problems)**
   - 'What if' questions help explore potential futures and imagine a state were two competing ideas compliment each other:
   - What if we create economic value and restore the local ecosystem?
   - What if we do [blank] like the city in this case study did?
   - What if our neighborhood captured enough water for all of its residents' uses?
2. **Create ideas**
   - Use a pen and paper, software, conversation, or any other method to illustrate projects that address undesirable current conditions and desired futures
3. **Iterate**
   - Critique, improve, and create new ideas. Continue to iterate until principles are met.



Putting ideas on sticky notes can also be a form of creating ideas and getting them out in the open.

Step 6: Reflect on the process

Goal: Use the experience of the process to improve it

To get there, start by answering these questions:

-What worked and what did not?

-Who was included and who was not?

-What challenges arose and how were they surmounted?

-Was progress made towards the group's stated goals?

Along the way, remember to:

-Seek improvement, not criticism

-Keep the conversation about the process, not individuals

-Accept shared responsibility

Some groups may find reflection difficult. Here are some ways to facilitate reflection among all participants:

-Small group discussions (photo of small group conversation or something?)

-Smaller groups allow for dialogue among participants without the pressures or time constraints of a larger group.

-Findings from small group discussions can then be discussed as a larger group to find overlapping concerns and suggestions

-Journaling or writing activities

-Throughout the process, notes and reflections on what's working and what's not provide a helpful resource when it comes time to review

-Music, poetry, or other forms of expression

-Just like whole societies use the arts as a way to reflect on key issues, music, poetry, photography, or any other form of expression can be a helpful venue for reflection in smaller groups.

-Designated 'review' board made up of trusted participants or outside observers

-Trusted participants and/or outside observers can note key shortcomings and successes and start conversations about improving the process.

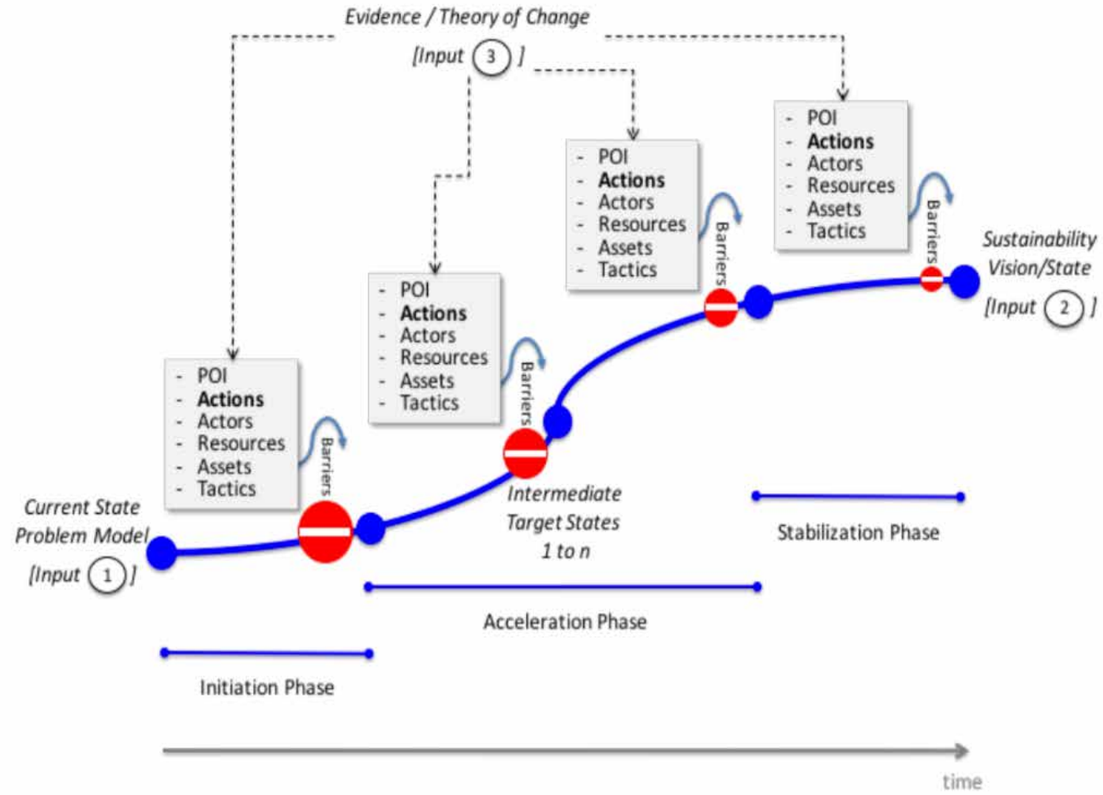
http://infed.org/mobi/wp-content/uploads/2014/03/eldan-goldenberg-groupwork-eldan-492925839-ccbyncsa2.jpg

Step 7: Strategize & Implement

Goal: With a project idea ready, build the structure to support the project from start to finish and beyond

To get there:

- **Establish baseline data relevant to the project**
  - What needs to be measured and how is it measured? Local experts can help find techniques for specific measurements.
  - Who will measure this before, during, and after the project?
- **Identify key stakeholders, barriers, and opportunities for the project**
  -Who is key to implementation and are they on board?
  -What might prevent successful implementation?
  -What existing opportunities can the project build off of?
- **Work with stakeholders to create step-by-step plan**
  -How will each stakeholder contribute?
  -Who will do what, when?
  -How will funds be disbursed and when?
  -Who will manage the project/s?
- **Engage community stakeholders**
  -How are funds distributed?
  -Who is responsible for different parts of the project?



Need to edit and cite

Step 8: Monitor

Goal: Examine the results of the project and ensure that its meeting goals

To get there:

-Continue baseline measurements during and after project implementation
-Set up
-Is this project accomplishing the intended objectives and meeting goals?
-Is this in alignment with the guiding principles and creating vitality and prosperity as envisioned?

http://ecotippingpoints.org/our-stories/indepth/usa-hawaii-heeia-fishpond-watershed.html

http://ecotippingpoints.org/our-stories/indepth/usa-hawaii-heeia-fishpond-watershed.html

Step 9: Adapt

Goal: Much like reflection is needed in designing a project, reflection is needed afterwards to continually improve it

To get there:

-Use what's learned from other projects and from monitoring to further improve.

-Keep these questions in mind:

-Have our goals/desires/needs changed?

-Does our community need different/additional projects to manifest our vision?

-Do we need to adapt our vision?

-How could the project be altered to create a process or outcome more in alignment with the guiding principles and the envisioned processes and outcomes?

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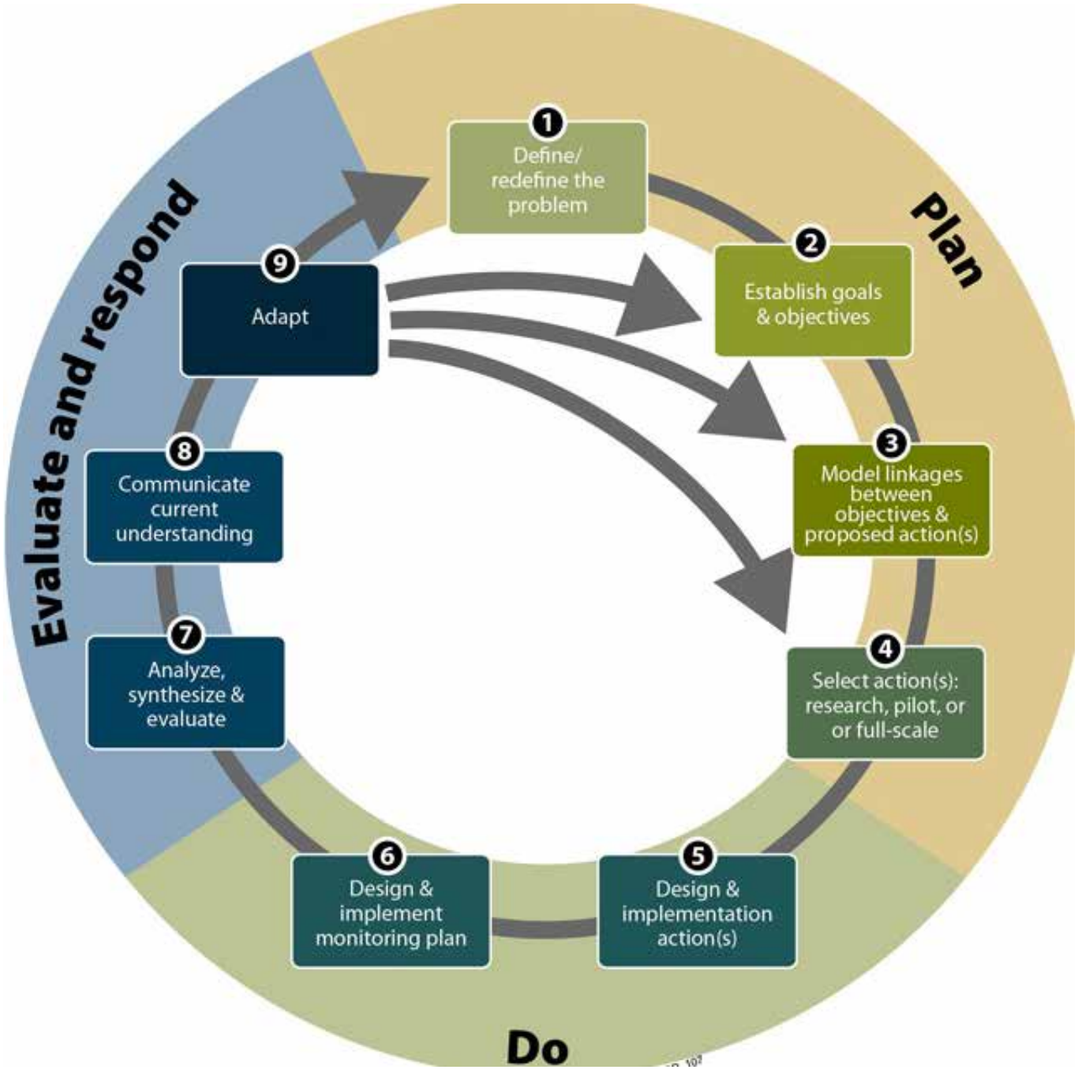
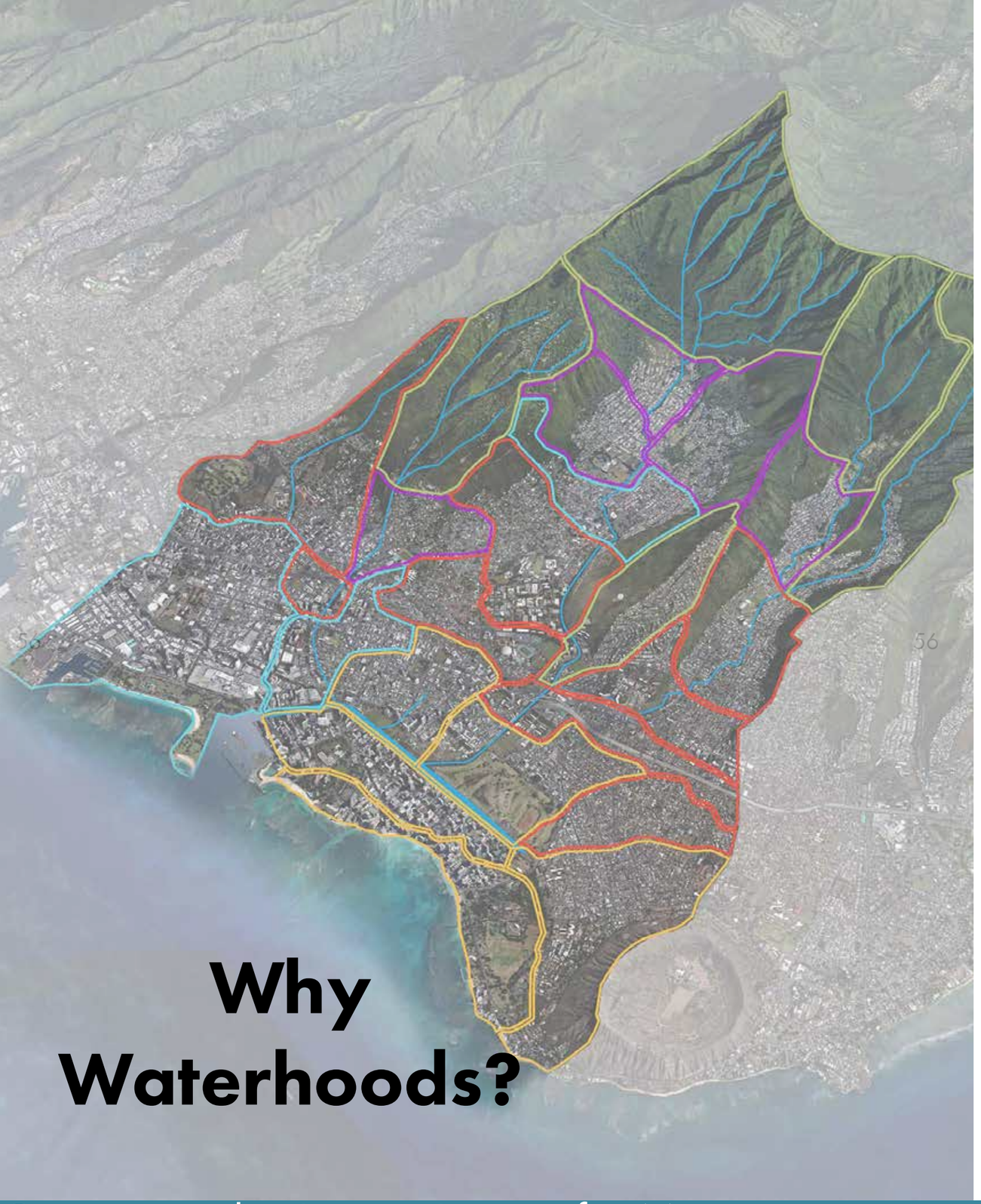


http://staging.iolani.org/news/7th-graders-help-out-heeia-stream

Organizing the Design Process for Mauō: Waterhoods

Waterhoods are both an outcome of the design process and a vehicle to employ it across the watershed. Waterhoods are local centers for decision-making and ahupua'a regeneration distributed across the watershed.

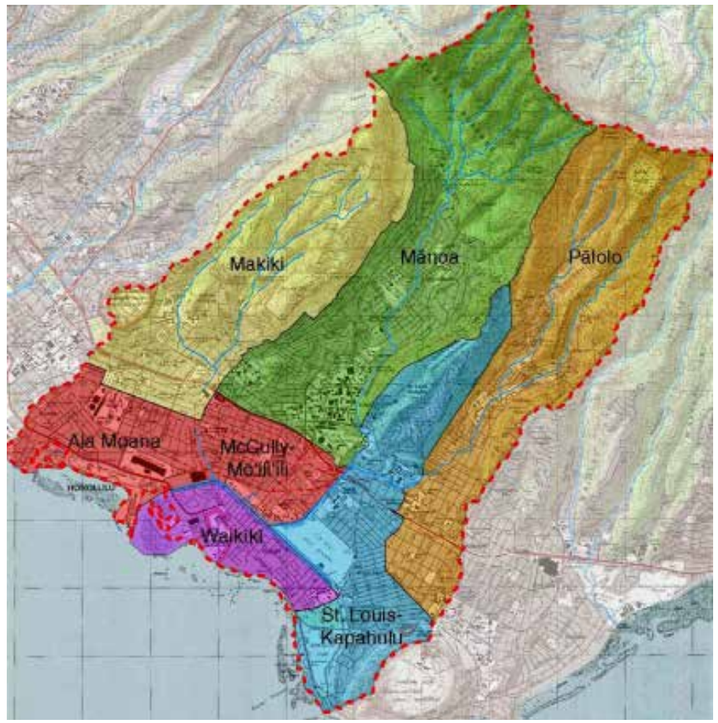


Why Waterhoods?

Discontent with current plans for and management of the Ala Wai watershed necessitate a local and community-oriented approach to management and regeneration. This brings community knowledge and concerns to the forefront of addresses problems across the Ala Wai, building vital and prosperous communities. This approach bolsters a strong sense of community, an active civic life, and a strong connection to nature--the Aloha culture.

What are waterhoods?

Waterhoods are physical and social organizations for the principles + process across the ahupua'a. Indigenous Hawaiians also used the flow of water to organize. In a contemporary context, breaking up a watershed as large as the Ala Wai watershed into smaller organizational units based on storm watersheds boundaries makes the system more easily manageable and transformable for community members. These units allow community members to more easily connect with each other and nature, experience reciprocity, demonstrate responsibility, and create vitality and prosperity within their communities and beyond.



Areas within watershed already defined

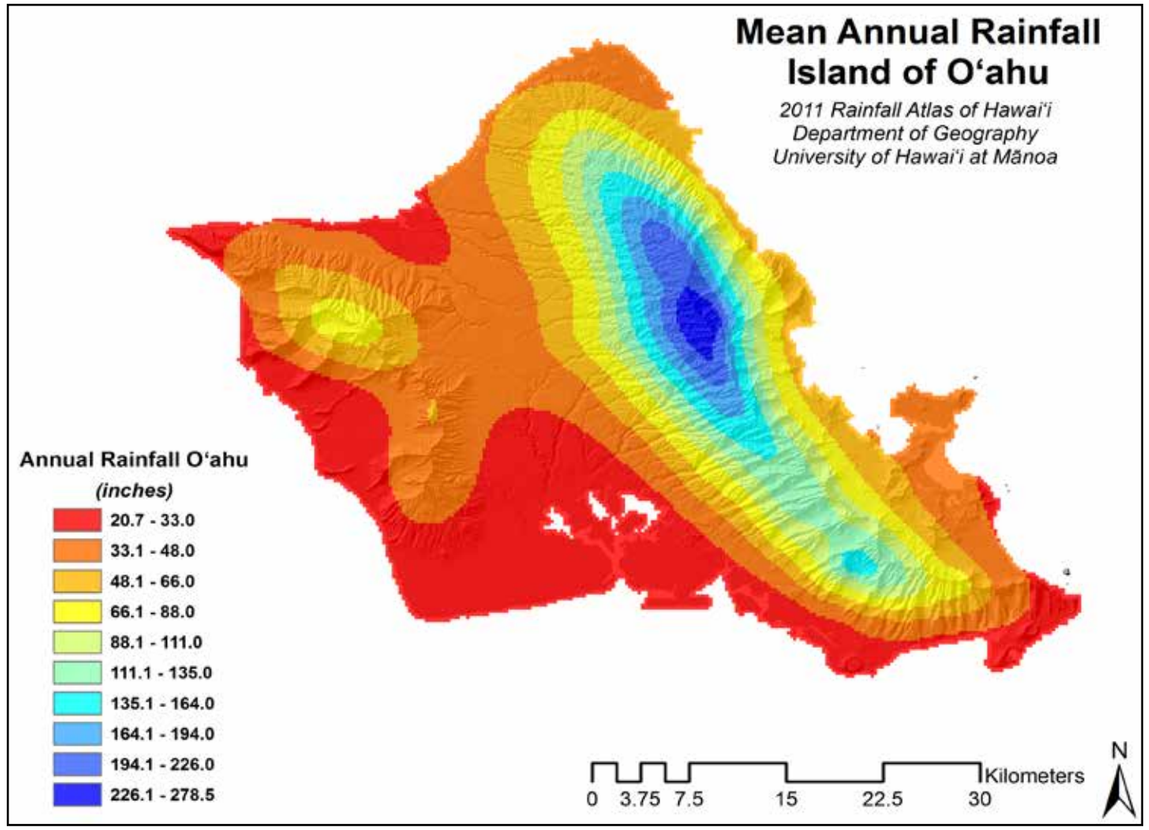
Watershed communities defined within watershed boundaries and areas.

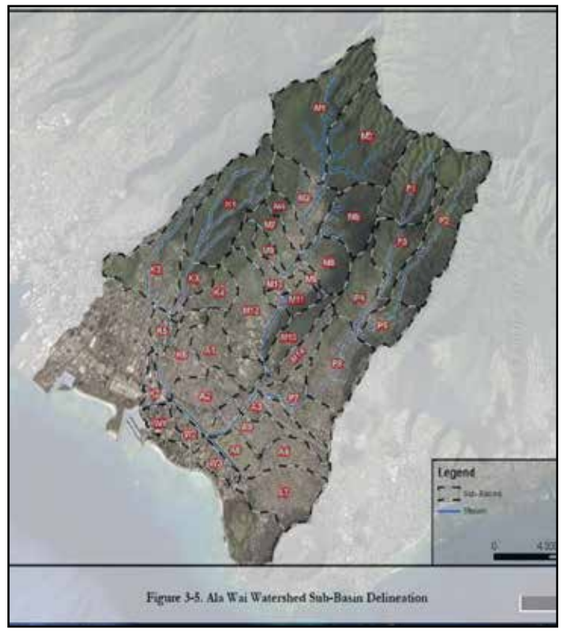
Creating waterhoods: Combine natural & social boundaries

Hydrologic boundaries + neighborhoods

Case study: Neighborhood Network, Portland, Oregon

https://www.portlandoregon.gov/oni/25967





Features/Functions:

Distributed local design and decision making and action for ahupua'a regeneration

-Decentralized decision making and action empowers local communities to reflect on and regenerate the ahupua'a.

Efforts specific to community needs and landscape

-Community-based decision-making empowers communities, promotes responsibility and reciprocity, prioritizes local needs, priorities, and situations, and takes advantage of the knowledge of local residents regarding their community.

Organizational structure for connecting community engagement, education, capacity-building

-As communities improve water quality or address other sustainability issues, they devise a shared plan for evaluating progress towards goals and can enlist community members and organizations in monitoring progress. For example, measures to improve water quality can be connected to local educational efforts on watershed health, providing a monitoring framework and educational and community-engagement opportunities.

Allows for pragmatic learning: what works and what doesn't across the watershed

-Sharing lessons learned across waterhoods builds local knowledge and capacities and leads to vital and prosperous living systems.

Grass-roots structure with top-down support and coordination

-Local organization, decisions, and actions are supported by higher-level organizations and resources, such as the University of Hawai'i (Extension Service), City and County of Honolulu, State of Hawai'i, that provide knowledge, programs, coordination, and funding.

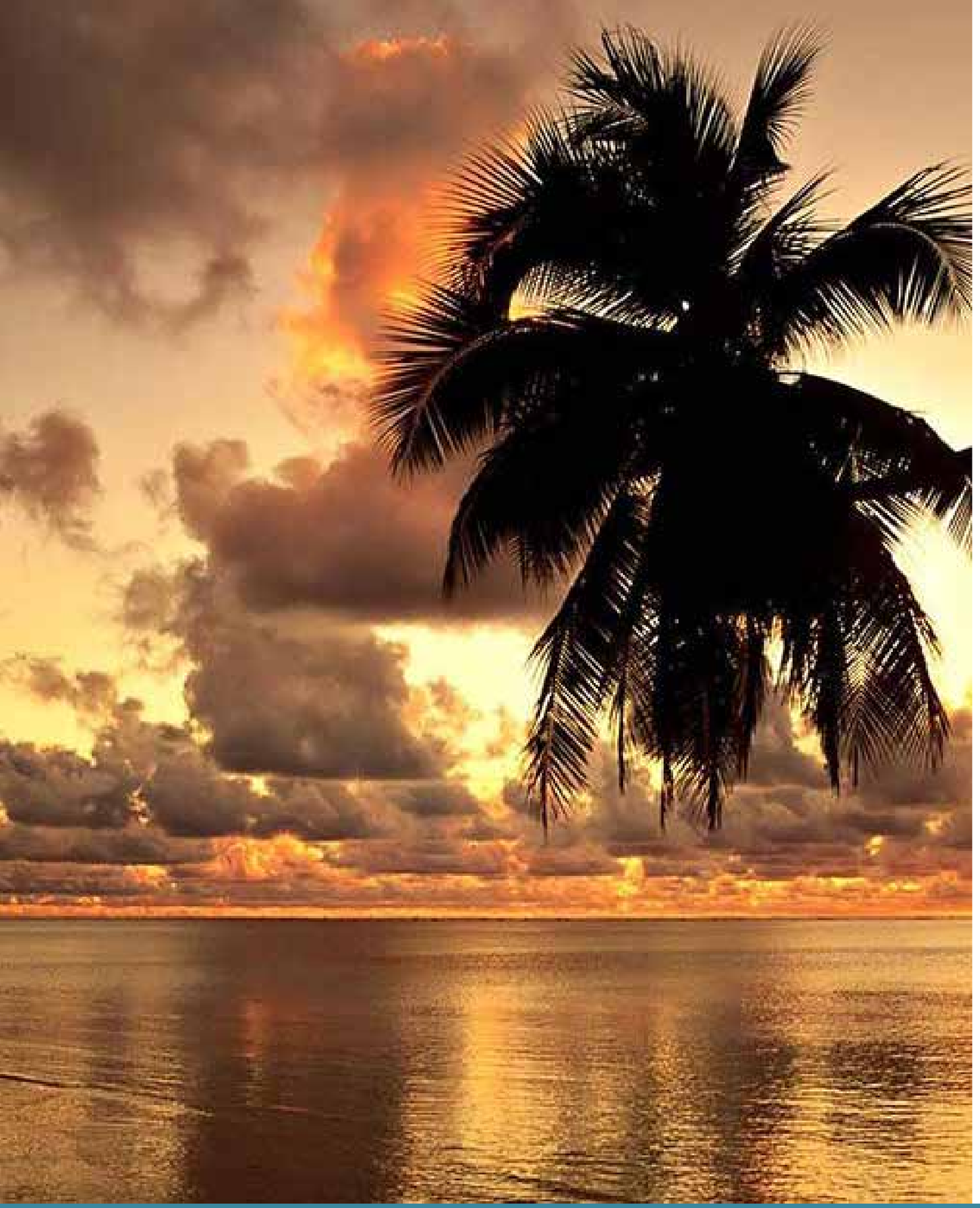
Public-Private-Partnerships

Public initiatives can be supported by other public initiatives (see above) and private interests, such as private philanthropists or businesses (e.g., social entrepreneurs or businesses wishing to become more sustainable) that have an interest in sustainability in communities and the watershed.

See Section 6 (Toolkit and resources for waterhoods) for details on potential structures, support, tools, and resources for waterhoods.

http://staging.iolani.org/news/7th-graders-help-out-heeia-stream

https://www.nlm.nih.gov/nativevoices/assets/timeline/000/000/423/423_w_full.jpg



Making it Happen:
Toolkit & Resources for Waterhoods

The following are suggestions, based on analysis and understanding of the watershed, indigenous Hawaiian culture, and design process, for organization and action towards mauō throughout the ahupua'a and beyond.

Waterhoods Structure:

Waterhoods Advisory Committee--A guiding and coordinating organization in service of the waterhoods and Ala Wai watershed regeneration:

-Members will include people with many different relevant areas of expertise: ecology, urban design and planning, landscape architecture, sustainability science, regenerative development, education, indigenous Hawaiian culture, community activism and development, economics, etc. Representatives from each waterhood will also be on the committee.

Functions:

-coordinate activities in waterhoods to create synergies and mauō throughout the watershed

-facilitate learning between waterhoods

-act as a liason between waterhoods and higher-level organizations (e.g., City and County of Honolulu, State of Hawai'i)

-assist waterhoods when expert knowledge is needed

Waterhood structure and operation--options:

Waterhood structure and operation may take many forms. Each waterhood should decide which structure works best given its unique conditions and desires. Structures and operating options include:

-elected 'board' organization

-citizen review boards

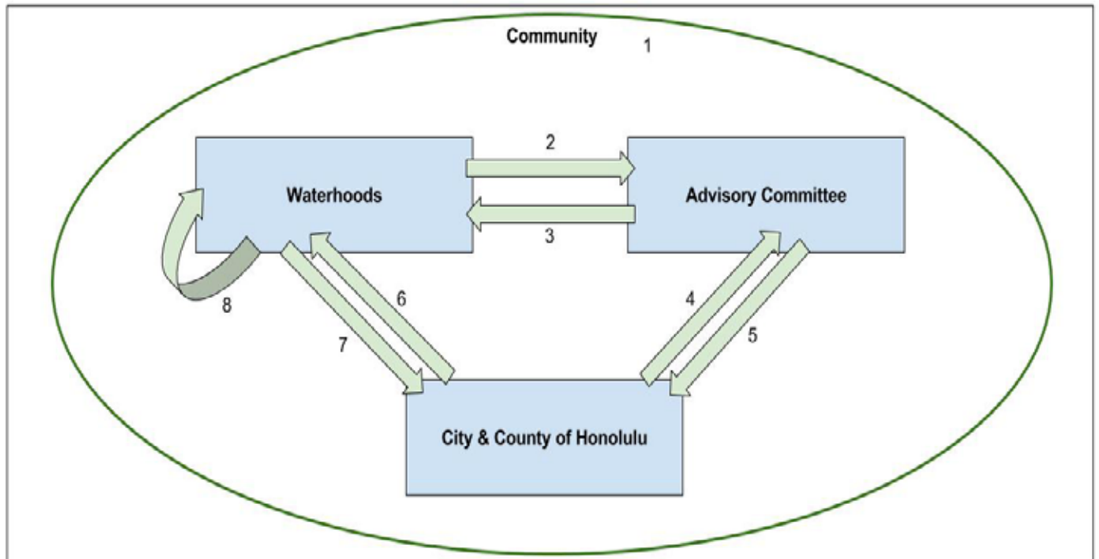
-deliberative forums

-sociocracy

-design challenges (to encourage creativity)

-participatory budgeting

Waterhoods Structure Diagram:



1. Waterhoods are accessible forums for community input. Advisory Committee and Honolulu are accountable to broader community concerns.

2. Waterhoods submit requests/plans to advisory committee for approval; provide at-large members to committee.

3. Advisory Committee approves or rejects requests/plans; provides staff to coordinate w/ Waterhoods; provides technical/cultural support as capable; sets up initial Waterhoods.

4. Honolulu oversees Committee; recommends new members on a rolling basis.

5. Advisory Committee reports Waterhood progress to Honolulu; In general, manages relationship between Honolulu and Waterhoods.

6. Honolulu administers funding and resources to individual Waterhoods for approved projects; provides technical assistance as needed.

7. Waterhoods work with the Honolulu to address infrastructure repair and replacement projects and change relevant codes and policies. Waterhoods can can appeal to Honolulu during conflicts w/ Advisory Committee.

8. Waterhoods collaborate, share ideas, and engage each other as necessary to build community and improve restoration efforts.

Funding Mechanisms:

Waterhoods should use many types of funding mechanisms to support their initiatives, projects, and efforts and continue to create the community they want. Options include:

CIVics--Community Investment Vehicles:
- -community benefit agreements
- -special taxing districts

Local community economic strengthening, investment, and development:
- -local credit unions
- -cooperative banks
- -community land trusts
- -LETS (local exchange trading systems)
- -scrip (local paper money systems)
- -time banking
- -co-production (mutual volunteering systems)
- -microcredit
- -microfinance
- -crowd-funding
- -Parametric insurance

Waterhhod Activity--see Section 4

Waterhood Characterization:

- Use the same data and information gathered in Section 4, Step 1.
- Determine what processes, flows and capacities to pay attention to in your waterhood--from Section 4, Step 1; also, see Appendix xxx for suggested ways of thinking and structuring complexity.

Waterhood Typologies & Strategies:

Our suggested typology include:
- -Conservation
- -Low Density
- -Mixed-Use/Commercial
- -Medium Density
- -High Density
- -Resort

+ strategies relevant to each--see google sheet, take from design board

In all cases, connecting and synergizing existing efforts and initiatives in addition to creating new initiatives to fill any gaps is recommended.

Conservation:

Ma'uka land conserved for natural resources management and improvement

Examples of Strategies & Information:

Riparian Areas

http://www.soil.ncsu.edu/publications/BMPs/buffers.html

Ecocultural Tourism

http://journals.sagepub.com/doi/abs/10.1177/1468797604057326

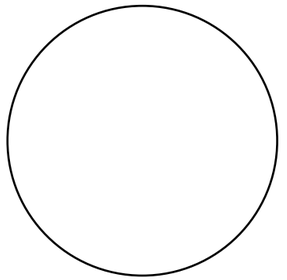
Educational Programs

http://hbmpweb.pbrc.hawaii.edu/dlnr/projects/outreach

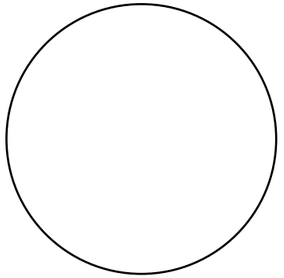
Low Density:

Mostly single-family homes with larger yards

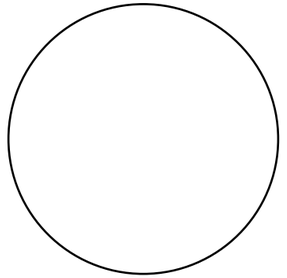
Examples of Strategies & Information:



Rain Gardens



Food Gardens



Green Roofs

Medium Density:

Single-family homes with small yards, multi-family dwellings

Examples of Strategies & Information:

Rain Barrels/Cisterns

Bioswales

Pervious Pavements

High Density:

Mostly high rises

Examples of Strategies & Information:

Green Walls & Roofs

Permeable Parking

Rainwater Capture

Mixed Use/Commercial:

Single-family homes, multi-family dwellings, businesses

Examples of Strategies & Information:

Green Roofs

Parking lot reduction/ Converstion to green space

Opportunities for Community Programs

Resort:

Places for relaxation or recreation

Examples of Strategies & Information:

Ecocultural Tourism

Bioswales/Rain Gardens

Education Programs

CITATIONS