The Trail to Ho'okena:

Connecting Communities, Resources, Past, Present, and Future



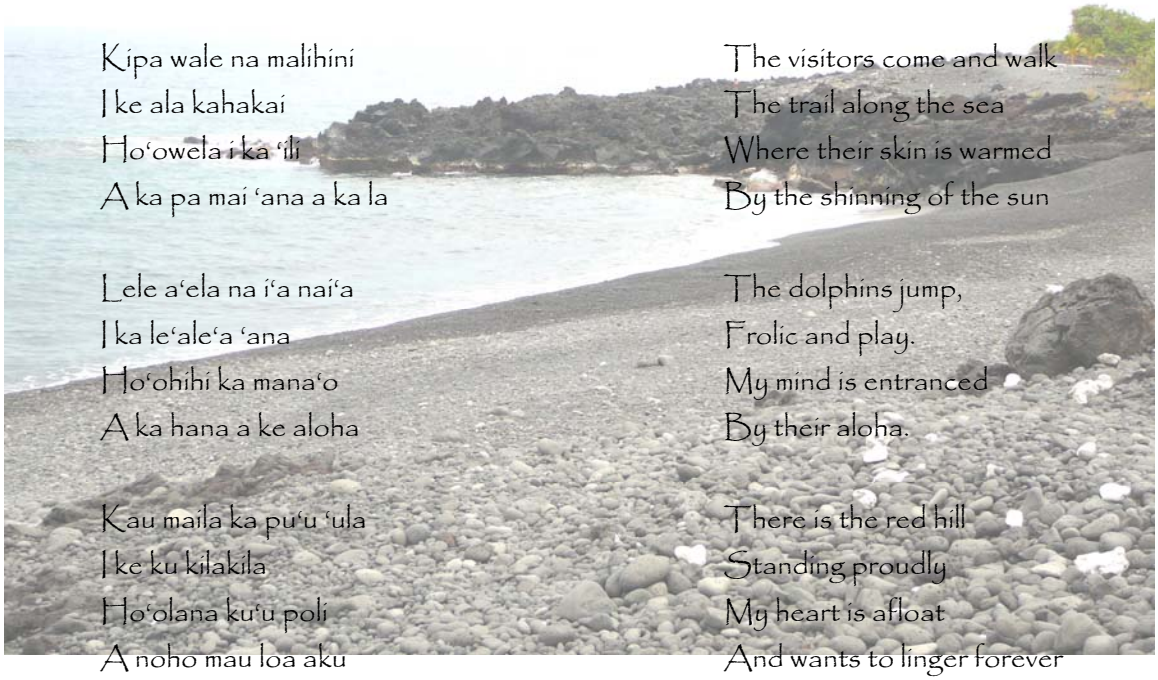
Prepared for:
Ala Kahakai National Historic Trail
National Park Service

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Spring 2008 Practicum
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Ka‘ohe

Composed by M. Kaleo Manuel

Nani wale ke ‘ike aku	Beautiful when seen
I ka hono malino o Ka‘ohe	Is the tranquil bay of Ka‘ohe
Ho‘oheno i ku‘u pu‘uwai	Cherished in my heart
A malie maoli no	And where I find peace
Hea maila ka leo o ke kai	The voice of the sea calls
I na hoa makamaka	To their friendly companions
Ho‘olono i ke kani	Listen to the sounds
A ka pohaku ‘ili‘ili	Of the tiny pebble stones
Kipa wale na malihini	The visitors come and walk
I ke ala kahakai	The trail along the sea
Ho‘owela i ka ‘ili	Where their skin is warmed
A ka pa mai ‘ana a ka la	By the shinning of the sun
Lele a‘ela na i‘a nai‘a	The dolphins jump,
I ka le‘ale‘a ‘ana	Frolic and play.
Ho‘ohihi ka mana‘o	My mind is entranced
A ka hana a ke aloha	By their aloha.
Kau maila ka pu‘u ‘ula	There is the red hill
I ke ku kilakila	Standing proudly
Ho‘olana ku‘u poli	My heart is afloat
A noho mau loa aku	And wants to linger forever
Ha‘ina ‘ia mai ka puana	Told is the story of
I ka hono malino ‘o Ka‘ohe	The tranquil bay of Ka‘ohe
Ho‘oheno i ku‘u pu‘uwai	Cherished in my heart
A malie maoli no	And where I find peace



Written on a trip to Ka‘ohe, Kona, Hawai‘i during a hike along the coastal trail with Luciano Minerbi, Sara Bolduc, Mele Chillingworth, Maki Kobayashi, Agnes Martelet, Joong Hee Park, Dennis Hart, Roy Santana, and the South Kona trail clearing group on April 13, 2008. ©

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DISCLAIMER

The opinions expressed in this study are those of the authors and do not necessarily reflect the views of the University of Hawai‘i, the Department of Urban and Regional Planning, the National Park Service (NPS): Ala Kahakai National Historic Trail System or any other agency, organization, or individuals mentioned in this report. Errors and omissions are the sole responsibility of the authors and editors.

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ACRONYMS

AKNHT	Ala Kahakai National Historic Trail
CBED	Community Based Economic Development
CEDO	Community and Economic Development Office
CCN	Community Conservation Network
CDP	Community Development Process
CRM	Cultural Resource Management
CZM	Coastal Zone Management
DLNR	Department of Land and Natural Resources
DURP	University of Hawai'i Department of Urban and Regional Planning
FRA	Fish Replenishment Areas
FWS	US Fish and Wildlife Service
GIS	Geographic Information System
GPS	Global Positioning System
KUPA	Kama'aina United to Protect the 'Aina
LRC	Local Resource Council
LCA	Land Commission Award
LUC	Land Use Commission
NGO	Non-Governmental Organizations
NHT	National Historic Trails
NOAA	National Oceanic and Atmospheric Administration
NPO	Non-Profit Organizations
NPS	National Park Service
NRM	Natural Resource Management
PASH	Public Access Shoreline Hawaii
REEF	Reef Environmental Education Foundation
SCD	Social Community Development
SHPD	State Historic Preservation Division
SMA	Special Management Area
TMK	Tax Map Key
USGS	United States Geological Survey
VMOSA	Vision Mission Objective Strategies and Action Plan
WHFC	West Hawaii Fishery Council
YCMAD	You Can Make A Difference

Glossary of Hawaiian Terms[1]

Heiau	shrine
Loʻi	irrigated terrace
Loko Iʻa	fishpond
Ahupuaʻa	Land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (puaʻa), or because a pig or other tribute was laid on the altar as tax to the chief.
Mauka	inland
Makai	seaward
Hula	traditional dance
ʻukulele	instrument brought to Hawaiʻi by Portuguese
māla	garden
Kānaka	people
Kamaʻāina	native born
ʻĀina	land, earth
Kuleana	responsibility
Aho	line, cord, lashing
Moʻolelo	story
Holua	sled
ʻOpihi	limpet
Kūpuna	elders, grandparents
ʻAʻā	stony lava
Ahu	altar
Pāhoehoe	smooth lava

[1] Pukui and Elbert, 1986.

Executive Summary

In order to create a framework for the practicum course, students expanded on the concepts of a previous practicum's working model that was designed to guide their research on the Ala Kahakai National Historic Trail program. According to the previous practicum there are five aspects identified for the successful management, implementation, and evaluation of the Ala Kahakai Trail that include Moku and Ahupua'a Traditional Knowledge, Cultural Preservation, Community Based Economic Development (CBED) & Tourism, Natural Resource Management (NRM), and Protocol among Stakeholders. These five components formatted the scope of their practicum and project report.

UH DURP Fall 2007 Practicum Working Model



In expanding on this working model and its five components, the practicum created a conceptual model using a soft-system methodology developed by Professor Peter Checkland which looks at "soft problems" or those problems that are difficult to define and have large social and political components.[2] The Ala Kahakai Trail is an immense undertaking and includes various constituents; consequently, breaking down the program's parts helps with digesting the information and the material involved.

[2] Couprie, etal. *Soft Systems Methodology*.

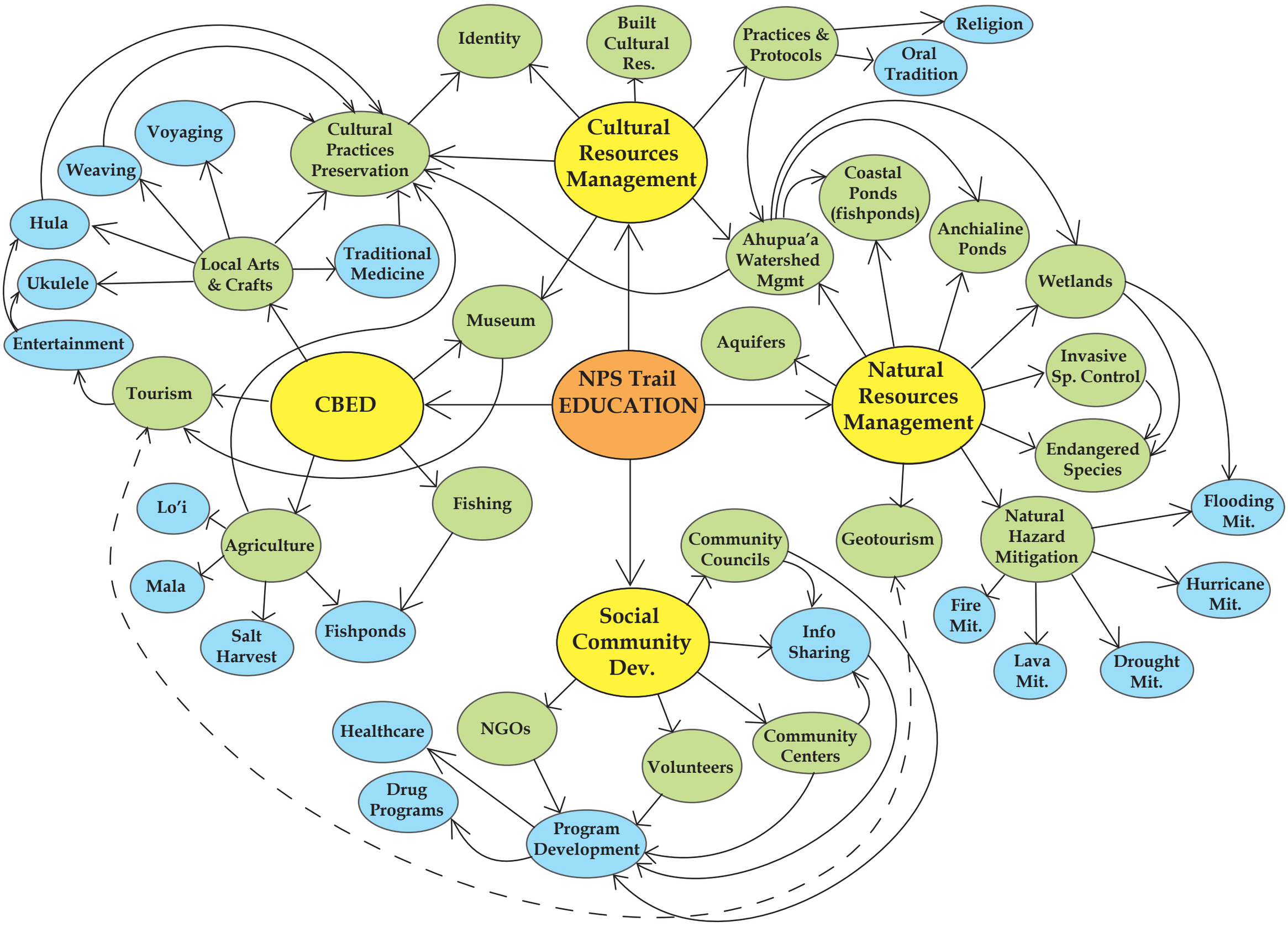
The conceptual model of the Ala Kahakai Trail is inclusive of four parts: Cultural Resource Management (CRM), Natural Resource Management (NRM), Community Based Economic Development (CBED), and Social Community Development (SCD). These four components are essential in establishing the trail and managing its resources. Connections and linkages between each of the four components is important in conceptualizing how they are related with one another.

Cultural Resource Management for the Ala Kahakai Trail should include the management of ancient and historical cultural resources such as heiau, loʻi, and loko iʻa and the natural resources that support them. Cultural and natural resources are not distinctly different because the proper management of a watershed is inclusive of both. The establishment of a continuous trail ensures that cultural practices and protocols, passed on through oral tradition and religion, help connect people with their resources and assist in preserving their cultural identity.

Natural Resource Management is connected to CRM through the management of the ahupuaʻa or watershed. The natural resources of the ahupuaʻa include mauka forests, rural and agricultural lowlands, and coastal and marine ecosystems. Ancient Hawaiian trails were used to connect ahupuaʻa as well as to access mauka and makai resources. South Kona is a region with tremendous natural assets: its forests support many native and endangered species and are important for water conservation of the watershed; its lowlands support a diverse agriculture; and its coastal resources include healthy coral reefs supporting a diverse fish population.

Community Based Economic Development can play a big part in the management of the Ala Kahakai Trail. Not only does it connect the community to existing cultural and natural resources, but it also provides economic opportunities for the local communities along the trail. Cultural practices like voyaging, fishing, agriculture, traditional medicine, and local arts and crafts such as weaving, hula, and ʻukulele can generate revenue through geotourism. In addition, the cultural and natural resources like loʻi, mala, salt ponds, and fish ponds can also be utilized as an economic engine. In addition to creating more jobs and generating income, a museum or educational programs and establishments can supplement CBED efforts while bridging CRM, NRM, and Social Community Development with one another.

Social Community Development is a large part of the Ala Kahakai Trail. In addition to federal, state, and country agencies, SCD involves multiple stakeholders ranging from individual community members and volunteers, Community Councils, Non-Governmental Organizations (NGO), and Non-Profit Organizations (NPO). In order for positive SCD to occur, information sharing amongst all parties is extremely important and community centers are often a



NPS Conceptual Model

April 1, 2008

UH DURP Sp 08 Practicum

venue where this communication can take place. In addition, these community groups are often the leaders in CRM and NRM. Once again the Ala Kahakai Trail can connect communities to their resources and help in their social development. The development of programs, such as healthcare and drug programs to name a few, are also important in SCD.

The practicum participated in two community meetings held by KUPA: Kamaʻāina United to Protect the ʻĀina in Hoʻokena, South Kona and also networked with the South Kona Trail Group to further identify and understand community concerns and issues. These field studies supplemented the research of the practicum in clarifying the linkages between the four components of the conceptual model and the effects, both positive and negative, that may occur with the establishment of the Ala Kahakai Trail.

Findings and Conclusions

The Ala Kahakai Trail can be a useful mechanism that promotes community involvement in all of the four primary components of the conceptual model (CRM, NRM, CBED, SCD) and therefore create better and more resilient communities. In addition, through this mechanism, the roles and responsibilities of communities, private landowners, the government, and other stakeholders in the management of cultural and natural resources can be better clarified. Finally, understanding each of the four primary components of the conceptual model and the linkages that exist between them can assist in creating more resilient communities that are more involved in conserving the integrity of their resources.

In order to better visualize and understand the historic, cultural and natural resources of the five focus ahupuaʻa, the practicum team used 1873 boundary commission reports and the description narratives to create a visual map of the landscape of the region in 1873. This map helps understand the richness of the resources of the area and can promote increased support for preservation activities.

Currently, encroaching development and open access are putting native Hawaiian trails, cultural and archaeological resources of the core areas at risk of destruction. The trails, however, provide native Hawaiians and local communities with opportunities to reconnect with the area's cultural and natural resources. Preservation and proper management practices are therefore key to the perpetuation of these rich native Hawaiian cultural and natural resources, as well as the continuation of the unique cultural practices, traditions, and protocols found here in Hawaiʻi.

Development pressure is also affecting natural resources of the South Kona region, which include some very important ecosystems that should be preserved. Conserving the rural character and natural resources of South Kona is a general goal of State and County plans, however, with increased development pressure

from the growth of Kailua-Kona, community empowerment through CBED and social development is key to improving natural resources conservation. There are a number of opportunities for communities to create economic and social development through conservation and enhancement of their natural resources, which can be achieved through community/non-profit organization/government partnerships.

Communities of the five focus ahupua‘a can promote economic development through various processes such as geotourism and community kitchen incubators. If some of these processes are implemented simultaneously, their connections with one another can have a compounded positive influence on CBED. In order to initiate economic development processes, external funding support at the start is essential. Sources of funding available for CBED in the Kona region are included in an appendix to this report for the communities' information.

In order to promote successful CBED, social community development is also necessary. A clear, efficient, and flexible process is required for SCD. Building trust, capacity, and collaboration between community members is key to building stronger communities. Additionally, promoting learning for community members is also important so that they are feeling a positive influence of SCD on their personal lives. SCD, similarly to CBED, should also have an action plan, and ways to self-evaluate and provide feedback on actions being conducted to help the process of community development.

During the field trip of the practicum team to the Island of Hawai‘i, the group was invited to join KUPA's community meeting and South Kona trail conservation efforts. It was observed that there is a shared recognition between KUPA, the South Kona Trail Group, and NPS of the significance of conserving native Hawaiian trails. The current need is to clarify the ways in which NPS, KUPA, and the South Kona Trail Group can collaborate to promote best management practices for the conservation of these valuable historic resources while promoting more community support. The practicum group was also impressed by the passion and dedication of community members towards preserving trails, and by the collaboration of people from different backgrounds. With such a positive push for action on the part of the communities, there is an opportunity for community groups, NPS, and DLNR to harmonize their methods for managing trails. Future work should investigate the development of a set of procedures that everyone can follow and agree on in order to make the preservation of these trails most effective.

CHAPTER ONE: INTRODUCTION

1.1 Goals and Objectives

The Department of Urban and Regional Planning Spring 2008 Practicum project is part of a collaboration effort between the University of Hawai‘i at Mānoa and the Department of the Interior’s National Park Service to provide innovative community-based management of the Ala Kahakai National Historic Trail. This practicum report is a continuation of the work of the Fall 2007 Practicum, which explored “Managing a Traditional Ahupua‘a Trail System in a Multi-Cultural Modern Society.”

Developing sustainable methods of resource management, considering Hawai‘i’s unique environmental, social, and historical conditions, requires collaboration between local communities and government agencies, including federal, state, and county entities. In order to understand this situation more clearly, the Spring 2008 Practicum focused their research on the relationships among the following ideas: CRM (Cultural Resource Management), NRM (Natural Resource Management), CBED (Community Based Economic Development) and SCD (Social Community Development).

The Spring 2008 Practicum’s research objectives were determined to include the following:

- Organizing research data associated with CRM, NRM, CBED and SCO to assist local communities and government agencies in understanding the management of their resources.
- Construct GIS maps of the Ala Kahakai National Historic Trail on Hawai‘i Island, focusing on five core ahupua‘a (Ki‘ilae, Kauleolī, Keālia 1, Keālia 2, Ho‘okena) based on CRM, NRM and CBED research in order to identify diverse and significant resources;
- Interact and cooperate with local communities and NPS to create appropriate and efficient project outputs;
- Create a planning model for cooperative, harmonized, and symbiotic participating research.

1.2 Project Chronology

During the week of January 14, 2008, the students of the Spring 2008 Practicum decided to continue the work that had previously been done by the Fall 2007 Practicum class for Aric Arakaki the superintendent of the National Park Service (NPS). That decision stemmed from the fact that the Ala Kahakai National Historic Trail Project (AKNHT) of the NPS matched the wide array of interests

and experience of the students involved in the class. The NPS' novel approach to trail management as a means to promote community empowerment was a particularly interesting concept for the students.

Immediately following this decision, the students reviewed and extracted information from the work previously done by the Fall 07 Practicum, which was used to create a conceptual model, describing the linkages between the AKNHT, cultural, social, and natural resources management, and community-based economic development (CBED). The students also collected aerial photographs from SOEST along the entire length of the proposed Ala Kahakai trail in order to begin visualizing the resources present along the trail corridor.

On January 25, 2008, Aric Arakaki met with the Spring 08 Practicum class. The meeting helped clarify the vision that the NPS is advocating with regards to the management of AKNHT, the level of community involvement, conflicts of interest that exist in the communities, and the work that might be needed from the Spring 08 Practicum. As a result of the meeting, the South Kona five ahupua'a of Ki'ilae, Kauleolī, Keālia 1 and 2, and Ho'okena were agreed upon as the focus area for the Spring 2008 Practicum. This area was chosen because of the development pressures that currently exist there and the interest of local organizations to take care of the environment.

Throughout the month of February, the students of the practicum divided up into their respective areas of interest to collect and analyze data for the project. The research tasks were divided up as follows:

- Kaleo Manuel: Hawaiian historical resources for the focus area.
- Klouldil Hubbard: visual landscape analysis and cultural resources for the focus area.
- Maki Kobayashi: community-based economic development applicable to the focus area.
- Joong Hee Park: community strategic planning and social development applicable to the focus area.
- Agnes Martelet: natural resources of the focus area.

The source of the information collected by each student will be further discussed in subsequent sections of the report dealing with specific topics of research. The students worked closely together and reported their findings and progress to the other members of the group on a biweekly basis to make sure that the information collected was integrated in the entire project and the findings were cohesive. Dr. Minerbi also provided a wealth of information from other research projects to aid in the analytical process.

On February 16 through 18, Dr, Luciano Minerbi and Kaleo Manuel attended the community meeting set up by Kama'āina United to Protect the 'Āina (KUPA) to define guiding principles for "Honoring, Strengthening, Sustaining… Our Beloved

Ho‘okena”. KUPA is a non-profit organization originally created by concerned fishermen from the Ho‘okena area to try to protect the marine fisheries of the region. From the meeting, Dr. Minerbi and Kaleo returned with a better understanding of issues of concern to communities in the Ho‘okena area, and with specific questions and requests from interested Ho‘okena community members and KUPA representatives.

During the month of March, in preparation for the presentation of their data to the NPS and at the 2nd KUPA meeting, the students focused on developing maps that would aid in visualizing the characteristics of the area and their interrelations. Geographical Information System (GIS) was used to create most of the maps because this tool allows a wide range of spatial analyses.

From April 11 through April 14, 2008, the practicum class traveled to the Big Island to present their findings at the NPS, at the 2nd KUPA meeting, and at the meeting of Dennis Hart’s trail management group. Meeting with the various stakeholders was an important step in understanding more clearly the linkages between the communities’ economic, socio-cultural, and environmental conditions. The meetings were also important for the students to understand the relevance of the information they collected to the various issues faced by different stakeholders. The final report was completed during April and May 2008, using the information needs of community groups as a guiding principle for presentation of the data gathered by each student (Refer to Chapter 6: Field Research).

1.3 Methodology

The Practicum Team of the Department of Regional and Urban Planning, University of Hawaii took several approaches in developing document resources that could be used in the assessment and management of segments of the Ala Kahakai National Historical Trail. After being given direction to focus on the five ahupua‘a of Ki‘ilae, Kauleolī, Keālia 1, Keālia 2, and Ho‘okena, the practicum team proceeded to conduct first a literature review of the area. Literature review provided important information regarding the history and culture of the five areas as well as providing current literature to enhance basic understanding of the area. Literature review also involved the synthesizing of important information that would utilize Geographical Information System, resulting in visual images of the five core areas. This would become a tremendous tool in working with the subsequent communities later on during the project. Additionally, the practicum team met with various stakeholders in the five core ahupua‘a, including the National Park Service and KUPA. Practicum members participated in community meetings and held interview sessions with various stakeholders to gain input that would help increase knowledge of issues and opportunities in the five core areas.

Geographic Information System (GIS)

Geographic Information System computer programs can visually place statistical data into the geographic landscape when the spatial location of the data is known. Such a process can produce base maps that are overlaid with specific spatial information to produce information regarding spatial relations among human and environmental variables.

The primary objectives of the GIS Mapping for the Spring 2008 Practicum were to:

- Identify the trail along the main trail corridor as well as identify the trails that run mauka makai.
- Identify through aerial photography areas that are critical to trail management and maintenance.
- Distinguish current ahupua‘a boundaries and to relate these boundaries to the older land boundaries.
- Distinguish and identify areas of important historical and cultural sites that are potential sites for management.
- Distinguish and identify areas of important natural resources and the management regimes of these resources.
- Identify zoning areas for community project development purpose.
- Identify large landowners as well as other landowners that might have impact on certain community projects, cultural resources, and natural resources.
- Identify development areas and areas of potential development to gage impact of these projects on trail management.
- Identify land use patterns in the area.

These objectives served as criteria for developing maps to be used as management tools for trail management, and community social and economic development

GIS Map Making Process

The following steps were taken in creating the maps:

1. A base map was developed using shapefile layers downloaded from the Hawaii State GIS website.
2. Identify map elements that are shapefile layers that would help identify opportunities and issues of trail management.
    a. corridor trail and mauka makai trails
    b. ahupua‘a boundaries
    c. cultural resources
    d. natural resources
    e. land ownership
    f. land use patterns
    g. development

3. Develop map categories and legends
4. Overlay map elements
5. Facilitate map readability by unifying symbols from different resources.
6. Analyze and interpret each map and report findings and conclusions.
7. Demonstrate how to characterize trail impacts according to maps.

Information for the known historic sites maps were derived from shapefile layers downloaded from the Hawai'i State GIS website. Additional layers were derived from the Department of Urban and Regional Planning (DURP) shapefile layers created by the DURP National Park Service Research Assistants. The DURP NPS layers produced for the 5 core ahupua'a area were invaluable as other sources of information and GIS data had been incomplete for the South Kona area, particularly for the five ahupua'a. This gap in information places limitation on the Historical and Cultural Sites map for the core area therefore restricting management planning and practice.

1.4 Project Site

Physical Description

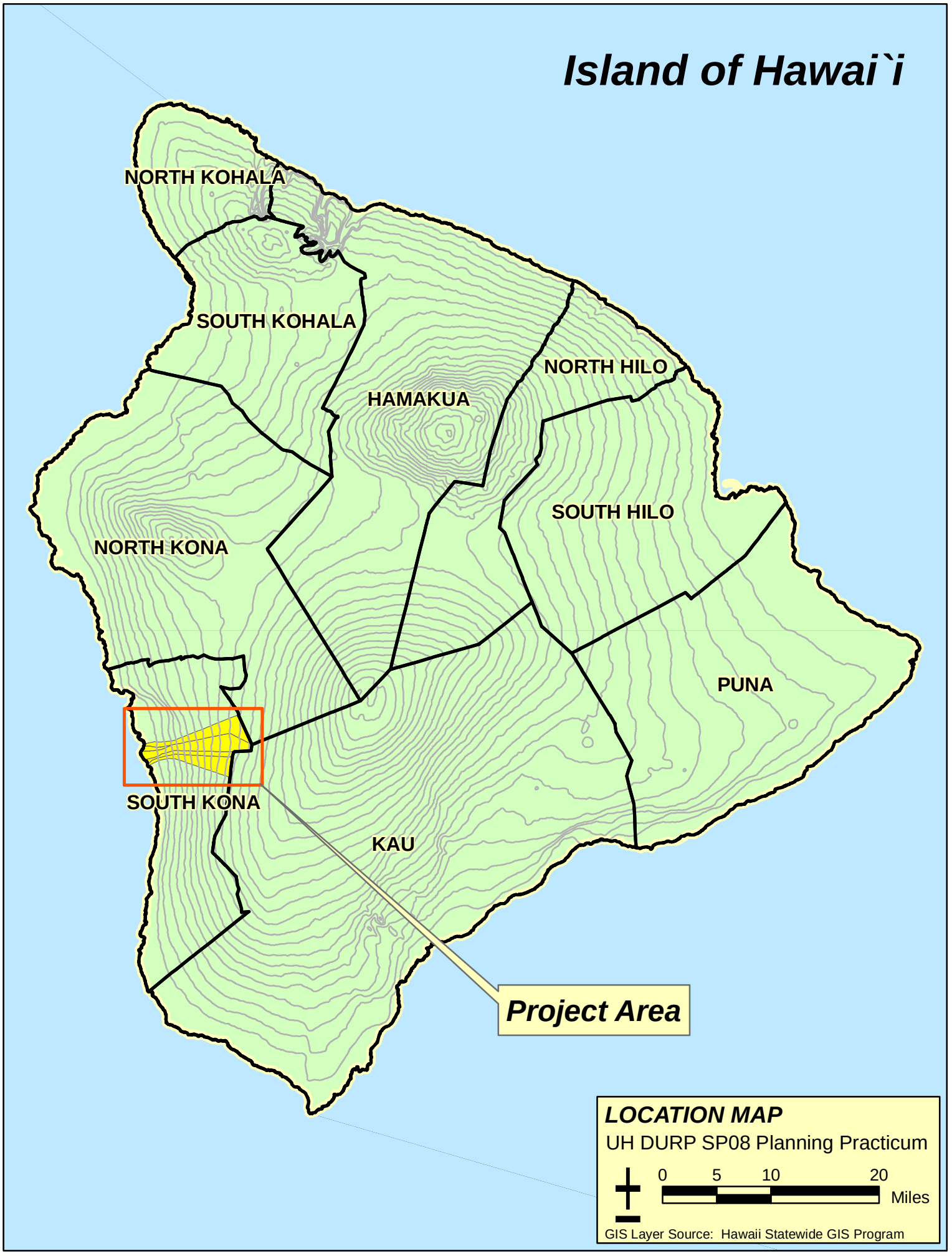
The Ala Kahakai National Historic Trail is extensive and covers 175 miles from 'Upolu Point to Ka'ū on the coast of Hawai'i Island. A project site of five adjacent ahupua'a in South Kona, Hawai'i inclusive of Ki'ilae, Kauleolī, Keālia 1, Keālia 2, and Ho'okena was selected as the focus for the practicum. The project area begins with Ki'ilae that located south of the ahupua'a of Honaunau and runs to Ho'okena which is north of the ahupua'a of Kauhakō. A coastal trail segment, mauka-makai trails, and many archaeological sites exist within this project site. The cultural and natural resources within the project site are described in more detail in the subsequent chapters of this report.

A detailed study of these five ahupua'a seemed to be a manageable project in comparison to doing a broad and general study of the entire trail; considering the allotted time and resources available for the project. In addition, the research methodology and project outline generated for this project site, can be used as a template for the remaining segments of the trail.

Social Description

Native Hawaiian population estimate taken in 1853 pegs the population in the South Kona region at 3,950.[3] According to government census data from the year 2000, the population of the South Kona area hovered at 8,598 persons with the median resident age estimated to be 41.2 years. Although population growth had declined from the previous decade, with growth rate estimated at near 0 percent, the native Hawaiian population however has been consistently represented in the area. Native Hawaiian population represented 12 percent of

[3] Coulter, 1931.


Island of Hawai`i
NORTH KOHALA
SOUTH KOHALA
HAMAKUA
NORTH HILO
SOUTH HILO
NORTH KONA
PUNA
SOUTH KONA
KAU
Project Area
LOCATION MAP
UH DURP SP08 Planning Practicum
0 5 10 20
Miles
GIS Layer Source: Hawaii Statewide GIS Program

the total population of South Kona, with the largest ethnicity group belonging to White Caucasians at 27 percent of the total population.

Many in the area still prescribe to a rural lifestyle that hints at the cultural ties that the native Hawaiians had to the land and many of the people in these communities maintain some form of indigenous cultural practice. Additionally, many residents of the area are advocating for employment opportunities consistent with the areas' lifestyle and are discussing the possibility of establishing a community center and farmers market.

1.5 Existing Conditions

The five ahupua‘a of Ki‘ilae, Kauleolī, Keālia 1, Keālia 2, and Ho‘okena are situated in South Kona area located on the leeward side of the Island of Hawai‘i. This area of South Kona has retained much of its rural character despite increasing development north of the area in what is referred to as North Kona. Due to its ideal climate, North Kona has attracted an influx of new residents and has experienced tremendous growth that is mainly driven by resort development and the second-home residential market. As a result of this rapid growth rate, the five core ahupua‘a project site has come under recent pressure from development that is expanding toward South Kona and is threatening to change the rural character of the area.

Most of the communities within these five ahupua‘a are located along the main road that is the Māmalahoa Highway with smaller arterial connections that allow access to areas makai and mauka of the highway. Most of the housing stock in the area is characterized as single family homes and are distributed in pockets throughout the area. There is not much by way of development centers with few stores serving the needs of the community. As such, the members of the community must make the hour long drive into Kailua-Kona for major purchases and to obtain services otherwise not yet available in the area.

The area of the five core ahupua‘a is surrounded by a greenbelt production area which has resulted in large swathes of land dedicated to coffee plantations and other agricultural pursuits. The area still maintains a clear coastline and untouched upland landscape that contains large areas of native ‘ōhi‘a forests. Additionally, with the rural town centers close to the highway, much of the land in the area has been kept forested and therefore has allowed for the establishment of reserves in the area. Most of the lands in the area, however, belong to the federal government and few individual estates; the largest ones being the Kamehameha Schools and EM Stack, all controlling significant amount of land in the area.

CHAPTER TWO: CULTURAL RESOURCES MANAGEMENT

2.1 Objectives

The objectives of this section are:

- To describe the current cultural resources along the trails of South Kona and their significance, with a focus on the five project ahupuaʻa;
- To describe the current and potential threats to cultural resources associated with the trails in the focus area;
- To describe ways in which community involvement could improve the health and management of the trails and the cultural resources within the trail areas.
- To provide sources of technical information and project assistance that could help communities get involved in the management of their cultural resources.
- To provide the resource documents and knowledge base for understanding current access laws and regulations and the issues within these ahupuaʻa.

The primary focus of this report will be on the identified five core ahupuaʻa of Kiʻilae, Kauleolī, Keālia 1, Keālia 2, and Hoʻokena however, the issues and proposed projects and programs are applicable to the entire trail corridor that runs from ʻUpolu in the North Kohala to Kaʻū in the south.

Additionally, it is not within the scope of this document to identify specific trails for preservation, restoration and reuse activities intended by the communities which will be participating in the management of these trails. At this stage, there is simply not enough historical and archeological data for basing management decisions on.

2.2 Current Uses, Facilities, Improvements

The trail segment for the five core ahupuaʻa of Kiʻilae, Kauleolī, Keālia 1, Keālia 2, and Hoʻokena begins in the ahupuaʻa of Kiʻilae and runs south ending at the southernmost point of the ahupuaʻa of Hoʻokena. Within this segment of the trail corridor are numerous trails that run mauka-makai connecting the main trail and facilitating access to the uplands of the ahupuaʻa areas and down towards the coast. Additional trail information regarding these mauka-makai trails have been compiled and analyzed by Warshauer (See Appendix A-10)

Trail use in this area has been kept to a minimum as the trails have become overgrown and access has been limited as well as prohibited in some areas. There still remain members of these communities who access these trails for traditional cultural practices particularly those practices such as fishing and ocean gathering that are closer to the shore and have direct access to marine resources. Upland trails have been a bit more difficult to access and there has been effort from some of the community members to clear these trails.

There is resistance from state agencies regarding the clearing and use of trails without required permits, particularly those trails and terrestrial areas that fall under the jurisdiction of the state government. Large parts of the trails fall into state land and are therefore under the management of state agencies, in particular, the Department of Land and Natural Resources (DLNR). Additionally, trails, especially those running mauka makai often fall in areas of privately owned lands therefore making trail access very difficult if not near impossible.

There are currently no identified facilities and no built improvements on any of the trails within the five ahupua‘a areas.

2.3 Access

Foot travel along trails was the primary means of transportation over land for the ancient Hawaiians. Different trails along different paths accommodated the local population enabling them access to resources along the shorelines as well as towards the uplands of the ahupua‘a. Western contact and the consequent changes in land tenure and lifestyle have resulted in difficulty in accessing kuleana parcels and the resources from the uplands to the sea. Native Hawaiians need to be informed of these important rights if they are to maintain and preserve their lands and traditional cultural practices.

Native Hawaiian rights of access can be divided into two major categories. The first is the access rights to kuleana parcels which involve access along ancient trails, or expanded access not limited to any particular route. Owners of kuleana parcels can have unrestricted rights of access to their properties as either an express grant, an implied easement by necessity or by statute. The second major category of native Hawaiian rights of access pertains to access rights between two or more ahupua‘a which involves access along ancient or well-established trails.

Currently in the five ahupua‘a of Ki‘ilae, Kauleolī, Keālia 1, Keālia 2, and Ho‘okena trail access is limited. There is a general consensus from the community that trail access is an issue that needs to be resolved. Some members of the community have formed groups therefore empowering themselves to take on a stronger role in advocating for access rights among other things. As such, these communities are seeking to inform themselves of native Hawaiian access rights as well as general public access rights so that they

may continue to have right of entry to areas where the practice of traditional culture can be perpetuated.

Listing of Important Laws and Regulations Pertaining to Access Rights[4]:

Section 1-1 Common Law & Hawaiian Usage - 1892

The common law of England, as ascertained by English and American decisions, is declared to be the common law of the State of Hawai'i in all cases, except as otherwise expressly provided by the Constitution or laws of the United States, or by the laws of the State, or fixed by Hawaiian judicial precedent, or established by Hawaiian usage; provided that no person shall be subject to criminal proceedings except as provided by the written laws of the United States or of the State.

Article XII. Section 7 of the Hawai'i State Constitution - 1978

The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

Highways Act of 1892 (HRS chapter 264)

This act defines public trails within the state and sets forth a system for identifying trails and right-of-ways that are owned in fee by the government. This act serves to claim governmental ownership and public rights to ancient and historic trails or roads.

Kuleana Act – 1859 (Hawaii Revised Statutes Section 1-7)

This act enables the provision of statutory right for native tenant to access kuleana parcels as well as to allow unobstructed access within the ahupua‘a to obtain items such as firewood, house timber, aho cord, thatch or ti leaf necessary to make the kuleana productive.

Kalipi vs. Hawaiian Trust Company (Kalipi) – 1982

In this first significant case, the court affirmed the right of the lawful occupants of an ahupua‘a to enter undeveloped lands within the ahupua‘a for purposes of practicing native Hawaiian gathering rights. While the court listed specific items limited to materials used for housing and fuel that native Hawaiians were permitted to gather, it left the door open for the expansion of those items.

[4] *Hawaii State Constitution*, Article XII, section 7 and *Hawaii Revised Statues*, sections 1-1 and 7-1.

Pele Defense Fund vs Paty (Pele – 1990)

In this case, the court expanded on the Kalipi case in that it affirmed the right of native Hawaiians to access properties beyond the boundaries of the ahupua‘a in which they live for purposes of exercising “continuously exercised access and gathering rights necessary for subsistence, cultural or religious purposes.”

PASH: The Public Access Shoreline Hawaii (PASH) - 1995

The PASH decision resulted from the implementation of the Coastal Zone Management (CZM) and the Special Management Area (SMA). This decision rendered by the Hawaii Supreme Court in 1995 unanimously upheld the validity of native Hawaiian gathering rights that were asserted by PASH and other individuals during the SMA permit proceedings before the County of Hawai‘i Planning Commission. The decision spoke to the standing of Hawaiian gathering rights and the governments’ duty toward protecting those rights.

Some of the significant points to consider in the PASH case:

1. Fee simple title to property in Hawaii confers only a “limited property interest”, as such does not include the right to universally exclude others from the owner’s property.
2. Access or land use rights cannot be abandoned or lost through non-use.

Ka Pa‘akai O Ka‘aina vs Land Use Commission – 2000

In the most recent case, the court decided to acknowledge further the variety of customary and traditional rights of native Hawaiians as well as providing an analytical framework for the State to practice in order to achieve its obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating private interests.

The safeguarding of Hawai‘i’s unique culture and the continuity of development and established business practices are two widely supported concerns that continue to raise interest regarding access issues in the state. Additionally, the ambiguities of existing access laws continue to pose problems for native Hawaiians, the general public and private landowners. In a recent attempt to resolve some of these issues, especially as it relates to native Hawaiian and public access rights, several bills were introduced in the 2008 Hawai‘i Legislative Session. The intention of the proposed legislations was to establish specific procedures for the assertion of native Hawaiian access rights as well as general public access rights and to attempt to eliminate many of the ambiguities that currently exist. The bills, however, have been held by legislative committees and have essentially failed to gain support of both the senate and house leadership.

Proposed Legislative Bills Pertaining to Access Rights (2008) Listing:

1. SB730: Clarifies that obstructing access to the sea, to or along the shoreline, to inland public recreational areas, or to government roads is prohibited and that inland public recreational areas include public trails. Requires agencies to protect public rights of way to coastal or inland recreational areas
2. SB2755: Provides hunters access to public hunting areas by authorizing the board of land and natural resources to establish easements across private lands and appropriating funds for the acquisition of easements.
3. SB 2836: Modifies definitions of "public recreational area" and the offense of obstructing access to public property; defines "public right-of-way".
4. SB 3189: Requires owners of privately owned shoreline access paths to keep access to the shoreline open to the public, at minimum, from 7:00 am to 6:00 pm.
5. HB839: Appropriates funds for the Department of Land and Natural Resources (DLNR) to survey and map all existing public access ways to shoreline areas.
6. HB1037: Requires affected agencies to account for sea-level rise and minimize risks from coastal hazards such as erosion, storm inundation, hurricanes, and tsunamis. Preserves public access and public shoreline access. Extends shoreline setback to not less than forty feet from shoreline and requires counties to account for annual erosion rates.
7. HB2578: Requires developments of 100 units or more to dedicate land for public access by right-of-way or easement. Requires each county to adopt public access signage guidelines.
8. HB2884: Requires the Department of Land and Natural Resources (DLNR) to hold any lands where the owner of an inheritable interest in kuleana lands dies intestate and there is no taker under the Hawai‘i Probate Code, for 10 years before passing to the Office of Hawaiian Affairs.
9. HB2921: Makes the Office of Hawaiian affairs the trustee of any unclaimed kuleana lands. Prohibits quieting title to or claiming by adverse possession of any kuleana lands.
10. HB3015: Prohibits the modification of shorelines through the planting of vegetation.
11. HB3210: Appropriates matching funds from the Department of Land and Natural Resources (DLNR) for Kaua‘i county's acquisition of a public right of way to Hā‘ena beach park.
12. HB3265: Requires the State to acquire land for public rights-of-way.

Community members should closely follow the development of issues and litigation regarding Hawaiian land use and access rights. Communities and those organizations or agencies working with them should also use their influence to encourage the unilateral discussion and resolution of native

Hawaiian access issues in a forum, which by its broad representation can win comprehensive endorsement.

2.4 Place Names

The native Hawaiian process of naming people, places, resources, and things is very important and taken seriously. Therefore, identifying and understanding place names and the meanings associated with those names is vital in proper natural and cultural resource management in Hawai‘i. In order to create a list of significant resources in Hawai‘i, the practicum complied three separate Hawaiian resource lists retrieved from the Native Hawaiian Access Right Project, the Native Hawaiian & Local Cultural Assessment Project , and A Catalog of Hawai‘i Place Names[5], and created a resource typology (below) that would assist with identifying place names.

Practicum Resource Typology

1. **Ancient Land Divisions**: Divisions of land and land tenure terminology used in pre-contact Hawai‘i
   Resources:
   - Mokupuni – island
   - Moku - district
   - Ahupua‘a – land division extending from mauka to makai
   - Boundary point - a place named along a boundary, sometimes with a monument
   - ‘ili ‘āina – a subdivision of an ahupua‘a which pays tribute to the chief of ahupua‘a
   - ‘ili kūpono – a subdivision of an ahupua‘a which pays tribute to the chief of the moku
   - mo‘o – narrow strip of cultivated land smaller than an ‘ili
2. **Modern Land Divisions**: Divisions of land and land tenure terminology used in post-contact and modern Hawai‘i
   Resources:
   - Ownership – Mahele Awards, Government Grants, Crown Land, Land Commission Award (LCA), individual ownership, etc.
   - Homesteads – Land held by the Department of Hawaiian Homelands
   - Tax Key – Tax Map Key parcels and divisions
   - Park – a state or county recreational facility
   - Town – a grouping of residential and commercial buildings, usually with a post office
   - Ts – triangulation station
   - Village – a grouping of residences without commercial buildings; subdivision, camp

[5] McGregor, Matsuoka, and Minerbi, 2001; Minerbi, McGregor, Matsuoka, 1993; Soehren, 2005.

3. **Natural Resources**: Natural resources that were used and are currently used by native Hawaiians and local residents of Hawai‘i
   Resources:
   - ‘āina kalo – taro land
   - kula – plain, field, pasture, unirrigated farm land
   - well – a man-made source of water
   - hono – bay
   - Kahakai/kahaone – beach
   - Reef/Shoals
   - Channels
   - Ana – cave
   - Cone – a volcanic orifice, usually with a summit crater
   - Dunes
   - Forests
   - Vegetation Zones
   - Soil Types
   - Cultivation Areas
   - Fauna – including such features as animal pens
   - Awa/‘oawa – cove
   - Waha pele/lua pele – crater; a volcanic depression smaller than a caldera
   - ‘A‘a, Pāhoehoe – lava flow
   - Ulu – grove
   - Awaawa – gulch, a stream channel, valley
   - Pu‘u – hill, knolls, cones, mountains
   - Kahawai - stream channel, gulch, river
   - Loko – pond, lake, a substantial body of fresh water or sea water
   - Lua – hole, pit
   - Nenelu – marsh, wetlands
   - Pali - cliff, steep slope
   - Lae – point, a promontory at shore
   - Kualapa – ridge
   - Moku pōhaku – an islet, rock
   - Punawai – spring, natural source of flowing water
   - Pōhaku – stone, a named stone (if offshore, then it is termed a rock)
   - Wailele – waterfall
   - Waterholes
   - Place – a feature not otherwise identified
   - Surf – a place suitable and used for surf riding
   - Tree – often a boundary point; includes breadfruit, kukui, pūhala
   - Vent – a source of volcanic ejecta
4. **Cultural Resources**: terrestrial and marine resources utilized by native Hawaiians for cultural traditions, practices, and protocols
   Terrestrial Resources:

- Ahu – a cairn, pile of stones, boundary marker, sometimes an altar, shrine
- ʻAuwai – irrigation ditch, canal
- Battlefield
- Cemetery
- Heiau – a temple, place of worship in traditional religion
- Hōlua – a sledding track
- Hale – buildings or settlements
- Kauhale/Kūhale– a group of houses belonging to a family
- Kōʻele – garden worked by a tenant for his chief
- Leina ʻuhane – souls' leap
- Loʻi – pond field, wet taro patch
- ʻOʻioʻina – resting place for travelers
- Kiʻi pōhaku – petroglyphs
- Pā puaʻa – pig pen
- Puʻuhonua – place of refuge
- Puʻukaua – fortified hilltop
- Ala – trails
- Walls
- Wahi Pana – a legendary or famous place

Marine Resources:

- Koʻa/Kūʻula – a fishing shrine
- Loko Iʻa – fishpond
- Landing – a pier or wharf built to accommodate ships or small boats
- Fishing Grounds

5. **Post-Contact Modern Resources**:

Resources:

- Harbor – a sheltered place for canoes, vessels
- Reservoirs– a man-made pond of irrigation or drinking water
- Roads – dirt, gravel, paved
- Bridges
- Railroad Systems – usually by plantation name

In addition to these five core groups of resources, the practicum wanted to add some resources that were not found within the three Hawaiian resource lists. Kīhāpai or a garden falls under the Ancient Land Division group. National Parks falls under Modern Land Divisions. Churches were added to Post-Contact Modern Resources. In addition to these three resources, another section was added by the practicum.

6. **Hazards**
    - Flooding
    - Tsunami
    - Earthquake
    - Volcano Eruptions
    - Hurricane
    - Erosion

These three lists and the Practicum Resource Typology are not entirely complete lists of all the significant resources found in Hawai‘i, but for the purpose of this practicum, cultural heritage assessment, and identification of place names, this list is suffice and items can be added on as research and oral histories occur.

Previous to the creation of the Practicum Resource Typology, significant resources could be placed within more than one typology, which can be problematic in identifying and categorizing resources. Therefore, formulating this resource typology and the five core groups with specific definitions of the characteristics of resources found within that group, makes resources mutually exclusive and easy to sort.

Place Names and Pictures

The five core ahupua‘a, Ki‘ilae, Kauleolī, Keālia 1, Keālia 2, and Ho‘okena have significant resources with place names located within them, and are place names themselves. Below are a few of the significant resources, their descriptions, and the literal translations of their names.

Kauhakō Bay and Ho‘okena Beach

Photo by M. Kaleo Manuel



The present grey sand beach of Ho‘okena is part of the larger Kauhakō Bay. Kauhakō, literally meaning, “the dragged large intestines,” gets its name from a mo‘olelo about a chief who was killed out of revenge by his people and dragged.[6] Ho‘okena which literally means, “to quench thirst,” is also the name of the ahupua‘a.[7]

[6] Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini, 1974.
[7] Ibid.

Kupa Landing

Photo by M. Kaleo Manuel

Named after Henry Cooper, the road supervisor of the District of South Kona, Kupa Landing was an important inter-island steamer landing where agricultural products and cattle were shipped.[8] This landing which was demolished by high surf in the 1930's, sits in ruins on the northern side of Hoʻokena beach. A song entitled, "Kupa Landing," written by Lot Kauwe[9] reminisces about the days of old in Hoʻokena.[10]



Pukaʻana Church

Photo by Luciano Minerbi



This church, that lies in ruins today, was built by Kuakini, Kaʻahumanu's brother, in the 1930's and is located between Hoʻokena and Keālia. A new Pukaʻana church is located on the main mauka road. Pukaʻana literally means, "exodus."[11]

[8] Clark, 1985.
[9] See Appendix for song, "Kupa Landing" by Lot Kauwe
[10] www.huapala.org
[11] Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini, 1974.

Coastal Road in Keālia
Photo by Luciano Minerbi



Keālia

Literally meaning, "the salt encrustation," Keālia is an ahupua'a between Ho'okena and Kauleolī. A mo'olelo speaks of Kaleipa'ihala, a chief of the area, that was so obsessed with watching ancient Hawaiian sports that he made everyone, including his wife, wait around until he was ready.[12] This story is said to have explained how Keālia got its name because ālia also means, "to wait." [13]

Kauleolī

An ahupua'a located between Keālia and Ki'ilae whose name literally translated means, "the penis of Lī." This name is derived from a story about a man named Lī who traded his penis for another one.[14]

Ki'ilae

Interpreted as, "a cape image," Ki'ilae is a village, an ahupua'a and a bay located north of the ahupua'a of Kauleolī.[15] Ancient sites like heiau and holua slides, and modern sites including animal pens and church foundations can be found in the old village of Ki'ilae.[16]

[12] Kahele, 2006.
[13] Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini, 1974.
[14] Ibid.
[15] Ibid.
[16] www.nps.gov

Coastal Trail Hoʻokena to Kiʻilae



Photo by Kaleo Manuel

In addition to these places found within the five core ahupuaʻa, wind and rain received names as well. There are no specific winds or rains, that the practicum has found, within the five core ahupuaʻa but there are some general names associated with Kona. ʻEʻeka, ʻEka, and Hau-o-Māihi are some wind names.[17]

2.5 Boundary Commission Reports

As part of a cultural landscape assessment one can look at the old Boundary Commission Reports to get a greater understanding of the natural,

[17] Index of Winds. Hamilton Library.

environmental, and man-made features that were used to describe the boundaries of the ahupua‘a. The Boundary Commission Reports consist of individual native tenant testimonies that describe the boundary of specific ahupua’a using land marks in the landscape.

A Boundary Commission Descriptions (Ki‘ilae-Ho‘okena)Table (See Appendix B-2) was created to organize all of the reports within the five core ahupua‘a, to make the reports easily accessible and readable, and to assist in the creation of the Boundary Commission Map (Section 2.6). In addition, The Boundary Commission Reports were obtained from the Waihona Database, a database that transcribes, translates, and digitizes old Māhele records inclusive of Land Commission Awards, Royal Patents, Land Grants, and Boundary Commission Reports.

Once obtained, the information from the reports were extracted and entered into a Microsoft Excel spreadsheet. Each row identifies the specific Boundary Commission Report, while each column separates and organizes the information in the reports. The name of the ahupua‘a or region being described is located in column one, titled “Name.” The second column, “District,” indicates the district of the island in which the ahupua’a or region is located. The name of the ahupua’a is found in column three and may be the same name as that in column one. If an ili is recognized in the Boundary Commission Report, it is noted in column four. The name of the native tenant who gave testimony on the boundary of the ahupua’a is identified in column five called, “Informant.” The date in which the testimony was given is marked in column six. The transcribed native testimony is recorded in column seven titled, “Boundary Description.” The source of the specific testimony can be found in column eight. Lastly, if there are any notes related to the survey or testimony, it was logged in column nine, “Notes of Survey.”

As stated earlier, the Boundary Commission Descriptions (Ki‘ilae-Ho‘okena)Table was created to help with accessibility and readability of the Boundary Commission Reports within specific ahupua‘a. While accessibility and readability were the main reasons for the creation of the table, the table can also be utilized as a database. The information in the table can be manipulated by column to sort out or highlight specific subjects or categories. For example, if one wanted to identify all of the Boundary Commission Reports for the ahupua‘a of Ki‘ilae, one can easily sort the database chronologically by ahupua‘a name to locate those reports associated with that ahupua‘a. In addition, as a database, the excel spreadsheet and table can be linked to other databases or maps. Sorting and organizing the information within the table or database makes the Boundary Commission Reports reader and user friendly.

The information found within the report, especially the specific testimony located in column seven, “Boundary Description,” can be used to analyze the cultural

landscape of the ahupua‘a and region through the memories of native tenants in the mid-1800s. Their testimonies give a glimpse into the ways in which Native Hawaiians of the past identified boundaries, demarked land, and recognized land divisions. In addition, their testimonies show the significance of natural and environmental resources, such as caves, ridges, forests, and trees, not only as boundary markers but as resources that deserve recognition and identification in being named. Lastly, the visualized historic environmental and cultural landscape of the past can be compared to the current landscape to understand the change in the environment, boundaries, lifestyles, functions, and uses of the resources within the ahupua‘a.

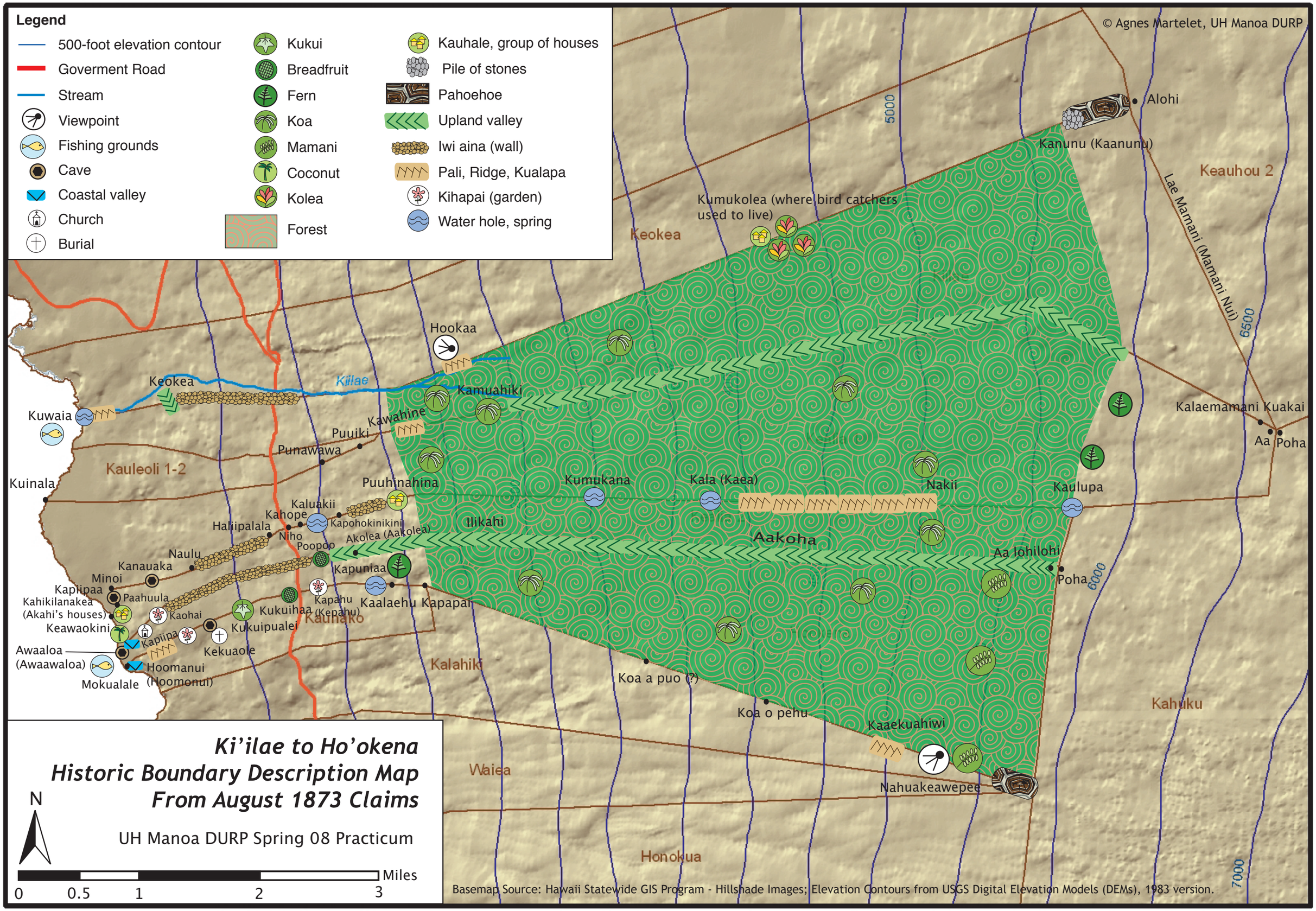
2.6 Boundary Commission Map (Ki‘ilae-Ho‘okena)

Using the native testimonies of the Boundary Commission Reports that describe the boundaries of the ahupua‘a and the natural and cultural resources existing at that time, the practicum plotted out the narrative of the five core ahupua‘a onto a topography map with the current ahupua‘a boundaries, and developed a visual representation of the Boundary Commission Reports.

The practicum used their best judgment, considering both the narrative and the topography map, to create the Boundary Commission Map. Usually beginning at the coastal boundary of an ahupua‘a, the native testimony walks the reader along the boundary of the ancient ahupua‘a using place names, natural resources, and the physical landscape features to describe the area. Therefore, place names were marked with points, while symbols were created for natural resources and physical landscape features. To properly read the Boundary Commission Map, one needs to read the narrative, following the ahupua‘a boundary with points and symbols, and refer to the legend that organizes the places names, natural resources, and cultural resources located there.

According to the native testimonies given for the five core ahupua‘a, a large amount of cultural resources existed along or near the coast and consisted of caves, pali, iwi ‘āina, house sites, and kīhapai. Various terrestrial natural resources, such as coconut, kukui, and ulu trees were found near the coast, as well as marine resources with specific fisheries assigned to certain ahupua‘a. Ridges, walls, valleys, rivers, and springs or wells, were often used to mark the ahupua‘a boundary as it headed mauka. The Boundary Commission Reports also give a good description of the ecological mauka zones. Heading upland, ferns were found on the outskirts of Koa forests. Beyond the Koa forests, Kōlea and Māmane trees grew until one reached the pāhoehoe lava fields.

Place names, as mentioned earlier, were significant and were associated with certain areas. In addition, almost every physical landscape feature including


Legend
500-foot elevation contour
Goverment Road
Stream
Viewpoint
Fishing grounds
Cave
Coastal valley
Church
Burial
Kukui
Breadfruit
Fern
Koa
Mamani
Coconut
Kolea
Forest
Kauhale, group of houses
Pile of stones
Pahoehoe
Upland valley
Iwi aina (wall)
Pali, Ridge, Kualapa
Kihapai (garden)
Water hole, spring
© Agnes Martelet, UH Manoa DURP
Alohi
Kanunu (Kaanunu)
Keauhou 2
Lae Mamani (Mamani Nui)
5000
6500
6000
7000
Kumukolea (where bird catchers used to live)
Keokea
Hookaa
Kiilae
Keokea
Kamuahiki
Kawahine
Puuiki
Punawawa
Kuwaia
Kauleoli 1-2
Kuinala
Puuhinahina
Kumukana
Kala (Kaea)
Nakii
Kaulupa
Kalaemamani Kuakai
Aa
Poha
Kaluakii
Kahope
Kapohokinikini
Haliipalala
Niho
Akolea (Aakolea)
Poopoo
Ilikahi
Aakoha
Aa Iohilohi
Poha
Naulu
Kanauaka
Minoi
Kapiipaa
Paahuula
Kahikilanakea
(Akahi's houses)
Keawaokini
Kapuniaa
Kapahu
(Kepahu)
Kaalaehu
Kapapai
Kaohai
Kukuihaa
Kukuipualei
Kapiipa
Kekuaole
Kaumako
Awaaloa
(Awaawaloa)
Hoomanui
(Hoomonui)
Mokualale
Kalahiki
Koa a puo (?)
Koa o pehu
Kaaekuahiwi
Nahuakeawepee
Kahuku
Waiea
Honokua
Ki'ilae to Ho'okena
Historic Boundary Description Map
From August 1873 Claims
N
UH Manoa DURP Spring 08 Practicum
Miles
0
0.5
1
2
3
Basemap Source: Hawaii Statewide GIS Program - Hillshade Images; Elevation Contours from USGS Digital Elevation Models (DEMs), 1983 version.

specific trees, water holes, springs, rivers, ridges, pali, and valleys were given names. These testimonies give insight into the land use and settlement patterns of the past. This in turn can help guide modern land use management on the Island of Hawai'i.

As depicted on the Boundary Commission Map, most residences were located along or near the coast. There is a few other house sites located upland but are there because they serve specific individuals with certain occupations such as bird catchers. Most of the cultivated land is also located in the lowland areas between the forests and the coast. The description of specific trees and gardens in the boundary descriptions indicate the significance of these resources to native Hawaiians. Also, while fresh water did not seem very abundant in the area because there is only one river within the five core ahupua'a area, the boundary description describes several springs and water holes in upland areas, which indicate the significance of these fresh water sources to the native Hawaiian settlements. Based on the description, it is likely that water was not readily accessible in the lowland coastal areas.

Using this ancient description of the cultural and natural landscape, one can see the changes that have occurred by comparing it to the current landscape. For example, one can note that the koa forests have been greatly reduced since western contact as mid-elevation forests are now dominated by 'Ōhi'a instead of Koa. One can also note that the lowland and coastal areas appeared to be more heavily populated, which is also where coastal trails ran. With the building of the government road, which is now Māmalahoa Highway, populations shifted to higher elevations, where they are now closer to the main transportation artery.

Creating future Boundary Commission Maps along the entire trail corridor, using the methodology developed by the practicum group, can be extremely useful to the Ala Kahakai National Historic Trail in the following ways:

1. Analysis of the natural and cultural resources within the 19th century ahupua'a
2. Identification of the ancient trails that existed prior to the 1892 Highways Act for incorporation into the Ala Kahakai National Historic Trail
3. Understanding how ancient land divisions were marked and designated
4. Comparative analysis of the ancient landscape with the current landscape using aerial photos, imagery, or ground truthing
5. Distribution of population, land use, and settlement patterns of native Hawaiians in the 19th century

2.7 Oral History Methodology and Templates

Within the past decade or so, ethnography and oral history documentation has become an essential part of natural and cultural resource management within

Hawai‘i’s local communities. Documentation of these “living histories” can aid in identifying significant resources, understanding traditional resource management methods, and most importantly connect the current generation with the past. Unfortunately, although this desire exists, most communities are uncertain about the process and methods of documenting oral history interviews. Therefore, the practicum has selected two different oral history methodologies to analyze, and produced useful templates that diagram the process of oral history documentation.

DURP 2005 Oral History Methodology[18]

In 2005, a planning practicum in the Department of Urban and Regional Planning at the University of Mānoa did a project to analyze the coastal cultural resources and the heritage landscape in North Kohala, Hawai‘i. As part of this study, oral history interviews were conducted with residents on Hawai‘i Island and an oral history methodology was developed, which is detailed below.

First, the scope of the interview was developed which focused on two aspects: analysis of the historic and cultural landscape and documentation of native Hawaiian coastal cultural and natural resources. Once a framework was developed, the second step was to commence with the interview that occurred in three different styles: Drive-Along Interview, One-on-One Interview, and Historical Research.

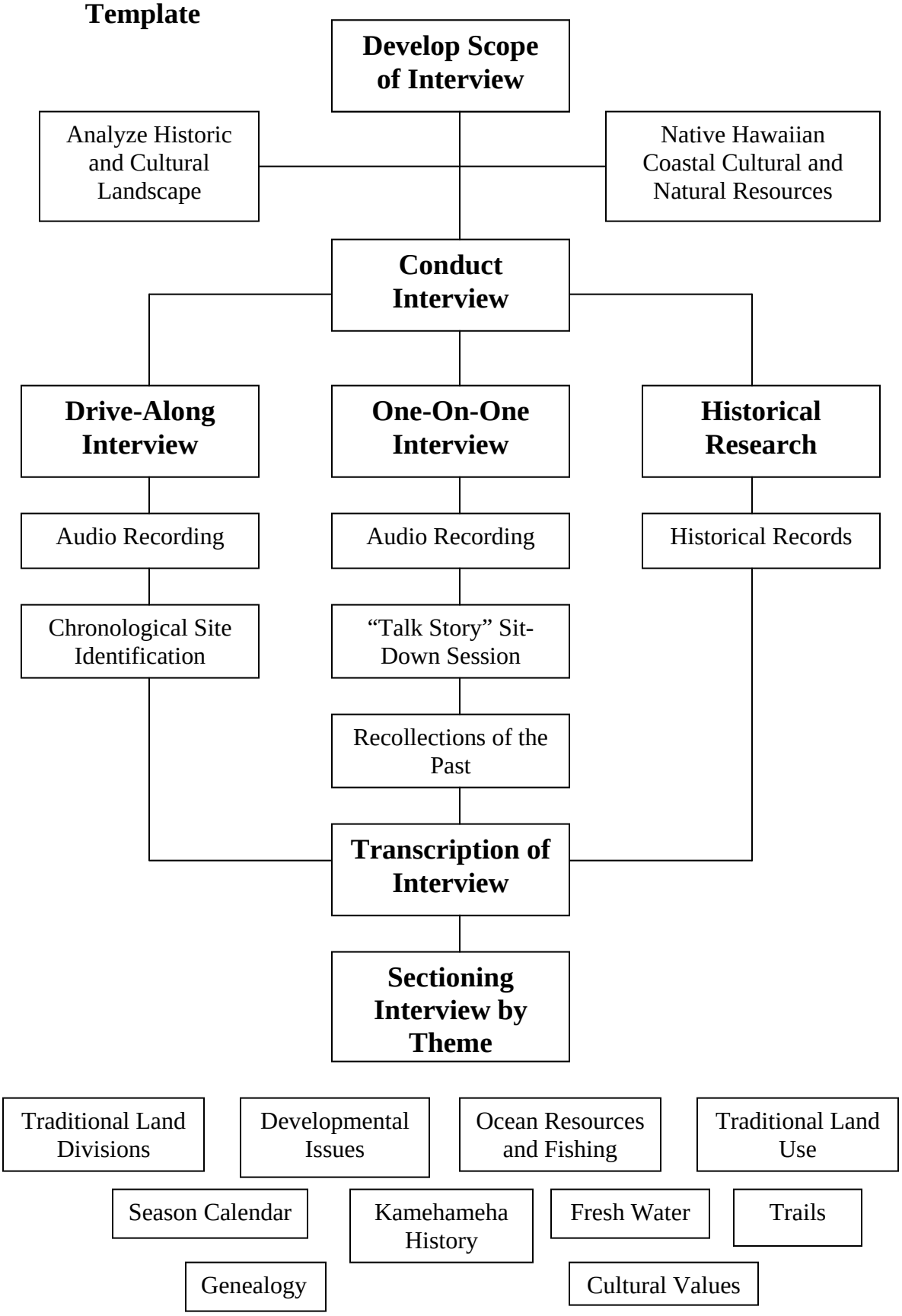
The Drive-Along Interview involves audio-recording the discourse that occurs during a drive in car that documents sites, stories, places names, and coastal cultural and natural resources. A benefit of this interview style is visually seeing the physical places associated with the oral histories and stories that make the interview more applicable and easily remembered. In addition, the chronological ordering of sites and place names, allows one to easily transfer oral history information or data to a map or other databases because of its connection to place.

The One-on-One Interview is the traditional sit down interview that occurs with one or more persons that is audibly or visually recorded. These oral history interviews can be considered “Talk Story” sit-down sessions that allow the individual(s) to give their recollections of the past. This interview style is usually a more intimate style of oral history documentation.

In addition to these two interview styles, Historical Research was conducted as a part of this practicum’s project to document previously recorded oral history interviews of the past that were conducted by the Office of Hawaiian Affairs, that

[18] DURP, 2005.

DURP 2005 Practicum
Oral History Methodology Template



would compliment the interview data collected through primary oral history interviews. Once information was obtained and collected from the interviews, the third step was to transcribe all primary oral history interviews. Once a the oral history was documented in writing, the final step involved sectioning the interview(s) by themes that included: traditional land divisions, trails, developmental issues, traditional land uses, Kamehameha history, fresh water, season calendar, cultural values, Hawai'i Island Lineage, ocean resources/fishing. By organizing an interview by theme, one can easily access information pertinent to specific subjects versus reviewing the entire oral history document for relevant information. This last step allows for better readability, accessibility, and organization.

Kepa Maly Oral History Methodology[19]

Another worthy and extremely extensive oral history methodology was extracted from a combination of four historical and cultural documentary research reports conducted by Kepa Maly, a cultural historian and resource specialist, and his wife Onaona Maly, an archival researcher and project assistant. The husband and wife duo make up the company, Kumu Pono Associates LLC, that does prolific cultural research. An analysis of their interview methodology, in the four reports, was diagramed by the practicum to detail their processes.

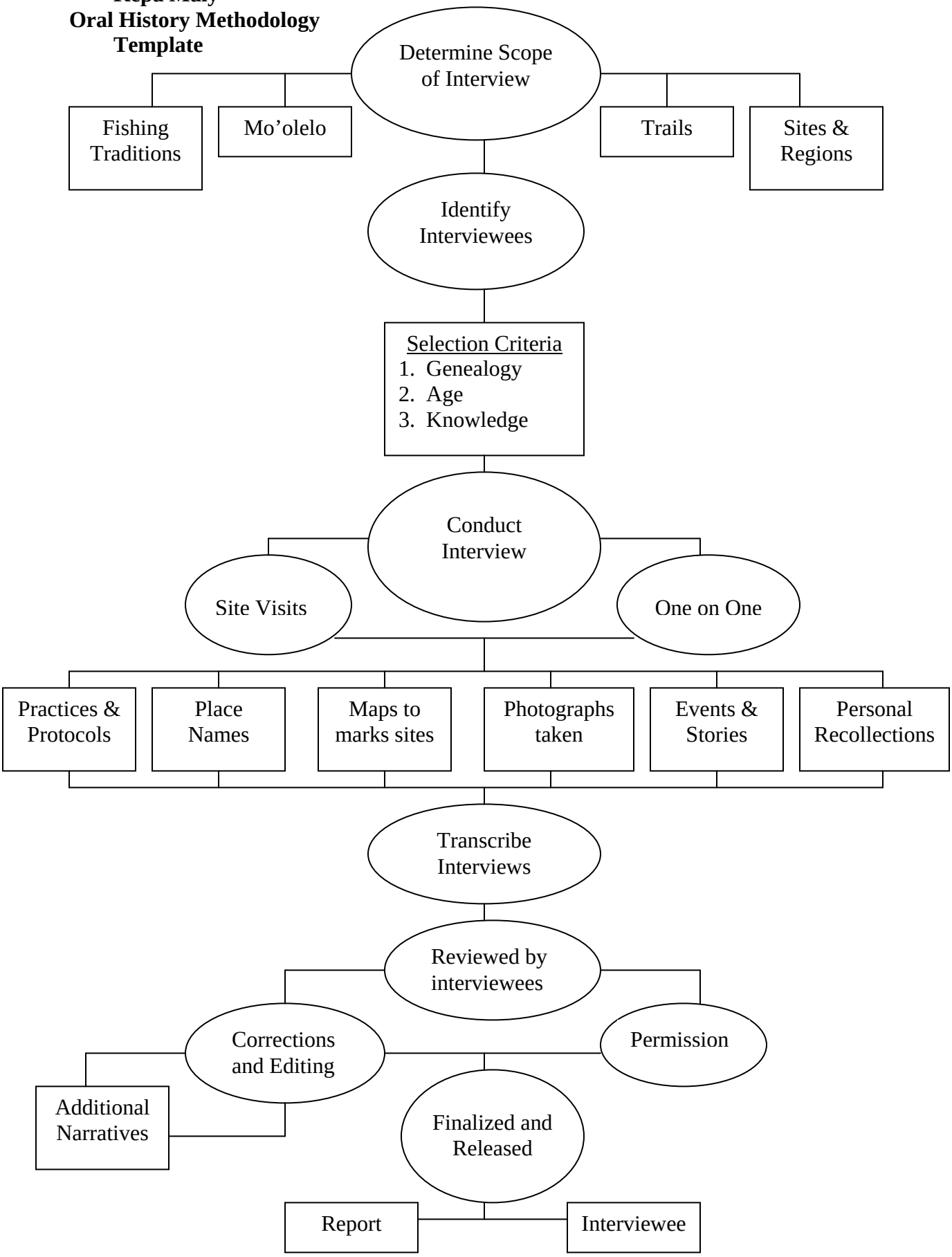
First, the scope of the interview was determined based on the project's framework. Fishing traditions, mo'olelo, trails, and sites and regions were the primary focus of the cultural reports that were analyzed. Lists of interviewees from the four reports can be found in Appendix B-3.

Second, interviewees were identified based on three important criteria: genealogy, age, and knowledge. First, Local individual(s) that were long-term residents within or have genealogical connections to the area being researched were desired because of their associated to the place, resources, and stories. Second, age was also a desirable characteristic amongst potential interviewees. Oftentimes, older individual(s) provided greater perspectives and recollections of their past experience, but also served as a link to the generation of the 1800's, whose traditions mostly survived through oral histories. Lastly, the knowledge of the individual(s) in respect to the project framework or interview scope was important to ensure that adequate information was retrieved from those most fluent and knowledgeable about the topic. These three criteria helped in selected potential interviewees, but were not complete limiting factors.

Third, interviews were conducted in two styles: Site Visits and One-on One Interviews. The first interview style, Site Visits, was conducted with individual(s) at sites being discussed or areas being researched. The second interview style,

[19] Extracted from four reports, see Maly references.

Kepa Maly
Oral History Methodology
Template



One-on-One, occurred in the same fashion as that listed previously in the DURP 2005 Oral History Methodology. During both interviews styles, audio recording and photographs documented interview. In addition, historical maps were used to mark specific sites or resources during the interview session and also to help guide the oral history interview. Practices, protocols, place names, events, and stories were all part of the personal recollections that were discussed during the interview.

Forth, interviews were transcribed and documented. These transcribed interviews were then reviewed by the interviewee. If during the review of the transcribed interview, there needs to be changes, editing and correcting occurs. Also, additional narratives may be recorded and documented at this time as part of the editing process. Once all revisions are made, consent must be obtained from the interviewee to use the transcribed interview and the information and data contained in their oral history. If permission is granted, then the final step commences.

Lastly, a finalized and documented oral history interview is released to the interviewee and is usually included as part of a larger report. Complete respect recognition of traditional knowledge and personal histories are given and information not appropriate for distribution is not included into the report or public domain.

Combined Practicum Oral History Methodology

To synthesize the positive and most useful steps and processes found within the two oral history methodologies, a Combined Practicum Oral History Methodology highlights segments that should be used in conducting oral history interviews.

I. Determine scope of interview and framework of project
    What exactly are the goals and objectives of the project? What does one want to learn from respondents?
II. Identify interviewees
    Recognizing those resources most pertinent to one's research will not only save time and will help with the validity of the research conducted
III. Conduct interview based on scope of project
    The two previous oral history methodologies were based on place, therefore the Site Visit and Drive Along Interview styles worked most effectively. On the other hand, for example, if one wants a specific interview about an individual's life, the One-on-One Interview style may be more appropriate.
IV. Audio Record, Video Tape, Transcribe
    Use technologies that are available to properly record the interviews to ensure accuracy, proper citation, and documentation of information.

V. Review, Edit, Permission

All transcribed information should be reviewed and edited by the interviewee to make sure information is accurate. This step also ensures that private material is screened and removed before information is disseminated to the broader public. Finally, permission from the interviewee to use the oral history information is essential.

VI. Sectioning of Interview

If time permits, sectioning the interview into themes is extremely helpful for readability, accessibility, and future referencing.

The three methodologies in this section can help communities in conducting interviews by describing, detailing, diagramming, and outlining the important steps and processes of effective oral history documentation.

2.8 Archaeology

Identifying archaeological sites is essential in cultural resource management including the establishment and maintenance of trail systems. Information on existing archaeological sites can be found in various documents, but for the purpose of this project, archaeological reports, located in the State of Hawai‘i Historic Preservation Division library became the primary document for analysis. Part of an Archaeological Report Review Table, created by a NPS research assistant, was used to recognize the previously recorded archaeological sites located within the vicinity of the five core ahupua‘a of this project

The Archaeological Report Review Table created by the NPS research assistant analyzes 110 archaeological reports that are pertinent to the Ala Kahakai National Historic Trail, but an excerpt of the table (See Appendix B-4) highlights those reports conducted within the five ahupua‘a and included the following 19 columns:

Table 2.1 Archaeological Report Review Table Columns

COLUMN TITLE	INFORMATION
CD#	Indicates the CD that the archaeological report is located
SHPD#	Indicates the SHPD number assigned to the archaeological report
Title	Indicates the title of the archaeological report
Author	Indicates the author(s) of the archaeological report
Year	Indicates the year in which the archaeological report was published
TMK#	Indicates the Tax Map Key(s) (TMK) associated with the archaeological report
Objective	Indicates the objective(s) of the archaeological report
Methodology	Indicates the methods used in conducting research for the archaeological report
Ahupua‘a	Indicates the specific ahupua‘a associated with the archaeological report
District	Indicates the district (North Kona, South Kona, Ka‘ū) where the archaeological report was conducted
# Acres Surveyed	Indicates the acreage studied for the archaeological report
Maps	Indicates any relevant maps with pertinent information for NPS Ala Kahakai National Historic Trail
Tables	Indicates any relevant tables with pertinent information for NPS Ala Kahakai National Historic Trail
Figures	Indicates any relevant figures with pertinent information for NPS Ala Kahakai National Historic Trail
Coastal Trails Found	Indicates if any coastal trails are found, documented, or recorded in the archaeological report
Inland Trails Found	Indicates if any inland (mauka-makai) trails are found, documented, or recorded in the archaeological report
Place Names	Indicates significant place names associated with study area, research, or found within archaeological report on maps, tables, figures, or within narrative
Findings/Cultural Sites	Indicates the cultural sites and findings of the archaeological study included in the report
Recommendations	Indicates the recommendations given by the author(s) (archaeologist(s)) in correspondence with cultural sites and findings
Comments	Indicates any comments (by reviewer) on the study or important information located within the archaeological report

The Archaeological Report Review Table was created to allow data located in archaeological reports to be reader friendly, more easily assessable, and sorted or searched more efficiently for information and content. Although the intent of

the table's creation seems complete, the following are limitations of the Archaeological Report Review Table:

1. Accessing and obtaining archaeological reports at the SHPD library was incomplete. Research assistants obtained as my reports that were physically there, but many archaeological reports were either checked out, missing, lost, stolen, or sorted properly within their library.
2. There is a lack of uniformity and consistency between the physical archaeological report documents acquired and the SHPD Archaeological Report Digital Index. The discrepancies between the Archaeological Report Review Table and the SHPD Archaeological Report Digital Index are found in the following columns: SHPD#, Title, Author, TMK#.
3. Unless the archaeological reports were 50-75 pages in length only the table of contents, introduction, findings, conclusion, and recommendations sections of the report were scanned and reviewed. Therefore, the information found in the Archaeological Report Review Table is a representation of those scanned portions of the archaeological reports.
4. Not all cells are filled and remain blank for the following reasons:
    a. All author(s) or architect(s) have various methods of conducting, writing, and compiling archaeological reports. Therefore, some column details may not have been part of the author's archaeological report.
    b. Sections of the archaeological report were scanned and reviewed, so only that information was recorded. Blank cells do not indicate that the information does not exist, but instead may mean that information was not reviewed in the scanned portions of the archaeological report.
5. The Archaeological Report Review Table is not inclusive of all archaeological reports available that are pertinent to North Kona, South Kona, Kaʻū, and should not be considered entirely complete.

The table excerpt of the five ahupuaʻa includes a total of seven reviewed archaeological reports, six conducted in the ahupuaʻa of Kiʻilae and one in Keālia 2. These reports were published in different years ranging from 1966 to 2001 and had varying objectives: archaeological inventory survey, mapping, and historical research. A 1871 horse trail that ran parallel to the coast connecting villages was recorded, in addition to multiple artifacts, burials, house sites, canoe landings, holua slides, and heiau. Lists of place names identifying significant natural and cultural resources are also evident in the table. While considering the limitations of the table, a general assessment of the archaeological sites present within the reports can be made to display the significance of the area's resources.[20]

[20] Synthesized from Archaeological Report Review Table

2.9 Cultural Resource Management

Varying perspectives of western versus native Hawaiian thought permeate issues pertaining to trail management and usage. The western view of trails is commonly narrower in perspective than the native Hawaiian cultural view often emphasizing trail recreational value and commercial prospective. The indigenous perspective defines the usage of trails as an activity deserving of respect and special conduct and is often a link between the indigenous people of Hawai‘i to their ancestors and their cultural practices.

The reality is that there are defined parameters established by state and federal agencies that have set legal precedent as to how trails should be addresses. There exists a need to find the common elements between the two epistemological frameworks to create an innovative methodological approach to pre-historical and historical trail management.

2.9.1 Threats and Opportunities

Immediate threats to the trail corridor include concerns for the protection of natural and cultural resources that will result from the increased public access to these areas. Native Hawaiians in the area are concerned that increased public access could potentially impact on their traditional cultural practices as well as destroy areas of deep spiritual significance.

There are also legitimate concerns regarding undesirable trail user behavior that have occurred in other public trail systems. Trails users have consistently violated trail use protocol by dumping rubbish along trails and shorelines and in some cases there have been incidents of illegal dumping where there is open space and where access is unregulated. Access to trails has also resulted in resource depletion particularly in the case of coastal resources where over harvesting of resources such as plant materials, fish, sand and ‘opihi have been known to occur. Moreover, there are many cases of trail users who wander off the trails to explore without regard to whether they are trespassing or trampling over sacred sites. Cultural sites along the trails have also been dismantled with stones removed and burial caves desecrated and robbed of funerary artifacts.

Additionally, there are concerns regarding loss of native Hawaiian access rights that may result from the effects of federal administration of the trail particularly on their gathering and subsistence rights under Hawaiian state law.

Identifying threats to the creation and management of the trail system should result in the identification of opportunities for trail management. These opportunities should include the following:

- Identification of lineal descendants within an ahupua‘a near the trails to take the role of caretakers or rangers to educate trail users, monitor and report violations.
- Identification of kānaka or kama‘āina within an ahupua‘a near the trail system to take the role of caretaker or rangers in the area.
- Creation of a kūpuna council to regularly inspect trail and cultural resources along the trails to determine whether they are being damaged.
- Creation of a kūpuna council to supervise trail maintenance and repair according to the trail’s historical condition and historical trail knowledge.
- Develop signage to inform and manage area users.
- Identification of sites considered suitable for cultural and historical interpretation along the trails.
- Creation of protocol to identify potential sites that could be opened to public access.
- Developing a listing of specific historic and cultural places that are not to be disclosed to the public.
- Creation of land easements through land trust mechanisms particularly in accessing additional trail areas that are in private ownership.
- Identification of collaborative frameworks for trail management between state agencies, communities, and private landowners.[21]

2.9.2 Plans for Restoration and Reuse of Trails

Community members of the five core ahupua‘a have collectively decided to participate in the maintenance and management of the trail systems that run along the Ala Kahakai Trail corridor as well as the trails that run mauka makai of the corridor. Additionally, the communities have raised concerns and issues regarding the protection of cultural sites along the trails and to restore native Hawaiian sites of historical and religious significance.

Differing trail typology dictates the use and maintenance practice of specific trails in the area therefore they should be considered. Additionally, there is a need to synchronize federal regulations, state regulations and community access needs into the management of the trails.

[21] Adapted from the “Book of Proceedings”: KUPA Meeting February 16-18, 2008

Table 2.2 Kamakau's Trail Typology[22]

Name of Trail	Description
Alanui or Kuamoʻo	Narrow bare places that stretch the length and breadth of the land
Alaloa, he ala o Puna	One that extends all around the land, or island
Ala ʻoki	An alanui that cuts across country, shortcut
Ala ʻilili	One that ascends a pali (cliff) latterwise
Ala pili pali	One along the side of a pali
Alanui kakaʻi pali	One along the very top of a pali
Ke alanui iki a ke kahuna(the narrow precarious path of the Kahuna) or Ke ala a ka manu (the trail of the birds)	A "thread of trail" (wahi alanui makoli iki) that clings to a pali
Alaʻau	Alanui that goes through a stream
Piʻina	Ascent
Ihona	Downward
ʻAlu	Dip in the road
Uakeʻe	Bend in the road
Hoʻoku	Top of a steep ascent
Kuhoho or Kumomole	Bottom of a steep incline
Kunihinihi	Trail with cliff on either side
Lehulehu, kawahawaha, or ʻalualua	One that goes up and down across valleys
Alanui aʻa	Stony roadway
Alanui puʻuhonua	A clear place like the road itself
Puʻu hoʻomaha or ʻoʻiʻo ʻina	Resting place along the road
Kaʻele waʻa	Short pathways in gullies

Apple's Trail Typology[23]

1. Type A: single file foot trails and were built before the introduction of horses to the Hawaiian Islands. Characteristically they are quite windy and follow the contours of the coastline if located on the coast (fisherman's trails). Over ʻaʻā, stepping stones were often placed in the path, and there may be ahu (rock cairns) to mark trails.

2. Type A-B: usually a Type A trail modified to accommodate horses by widening, (terrain permitting) and the addition of kerbstones. Chiefs ordered stepping stones thrown out of type A-B trails when they found that their horses would slip on them. They can sometimes still be seen lying where they were tossed on the side of the trail.

[22] Table created from information in Kamakau, 1976.
[23] Adapted and synthesized from Apple, 1965 and Apple, 1994.

3. Type B: newly built trails constructed for horse use (proper width for horses) and built in a straight line between two points. Type B trails were always inland of type A or A-B trails. A-B and B trails were built under the direction of chiefs between 1820 and 1840 (Apple 1965: 64)

4. Type C: trails were constructed between 1841 and 1918 (Apple 1965: 64). They were new trails which permitted two horses to be ridden side by side or pass one another. Built in as straight of a line as possible, type C roads often cut off coastal peninsular communities. They are characterized by the planting of bushes or trees as boundaries and the presence of man-made kerbstones. The surface type C roads are "macadamized" where they pass over ʻaʻā and pāhoehoe (solidified by packing and leveling small rocks on the surface)

5. Type D: type C trails modified to accommodate carts. Often feature parallel ruts made by cart wheels with iron rims.

These two trail typologies vary in different ways. Kamakau's Trail Typology uses Hawaiian language to name and to illustrate the physical description and characteristics of 20 specific trails as they are encountered topographically. On the other hand, Apple's Trail Typology historically dates specific trails and focuses on the function and use of the trails to identify and type them. In addition, Kamakau's typology is derived from a native Hawaiian perspective while Apple's typology is a non-native perspective on trail identification. Both typologies can be effectively utilized simultaneously in the Ala Kahakai National Historic Trail corridor to identify and describe individual trails or the trail system as a whole.

2.9.3 External Support

Various federal and state agencies, non-profit organizations, non-governmental organizations, and community groups provide external support for the establishment, management, and protection of trails.

Table 2.3 External Support

Entity	Current or Possible Support
National Park Service	• Financial support through funding and grants • Technical assistance including GPS of trails, tools for maintenance and cleaning
Department of Land and Natural Resources	• Technical guidance in collaboration with Na Ala Hele Program
University of Hawai'i at Mānoa (DURP)	• Research • Analysis • Instruction
Kids of Kona	• Bridging of generations • Educational curriculum • Physical assistance
KUPA: Kama'āina United to Protect the 'Āina	• Community Development • Reconnecting people with resources
Kona Historical Society	• Historical and archival documentation research • Map resources for trail identification
Community Conservation Network	• Networking opportunities with other communities • Capacity Building and Training

2.9.4 Future Research

Native Hawaiian Access Rights

A major concern from the communities in the area pertains to the rights of the native Hawaiians to access the trails. Future research needs to focus on simplifying all regulatory material regarding native Hawaiian access rights. Current information is fairly difficult to decipher due to the difficulty in

understanding the legal language as well as procedures. Effort must be made to reconcile these issues to make the material readily understandable for a layperson. Additionally, there are many laws pertaining to native Hawaiian access rights which present the difficulty of interpretation and understanding which laws precede others. There is a need to research the different laws and regulations to understand the different standing that each of these laws have.

Ethnographic Projects

The purpose of ethnographic studies is to gather important information on Hawaiian ethnographic resources in the area particularly traditional cultural practices and mo‘olelo of the areas.

It is critical to locate and interview any living persons or their descendants who have ancestral ties to the area. These informants are the best sources to identify significance of trails, usage and cultural practices within the trail systems.

Ethnographic information is critical for complementing historical records, particularly the oral history of certain areas. Additionally, traditional cultural properties are not always identifiable through archaeological record.

Information Management Program

Creation of an information management program is needed to assist community members to systematically organize collected data pertaining for the Ala Kahakai National Historic Trail and the trails mauka makai of it. An information management system will allow for the processing of information from various archeological sources, historical and ethnographical research and global positioning system (GPS) data regarding the trails. Information compilation into a database will be useful for the creation of a geographical information system (GIS) to facilitate accessibility and management of information that can be used for trail management and area resource planning.

Best Management Practices

Future research should also focus on best management practices as guidelines for managing the historical and cultural trails. Trail construction and maintenance may involve impacts to cultural and natural resources, therefore, attempts must be made to create an understanding of these impacts and to provide the methods necessary to minimize them. Reference tools must be developed to help public land managers, community groups, landowners and other trail users so that these groups are able to work together to protect the cultural and natural resources along these historical trails. It is also necessary to develop trail management that take into consideration the different needs of the trail stakeholders and to synchronize the different trail construction and maintenance

guidelines that are required from the different stakeholders such as the National Park Service (NPS) and the State Department of Land and Natural Resources (DLNR).

2.10 Bridging CRM and Economic Development

The communities within these five core ahupua‘a have expressed the need for some form of economic development for the area. They are struggling with the principles of economic growth of having to develop to bring in some economic opportunities for the area. On the other hand, they are hesitant because they are aware of the importance of the area as it pertains to indigenous cultural practices and the maintenance of a simpler way of life.

For this rural area, economic development is certainly an issue. Residents have home-based businesses to supplement income but would like the opportunity to market their products more effectively or garner a larger share of the market in the tourism sector. This is understandable considering the unemployment rate for the area is very high at 8.6 percent. The community has advocated for increased employment opportunities that are consistent with existing lifestyles and residents have discussed the possibility of establishing a cultural center and farmers market.

Addressing the economic needs of the community is important as it pertains to the preservation of cultural resources along the trails as well as the trail itself. Commercialization of resources and engagement in profit maximization activities must play a secondary role to the preservation of traditional and customary values and gathering practices. Economic opportunities and therefore possible projects for the area must reflect the core values of the community. Economic opportunities must not infringe upon the pristine cultural and natural resources of the area, rather these opportunities have to be planned to so that they can enhance and protect the area.

2.11 Conclusion

Historic trails of Hawai‘i continue to serve as a connection between the people of Hawai‘i and their cultural traditions. Trails connected the native Hawaiians to resources from the uplands to the sea therefore enabling families’ livelihoods and the perpetuation of cultural practices, customs, and protocols. Native Hawaiians today recognize the significance of these trails and the role that they play in strengthening their ties and hence their sense of kuleana to the land and therefore to their ancestors.

Historic trails of Hawai‘i, however, have not been relegated the importance or attention that is placed on other significant historical sites, particularly the burial

graves and caves of Hawai‘i. Moreover, when identified on private properties, trails are seen to present an impediment to development and therefore become topics of controversies between private landowners and the public.

The identification and restoration of trails can be problematic such that it places these sites and resources within public access and therefore open to vandalism and desecration. Trails need to be preserved, protected, and managed so that access for the native Hawaiians and the general public does not result in trail destruction or degradation.

In addition to federal, state, county, and community trail advocacy, understanding the overall cultural landscape, inclusive of place names, natural resources, and cultural sites, through oral histories and documents of the past and present, can help to mitigate possible negative externalities of trail establishment by educating all of Hawai‘i about the significance of existing resources.

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CHAPTER THREE: NATURAL RESOURCES MANAGEMENT

3.1 Objectives

The objectives of this section are:

- To describe the current natural resources of South Kona and their cultural and environmental significance, with a focus on the five project ahupua‘a;
- To describe the current and potential threats to natural resources in the focus area;
- To describe ways in which community involvement could improve the health and management of natural resources.
- To provide sources of technical information and project assistance that could help communities get involved in the management of their natural resources.

3.2 Current Natural Resources Cover

For the purpose of describing the natural resources of an ahupua‘a, it is helpful to first observe the mauka, or mountain-ward, landscape features, and then to observe the makai, or seaward, landscape. This is because land use and land cover at all elevations can have an important impact on nearshore environments.

This section describes the land cover of the five project ahupua‘a, with a focus first on the status and significance of the mauka forests, and then focusing on the health of the nearshore habitats. The source of the information collected is also discussed.

3.2.1 Mauka

Sources of Information

There are many sources of information on the land cover and natural resources of the South Kona Region. Hawai‘i State and County sources of information include:

- The Hawai‘i County Resource Center (available at: http://www.hcrc.info/), which provides a wealth of planning and land use information on all the districts of the island of Hawai‘i. Data available for download include maps

relevant to the Kona Community Development Process (CDP), CDP draft documents, as well as additional documentation of the CDP;

- The Hawai‘i Statewide GIS Program (available at http://hawaii.gov/dbedt/gis/), which is administered by the Office of Planning of the Hawai‘i Department of Business, Economic Development, and Tourism. It is a very comprehensive source of spatial geographic information system (GIS) data. GIS data layers that are available on the Statewide GIS program website and are applicable to natural resources management include physical features such as elevation contours and streams; environmental features such as agricultural lands, aquifers, vegetation cover, etc.; marine features such as coastal resources, marine managed areas, fish catch areas, etc.; and hazard features such as flood hazard zones and tsunami evacuation zones. In addition to offering GIS data for download, the Statewide GIS program also developed a web mapping application, I-Map Hawai‘i, to allow people to view common GIS data layers and create their own maps. This application is available at http://hawaii.gov/dbedt/gis/i-map.htm.

The South Kona region has been identified as an important habitat for several endangered plant and animal species; consequently, there are several nature preserves in that area and a number of surveys of plant communities have been conducted. The Kona Forest Unit of the Hakalau National Wildlife Refuge is located almost entirely in the mauka portion of the Ho‘okena ahupua‘a. Environmental assessments conducted as part of the management process of the refuge provide survey information on forest characteristics and endangered species present in the refuge. These documents also provide some information on refuge management practices and community access rights.

Additional information on South Kona forests and native plants were collected from;

- The Kona Soil and Water Conservation District;
- The Smithsonian National Museum of Natural History’s Flora of the Hawaiian Islands collection (available at http://botany.si.edu/pacificislandbiodiversity/hawaiianflora/index.htm);
- The Manual of Hawai‘i’s Flowering Plants by Wagner, Herbst, and Sohmer;
- The Fish and Wildlife Service’s (FWS) Pacific Islands Endangered Species Site (available at: http://www.fws.gov/pacificislands/wesa/endspindex.html#Hawaiian)
- Additional literature cited at the end of this chapter.

General Land Characteristics

The South Kona Region is a rural area, dominated by undeveloped forested land, ranch land, and diversified agricultural lands, as shown on the Land Cover Map

in Appendix A-7. In this area, human development and infrastructure are still limited and damage to the natural environment remains relatively low. Because of the proximity of this area to the more urban North Kona region, which developed quickly from an influx of tourism starting in the 1980s, there is new and unprecedented development pressure on the South Kona Region.

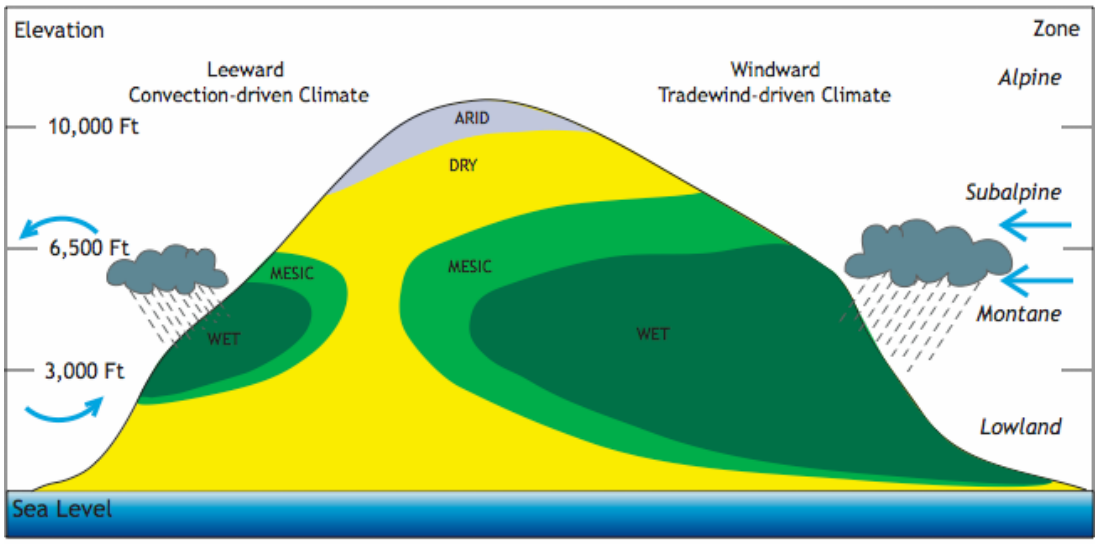
The South Kona district occupies part of the southwest flank of the active Mauna Loa Volcano, which last erupted in 1983 (USGS, 2005). The land surface in the area of focus is covered by Mauna Loa lava flows ranging from 3,000 years old to less than 100 years old. The lava flows have a porous rock structure with numerous cracks, caves and lava tubes. The caves and lava tubes may contain rare plants and animals, Native Hawaiian cultural remains, and paleontological remains of now extinct plants or animals.

Forests

The forest resources of the South Kona Region are very important, both from a cultural and a natural resources standpoint. Because of its location in the southwest portion of the island of Hawai‘i, South Kona is shaded from the moisture-rich trade winds that bring rain to the Windward side of the island. At high elevations (about 6,000 feet and above) in the South Kona region, dry conditions prevail. At lower elevations, convection-driven sea breezes create an almost daily pattern of cloud accumulation and rain in the mid-range slopes (approximately 1,000 to 5,000 feet elevations)[24]. These rains promote the growth of wet and mesic forests. Wet forests in the focus area occur at elevations ranging from approximately 1,500 feet to 4,500 feet above sea level. Mesic forests occur from about 4,500 feet to 6,000 feet above sea level. Dry forests and shrub lands dominate at higher elevations. Wet and mesic forests generally have some of the highest concentrations of endemic Hawaiian species, largely because of the multitude of microclimates they represent[25].

[24] National Climatic Data Center, available at www5.ncdc.noaa.gov/climatenormals/clim60/states/Clim_HI_01.pdf.
[25] DLNR, 2005

Figure 3.1 Hawai‘i Island Rainfall Pattern



Source: Figure adapted from National Climatic Data Center Climate description and Hawai‘i Island Satellite Imagery from Hawai‘i Statewide GIS Program

The forest composition of our focus area in South Kona is shown on the Forest Cover Map in Appendix A-8. As the map shows, there are three major types of wet and mesic forests that are encountered in the five project ahupua‘a:

- **‘Ōhi‘a Montane Wet Forest**: Occurring at mid-elevations from about 1,500 feet to 4,500 feet in altitude, the overstory of this forest consists of pure ‘Ōhi‘a (*Metrosideros polymorpha*). Epiphytic bryophytes and lichens are abundant on tree branches. Prominent in the understory of native shrubs are pilo (*Coprosma spp.*), pūkiawe (*Styphelia tameiameiae*), and ‘ōhelo (*Vaccinium calycinum* and *V. reticulatum*). The ground cover is composed largely of native ferns, particularly laukahi (*Dryopteris wallichiana*) and ‘ama‘u (*Sadleria cyatheoides*); subapline plants can also be encountered in this forest[26].
- **Montane Mesic Forest**: these forests occur between 2,500 and 6,000 feet elevation and have annual rainfall in the 1000 to 1900 mm range. This forest type is characterized by an overstory composed of a mixture of koa (*Acacia koa*) and ‘Ōhi‘a trees and an understory of native shrubs and hapu‘u (*Cibotium glaucum*), the Hawaiian tree fern. Canopy heights range from 10 to 35 meters. The vegetation in this forest zone includes a diversity of native species[27].
- **Mixed Mamane-Sandalwood and Koa Dryland communities**: At elevations exceeding 6,000 feet, the native forest is characterized by a mixed mamane-sandalwood (*Sophora chrysophylla – Santalum spp.*) and koa or ‘Ōhi‘a dryland

[26] Wagner et al, 1990
[27] ibid

natural communities. The understory of these communities includes native shrubs such as pūkiawe, ʻōhelo, and kūkaenēnē (*Coprosma ernodeoides*)[28].

These forests are home to many endemic plant and animal species and several endangered species of significance for biodiversity, but also as cultural resources associated with native Hawaiian practices. A discussion of endemic plant and animal species is presented below.

Native Forest Plant Species

The forest ecosystems of the South Kona Region are important strongholds of native Hawaiian plant communities. Disturbance from introduced plant and animal species, human development encroachment, and habitat destruction by fire are a constant threat to the native Hawaiian forests, but management efforts have helped support the health of these magnificent forests. Federal and State agencies as well as some prominent NGOs recognize the importance of these forests for biodiversity and cultural preservation, aquifer maintenance, and for the education and enjoyment of present and future generations, and thus have joined forces to conserve these forests. Conservation efforts could also be improved by disseminating information about the importance and uniqueness of these forests to local communities of the South Kona Region.

A survey conducted as part of an Environmental Assessment for the Kona Forest Unit of the Fish and Wildlife's Hakalau National Wildlife Refuge indicated the presence of 33 rare, threatened and endangered plant species within the forest unit, which is located in the Hoʻokena ahupuaʻa[29].

In order to better appreciate the uniqueness of the forests of the South Kona Region, understanding their composition and the endemic species they support is critical. The flora and fauna descriptions of the following pages are not meant to be an exhaustive list of the species of the South Kona forest ecosystems, but instead they are aimed to convey a sense of the richness of these habitats and the interconnectedness of ecosystem species.

The dominant native tree species of the South Kona mesic and wet forests as well as additional native plants, and endangered fauna of significance are described below. Cultural, economic and natural significance of these species are also discussed.

[28] ibid
[29] Fish and Wildlife Service, 2008

ʻŌhiʻa Lehua – *Metrosideros polymorpha*



The ʻŌhiʻa is the most abundant and widespread native tree in the Hawaiian Islands. It is a dominant or co-dominant tree in the rainforests and mesic forests of the South Kona Region.

The ʻŌhiʻa is a member of the myrtle family and is closely related to species of similar appearance in the South Pacific. New Zealand in Particular is a center of distribution for the genus *Metrosideros*, with over a dozen species, including the widespread and well-known Pohutukawa (*M. excelsa*) [30].

The ʻŌhiʻa has eight varieties, all characterized by grey, flaky bark and gray-green to yellow-green thick-textured foliage, and by pompom-shaped flowers with many colorful stamens and small petals. The flowers are most often bright red, but may also be orange, yellow, pink, or white. ʻŌhiʻa varieties can usually be distinguished by the hairiness of their leaves, which is thought to be an adaptation to more arid and hot areas. Silvery hair on the leaves of ʻŌhiʻa is believed to help regulate leaf temperature by having a reflective color, and to help regulate leaf moisture by reducing desiccation in dry and windy conditions. Because of these adaptations, ʻŌhiʻa is often one of the first colonizers on new lava flows[31].

ʻŌhiʻa flowers produce large amounts of nectar and are a critical food source for several Hawaiian honeycreepers, including the ʻapapane and the ʻiʻiwi.
There are a number of variations on the Hawaiian name for ʻŌhiʻa: ʻŌhiʻa hākea and ʻŌhiʻa kea refer to the ʻŌhiʻa with white flowers; ʻŌhiʻa ʻulaʻula refers to ʻŌhiʻa with red flowers; ʻŌhiʻa ʻapane refers to Ohi'a with dark red blossoms; and Lehua mamo refers to an ʻŌhiʻa with yellow blossoms. ʻŌhiʻa kō refers to the log of an ʻŌhiʻa tree to be made into a canoe[32]. ʻŌhiʻa figures prominently in ancient Hawaiian legends and religion: ʻŌhiʻa forests were regarded as the residence of the gods of creation, Kū and Kāne[33].

[30] Stone & Pratt, 1994
[31] ibid
[32] Wagner et al, 1990
[33] Kepler, 1998

Koa - *Acacia Koa*



Koa is also a relatively common endemic plant species in upland habitats across all the Hawaiian Islands. Mature Koa trees are characterized by curved, sickle-shaped, thick-textured "leaves", which are not true leaves but modified flattened petioles (leaf stalks). Juvenile Koa trees on the other hand, exhibit compound leaves with tiny, soft-textured leaflets. It is believed that the two different kinds of leaves exhibited by the Koa tree are an adaptation for drought conditions. The mature, modified petioles are better at controlling water loss, while the juvenile leaves provide an advantage to small trees that are shaded in the forest understory[34].

Koa is an extremely important plant for the health of ecosystems in the Hawaiian Islands. It is a host and food source for several native invertebrates, including several species of endemic moths, endemic yellow-faced bees, and wood-boring beetles. In turn, these invertebrates are important food sources for several native Hawaiian birds[35].

In ancient Hawaiian times, Koa logs were highly prized for their use to make canoe hulls. Additionally, the leaves of Koa were used medicinally by the Hawaiians. The leaves were spread out on a bed to cause a patient lying on them to sweat. The ashes of Koa plants were also applied to the mouth interior of infants for physical weakness. Nowadays, Koa is still a highly prized wood for making fine furniture and other handcrafted articles. While Koa is widespread, unlogged Koa-ʻŌhiʻa wet forests, which support the growth of tall, straight-trunked Koa trees (preferred by loggers) have become extremely rare. Almost all of the lowland Koa forests of Maui and Hawaiʻi have been logged in the 19th century, and high-elevation Koa forests of Hawaiʻi Island were converted to cattle ranches. Thus the conservation of remaining Koa and Koa-ʻŌhiʻa forests is very important for preservation of naturally functioning Hawaiian ecosystems[36].

[34] Wagner et al., 1990
[35] Stone & Pratt, 1994
[36] Stone & Pratt, 1994

Māmane – Sophora chrysophylla



After ʻŌhiʻa and Koa, Māmane is probably one of the most important endemic trees in many subalpine Hawaiian plant communities. It grows at elevations ranging from 1,400 to over 10,000 feet. It is found on all the main Hawaiian islands except Niʻihau and Kahoʻolawe[37]. In the South Kona region, Māmane is one of the dominant plant species of upper-elevation forests.

Māmane is usually a small tree with a rounded, spreading canopy. Its leaves are compound with many rounded leaflets opposing each other on a central leaflet stem. The flowers of māmane are abundant, bright yellow, and produce nectar that is an important food for native Hawaiian honeycreepers, particularly in times when ʻŌhiʻa flowers are scarce.

The wood of Māmane is very hard and was favored by Hawaiians for farming tools such as digging sticks. Māmane wood was also used to make the runners of sleds (papa holua), which were run down stone and earthen tracks in a popular sport of the Aliʻi[38].

Table 3.1 below also shows some additional culturally and economically important plant species supported by the ecosystems of South Kona forests. These plants represent assets and a connection to native Hawaiian culture for the local communities of South Kona, which should not be overlooked.

[37] Wagner 1990
[38] ibid

Table 3.1 Culturally and Economically Notable Plant Species of South Kona Forests[39]

 Photo by Forest & Kim Starr	**Maile (*Alyxia oliviformis*)** – it has been a favorite plant of the Hawaiians for its fragrant leaves. It was and is still used at festive occasions for decorations and lei. Laka, goddess of the hula, was invoked as the goddess of the maile, which was one of the five standard plants used in her altar.
 Photo by Forest & Kim Starr	**Kāwaʻu (*Ilex anomala*) –** Trees and shrubs (5-12 m tall) with dark green and glossy leaves and with small purplish-black fruits. This tree is indigenous in Tahiti, Marquesas and the Hawaiian Islands and is common in mesic and wet forests on all the main islands. The wood of Kāwaʻu was formerly used for saddle trees, for canoe trimmings, and as an anvil for kapa beating.
 Photo by Forest & Kim Starr	**Naio, bastard sandalwood (*Myoporum sandwicense*) –** Indigenous shrubs to small trees with somewhat fleshy leaves and white or pink flowers and greenish white to pinkish fruits. The wood, while drying and burning, has an odor similar to sandalwood. It was once shipped to China as a substitute after the local sandalwood supply was exhausted, but it was not accepted. It was formerly also the preferred wood for house frames.

[39] Table plant information source: Wagner 1990, and Hawaiian Ecosystems at Risk project (HEAR) site: http://www.hear.org/

 Photo by Forest & Kim Starr	**Kōlea lau nui (*Myrsine lessertiana*) –** Endemic trees or shrubs 2 to 8 m tall with purplish to reddish brown branches and young leaves. The wood of this species was used by the Hawaiians for house posts and beams, and for anvils on which to beat kapa. The red sap was used to dye kapa, and a black kapa dye was made of the charcoal.
 Photo by Forest & Kim Starr	**ʻĀkala, ʻākalakala (*Rubus hawaiensis*) –** Endemic shrub with slender prickles and compound leaves. Small flowers are dark pink to dusky rose and fruits are red to dark purple. These shrubs are common in mesic to wet forests of Kauaʻi, Molokaʻi, Maui, and Hawaiʻi. The plant appears to be related to the North American salmonberry (*R. spectabilis*). The fruits are edible and are commonly used in making pies and preserves.
	**Pūkiawe (*Styphelia tameiameiae*) –** Indigenous shrubs or trees with small whitish coriaceous leaves. They have distinctive dark red to pink round fruits. This plant is found from mesic forests of low elevation to alpine shrubland on all the main Hawaiian islands and on Marquesas islands. When a high-ranking chief wanted to mingle with commoners, he would enter a smoke house and be smudged with smoke of pūkiawe wood while a priest chanted a prayer for dispensation. The plant is still used for making lei.

Photographs Source: Photographs used in this table are permitted for use with credit to the photographers Forest Starr and Kim Starr (Image use policy: http://www.hear.org/starr/imageusepolicy.htm).

Native Forest Endangered Animals

The wet and mesic forests of the South Kona Region are home to several endemic and endangered animal species that are important to the culture and biodiversity of Hawaiʻi. Some of the endangered animal species found within the project five ahupuaʻa area are described below.

‘Alalā – The Hawaiian Crow (Corvus hawaiiensis)



Endemic to the Big Island, the ‘Alalā favors upland ‘Ōhi‘a and ‘Ōhi‘a -Koa forests between 3,000 to 6,000 feet in elevation, in the Hualalai area and on the western slopes of Mauna Loa. The ‘Alalā was once abundant in the lower forests of the western and southern portions of Hawai‘i Island. Their feathers were prized by the Hawaiians for use on kahili, long staffs topped with feathers, symbols of royalty[40].

A number of factors led to the rapid decrease of their populations. The introduction of avian malaria and pox with mosquitoes was an important factor in the early decrease in the species. The introduction of cats and mongooses is also thought to have had a strong impact on juvenile crows, whom leave their nest up to two weeks before they can fly. Additionally, starting in the 1890s, a shooting campaign was undertaken by fruit and coffee farmers of the region, which further increased the decline of the species. With the loss of forested habitats, the crows also became a more susceptible target to their natural predator, the ‘Io, also itself an endangered bird[41].

Nowadays, the ‘Alalā is the most critically endangered bird species of the South Kona region. As of 2003, this bird was listed as extinct in the wild, when the last two known specimens of the species, which were located in the mesic forests of the South Kona region, disappeared. The species now only survives in captivity in the Maui Bird Conservation Center, and in the Keauhou Bird Conservation Center. The Kona Forest Unit of the Hakalau Forest National Refuge was established by the Fish and Wildlife Service in 1997, to protect a portion of the ‘Alalā’s natural habitat and attempt to reintroduce this bird in the wild[42].

‘Io – The Hawaiian Hawk (*Buteo Solitarius*)

The ‘Io is endemic to the Island of Hawai‘i and is a federally listed endangered species. Although this bird formerly inhabited other Hawaiian Islands, it is now only found on the island of Hawai‘i. ‘Io was a symbol of royalty in Hawaiian legend.
While it needs native forest for nesting, it is able to use a wide range of habitats and prey items for foraging. It feeds on rodents, insects, and small birds.



[40] Stone & Pratt, 1994
[41] FWS, Pacific Island Endangered Species
[42] FWS, 2008

Conversion of their forest habitat to residential, agriculture, exotic forestry, and industrial areas has had the greatest negative impacts on the ‘Io population and is likely to remain the main pressure on this species with increasing human settlement on the island of Hawaii[43].

‘Akiapola‘au – The Hawai‘i Creeper (*Hemignathus munroi)*



The ‘Akiapola‘au is five inches long and has an olive green color with a white throat and dark grey raccoon-like mask. This bird also has a very distinctive bill, with a stout lower mandible and a slender, curved, and somewhat flexible upper mandible. The upper mandible is used to pry burrowing insects from beneath tree bark, and the lower one to hammer or chisel bark. This endemic bird species is dependent upon native Hawaiian forest ecosystems for food, shelter, and nesting. The ‘Akiapola‘au is found in Koa-‘Ōhi‘a mesic and wet forests of Hawai‘i island at elevations above 2,000 feet. This bird feeds mainly on insects found on branches and tree trunks, particularly Koa, but is sometimes also seen feeding on nectar[44].

The ‘Akiapola‘au was listed as an endangered species in 1975 and remains threatened by introduction of avian diseases, predation by introduced mammals, and habitat destruction.

‘Akakane - The Hawai‘i ‘Ākepa (*Loxops coccineus coccineus*)



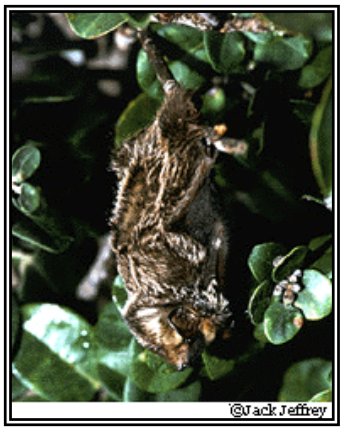
The male ‘Akakane has a bright red-orange feather coat while the female has a greenish top and yellow belly. This bird has a conical bill, which it uses to pry open ‘Ōhi‘a buds, seed pods, and galls, in search of food. Small insects and spiders form the bulk of their diet, although they have also been seen drinking nectar. The ‘Akakane is usually found in ‘Ōhi‘a and Koa-‘Ōhi‘a mesic and wet forests above 3000 feet in elevation[45].

The ‘Ākepa was common on Maui (known on Maui as ‘Ākepeu’ie), Kaua‘i and Hawai‘i in the 1800’s but the largest population now remains on Hawai‘i Island (estimated at about 14,000). Aggressive alien plants and animals, and loss of

[43] FWS, Pacific Island Endangered Species
[44] Stone & Pratt, 1994
[45] Stone & Pratt, 1994

habitat are thought to be the main threats to the survival of ‘Akakane populations[46].

‘Ōpe‘ape‘a – The Hawaiian Bat



The ‘Ōpe‘ape‘a weighs about 5 to 8 ounces and has a wingspan of 10 to 13 inches. This bat has a thick brown and grey fur coat and is believed to be related to the North American hoary bat. It is the only remaining native land mammal of the Hawaiian islands.

Data on the ‘Ōpe‘ape‘a’s habitat and population and very limited and indicate that it roosts among trees in areas near forests. It has been observed from sea level up to elevations of 10,000 feet, flying over most vegetation, whether alien or native, except deep wet forest[47].

The magnitude of ‘Ōpe‘ape‘a population decline after western settlement is unknown. It is believed that the primary reason for the decreased bat population is loss of habitat, however, much more research is needed.

Lowlands Land Cover

Māmalahoa Highway is the main highway linking Kona to Hilo and the only artery into the southern portions of the Island of Hawai‘i. Consequently, human settlement is more concentrated in the vicinity of the highway and several villages are located around it. Additionally, the land in the vicinity of Māmalahoa Highway and downhill from the highway is also occupied by agricultural plots including coffee and tropical fruit plantations. A large portion of the land between the highway and the shoreline in the five focus ahupua‘a is also ranch land, covered with tall grasses, shrubs, and small trees, and either used for cattle grazing or vacant.

It is the lowlands between Māmalahoa Highway and the shoreline that are facing the greatest development pressure. Due to the current demand for housing in Hawai‘i, these lands are viewed by large landowners as having a higher value if developed than if used for agriculture or as ranch land. Agricultural land subdivisions and the development of gentlemen’s estates are threatening the social structure of South Kona, creating shoreline access and land use conflicts, and are diminishing the amount of important agricultural and historical lands of the island of Hawai‘i.

[46] FWS, Pacific Island Endangered Species
[47] Stone & Pratt, 1994

Historic descriptions of Kona indicate that the area now under development pressure was previously part of the Kona field system. The Kona field system occupied a large area from Kailua to south of Honaunau and was a "patterned network of elongated rectangles lying as a band parallel to the coastline."[48] Earth and rock ridges were built by native Hawaiians to enclose the fields, which were cultivated according to their elevation and rainfall amounts[49]:

- Nearest to the shoreline were sweet potatoes and paper mulberry;
- In the area above that were breadfruit trees, sweet potatoes, and paper mulberry;
- Above that were sweet potatoes and dry land taro;
- In the highest portions of the system were plantains and bananas.

3.2.2 Makai

Sources of Information

The National Oceanic and Atmospheric Administration (NOAA) has a wealth of information on coral reefs and near-shore habitats, ranging from definitions and current status to management alternatives, which can be accessed from their coral reef information system portal at http://coris.noaa.gov/welcome.html. Additionally, NOAA's Center for Coastal Monitoring and Assessment also has maps of the benthic habitats available for online viewing at http://ccma.nos.noaa.gov/products/biogeography/hawaii_cd/htm/maps.htm, which are meant to assist coastal communities in better managing their near-shore ecosystems. The maps are based on aerial photography and site surveys, and detail shallow depth biological communities and sea-floor geomorphology. Biological cover is a very good indicator of the health of a marine habitat.

The United States Geological Survey (USGS) is also an important source of technical information on natural resources. The USGS conducted a survey of benthic habitats in Honaunau Bay, which is available at http://pubs.usgs.gov/sir/2006/5258/index.html.

Near-Shore Environments

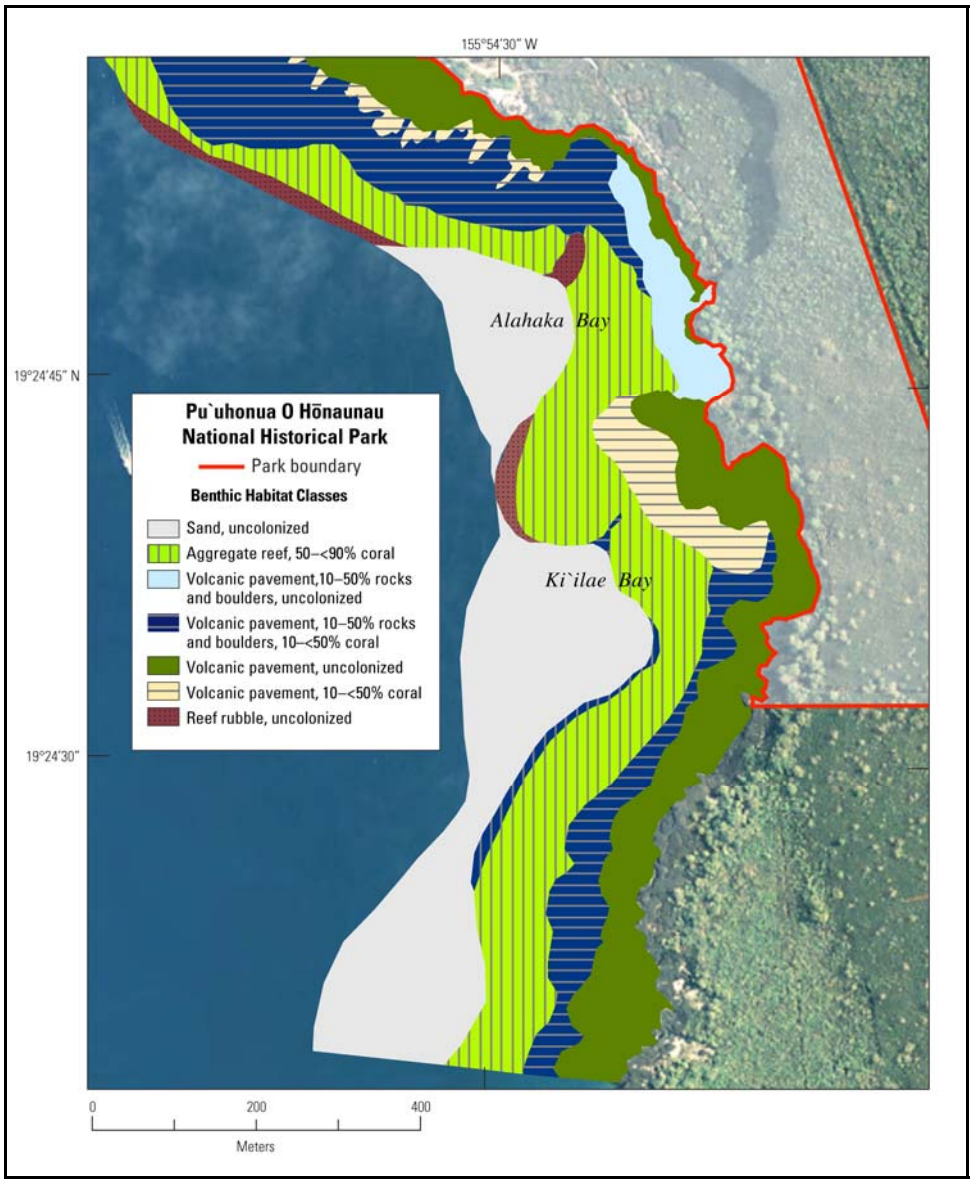
Benthic Cover

A study conducted by the USGS in collaboration with the National Park Service (NPS) mapped the benthic resources of Honaunau Bay to Ki'ilae Bay from the shoreline to depths of about 130 feet (40 meters). The study was conducted because of concerns by the NPS over potential impacts of development in the Pu'uhonua o Honaunau park to downstream marine ecosystems[50].

[48] Newman, 1972
[49] Greene, 1993
[50] Cochran et al. 2007

Mapping methods are explained in detail in the USGS report and used a combination of aerial photography, bathymetric data, underwater photography, and underwater video. Results of the survey indicated that Honaunau Bay has a lush coral reef environment, both at shallow and deeper depths, because it is sheltered from high-energy waves. In comparison, Alahaka and Ki'ilae Bays, which are more open to incoming waves, have limited coral growth near the shoreline, but have a well-formed coral reef at depths ranging from 40 to 100 feet below the ocean surface, as shown in Figure 3-2 below.

Figure 3.2 Benthic Habitats of Alahaka and Ki'ilae Bays



Source: Cochran et. al. 2007.

Bathymetric maps of the South Kona region created by NOAA using similar survey techniques but with less detail, indicate that the same pattern of coral colonization is observed along the shoreline of the five ahupua‘a focus area, with narrower coral cover bands in areas of highest wave action. The NOAA benthic habitat map covering the coastal area of the five project ahupua’a is included in Appendix A-9.

The USGS report also indicated that many groundwater seeps were observed in Honaunau Bay, Alahaka Bay, and Ki‘ilae Bay. This raises the concern that increased land development inland may affect nearshore environments through added inputs of pollutants and nutrients in the groundwater. Wastewater from cesspools and septic tanks is of particular concern, as the area does not have a sewer system. Because of the pristine nature of coral reefs in the South Kona region, it should be a priority to address these issues in any changes of current land use.

Kealakekua Bay MLCD

The Kealakekua Bay MLCD is located in the South Kona District and encompasses a total of 305 acres. The MLCD was established in 1969. Protection from fishing within the bay is moderate with hook & line, throw net, akule & ‘ōpelu, and crustacean fishing authorized within 60% of the MLCD. To the south of Kealakekua Bay is the Nāpo‘opo‘o-Honaunau Fisheries Replenishment Area (FRA), which was established in 1998 in response to declining populations of reef fishes as a result of intensive aquarium fish collection[51].

A study of the benthic habitats from Nenue Point to Honaunau Bay conducted for the UH Coral Reef Initiative and NOAA indicated the following attributes of the benthic cover in the South Kona habitats[52]:

- Turf algae cover was 55% in the open access area, 46% in the FRA, and 25% in Kealakekua Bay.
- The four primary coral species found in South Kona were *Porites lobata*, *Porites compressa, Pocillopora meandrina,* and *Pavona varians*. Coralline algae cover was similar among the management strata with 7% in the MLCD and 11% in the open access and FMA areas.
- In Kealakekua Bay, Goldring surgeonfish (kole) was the dominant species and accounted for about 10% of the total fish biomass, followed by yellow tang (lau‘īpala), black durgon (humuhumuelele), and bullethead parrotfish (uhu). In the FRA, lau‘īpala ranked first, followed by kole, orangespine unicornfish (umaumalei), and brown surgeonfish (mā‘i‘i‘i). In the open area, umaumalei dominated, followed by kole, lau‘īpala, and mā‘i‘i‘i.

[51] Tissot et al., 2002
[52] Tissot et al. 2002

Table 3.2 Kealakekua Bay Dominant Fish Species

Description	Hawaiian Name (common name)	Latin Name
	Lauʻīpala (Yellow Tang)	*Zebrasoma flavescens*
	Kole (Goldring Surgeonfish)	*Ctenochaetus strigosus*
	Humuhumuelele (Black Durgon)	*Melichthys niger*
	Uhu (Bullethead Parrotfish)	*Chlorurus sordidus*
	Umaumalei (Orangespine Unicornfish)	*Naso lituratus*
	Māʻiʻiʻi (Brown Surgeonfish)	*Acanthurus nigrofuscus*

Photography Courtesy of REEF (Reef Environmental Education Foundation), www.reef.org

3.3 Natural Resource Management – Case Study: Hoʻokena mauka to makai

3.3.1 Current Status of Ahupuaʻa

The Hoʻokena ahupuaʻa has very pristine natural resources. The majority of the forest resources of Hoʻokena are within the Kona Forest Unit of the Hakalau National Wildlife Refuge. The wildlife refuge is managed by the FWS. The Kona Forest Unit was established in 1997 primarily to protect and conserve a portion of the native forest in South Kona for listed threatened and endangered species, the ʻAlalā in particular. Another goal of the Kona Forest Unit is to rehabilitate degraded forest habitat through control of non-native species, and ultimately to provide opportunities for public natural resources interpretation and education. In 2007, the FWS conducted an environmental assessment for the fencing and feral ungulate removal from the Kona Forest Unit, which was finalized in January 2008. The fence will provide protection of the forest from feral ungulates (cattle, pigs and sheep), which are the cause of widespread ecosystem damage throughout the Hawaiian Islands[53].

Several other reserves exist in the vicinity of the Kona Forest Unit, including the Kipahoehoe Natural Area Reserve and the South Kona Forest Reserve, which are managed by the DLNR. These reserves provide corridors of native forest conservation in a region rich in biodiversity and endangered species.

Areas downhill from the forests of Hoʻokena, are mainly occupied by ranch land, with some houses being built along the road that goes down to Hoʻokena Beach Park and some diversified agriculture in the vicinity of Māmalahoa Highway. Several houses are present also at the shoreline, next to Hoʻokena Beach Park. Previously, a village was present at the shoreline of Hoʻokena, which had developed from the activities created by the presence of the Kupa Landing (Cooper Landing). The Kupa Landing was a former inter-island steamer boat landing at Hoʻokena Beach Park, that was named after Henry Cooper, the road supervisor in South Kona from 1871 to 1880. Remains of the Kupa landing are still visible at the beach park nowadays.

The near-shore waters of Hoʻokena Bay are located within a Fish Replenishment Area, where aquarium fishing is prohibited. Healthy coral reefs are present within the bay, particularly in the northern and most protected portion of the bay.

[53] FWS, 2008

3.3.2 Kamaʻāina United to Protect the ʻĀina

KUPA was originally formed to address concerns of Hoʻokena fishermen over the depletion of reef fish by commercial tropical aquarium fish collectors. That conflict brought the community together to form a non-profit community organization called Kamaʻāina United to Protect the ʻĀina (KUPA).

KUPA's lobby was successful in passing legislation to limit the areas where tropical fish could be collected for commercial purposes and in designating a six-mile area in Hoʻokena as a Fish Replenishment Area where fish collection is prohibited. KUPA also has a current project, in partnership with the County of Hawaiʻi Parks and Recreation, to allow the community to have a more important role in managing the resources and facilities at Hoʻokena Beach Park[54].

Currently, KUPA has two projects that the organization is focusing on. These projects were discussed at a community meeting at Hoʻokena Beach Park on April 12, 2008, where the students of the DURP Spring 2008 Practicum were invited to attend. The first project is to join forces with a trail-clearing group led by Dennis Hart, which is working on clearing and maintaining the native Hawaiian trail corridor system in the South Kona Region[55]. The work conducted by Dennis Hart is connected to the NPS Ala Kahakai National Historic Trail project. Trails that are currently being restored run along the shoreline, although there is consideration of also restoring some ahupuaʻa trails, that run mauka to makai and link all the natural resources of an ahupuaʻa. This project is important because it provides continued shoreline access to the communities, which is a source of conflict with many landowners trying to cut off access onto their properties. In addition, the trail system links and empowers communities through working together on a common goal. The trails also link communities to their history by learning about native Hawaiian trail systems and associated cultural sites of significance.

The second KUPA project is to create a community center, which would provide CBED opportunities for community members, along with cultural learning activities. The creation of CBED opportunities that are linked to the health of the natural resources of the area, and to the enhancement of cultural heritage could be very beneficial to the local communities and to the environment they live in.

[54] KUPA: http://hookena.org/default.asp
[55] KUPA, 2008

3.3.3 Mauka to Makai Threats and Opportunities

Forests

Currently, the most important threat to the health of mauka forests are feral ungulates (cattle, pigs, goats, and sheep), which wreck havoc in the native ecosystems by trampling and feeding on native forest understory and preventing the growth of new forest trees[56]. Feral ungulates have been devastating to koa tree forests, which support many native insect and bird populations. Koa forests have also been affected by illegal logging for koa wood, which is highly valued. Other threats to South Kona forests include potential encroachment from new housing projects, although this is still limited at this time.

There are many opportunities for South Kona communities to get involved in conservation of their forests, including government/non-profit/community partnerships in forest conservation projects. These partnerships could take the form of education programs for local communities, forest maintenance and tree planting programs sponsored by non-profit organizations or government agencies ("Plant a Koa Tree" campaigns?), and feral ungulate hunting campaigns. If well-managed, hunting campaigns are not only beneficial to the forests, they also provide communities with another source of subsistence food. The Big Island Invasive Species Council is one such partnership of private citizens, community organizations, businesses, land owners, and government agencies that aims at containing and/or eradicating invasive species that are threatening agriculture, native ecosystems, and quality of life on the island of Hawai'i.

Education programs would also be particularly valuable for the younger generations and could involve groups such as "Kids of Kona" to foster care for land and natural resources in new generations.

Lowlands

Development of lowland ranch land into housing subdivisions and gentlemen estates is the most pressing threat to the rural character and quality of life of communities in the South Kona area. Development of exclusive housing on agricultural land is causing increased user and access conflicts; it also diminishes the supply of arable land of Hawai'i, and is likely to have negative impacts on downstream, near-shore marine environments.

There are opportunities for having more diversified agriculture in the South Kona Region. Opportunities are not only for cash crops such as coffee but also subsistence crops like sweet potatoes and dry land taro that were the main native Hawaiian crops of Kona, and which would increase local communities'

[56] FWS, 2008

food resilience. The KUPA CBED effort, with the development of the community center, could consider the creation of community gardens for growing subsistence crops, which could be shared among communities involved.

South Kona also has tremendous opportunities for geotourism, such as the creation of a native Hawaiian ethnobotanical garden and demonstration field system that could teach visitors about the native Hawaiian uses of natural resources and native Hawaiian agriculture. Such an endeavor, conducted by a community group, could not only provide new income for the improvement of local communities, but it would also serve to re-connect communities with their past. Other geotourism opportunities may include bird watching guided hikes and ancient Hawaiian trail hikes along the Ala Kahakai and ahupua'a trails, conducted by certified organizations. The proceeds from such visitor activities could be used for natural resources conservation and enhancement projects.

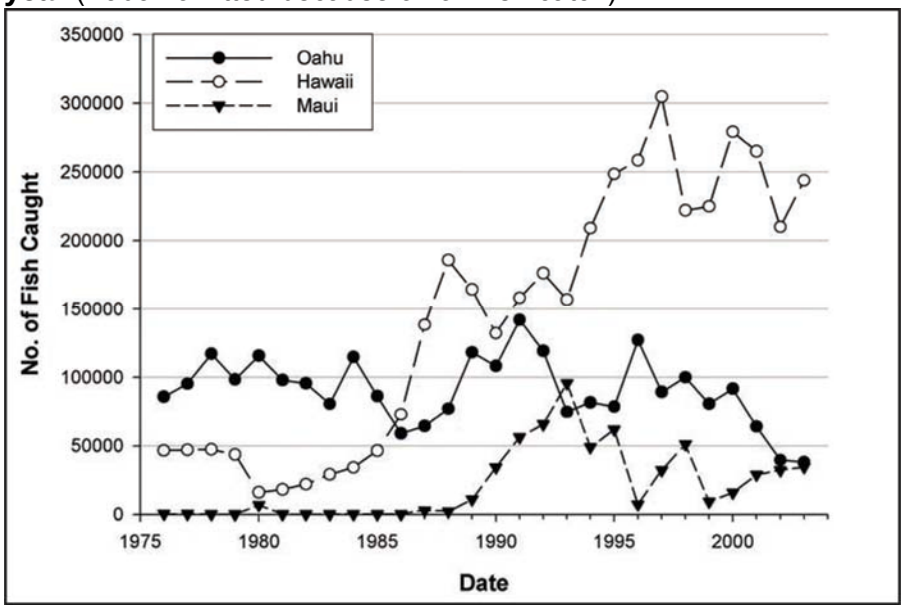
Coasts

On the West Coast of Hawai'i Island, over fishing by commercial, recreational, and subsistence fishermen is thought to be the most severe issue currently facing coral reefs. The commercial aquarium fishery in Hawai'i has developed over the last 50 years into one of the state's major inshore fisheries. In the beginning years of the fishery, from the 1970s to 1985, the main fish catch areas were located on O'ahu, which accounted for 84% of the fish catch in 1981. Starting in the 1980s, though, the O'ahu fishery declined, while the Hawai'i Island fishery soared. The Hawai'i Island fishery has experienced a 645% increase in the past 20 years and now accounts for 55% of the total catch[57].

Along the Kona Coast, the aquarium fish collection industry has significantly affected nearshore marine environments. In 1998, the State legislature passed a bill to improve the management of fisheries in West Hawai'i by protecting a minimum of 30% of the West Hawai'i coastline through the creation of Fish Replenishment Areas (FRAs). The West Hawai'i Fishery Council (a community-based group) proposed a network of nine FRAs that would protect 35.2% of the West Hawai'i Coastline from aquarium fish collection in order to promote sustainable fish harvests, which was approved by the Board of Land and Natural Resources in September 1999. Four years after the implementation of the FRAs in 2000, significant increases in several target fish populations were observed, and the value of the aquarium fishery had actually increased[58]. The FRAs also promoted a decrease in conflicts between subsistence and recreational fishermen, and aquarium fish collectors. This example shows that proper near-shore marine management efforts can benefit all parties involved while also helping to preserve natural resources.

[57] Friedlander et al. 2005
[58] Friedlander et al. 2005

Figure 3.3: Number of aquarium fish caught in the State of Hawai‘i per fiscal year (Kaua‘i omitted because of low fish catch)



Source: Friedlander et al. 2005.

Some challenges still left unsolved and which need to be addressed in order to continue improving the health of near-shore marine environments include the low catch report compliance from aquarium fish collectors on the Island of Hawai‘i. Additionally, large numbers of subsistence and recreational fishermen also add strain on the near-shore fisheries and the fish catch from these fishermen is largely unmonitored and unregulated.

Greater community training and involvement in monitoring and enforcement of near-shore marine resource conservation areas has great potential for improving the health of fish populations and reefs. By learning about the ways native Hawaiians used to manage their fisheries to allow for sustainable fish catch and by taking example on other successful management techniques, communities can be empowered to be stewards of their land and coasts. There are a number of non-profit organizations that are already set up to provide support to communities concerned about better managing their coastal resources, which include:

- **Mālama Kai (**http://www.malama-kai.org/): this foundation located on Hawai‘i Island works in partnership with communities, private landowners, businesses, schools, and public agencies to create effective conservation solutions for threatened marine and coastal resources.
- **KUPA (**http://hookena.org/default.asp): this community group of South Kona is described above in Section 3.4.1.
- **West Hawai‘i Fishery Council (WHFC) (**http://www.malama-kai.org/management/whfc.htm): this community group works with DLNR Division of Aquatic Resources (DAR) and local, isolated fishing communities

in the management of their marine resources. WHFC works to provide resources and training to develop Local Resource Councils (LRCs), aligned with ahupua‘a, in small fishing communities. LRCs are working groups engaged in educational outreach, collaborative decision-making and conflict resolution.

- **Big Island Reef Fund (**http://www.malama-kai.org/birf/index.htm): the Big Island Reef Fund is a voluntary alliance of marine recreation operators and non-profit conservation organizations aimed at creating the funding mechanism needed for the conservation work along the West Hawai‘i coastline.
- **REEF (**http://www.reef.org/**):** the Reef Environmental Education Foundation (REEF) is a grass-roots organization that seeks to conserve marine ecosystems by educating, enlisting, and enabling divers and other marine enthusiasts to become active ocean stewards and citizen scientists. REEF links the diving community with scientists, resource managers and conservationists through marine-life data collection and related activities. REEF currently operates programs in the coastal areas of North and Central America, the Caribbean, and Hawai‘i.
- **Community Conservation Network (CCN) (**http://www.conservationpractice.org/mission.php)**:** CCN’s mission is to assist local communities and their partners to sustain vital ecosystems and resources by fostering relationships and building capacity that will result in better long-term conservation and management of natural resources. CCN provides training and technical assistance to local groups, individuals, and governments in project design, monitoring, participatory involvement, capacity building, etc.

While over fishing is currently the greatest threat to near-shore ecosystems in West Hawai‘i, There are potential additional threats that may affect the shoreline in the future, and which are causing important impacts on other islands. Coastal development has caused tremendous damage to O‘ahu’s near-shore environments and also has serious effects in certain parts of Maui, where siltation and eutrophication are causing death of corals and impoverishment of shallow coastal waters in the Kīhei area. Coastal development can bring a number of social and environmental consequences, including conflicts over shoreline access, infrastructure demands, degradation of near-shore water quality from runoff and groundwater contamination, etc.

In South Kona, the region between Māmalahoa Highway and the coastline has historically been used for cattle ranching since western settlement, which had high impact on forest resources, but largely had very low impact on near-shore water quality. In recent years though, with the rapid growth of Kailua-Kona as a tourism destination its associated increased settlement, development pressure is increasing in South Kona. This is a concern for shallow near-shore water quality. The lower wave action on the leeward coast of Kona is ideal for coral growth but

does not have as much flushing action. Consequently, dissolved nutrients such as nitrates and phosphates flowing to the shoreline from wastewater systems through groundwater seepage can affect near-shore environments, causing increased algae growth and impacts to corals, which require low-nutrient water environments to strive.

The Kona Community Development Plan, which is currently in the complete pre-final stage and available for public review at http://www.hcrc.info/community-planning/community-development-plans/kona/cdp-draft-chapters/KCDP-pre-final-4-17-08-for-SC.pdf/view, states:

> *"The majority of future growth should be directed north of Kailua, with some future growth in the Kailua to Keauhou area, in the form of compact villages that offer increased density and mixture of homes, shops, and places to work. Density in South Kona should be kept low, and its character should remain rural, with most future growth directed around existing villages and towns."*

This vision seems to be in agreement with that of the local communities that we encountered in South Kona and would likely lead to decreased user conflicts, particularly if settlement remains centered around villages along Māmalahoa Highway, where most housing and places of commerce are currently located in South Kona. However, present settlement patterns have not necessarily resembled these guidelines, with agricultural land being subdivided and used to build gentlemen's estates, and subdivisions growing from Māmalahoa Highway all the way to the shoreline, and displaying obvious "Private Property" and "Keep Out" signs, locking access to the shoreline and causing conflicts with shoreline users.

Settlement patterns in South Kona do not however have to be negative for the local populations as they have the potential to bring economic resilience, as long as land use conflicts are dealt with appropriately ahead of time, which requires the involvement of communities early on in any development process, and effective regulation of development activities. Empowerment of local communities is a necessary step in the direction towards better land use in South Kona, which in turn is necessary for better management of natural resources in the region. Community empowerment can be achieved primarily through community-based economic development (CBED) and through community social development. CBED is discussed thereafter in Chapter 4, and community social development is discussed in Chapter 5.

3.4 Conclusion

South Kona is a region with tremendous natural resources, from the mauka forests all the way to the shorelines. Because of the richness of its ecosystems, this region has been well studied and there are many resources readily available for local communities to review, particularly on federal government websites such as that of NOAA, USGS, and NPS.

Conserving the rural character and natural resources of South Kona is a general goal of State and County plans, however, without community empowerment to speak up about the activities that are happening in the region and the increasing pressure of development, these plans are powerless. Community empowerment, through CBED and social development, is a key component to improved natural resources conservation. There are a number of opportunities for communities to create economic and social development through conservation and enhancement of their natural resources, which can be achieved through community/non-profit organization/government partnerships.

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CHAPTER FOUR: COMMUNITY BASED ECONOMIC DEVELOPMENT

4.1 Objectives

The objectives of this section are:

- To provide definition and significance of Community Based Economic Development (CBED);
- To describe needs for CBED in the five ahupua‘a, and potential ways that CBED can tie to demands in the projected sites and the trail;
- To describe case studies of successful CBED projects in Hawai‘i, and provide their objectives, external supports and risks, and expectation that how the projects fulfill community demands and promote economic activities;
- To provide current obstacle in the project areas, and the way to counter to the measures to cope with it.

4.2 What is CBED?

Guiding principles of Community Economic development proposed by UH DURP 2000 Kahikinui Practicum are;

1. *“Catalyze economic use of broad sector of resources through small scale, low impact program.*
2. *Mobilize large section of resources through multiple programs.*
3. *Selectively avoid high resource use activities in every sector.*
4. *Redistribute the profits into community based natural and cultural resources management programs.*
5. *Optimize allocations on high-profit low-impact (ecological, environmental and cultural) programs*.”

The objectives of CBED are to:

1. *“Build local capacities for both subsistence and surplus production. Adjust and enhance local skills to engage in productive activities in the resettlement area.*
2. *Generate and augment household income by creating local employment opportunities.*

3. *Create self-reliant community infrastructure and services through redistribution of benefits.*
4. *Promote, protect, revive and restore the cultural and natural assets of the projected area by channeling part of the profit into cultural and natural resource management.*
5. *Build social capital and institutional capacity by mobilizing the community into various community-based activities, inter-linking them and deliberately promoting reciprocity oriented relationship."*

4.2.1 Community Demands

Communities in rural areas need economic development that has low-impacts on their cultural and natural resources. Obtaining grants is an economic opportunity for communities to develop while considering the impacts on their local resources. KUPA, a non-profit organization in Hoʻokena, received a $300,000 grant to address and increase the lack of local business and economic activities in the area.

To understand community demands in the five core ahupuaʻa, the practicum referred to the community meeting report by KUPA[59] held on February 25, 2008

There were seven topics discussed at the meeting associated with CBED.

1. Starting micro-enterprise
2. Building a town center
3. Building a historical community center
4. Sustaining Cultural practices
5. Concern about genetic modified foods and health
6. Funding resources
7. Establishing community based businesses and creating more job opportunity

CBED in Hoʻokena can connect economic development with the community's spiritual beliefs, cultural and natural resources, and close family or ancestry and community relationships. CBED in this project focuses on capacity-building, or developing an individual's or communities' skill level, much like one of KUPA's slogans, "Live our history."

In addition to KUPA's community goals, this practicum simultaneously considered the mission and goals of the Ala Kahakai Trail management program by National Park Service (NPS). [60]

[59] KUPA, 2008, Book of proceeding p1-28
[60] National Park Service (07), http://www.nps.gov/alka/upload/ACF23FD.pdf (p2-3)

The NPS Ala Kahakai Trail management program goals are:

- To provide opportunities to restore, interpret and perpetuate the culture of native Hawaiian.
- To commemorate historic events that occurred along the trail corridor; to enhance and preserve the numerous archaeological sites and other cultural resources associated with the trail.
- To contribute to the sustainability of natural resources accessed by the trail; to enable public access to the trail through agreements and certification of trail sections within the designated corridor.
- To provide a visitor experience that accurately depicts the route of the Ala Loa, other coastal trails, and the native Hawaiian culture in general as it varies through the communities the trail crosses.
- To provide facilities, where appropriate, to allow long distance hiking if and when substantial continuous segments of the Ala Kahakai have been certified as open to the public as a National Historic Trail.

Comparing the two groups' goals, it is apparent that both of them share the same goals to protect cultural and natural resources, and to respect the history of native Hawaiians. Therefore, this chapter introduces some successful CBED examples in Hawai‘i that had low-impacts on the environment, archaeological sites, and other resources.

Specific areas need specific consideration, although the NPS trail management plan covers the whole trail, inclusive of urban, resort, and rural areas. While trail segments or portions may need to be analyzed individually, the larger goal of NPS emphasizes the importance for visitors and residents alike to experience the trail, the cultural and natural resources, and to protect all resources within the trail corridor.

On the other hand, KUPA's concerns lie with the community. The Ala Kahakai trail in rural South Kona is considered as a high local and low visitor use trail. Determining the effects of increased visitor usage by establishing the trail is essential in identifying if there are adequate facilities and infrastructure to support the increase and whether resource protection is being jeopardized.

However, from the view of CBED planning, increasing the number of visitors can provide community benefit and therefore increase local economic activities. The establishment of a town center and micro-enterprises can also support the increase in visitors, while providing economic opportunity for the community. These efforts can be conducted while properly managing the natural and cultural resources within the area.

Community members in the area are advocating for the creation of a town center along Māmalahoa Highway somewhere located between Ki‘ilae and Honokua, South Kona. The old town centers were located in Keālia, Kaimalino, Ho‘okena,

Kauhakō, Kalahiki, Honokua, and Pahoehoe. In addition to a town center, residents in the area would like acquire land for local commerce, town activities, churches, parks, affordable housing, social services and public services. The establishment of a town center would also provide a facility for the "homeless businesses" in the area.

4.3 CBED Process and Case studies

The following CBED case studies can be models of CBED for the five core ahupua'a and describe not only the case studies' objectives and benefits but also their risks.

Table 4.1 Examples of Community Based Economic Development

CBED Process	Community Entity	Objectives	External Support	Risks
Community Incubator Kitchen	Hamakua	-To promote local economy, the agricultural plan. -To promote microenterprise. -To provide future health promotion -To provide community empowerment	-Maintenance fees, grants, funding	-Zoning regulations -Food serving regulations
Micro-enterprise	Kahuku	-To promote local business -To redistribute benefits to the community and public schools -To enable anyone to start a new business	-Grants and funding, -Benefits from business	Lack of authenticity for the business and for community can stall successful progression
Website (information) and Advertisements	Papakōlea	-To help alignment of community organization -To display the community's history, developing process, and information about sponsorship -Promotion of micro-enterprise by community -To promote community participation by creating workshops and youth program	One time Grants	-Giving misinformation -Keeping human resources for the websites
Geotourism	National Geographic	-To enhance sustainability and community business -To conserve resources -To make common strategies for management of cultural and Natural resources	Benefit from local-based business	-Grants -Benefits from local-based business

Source: Kobayashi, Maki 2008.

Case studies were selected based on the topics discussed in the KUPA community meeting, the goals of the NPS Ala Kahakai trail management plan, and possible low impact economic activities that can help communities establish self-reliance and building capacity and skills. The table below highlights main points that this section will explain.

4.3.1 Community Kitchens incubator

A Community kitchen incubator offers more opportunities to develop a food related businesses and to promote the consumption of local food. It can be combined with a community center and provide foods not only to people in the community but also to visitors. In the kitchen, entrepreneurs can develop new products while improving their business skills. In Hamakua, the community kitchen and the agricultural plan synchronized positively. Farmers in Hamakua provided on-site food surplus to their community kitchen, and this played an important role in practice of sustainability. A community kitchen can not only promote local economic development but also sustainability.

To establish a community kitchen incubator, the community can obtain financing from government sources, through loans and grants.

Objectives

The establishment of a community kitchen incubator gives four benefits to the community. Hoyer (2000) introduces the goals of a community incubator kitchen.[61]

- **To increase economic, career development**
  Community kitchens provide the community with more opportunities to start businesses related foods. People in the community can generate economic value added through agricultural products and ocean resources. Also, with a community kitchen, the community can produce events related foods.
- **To reinforce cultural linkage among generation and ethnicity**
  A community kitchen can provide linkage among cultures and beyond generations. With the community kitchen can be a place for cultural practice of native Hawaiian's traditional food culture. For example, the younger generations' experience connected with traditional foods: It can be a reconnection with Hawaiian old food culture and a community member's heritage.

[61] Source: Hoyer (2000) Some Cost and Considerations for establishing an entrepreneurial community shared-use kitchen or "Test incubator"

- **To Increase awareness toward food security and health promotion**
  A Community kitchen can provide workshops as an institution that promotes not only awareness of food security but also the improvement of health and proper nutrition. According to community demands, Genetic Modified Organ (GMO) foods are one of big concerns in the community. A community kitchen educates community, and in the long term, it helps health promotion.
- **Family and community Empowerment**
  Family or the community members can participate as unit, and strengthen family and community bond. A community kitchen can stimulate people's participation in activities in community and functions as a recreation facility.

External Support

Lead household or owners of the enterprise need assistance in training. Financial aids for facility usage cover facility expense and maintenance fees. Hoyer talks about external support in Hamakua: annual contract is 60 dollars. In addition to that, it cost 16 dollars in one-time use, or 160 weekly in monthly use.

When Hamakua built a community kitchen in 2000, the community elements already started an agricultural business plan including tourism. This effort led to the establishment of a good community image based on agriculture and food production within Hamakua.

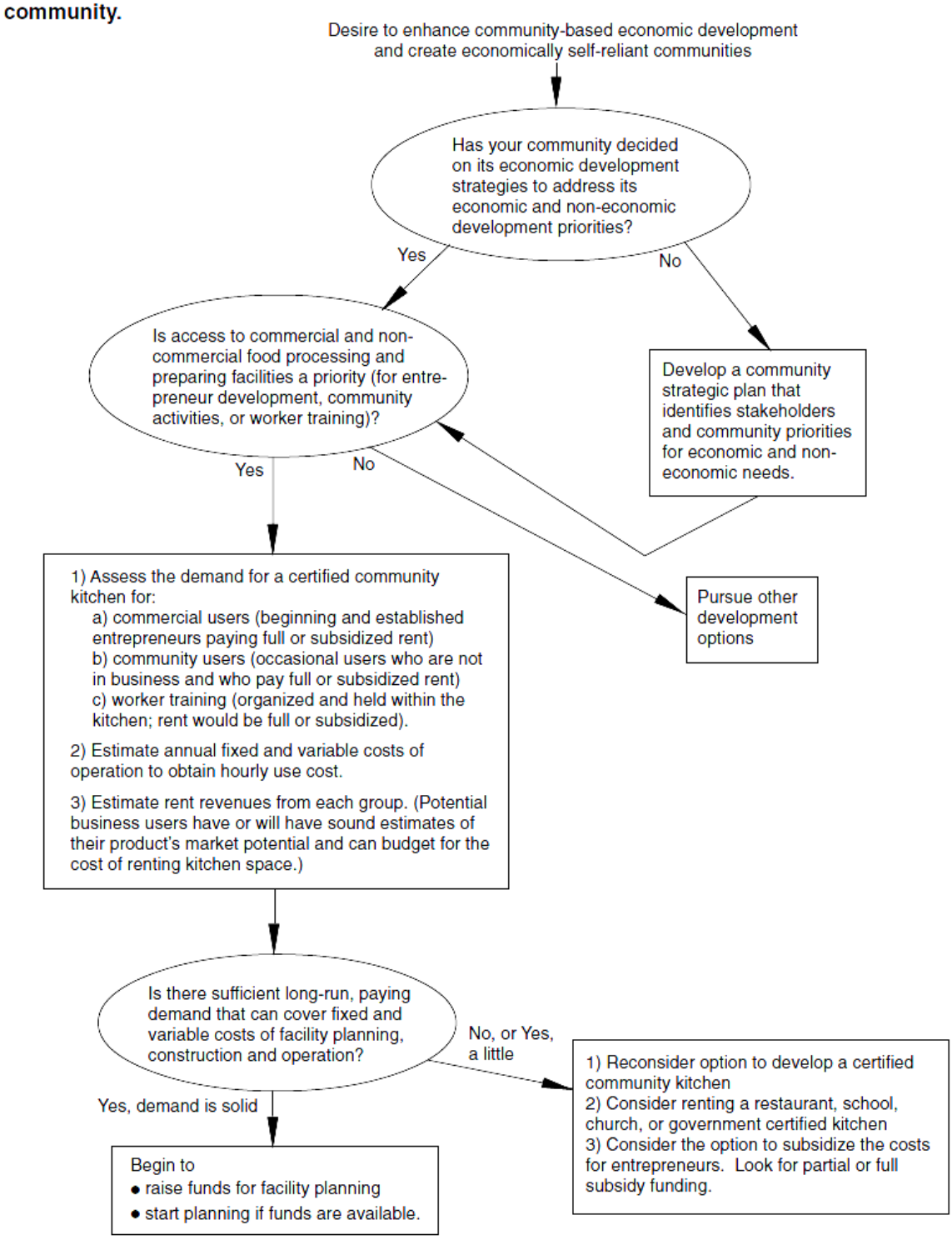
Risks

There are many building regulations and requirements to establish a community kitchen and to allow for serving food. The community needs strong commitment and should file an application for zoning change. In addition, community members should prepare an application according to section 4.5 in this chapter. Also, to deal with food regulations, detailed planning and commitments would be required.

Figure 4.2 describes the process of a kitchen planning in Hamakua and details what the community really needs for CBED. It describes the community's priorities and shows what stakeholders need to prepare for the community kitchen. In addition, the community needs to estimate cost and revenue for community kitchen, while considering external support too. When the estimated cost does not meet their budget or estimated grant or funding support, the community can find alternative ways to rent kitchens, restaurants, and so on. This process is applicable for not only community kitchens but also for other types of CBED planning.

Figure 4.2 Community Kitchen Schematic Decision Process

Schematic for the process of deciding whether a shared-use community kitchen is right for a community.



Source: Hoyer, 2000

Successful operation of a community kitchen will depend on the individual success of its business. Thus, community support both in patronage and activities will be important and necessary for the success of community.

4.3.2 Micro-enterprise

The Association for Enterprise Opportunity (AEO) explains that a micro-enterprise is a business with five or fewer employees, that requires $35,000 or less in start up capital, and that does not have access to the commercial banking sector.[62]

AEO estimates that there is over 20 million micro-enterprises operating in the U.S. and micro-enterprise employment represents 16.6% of all private (non-farm) employment in the United States. People in Hoʻokena seek opportunities to start enterprise for products made in Hawaiʻi. As stated earlier, KUPA already received $300,000 in grant money for starting economic activities.

In the State of Hawaiʻi, business registration is simple and easy. According to the Department of Commerce and Consumer Affairs, Business Registration Division, business registration is not complicated.

The Department of Commerce and Consumer of Hawaiʻi provides requirements for business registration on its website;[63]

> *"In Hawaiʻi, corporations, partnerships, limited liability companies, and limited liability partnerships are registered with the Department of Commerce and Consumer Affairs, Business Registration Division (BREG). An overview of Hawaiʻi's business registration requirements is provided for your reference. Select the organization form that you wish information.*
> *All of BREG's business registration, amendment, correction, and reservation forms are available for download. Select a business entity type and then click the desired form to obtain a copy.*
> *These forms can be filled out on your computer and are for downloading and printing only for filing by mail, fax, or over-the-counter. They can not be used for online filing through this web site. Currently, we are accepting the online filing of certain initial registration documents for a new business. Sign up for a free account with Hawaiʻi Business Express (HBE) to file on-line today."*

[62] Association for Enterprise Opportunity (02) ,http://www.microenterpriseworks.org/index.asp?bid=160
[63] Department of Commerce and Consumer of Hawaii (06), http://hawaii.gov/dcca/areas/breg/main/about

Business starters need to input information in the chart, pay a registration fee, and processing takes only one day. Except for financial institutions, the State of Hawai‘i does not assess business franchise taxes or charter taxes either.

Objectives

A micro-enterprise can provide not only self-employment or job creation in the community, but also more opportunities to help capacity building in the community and to use skills relating to native Hawaiian culture. The community does not need a large firm, and applications for land use change are not required. There are four main objectives of micro-enterprise to promote CBED:

1. Micro-enterprise is a possible way that the community supplies more job opportunity. Especially young people in the community don't need to leave their hometown because of low wages or lack of job opportunity. It prevents from declining of the community.
2. Micro-enterprise led by the community is effective way to generate revenues in each household in the whole community.
3. Micro-enterprise can be a promising option for workers in the skill-intensive sectors who are laid-off. It offers more opportunities to use community members' talents and knowledge relating to their history, and they can make use of the option in order to distribute and organize management work for the Ala Kahakai trail.
4. Micro-enterprise is a way to mobilize and socialize other community members.

The purposes of the process are not aiming to be "the community with economic power". By starting micro-enterprise in the community, the community can establish stronger spiritual and social tie among members. It will also help social community development.

Case Study: Kahuku.org[64]

Kahuku is rural area in Ko‘olauloa on O‘ahu. Kahuku is known for its community developing agricultural products. Nevertheless, the community has another successful CBED project by a venture business.

According to an article in the Honolulu Star Bulletin, Kahuku High school has six players in National Football League (NFL). This is the largest number in all the high schools that produce professional football players in the entire State of Hawai‘i. Some students started a venture business of Ko‘olauloa Educational Alliance Corporation called "Kahuku ORG". They design, produce and sell Red Raiders sports logo gear. In five years, they have sold more than $500,000 in

[64] Kaululaau, (01), http://starbulletin.com/2001/11/19/features/story2.html

merchandise locally, and internationally. The venture company donates 20 percent of their gross revenue to the school. In addition, this micro business provided local employment in the Kahuku community.

External support

External support for micro-enterprise include grants or loans for starting businesses and also for providing facilities and building spaces.

Risks

Community-based businesses require tremendous marketing and planning for the implementation of proper strategies. The community needs to find proper funds, loans or investments. In the case that an organization starts a community-based micro-business, lack of authenticity for the business and for the community can stall successful progression. Community members should trust and check on each other. Also, they should focus on ties and contributions to the community. Prospective business owners should attend workshops for micro enterprise, and need to discuss what business plan fits their community.

Another possible problem is conflicts in the community. Difference in participation in the community may result in unequal revenue in each household. The leader of the community needs to empower people in the community to participate not only in community activities but also in community-based businesses.

4.3.3 Website (information) and Advertisement

To appeal to the uniqueness of each ahupua‘a or community, marketing and advertisement can stimulate product sales. Before starting a business such as geotourism or food productions, disseminating the name and characteristic of each ahupua‘a can promote consumption of their products. Organizations can seek more opportunities to get funding resources or sponsorship by advertising. A website provides information to people outside of the community such that people will understand the importance of cultural resource management and natural resource management.

The communities can produce and register their own trademark. For example, in the community meeting report by KUPA, the opportunity to start a bakery is mentioned. Registering trademarks as the community’s original products can help establishment of a unique brand that registers the name of the community and avoids competition with similar products. The law explains that the initial registration is valid for five years only.

The Hawai'i Department of Commerce and Consumer Affairs[65] provides information about registration of trademark as follows:

> *"… it is easiest to see trade names as relating to businesses or entities and trademarks and service marks as relating to the products of businesses or entities. If your product is goods, you would be applying for a trademark. If your product is a service, you would be applying for a service mark. For example, DCCA, Inc., a corporation, or DCCA Co., a partnership, has registered a trade name DCCA Manufacturing Co. The corporation or partnership might also apply for registrations for its "DCCA Widgets (trademark) and for its DCCA Widget Maintenance (probably a service mark)."*

Objectives

To spread information about the importance of cultural and natural heritage, activities can get supporters and visitors who seek authentic Hawaiian historical legacies. Also, the community and National Park Service can join efforts toward management of the Ala Kahakai trail by providing clear instruction on how to take care of their trail.

Community members can have information in the websites to reinforce the awareness of the strategic plan and of what they have to do for implementing it. It also can promote participation by younger generations.

Advertising by the community will lead to self-employment, and venture companies.

Case Study: Papakōlea[66]

Papakōlea is an example of successful CBED implementation. For a long time, Papakōlea was well-known as a Hawaiian Homestead, and a place that non-Hawaiians could not access. However, the people of the community joined together in the community center because of their interest in their history and in their uniqueness as a Hawaiian homestead. Papakolea then obtained sponsorship and grants from several organizations. The community also collaborated with the University of Hawai'i to search for opportunities to obtain more knowledge for community development. They also joined some business competitions with university students and eventually earned a grant.

The website of Papakōlea provides information about:

- The alliance group made up by five organizations and the features and goals of each organization; (The formerly separate homestead communities of

[65] Department of Commerce and Consumer Affairs: http://hawaii.gov/dcca/areas/breg/main/about
[66] Department of Urban and Regional Planning, 07, The report of community event

Papakōlea, Kewalo and Kalawahine have built an alliance, which is housed at the Papakōlea Community Center.)

- The community's history and developing process, including the process of how the community established their community center;
- Product and on-line shopping sites selling original products by the community;
- Workshop classes: hula, lomilomi massage and marshal arts, and youth program;
- Announcements for events occurring in the community;
- Announcements for grants and sponsorship.

External support

A one time financial grant would be required for preparation of needed software. External support may also be needed for the cost of marketing assessment, networking, and/or alliance with other organizations or communities along Ala Kahakai trail.

Risks

Although the purpose of this plan is increasing interest in the community, community members need to pay close attention to the advertisement if it provides information that describes quality of the community. A website needs people with skills and knowledge about computer programs and software. When the community lacks informational technology skills, it costs more to hire an engineer.

4.3.4 Geotourism

The Travel Industry Association of America and National Geographic Traveler magazine introduced the concept of Geotourism.[67] "Geotourism is concerned with the entire combination of natural and human attributes that make one place distinct from another. Geotourism encompasses both cultural and environmental concerns regarding travel, as well as the local impact tourism has upon communities and their individual economies and lifestyles."

[67] National Geographic Center for Sustainabile Destinations, (02)

Difference between conventional tourism and geotourism

1) Geotourism focuses on enhancing diversity of the community based economic activities and sustainability with visitors' experience. It also emphasizes community's benefit.
2) Geotourism emphasizes on prevention of overdevelopment and destruction of cultural and natural resources.
3) Geotourism focuses on providing authentic natural and cultural experiences to visitors; as a result, it can educate both people in the community and visitors on the significance of the land.

Tourism is often viewed as selling Hawaiian culture and damaging the environment. Geotourism, however, can enhance both communities' sustainable economic activity and management of their history and environment. Chart 3 shows detailed principles of Geotourism.

Objectives

The principles of geotourism can help communities attain the same goals as those of the NPS Ala Kahakai trail management. Basic principles of geotourism can be effective for management of the whole trail, which involves collaboration of communities in many ahupua'a. NPS and communities in each ahupua'a can manage the trail according to the 13 basic principles of Geotourism (See Table 4.2)

For a community, there are five objectives of geotourism:

1. The Community can entertain travelers and provide expectations for a unique and culturally authentic travel experience that protects and preserves the ecological and cultural environment. The community can provide genuine "Aloha spirit" and understanding of their history.
2. The concept of geotourism can invite many visitors with interest in the community because geotourism emphasizes "loving places to death." and this idea can contribute to a sense of place. That demonstrates linkages between native Hawaiian's senses of the land "Mālama 'āina.", and allows community members to educate visitors by teaching them the love of their land.
3. The idea of enhancement and sustainability allows for community economic development and is based on the original characteristics of place, more than standardized international branding, generic architecture, and food, and so on.
4. Geotourism supports the integrity of the place. Travelers seek out businesses that emphasize the character of the locale. In projected site, trails should be integrated to be a part of the visitors' experience.
5. Geotourism can stimulate cultural practice and can be a way to revitalize voyaging, traditional fishing, agriculture (Taro cultivation), traditional

medicine, and local arts and crafts such as lauhala weaving, hula, and ‘ukulele with economic development.

External Support

Conventional tourism does not have an educational component; however, geotourism has many aspects to obtain external funds that can lead to supporting the cost of equipment for tours and operational costs of organizations. In order to operate geotours, the community should link with micro-enterprise and an advertisement plan as described in Section 4.3. Cost-sharing partnerships with community-based businesses would decrease advertisement and marketing cost.

Risks

Although geotourism would match native Hawaiian’s sense of place and might invite more visitors who respect the characteristics of the project site, the community and tour guides should have a clear guidance for natural and cultural protection. This is especially important in the case of historic trails, which are regarded as archeological sites; and thus, community groups and NPS need to collaborate to develop clear instructions on how to manage the trail. The way of distributing the money could present a problem: community enterprises should be aware of the primary objective and principles of CBED in the section 4.1; and they should redistribute benefits to the community.

Table 4.2 Geotourism Charter based on 13 principles [68]

Principles	Description
Market selectivity	Growth in tourism market segments most likely to appreciate, respect, and disseminate information about the distinctive assets of the locale.
Market diversity	Encourage a full range of appropriate food and lodging facilities, so as to appeal to the entire demographic spectrum of the geotourism market and so maximize economic resiliency over both the short and long term.
Tourist satisfaction	Ensure that satisfied, excited geotourists bring new vacation stories home and send friends off to experience the same thing, thus providing continuing demand for the destination.
Community involvement	Base tourism on community resources to the extent possible, encouraging local small businesses and civic groups to build partnerships to promote and provide a distinctive, honest visitor experience and market their locales effectively. Help businesses develop approaches to tourism that build on the area’s nature, history and culture,

[68] National geographic magazine, 2006

	including food and drink, artisanry, performance arts, etc.
Community benefit	Encourage micro- to medium-size enterprises and tourism business strategies that emphasize economic and social benefits to involved communities, especially poverty alleviation, with clear communication of the destination stewardship policies required to maintain those benefits.
Land use	Anticipate development pressures and apply techniques to prevent undesired overdevelopment and degradation. Contain resort and vacation-home sprawl, especially on coasts and islands, so as to retain a diversity of natural and scenic environments and ensure continued resident access to waterfronts. Encourage major self-contained tourism attractions, such as large-scale theme parks and convention centers unrelated to character of place, to be sited in needier locations with no significant ecological, scenic, or cultural assets.
Conservation of resources	Encourage businesses to minimize water pollution, solid waste, energy consumption, water usage, landscaping chemicals, and overly bright nighttime lighting. Advertise these measures in a way that attracts the large, environmentally sympathetic tourist market.
Planning	Recognize and respect immediate economic needs without sacrificing long-term character and the geotourism potential of the destination. Where tourism attracts in-migration of workers, develop new communities that themselves constitute a destination enhancement. Strive to diversify the economy and limit population influx to sustainable levels. Adopt public strategies for mitigating practices that are incompatible with geotourism and damaging to the image of the destination
Interactive interpretation:	Engage both visitors and hosts in learning about the place. Encourage residents to show off the natural and cultural heritage of their communities, so that tourists gain a richer experience and residents develop pride in their locales.
International codes	Adhere to the principles embodied in the World Tourism Organization's Global Code of Ethics for Tourism and the Principles of the Cultural Tourism Charter established by the International Council on Monuments and Sites (ICOMOS).
Protection and enhancement of destination appeal:	Encourage businesses to sustain natural habitats, heritage sites, aesthetic appeal, and local culture. Prevent degradation by keeping volumes of tourists within maximum acceptable limits. Seek business models that can operate profitably within those limits. Use persuasion, incentives, and legal enforcement as needed.

4.5 CBED Obstacles in Five Core Ahupua‘a

For the community that plans to establish a commercial facility and a community center, it is important to understand State and County land use regulations around their locality.

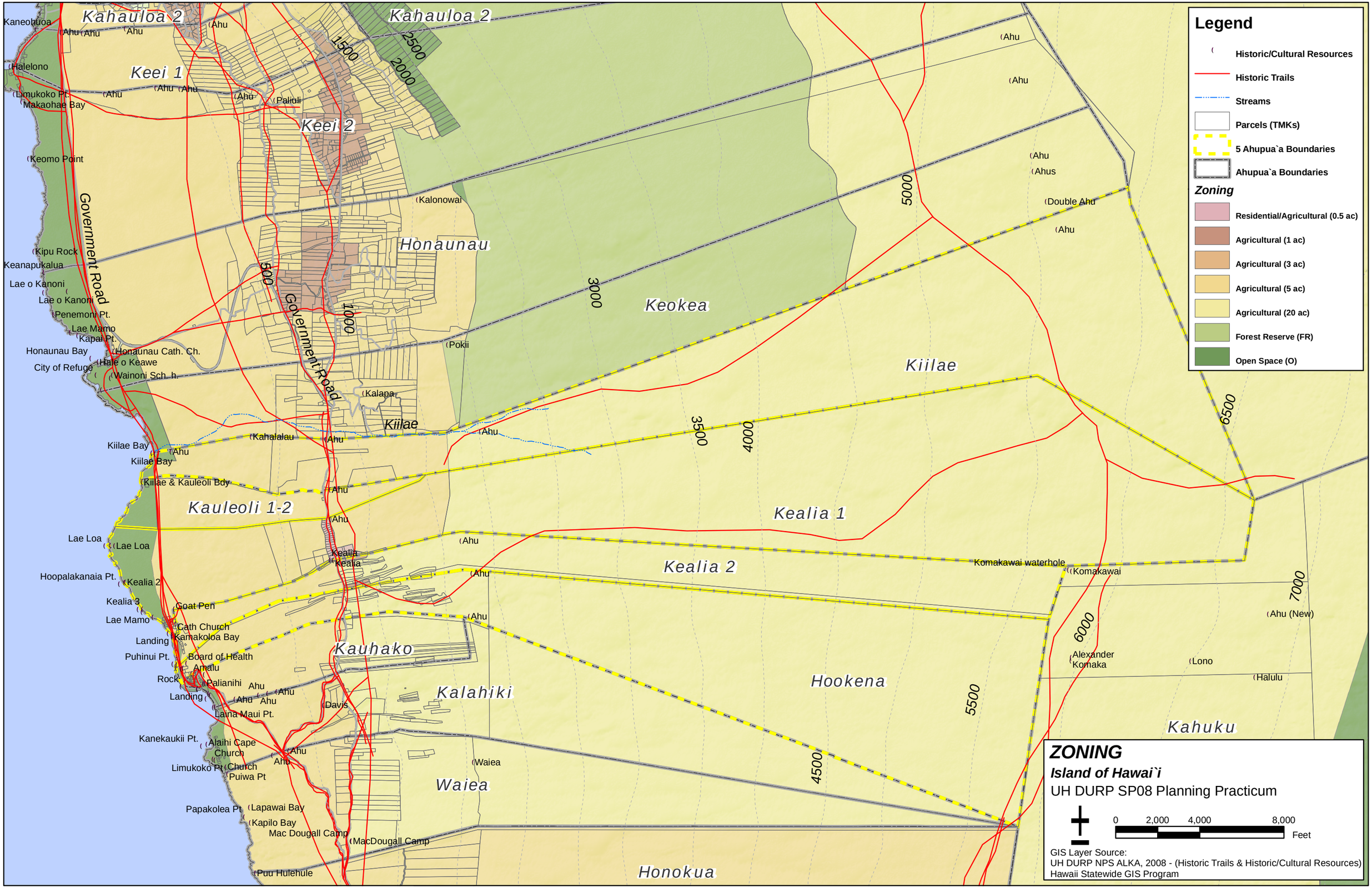
Land use regulations in Hawai‘i are complicated. Since the five ahupua‘a have a few large landowners, the private land has dual regulation by both Hawai‘i state government and County of Hawaii government. Federal land is not affected State and County laws.

First, the boundaries of State land use were first put by the State Land Use Commission (LUC) that is a body of nine members appointed by the Governor. The State land use and the zoning indicate that the project site is mostly agricultural zone and conservation zone.

The County Zoning Code implements the County general Plan. The County Zoning Code sets out the various types of zoning districts and indicates the allowable uses for each zoning. In the County of Hawai‘i zoning, the county defines these areas are regarded as rural district.

The County zoning code[69] defines rural district as “category [that] includes existing subdivisions in the State Land Use Agricultural and Rural districts that have a significant residential component.”

[69] County of Hawaii, 02, http://co.hawaii.hi.us/countycode/chapter25.pdf


Kahauloa 2
Kahauloa 2
Keei 1
Keei 2
Honaunau
Keokea
Kiilae
Kauleoli 1-2
Kealia 1
Kealia 2
Kauhako
Kalahiki
Waiea
Hookena
Kahuku
Honokua
Government Road
Government Road
Kaneohuoa
Halelono
Limukoko Pt.
Makaohae Bay
Keomo Point
Kipu Rock
Keanapukalua
Lae o Kanoni
Penemoni Pt.
Lae Mamo
Kapai Pt.
Honaunau Bay
City of Refuge
Kiilae Bay
Lae Loa
Hoopalakanaia Pt.
Kealia 3
Goat Pen
Lae Mamo
Landing
Puhinui Pt.
Rock
Landing
Kanekaukii Pt.
Limukoko Pt
Papakolea Pt
Paliuli
Kalonowai
Pokii
Kalapa
Kahalalau
Kealia
Kealia
Goat Pen
Cath Church
Kamakoloa Bay
Board of Health
Amalu
Palianihi
Laina Maui Pt.
Davis
Alaihi Cape
Church
Church
Puiwa Pt
Lapawai Bay
Kapilo Bay
Mac Dougall Camp
MacDougall Camp
Puu Hulehule
Komakawai waterhole
Komakawai
Ahu (New)
Alexander
Komaka
Lono
Halulu
Double Ahu
Ahus
Kiilae & Kauleoli Bdy
1500
2500
2000
500
1000
3000
5000
3500
4000
6500
7000
6000
5500
4500
Ahu
Legend
Historic/Cultural Resources
Historic Trails
Streams
Parcels (TMKs)
5 Ahupua`a Boundaries
Ahupua`a Boundaries
Zoning
Residential/Agricultural (0.5 ac)
Agricultural (1 ac)
Agricultural (3 ac)
Agricultural (5 ac)
Agricultural (20 ac)
Forest Reserve (FR)
Open Space (O)
ZONING
Island of Hawai`i
UH DURP SP08 Planning Practicum
0
2,000
4,000
8,000
Feet
GIS Layer Source:
UH DURP NPS ALKA, 2008 - (Historic Trails & Historic/Cultural Resources)
Hawaii Statewide GIS Program

According to County of Hawai'i,[70] the area is divided into the three zoning categories. The definition of each zoning category is also described:

Agriculture

- Orchard: Those agricultural lands which though rocky in character and content supporting productive macadamia nuts, papaya, citrus and other similar agricultural products.
- Extensive Agricultural zone: Lands not classified as Important Agricultural Land. It includes lands that are not capable of producing sustained, high agricultural yields without the intensive application of modern farming methods and technologies due to certain physical constraints such as soil composition, slope and climate.
- Important agricultural zone: Those agricultural lands have pasturage and range lands. Some areas in extensive agricultural zone meet criteria of important agricultural zone, due to their remoteness from potential sources of irrigation.
- Intensive Agriculture zone: Sugar, orchard, diversified agriculture, and floriculture.
  High: Fertile soil.
  Low: Less fertile soil

Conservation

- Forest and water reserves, natural and scientific preserves, open, lands within the State Land Use Conservation District

Open area

- This area has Parks and historic sites, and open shoreline areas.

When planning for community-based economic development, communities or organizations should pay attention to each zoning and their characteristics during the planning process.

[70] County of Hawaii(02) http://co.hawaii.hi.us/countycode/chapter25.pdf

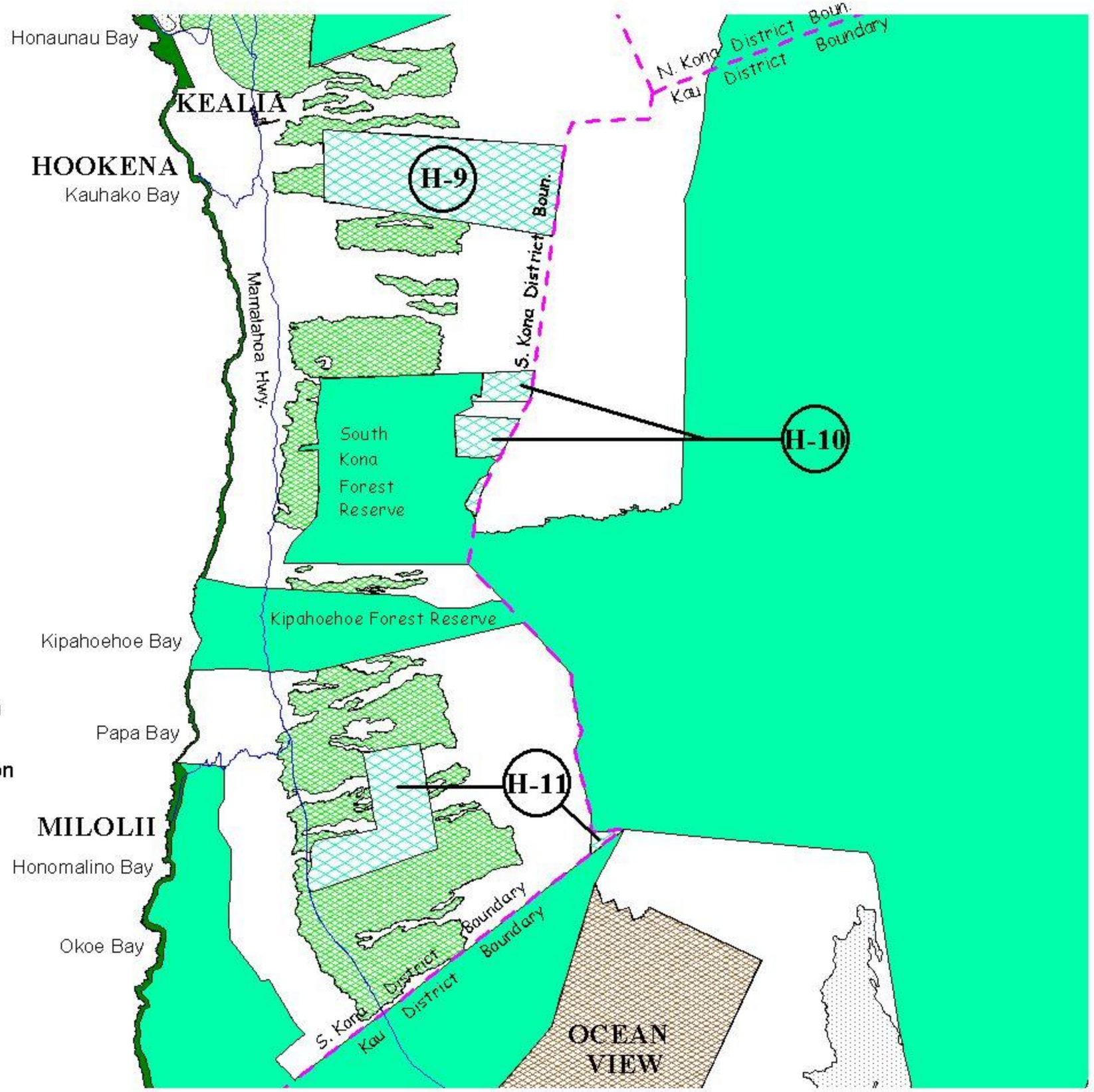
N
W E
S

LEGEND

- Major Road
- District Boundary Lines
- Conservation
- Extensive Agriculture
- Open Area
- Proposed Conservation
- Proposed Important Agricultural Lands
- Proposed Extensive Agriculture
- Proposed Rural

PROPOSED REVISIONS:

H-9 = Extensive Agriculture, Orchards to Conservation
H-10 = Extensive Agriculture to Conservation
H-11 = Orchards, Extensive Agriculture to Conservation



UH DURP Spring 2008 Practicum
May 16, 2008

Source:
County of Hawaii Planning Dpartment

1 0 1 2 3 4 5 6 7 Miles

4.5.1 Difference of regulation and permitted use

Most of the project site area was considered an Agricultural district. It has various permitted uses as shown in Appendix A.

Although land use regulations in agricultural land do not describe the land uses for a community facility, they may be permitted with a special permit use. The County of Hawai'i zoning code section 25-4-11[71], section C declares that "Public uses…community buildings are permitted in any district provided that the director has issued plan approved for such." Under this code, the community needs to organize their plans in order to get the County's permission for special use in the agricultural district. In addition to this County's requirement, the facilities should also be located in the State land use agricultural district.

Except for community and public facilities, adult day care home, bed and breakfast, family and child homes, and meeting facilities can also apply for special use permit in agricultural zones. Activities expected to stimulate economic activities and commercial facilities are not permitted as special permit use.

4.5.2 Application for zoning change

When the County Council considers a change of zone, or when the Planning Commission considers a Special Management Areas permit, a special permit, or a use permit, the decision is supposed to be consistent with the goals, policies, standards, and courses of action in the General Plan including the Land Use Pattern Allocation Guide Map.

According to a phone interview with the Planning department of the County of Hawai'i (Kobayashi, personal communication, April 28th) in order to change zoning, the community or organization first needs to find an ideal site for the project. Before community members submit an application form for a zoning change, they should identify specific sites for their new facilities. Also, they have to identify the Tax Map Key (TMK) numbers of parcels for which they are requesting zoning change. To identify TMK numbers, the County provides information on their website. The County of Hawai'i representative also mentioned that a zoning change would be granted an extension for up to 10 years. In addition, it is preferable to submit an application form after community members gather data and hold a meeting with representatives of the Hawai'i County Planning Department. The zoning change application form is attached in Appendix C-3.

To fulfill an application for a zoning change, community members should gather the following information as stated in section 25-2-44[72] of the County general plan:

1. DETAILS OF PROPOSED USE/ DEVELOPMENT
   The community/organization members should provide a clear statement of objectives and a specific plan (timeline, cost, traffic impact, number of acres).
2. CONFORMANCE WITH STATE/COUNTY PLANS
   The community/ organization members should show how the proposed use is not contrary to the Coastal Zone Management (existing public access, scenic or open space resources, coastal view planes, and coastal ecosystems), and how their plan applicable to county plan. Before submitting an application, community members should review the County's general plan in order to show that the new facilities would not only achieve their goal but also give benefit to the community.
3. PHYSICAL CHARACTERISTICS AND ENVIRONMENTAL SETTING OF THE PROPERTY AND SURROUNDING AREA
   The community/ organization members should describe the surrounding area both by physically and environmentally; For example, they should describe the area by using zoning, existing archaeological, cultural or historic sites on National register or Hawai'i register, lava, noise, existing floral /faunal resources.
4. PUBLIC FACILITIES AND SERVICES
   The community/organizations need to provide description of access, sewage disposal, school and all public facilities, to demonstrate that prove their plans do not affect on the public facilities.
5. ENVIRONMENTAL ASSESSMENT AND ANALYSIS
   The community/ Organization members are required to demonstrate the relationship between local short term uses of the environment and the enhancement of long term productivity. And also, alternatives to the proposed development are required. They should demonstrate that their proposal will not damage the environment in the long-term.
6. AGENCIES – COMMENTS
   The community/ organization member can consult and have discussions with following agencies. E.g.) Department of Public Works, Department of Water Supply, Police, Fire, Department of Finance - Real Property Tax Division, State of Hawai'i Department of Land and Natural Resources - Historic Preservation.

[72] County of Hawaii, 02, http://co.hawaii.hi.us/countycode/chapter25.pdf

This section only shows some brief requirement, thus, community or organization members need to refer to the full requirement by the County in the appendix (file of application, Section 25-2-44).

4.6 Conclusion

The conceptual model created by the Spring 2008 practicum group emphasizes linkages between each of the four components (cultural resource management, natural resource management, community-based economic development, and social community development). Each CBED process described in this chapter emphasizes the connection of each of these components with the communities economic goals.

Although geotourism was not suggested in the community meeting, it can be considered as a way for CBED to promote respect and love for the land. Geotourism can help develop micro-enterprise as a community-based travel agency. Another CBED option could involve the creation of a community kitchen, which could encourage cultural revitalization without overdevelopment. Other suggested projects could also contribute to the success of CBED. Establishing inter-relationship among projects is very important for the success of CBED projects. In addition, in order to initiate CBED, funding sources are essential and can come from external support.

As section 4.3 shows, some of the rural communities in Hawai‘i have demonstrated successful examples of CBED. Their success reinforces the point that in order to attain the community’s goals, community members’ commitment and devotion are essential. As in the Kahuku example, an ideal model of CBED that redistributes benefit to the community, it is clear that the community members’ agreement on how they use their benefit for the community is also essential. Before the community starts a CBED project, community members should have meetings to establish agreement and common understanding.

Case studies also show that the community needs appropriate leadership in order to start the project and keep the project going. With proper leadership, community members are encouraged not only to participate but also to commit to their community. The leadership’s commitment to successful CBED will mobilize people with skills and knowledge such as in cultural practices, natural resources, computer science and economic skills. Additionally, promoting these skills will provide more support to build community capacity and increase human resources. Eventually, strong leadership and community dedication can lead to successful CBED.

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CHAPTER FIVE: SOCIAL COMMUNITY DEVELOPMENT

5.1 Objectives

The objectives of this section are:

- Introduce and define social community development (SCD)
- Detail the social community development process and procedures
- Provide several useful and helpful strategies in specific situations for social community development
- Analyze current social community development efforts on the Big Island of Hawai‘i
- Develop suggestions and recommendations for positive social community development

5.2 Introduction

Social community development (SCD) exists in diverse venues with different resources, settings, and cultures. First, the structure of SCD process is introduced to provide an outline for community development. Second, strategic planning for community work is defined. Last, actual community processes and activities are researched and analyzed to generate recommendations and suggestions.

5.3 The Community Development Process

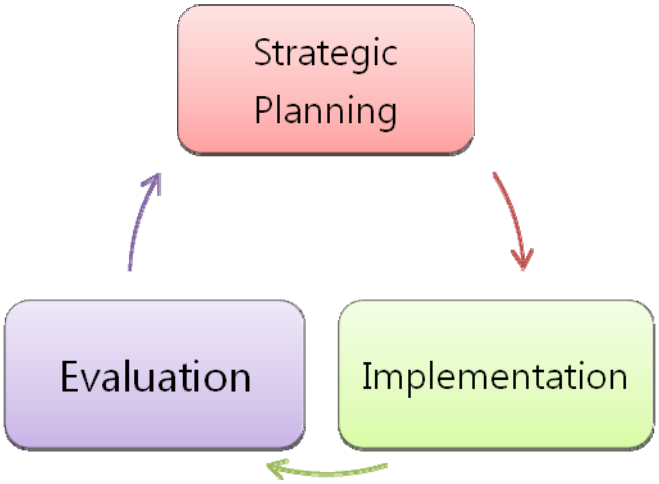
Every community has its own way of functioning and work process. There is no one single right process for community work. We propose one community development process among many others.

Healthy communities require constant attention and nurturing. Communities are shaped by the decisions one makes or fails to make. Some decisions are made with knowledge about their impacts while others are not. Some lead to unanticipated outcomes. But, the lack of a decision also has consequences.

The community development process consists of three phases: strategic planning, implementation, and evaluation. Strategic planning looks at the big picture and helps the community decide what is important. During implementation, a community executes the tasks which will guide the community

to where it wants to be. After completing these community activities, the community evaluates their implementation efforts to see how well the community worked. Improvements in the strategic planning process will be based on lessons learned through these three phases.[73]

Figure 5.1 The Community Development Process



Source: (The U.S. Department of Agriculture Rural Development Office of Community Development, 1998)

5.3.1 The Strategic Planning

What Is Strategic Planning
Strategic planning is a systematic process through which an organization agrees on – and builds commitment among key stakeholders to – prioritize which elements are essential to its mission and responsive to the operation environment.[74]

Strategic plan elements include – vision statement, community assessment, goals, strategies, and evaluation process are major elements of a strategic plan.[75]

What Strategic Planning is not
Strategic planning does not predict the future or make decisions which cannot be changed. While strategic planning involves making assumptions about the future

[73] Development Rural Developmetn Office of Community USDA. (1998). "A Guide to Strategic Planing for Rural Communities." Washington, DC: The U.S. Department of Agriculture (USDA) Office of Community Development
[74] Allison & Kaye. (1997). "Strategic Planning for Nonprofit Organizations: A Practical Guide & Workbook." New York, U.S.A.: John Wiley & Sons. Inc.
[75] Ibid.

environment, the decisions are made in the present.

Strategic planning is a tool – it is not a substitute for the exercise of judgment by the leadership. Ultimately, the leaders of any enterprise need to sit back and ask themselves "What are the most important issues to respond to?" and "How shall the community respond?" just as the hammer does not create the bookshelf, so the data analysis and decision – making tools of strategic planning do not make the organization function – they can only support the intuition, reasoning skills, and judgment that people bring to the work of community.

Strategic planning is not always a smooth, predictable, and linear process. Strategic planning, though structured in many respects, typically does not flow smoothly from one phase to the next. It is a creative process, requiring flexibility – the fresh insight arrived at today might very well alter the decision made yesterday.[76]

Reasons for doing strategic planning[77]

"Strategic planning lays out the blueprint for change within a community. It takes a community from a pie-in-the-sky vision to specific actions. Listed below, are some reasons for conducting strategic planning:

- *To create a vision of what the community wants to become in the future.*
- *To see the big picture of how the community's economy, environment and people will be changed.*
- *To make sure that everyone in the community shares in its well-being.*
- *To select and agree on some common goals*
- *To involve as many people and local organizations (e.g. universities, medical centers) as possible in the process.*
- *To find out how much time, money, and other resources are needed to create change.*
- *To get the support of Federal, State, private and non-profit partners.*

Additional reasons for doing strategic planning include:[78]

- *An explicit understanding of the organization's purpose, business, and values among staff, board, and external constituencies; that understanding supports an increased level of commitment to the organization and its goals.*

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[76] Ibid

[77] Development Rural Developmetn Office of Community USDA. (1998). "A Guide to Strategic Planing for Rural Communities." Washington, DC: The U.S. Department of Agriculture (USDA) Office of Community Development

[78] Allison & Kaye. (1997). "Strategic Planning for Nonprofit Organizations: A Practical Guide & Workbook." New York, U.S.A.: John Wiley & Sons. Inc

- *A blueprint for action. The plan is a conceptual framework that guides and supports the management and governance of the organization, a framework that orients board and staff as they go about doing the work of the organization.*
- *Broad milestones with which to monitor achievements and assess results.*
- *Information that can be used to market the organization to the public and to potential funders.*
- *An improved process for people working together in that it:*
    1. *Creates a forum for understanding why the organization exists and the shared values that should influence decisions.*
    2. *Fosters successful communication and teamwork among the board of directors and staff.*
    3. *Lays the groundwork for meaningful change by stimulating strategic thinking and focusing on what's really important to the organization's long-term success.*
    4. *Most importantly, brings everyone together to pursue opportunities for better meeting the needs of clients".*

5.3.2 Implementation

Implementation may be the most difficult but most important phase in the community development process. It is in this phase that the planning for resources can be lost. Partnerships become either close or distant, projects are started and managed, and results become visible. Experience shows that successful communities usually do the following:[79]

- *"Start with a smaller project that has a high chance of success,*
- *Manage their resources widely and get the most value for every dollars,*
- *Act responsibly so their supporters have confidence in the community's ability to deliver the promised results,*
- *Keep citizens informed and constantly involved,*
- *Set benchmarks to measure how well they are doing,*
- *Evaluate progress regularly and publicly,*
- *Change their plans when conditions change or new opportunities arise, always keeping in sight the long-term vision,*
- *Use every opportunity to learn from experience, and*
- *Celebrate successes publicly."*

[79] DevelopmentRural Developmetn Office of Community USDA. (1998). "A Guide to Strategic Planing for Rural Communities." Washington, DC: The U.S. Department of Agriculture (USDA) Office of Community Development

5.3.3 Evaluation

Evaluation can asses the health of community. Community discovers their hidden problem, weakness, and strength through evaluation.

Continuing public involvement
"After the initial enthusiasm of developing a community vision and strategic plan, many communities find it difficult to maintain public interest and involvement. This drop off is normal, but over the long term, a strategic plan cannot succeed if it relies on only a few people to implement it. The plan should describe how the community will involve the public. The community always needs a large pool of motivated people."[80]

Progress reports
"As the strategic plan is being implemented, it is important to have constant communication with the public and agencies that have provided resources to the community. It is easy to forget to tell everyone what a community is doing, when a community is so busy doing the work. However, the individuals and agencies that support the community need to know that their resources and money are well spent. The strategic plan should describe how and when a community will provide a progress reports to the public and other partners. This will help maintain good partnerships and ensure continued support from inside and outside the community."[81]

Strategic plan review and amendment
How and when will the community review its strategic plan? This review can look at both "How is the community doing?" and "How well are the plan's goals being carried out?" It can consider unexpected circumstances and scan the environment for new problems or opportunities. The review team could include some of the people that developed the strategic plan as well as members of the public. The review may identify things that need to be changed in the strategic plan. Perhaps community thought community could build a new airport, but community later learned that community's proposed site was a toxic waste area. As community situation changes, so will community plan.

However, a community should not immediately revise its community strategic plan every time the community identify something that needs to be changed. Planning experience has shown that an annual review cycle works well and no more than two per year should be allowed. Constant changes can weaken the

[80] Ibid.
[81] Ibid.

plan and lead community members to loss interest in the process. The strategic plan should describe an official, public process to change the plan. This will allow those who helped develop the plan to learn about the proposed changes and participate in refining and approving them. Just as the whole community participated to create the plan, they should also help improve it.[82]

Continuing evaluation

1. *"Process – Did people complete their tasks on time and within budget? A process evaluation helps answer questions such as "What changes are needed in how community are carrying out our plan?" and "How can community do it better?" it may be possible to do a process evaluation at the end of the first year or it may be more effective to do it during the strategic plan's annual review and update.*[83]
2. *Output – An output evaluation asks, "How much of what the community planned to do did the community actually accomplish?" Outputs are usually things that can be counted and that community can complete in a short timeframe. They result from activities in the strategic plan and work programs.*[84]
3. *Outcomes – In evaluating the end results of implementing a strategic plan, ask "How successful was the community in tackling its long-term problems?" or "How successful was the community in achieving its long-term goals?" Outcomes are usually long-term and linked to problems and goals. They are hard to evaluate because many factors that influence a community's well-being are out of its control."*[85]

5.4 Strategies for Community Development

First, the term strategy is introduced and defined. In addition, criteria and methods for developing a good strategy are discussed. Second, the importance of establishing relationships and its significant role in the entire community development process is analyzed. Good relationships can bring about a flexible and cooperative working process and promise great future accomplishments. Third, the practicum looks at a useful method of how to break the four negative barriers (fear, inertia, self-doubt, and isolation) within the community. Last, six helpful and useful methods for positive community development are offered for possible use.

- Five Steps toward Whole Community Mobilization
- Asset-Based Community Development

[82] Ibid.
[83] Ibid.
[84] Ibid.
[85] Ibid.

- Project Conceptualization
- The Community Economic Development Practitioner
- Principles of Neighborhood Planning and Possible Strategies
- VMOSA Method (Vision, Mission, Objectives, Strategies, and Action Plans)

5.4.1 Developing Successful Strategies[86]

Strategy Defined

"The word "strategy" comes from the Greek word for "generalship". Like a good general, strategies give overall direction for an initiative. A strategy is a way of describing how community is going to get things done. It will also stay with the overall vision, mission, and objectives of the initiative. Often, an initiative will use many different strategies--providing information, enhancing support, removing barriers, providing resources, etc.--to achieve its goals. Objectives outline the aims of an initiative--what success would look like in achieving the vision and mission. By contrast, strategies suggest paths to take (and how to move along) on the road to success. That is, strategies help community determine how community will realize community vision and objectives through the nitty-gritty world of action."

Criteria for developing a good strategy

- *"Give overall direction? A strategy, such as enhancing experience and skill or increasing resources and opportunities, should point out the overall path without dictating a particular narrow approach (e.g., using a specific skills training program).*
- *Fit resources and opportunities? A good strategy takes advantage of current resources and assets, such as people's willingness to act or a tradition of self-help and community pride. It also embraces new opportunities such as an emerging public concern for neighborhood safety or parallel economic development efforts in the business community.*
- *Minimize resistance and barriers? When initiatives set out to accomplish important things, resistance (even opposition) is inevitable. However, strategies need not provide a reason for opponents to attack the initiative. Good strategies attract allies and deter opponents.*
- *Reach those affected? To address the issue or problem, strategies must connect the intervention with those who it should benefit. For example, if the mission of the initiative is to get people into decent jobs, do the strategies (providing education and skills training, creating job*

[86] Work Group for Community Health and Development at the University Kansas. (2007). "Developing Successful Strategies: Planning to Win". The Community Tool Box - Bring Solutions to Light: http://ctb.ku.edu/tools/en/sub_section_main_1088.htm

opportunities, etc.) reach those currently unemployed?

- *Advance the mission? Taken together, are strategies likely to make a difference on the mission and objectives? If the aim is to reduce a problem such as unemployment, are the strategies enough to make a difference on rates of employment? If the aim is to prevent a problem, such as the substance abuse, have factors contributing to risk (and protection) been changed sufficiently to reduce use of alcohol, tobacco, and other drugs?"*

How does a community develop strategies?

- *"Organize a brainstorming meeting with members of community and members.*
- *Review (identify) the targets and agents of change for community initiative.*
- *Review community vision, mission, and objectives to keep community on the right track.*
- *Work together to brainstorm the best strategies for community initiative."*

5.4.2 Relationships[87]

"Organizers act to empower people to act by developing shared relationships, understandings, and actions which enable them to gain new resources, new understanding of their interests, and new capacity to use these resources on behalf of their interest" – Marshall Ganz, 1996

Types of Relationships

Strong Ties

- Strong Ties are ties with people who are like us – community, our supporters and allies, bonding ties.
- Strong Ties may actually inhibit our capacity to organize because they create a closed-in, limited circle of people and resources. However, at the same time, community may also reap great benefits if community enhances natural connections and cultures to build trust and support among people.

Weak Ties

- Weak Ties are ties with people who are unlike us – connections, bridging ties.
- Lots of weak ties may enhance our organizing capacity because they open into broader networks of resources by opening the circle outward.

Creating Relationships

- Catch each other's attention
- Establish interest in having a conversation

[87] GanzMarshall. (2001). "Organizing: People, Power, and Change." Harvard University - J.F.K. School of Government.

- Exploration
  Period of asking answering each other's questions, probing for areas of common interest. KEY: learn to ask good questions, such as why a person has made the choices they have
- Begin to make exchanges
  Exchanges made can either be made in the future or in the moment of conversation (i.e., being a good listener, offering support, challenging person in ways that lead to new insights)
- Determine if there is a basis for a relationship and then making a commitment to that relationship
  What turns the exchange into a relationship is the commitment made to each other and to the relationship (i.e., meeting again, having coffee, coming to meeting, etc.). Too often the mistake is made of trying to go right to a commitment without laying a relational basis for it first.

Relational Strategies

- Recruit individuals for an organization out of new relationships
  Develop relationships with individuals community hope to bring into the organization.
- Recruit networks for an organization out of old relationships
  Draw people in through relational networks that they are already a part of
- Recruit organizations for a new organization
  Build relationships with leaders of old organizations and draw then into relationships with each other to make a new organization possible

Relational Tactics

- One-on-one meetings
  Individual meetings to build relationship out of which further involvement may develop. The meeting is successful if it ends with a commitment to a "next step" (may be just another meeting).
- House meetings
  House meetings are designed to make use of networks. Begins with a one-on-one meeting with someone who has a network of relations. The "next step" commitment made is a meeting of his/her network of relations to be held in their home
- Emergency meetings
  Well suited to political campaigns or efforts where "urgency" is very clear.

5.4.3 Breaking Four Barriers[88]

"Organizers act to empower people to act by developing shared relationships, understandings, and actions which enable them to gain new resources, new understanding of their interests, and new capacity to use these resources on behalf of their interests" – Marshall Ganz, 1996

1. *"Fear → Anger*
   - *Fear: Fear o fall kinds – threats, danger, standing out, failing, being laughed at, etc. – is the biggest "belief barrier" to action. The way to counter fear is with anger:*
   - *Anger – not uncontrolled "rage" but indignant anger or "outrage" at unjust conditions. This is constructive anger based on the difference between what "ought to be" and what "is". People rarely mobilize to protest inequality, but they do mobilize to protest inequity – injustice. Motivation for action.*
2. *Inertia → Urgency*
   - *Inertia – just plain old resistance to change, habit, etc.*
   - *Urgency – although community thinks about urgency in terms of time, it is really about commitment. It is about creating a space within which new action can unfold. The urgent is what community really responds to, and unless community finds ways to make the important also urgent, the urgent along will take priority.*
3. *Self-Doubt → Community can make a difference*
   - *Self-Doubt – "I can't do it" , "people like me can't do it" , "community doesn't qualified to do it", etc.*
   - *Community can make a difference – ways to help people experience YCMAD include:*
     - *Recognition – specific recognition of specific people for specific contributions at specific times and in specific visible ways.*
     - *Action program based on what people can do, not on what they can't do.*
     - *Accountability, there is no real recognition without accountability. Requiring accountability does not show lack of trust but rather values for the work done.*
     - *Leadership development*
4. *Isolation → Solidarity*
   - *Isolation – don't see interests shared with others, little sense of access to common resource, no sense of shared identity, general feeling of powerlessness*
   - *Solidarity or love – is the reason why developing relationship is so*

[88] Ibid.

important. It is also the reason why mass meetings, singing, common dress, shared language, etc. play an important role in organizing."

5.4.4 Five Steps toward Whole Community Mobilization[89]

"These five steps can be a very practical method to mobilize a community to collaborate. This method is very clear and simple to follow for community. Institution for community must be easy to understand and execute.

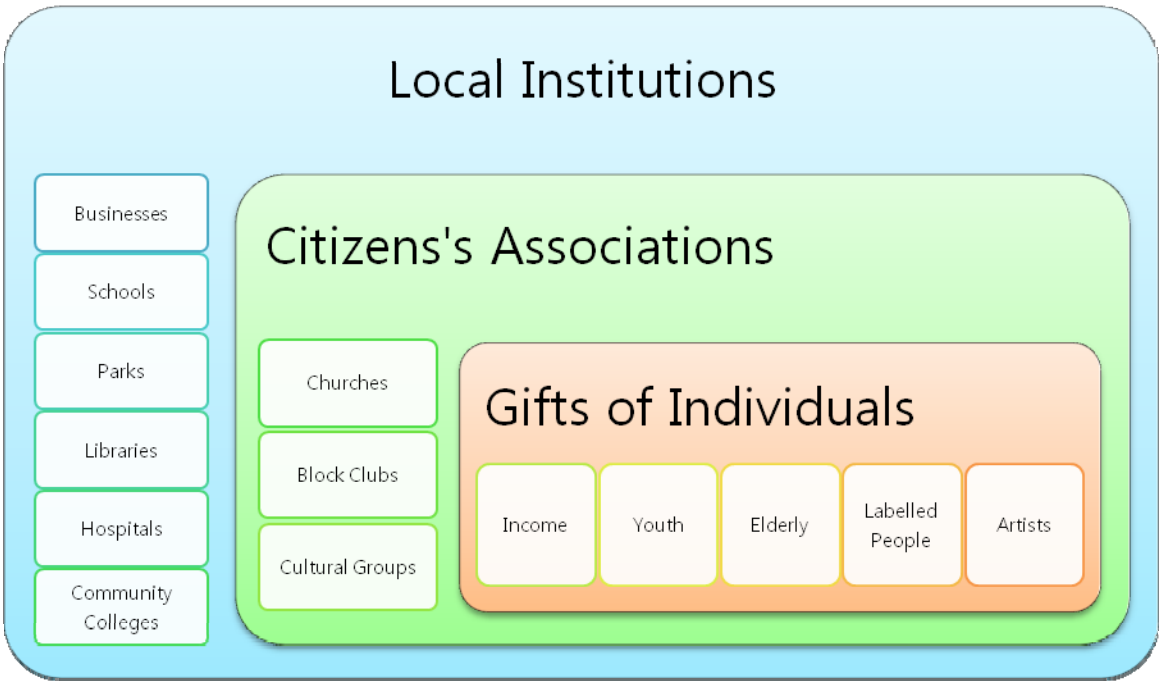
A. *Mapping completely the capacities and assets of individuals, citizens' associations and local institutions.*
B. *Building relationships among local assets for mutually beneficial problem-solving within the community.*
C. *Mobilizing the community's assets fully for economic development and information sharing purposes.*
D. *Convening as broadly representative a group as possible for the purposes of building a community vision and plan.*
E. *Leveraging activities, investments and resources from outside the community to support asset-based, locally defined development."*

5.4.5 Asset-Based Community Development

In asset based community development, the assets of a community is formed with gifts of individuals, citizen's associations, and local institutions. A thorough map of those assets would begin with an inventory of the gifts, skills and capacities of the community's residents. The capacity mapmakers will discover a vast and often surprising array of individual talents and productive skills, few of which are being mobilized for community-building purposes. This is basic truth about the giftedness of every individual is particularly important to apply to persons who often find themselves marginalized by communities. It is essential to recognize the capacities. In a community whose assets are being fully recognized and mobilized, these people too will be part of the action, not as clients or recipients of aid, but as full contributors to community-building process.[90]

[89] Kretzmann & Mcknight. (1993). "Building Communities from The Inside Out: A Path Toward Finding and Mobilizing A Community's Assets." Evanston, IL, U.S.A.: The Asset-Based Community Development Institute
[90] Ibid.

Figure 5.2 Community Assets Map



Source: (Kretzmann & Mcknight, 1993)

5.4.6 Project Conceptualization[91]

"Project conceptualization is designed as a worksheet. This is very helpful for brainstorming and facilitating to start community work.

1. *Putting Community Project Idea Together – Part I*
   - *A. Issue & Opportunity*
   - *B. The venture – program, project, or business*
2. *Putting Community Project Idea Together – Part II*
   - *A. Intended impact, outcomes, activities, and partners*
3. *Assessing Organizational Readiness*
   - *A. Organizational options*
   - *B. Competencies, skills, experience, and mindset*
4. *Pre-Feasibility & Sustainability*
5. *An Action Plan*
   - *A. Project Idea*
     - *i. Defining & Clarifying Project Outcomes & Impacts*
     - *ii. Community Assessment*

[91] DevelopmentAlliance for Community-Based Economic Hawai'i. (2005). "Project Conceptualization - Designing and Developing Successful Community-based Projects." Hawaii Alliance for Community-Based Economic Development.

iii. Alternative Models & Approaches

B. Organizational Development

i. Strategic Planning

ii. Systems Development (i.e., financial and information management)

iii. Staffing and Board Capacity

iv. Program Capacity (i.e., productivity, effectiveness, evaluation)

v. Training & Technical Assistance

C. Feasibility & Sustainability

i. Funding & Financing Plan

ii. Partnerships & Collaborative Strategies

iii. Leverage Action I, II, and III"

5.4.7 The Community Economic Development Practitioner

We find out a very useful practical strategic planning preparation and steps. Mike & Green propose 5 steps for preparation for strategic planning and 10 steps for actual strategic planning (Mike & Green, 1993). Those steps are really useful and helpful for community to practice.

Five steps of preparation to make strategic planning effectively[92]

1. *"Explicityly decide whether to develop a strategic plan.*
2. *Get commitment to the process.*
3. *Determine if outside help is needed.*
4. *Outline a planning process that fits my community*
5. *Form a planning team."*

Ten steps of preparation to make strategic planning effectively[93]

1. *"The community expresses its vision of the future.*
2. *The community helps identify the internal and external obstacles which keep the vision from becoming a reality*
3. *The community planning team can draft an initial mission statement.*
4. *Situation analysis identifies and assesses the key strengths and weaknesses of the CEDO, as well as external opportunities and threats that could influence the CEDO's performance of the drafted mission.*
5. *Various ways to carry out the mission are examined.*
6. *The mission statement is refined and completed, especially its explanation of how the organization is to carry out its function.*
7. *Strategic goals are established for the organization's actions over the next 5 years.*
8. *Each strategic goal is broken down into a series of specific objectives the*

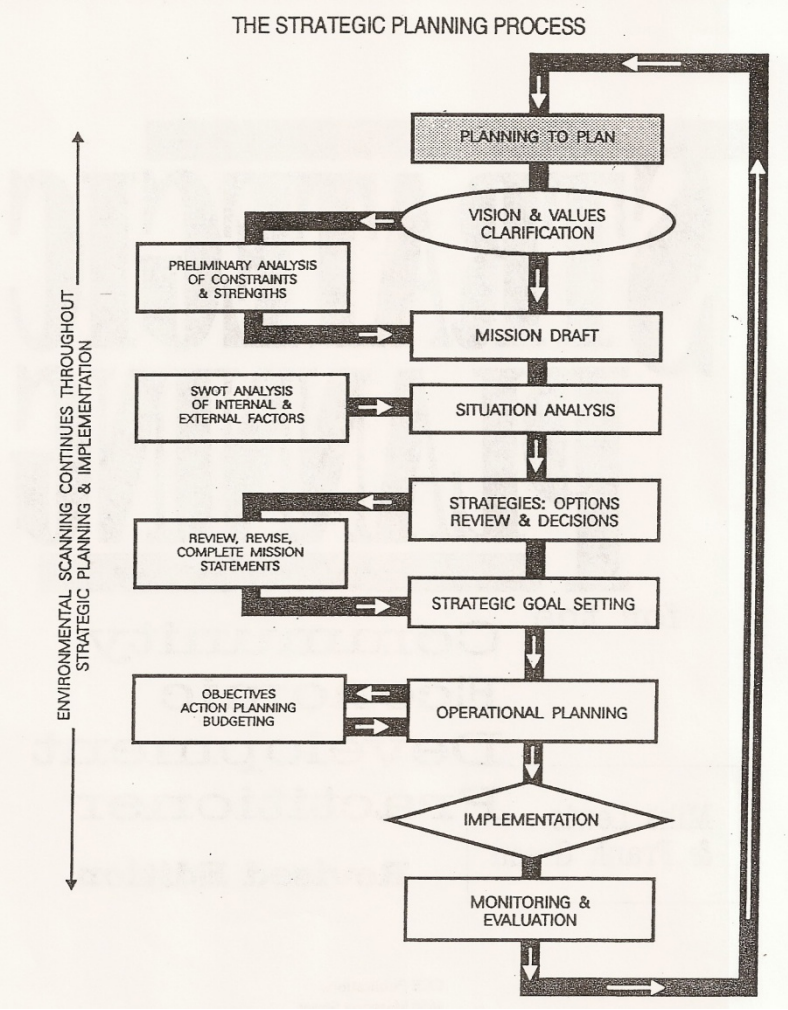
[92]Lewisand Frank & GreenMike. (1993). "Strategic Planning for the Community Economic Development Practitioner." Port Alberni, BC, U.S.A.: CCE Publications.

[93] Ibid.

first step in operational planning

9. *Action plans and budgets are completed and implementation begins.*
10. *The CEDO's performance is regularly monitored."*

Figure 5.3 The Strategic Planning Process



Source: (Mike & Green, 1993)

5.4.8 Principles of Neighborhood Planning and Possible Strategies

Neighborhood planning is complex. Many of these princes are, therefore, interrelated, and the strategies mentioned can be effectively used to achieve several different principles. The principles are essential; the strategies are simply suggestions and not meant to be a prescription of how to carry out the

principles:[94]

A. "*Thoughtful, deliberate preparation needs to go into the neighborhood planning process.*

B. The plan must identify and build on physical assets and social capital.

C. Neighborhood planning should be for a specific area and an inclusive process.

D. Resident involvement is essential.

E. Neighborhood planning should build the capacity of the neighborhood for community development

F. All participants should have defined and appropriate roles.

G. There must be transparency in the planning process.

H. Democratic decision-making is a hallmark of neighborhood planning.

I. The process should aim to create a shared vision for what the neighborhood can become and at a minimum, must generate a joint vision.

J. Data must be collected to inform the planning process.

K. There needs to be a clear relationship to existing activities and plans.

L. The plan must recognize market dynamics.

M. Neighborhood residents and other stakeholders must be included in the development and approval of the plan.

O. The plan must include a feasible plan to implement the plan's recommendations."

5.4.9 VMOSA

What is VMOSA?

"One way to make that journey is through strategic planning, the process by which a group defines its own "VMOSA;" that is, its Vision, Mission, Objectives, Strategies, and Action Plans. VMOSA is a practical planning process that can be used by any community or initiative. This comprehensive planning tool can help community by providing a blueprint for moving from dreams to actions to positive outcomes for community.

In this section, VMOSA will give a general overview of the process, and touch briefly on each of the individual parts. In Examples, VMOSA will show community an initiative to prevent adolescent pregnancy used the VMOSA process effectively. Then, in Tools, VMOSA offer community a possible agenda for a planning retreat, should community decide to use this process. Finally, the

[94] BurkholderH., Mark Chupp, and Philip Star Susan. (2003). "Principles of Neighborhood Planning for Community Development." Ohio: The Ohio Urban University Program

remaining sections in this chapter will walk community through the steps needed to fully develop each portion of the process.[95]

A. When should community use VMOSA?[96]

- *When community are starting a new organization.*
- *When community is starting a new initiative or large project, or is going to begin work in a new direction.*
- *When community is moving into a new phase of an ongoing effort.*
- *When community are trying to invigorate an older initiative that has lost its focus or momentum.*

B. VMOSA[97]

- *Vision (the dream)*
  - *i. Understood and shared by members of the community.*
  - *ii. Broad enough to allow a diverse variety of local perspectives to be encompassed within them.*
  - *iii. Inspiring and uplifting to everyone involved in community effort*
  - *iv. Easy to communicate - for example, they should be short enough to fit on a T-shirt.*
- *Mission (the what and why)*
  - *v. Concise. Although not as short a phrase as a vision statement, a mission statement should still get its point across in one sentence.*
  - *vi. Outcome-oriented. Mission statements explain the overarching outcomes community is working to achieve.*
  - *vii. Inclusive. While mission statements do make statements about community overarching goals, it's very important that they do so very broadly. Good mission statements are not limiting in the strategies or sectors of the community that may become involved in the project.*
- *Objectives (how much of what will be accomplished by when)*
  - *viii. Behavioral objectives. These objectives look at changing the behaviors of people (what they are doing and saying) and the products (or results) of their behaviors. For example, a neighborhood improvement group might develop an objective around having an increased amount of home repair taking place (the behavior) or of improved housing (the result).*
  - *ix. Community-level outcome objectives. These are related to behavioral outcome objectives, but are more focused more on a community level instead of an individual level. For example, the same group might suggest increasing the percentage of*

[95] Work Group for Community Health and Development at the University of Kansas (2007). An Overview of Strategic Planning or "VMOSA" ". The Community Tool Box - Bring Solutions to Light: http://ctb.ku.edu/tools/en/sub_section_main_1085.htm

[96] Ibid.

[97] Ibid.

people living in the community with adequate housing as a community-level outcome objective.

x. *Process objectives. These are the objectives that refer to the implementation of activities necessary to achieve other objectives. For example, the group might adopt a comprehensive plan for improving neighborhood housing.*

- *Strategies (the how)*

xi. *A child health program might use social marketing to promote adult involvement with children.*

xii. *An adolescent pregnancy initiative might decide to increase access to contraceptives in the community.*

xiii. *An urban revitalization project might enhance the artistic life of the community by encouraging artists to perform in the area.*

- *Action plan (what change will happen; who will do what by when to make it happen).*

xiv. *Action step(s): What will happen*

xv. *Person(s) responsible: Who will do what*

xvi. *Dated completed: Timing of each action step*

xvii. *Resources required: Resources and support (both what is needed and what's available)*

xviii. *Barriers or resistance, and a plan to overcome them!*

xix. *Collaborators: Who else should know about this action*"

5.5 Community Based Development: Case Study on KUPA (Kama'āina United to Protect the 'Āina)



5.5.1 KUPA History[98]

The Beginning

98 KAMA'AINA UNITED TO PROTECT THE `AINA. (2008). "Ho`okena Community Development Project". KUPA History and Accomplishments: http://hookena.org/history.asp

"KUPA was originally formed to address the concerns of Hoʻokena fisherman over the depletion of reef fish by commercial tropical fish collectors. This conflict brought the community together to form a non-profit community called KUPA, an acronym for Kamaʻāina United to Protect the ʻĀina.

KUPA was successful in lobbying the legislation that limited the areas where tropical fish could be collected for commercial purposes. KUPA was also instrumental in designating a six-mile area in Hoʻokena as a Fish Replenishment Area where fish collection is not allowed."

History of Hoʻokena
"After the first steamships arrived in the Hawaiian Islands in 1836, Ho ʻokena was transformed from a sleepy little fishing village to a trade center. The major village on Kauhakō Bay was not suitable for landing because of the rocky shoreline. Hoʻokena's soft, sandy beach on the shore of Kauhakō Bay was better suited for landing.

It was not until the increased usage of automobiles and trucks in the 20th Century that the importance of Hoʻokena began to diminish. Trucks traveling on the improved roads of the Kona coast replaced the need for many landings on the island. By the mid-1930's high surf and storms had demolished the landing. The ruins are still visible today.

The steamships left and so did most of the people. Relocating closer to the highway, people all but left the once important shore of Hoʻokena. Few people remained and few live in Hoʻokena today.

Today Hoʻokena is a state park, Hoʻokena Beach Park, where locals and visitors alike can still enjoy the beauty there. As with many government projects, Hoʻokena is subject to bureaucracy, budget, and vision of politicians. Many parks and beaches suffered economic difficulties during the 1990's."

5.5.2 KUPA Vision and Mission Statement[99]

Mission
"KUPA is a non-profit corporation organized exclusively for the educational, charitable, and scientific purposes to preserve and protect the land, water, and other natural resources in South Kona for housing, economic development, cultural, and religious needs."

Purpose
"At this time KUPA are focusing on two projects. One is a farm project with Bishop Estates that is intended to provide economic opportunities for community

[99] Ibid.

families.

The other project is a partnership with the County of Hawai'i Parks and Recreation called "Friends of the Park" which will allow our community to take a bigger role in deciding how the resources and facilities at Ho'okena Beach Park are utilized. The program will also enable us to improve the safety and security at the park."

Dream
"The Small Business Community Economic Development Program has submitted a grant to fund a Cultural Center at Ho'okena Beach for KUPA. Our request for the land to build the center has resulted in a verbal commitment with a letter of support to follow from the County Parks and Recreation. This Cultural Center will be the anchor for our community. The Cultural Center will help us to preserve the rich history of Ho'okena and the surrounding ahupua'a.

Provide a base for community functions, i.e., KUPA meetings, visits from schools, churches, and kupuna groups, fundraisers, and other special functions and activities.

The successful completion of this project will establish Ho'okena as an important historical site and enable KUPA to be recognized as a reliable and credible entity through which organizations can channel resources and rely upon for support.

KUPA is committed to improving social, economic, and cultural conditions in our community. It is also our intention to network with other communities and private or public organizations to enhance project goals and build upon what KUPA already have in place."

5.5.3 Strategy Planning - Open Space Technology[100]

KUPA used Open Space Technology for The community-powered Planning Event during 16 – 18 February 2008.

- What is Open Space Technology?
  "Open Space Technology is one way to enable all kinds of people, in any kind of organization, to create inspired meetings and events. Over the last 20+ years, it has also become clear that opening space, as an intentional leadership practice, can create inspired organizations, where ordinary people work together to create extraordinary results with regularity.
  In Open Space meetings, events and organizations, participants create

[100] MichaelHerman. (1998). "What is Open Space Technology?" OpenSpaceWorld: AboutOpenSpace: http://www.openspaceworld.org/cgi/wiki.cgi?AboutOpenSpace

and manage their own agenda of parallel working sessions around a central theme of strategic importance, such as: What is the strategy, group, organization or community that all stakeholders can support and work together to create?

With groups of 5 to 2000+ people -- working in one-day workshops, three-day conferences, or the regular weekly staff meeting -- the common result is a powerful, effective connecting and strengthening of what's already happening in the organization: planning and action, learning and doing, passion and responsibility, participation and performance."

5.5.4 Accomplishments of KUPA[101]

- *"August 2003 - Sponsored a Health Walk Pancake Breakfast and Country Store fundraising event. It was a success with over 50 members participating. County Councilman, Bob Jacobsen, also participated in the walk and voiced his support of KUPA. Councilman Jacobsen has attended several KUPA meetings and is committed to working with us in the future.*
- *October 2003 - Six KUPA representatives attended a Developing Community Teams Workshop sponsored by the May or office, The Department of Civil Defense, The Hawaii County Prosecutor Office, and the Hawai'i County Resource Center. Attendees learned community building skills with a focus on resources available to the community to address those problems.*
- *December 2003 - KUPA representatives attended a workshop on Molokai sponsored by The Native Conservancy. In attendance were representatives from various communities from across the state who shared concerns over the depletion of marine resources in their area. KUPA is forming a network of communities and organizations to share information and support.*
- *January 2004 – Ho'okena Beach Park was closed for a weekend community project sponsored by KUPA. With materials supplied by County of Hawai'i Parks and Recreation, KUPA members and community volunteers constructed six barbeque pits, a handicap walkway, established camping site designations, cleared the pail behind the beach of overgrown trees and vegetation, leveled and rebuilt damaged stone walls, and cleaned the historic Puhau well at the end of the beach. Approximately 50 members were involved.*

[101] KAMA'AINA UNITED TO PROTECT THE `AINA. (2008). "Ho`okena Community Development Project". KUPA History and Accomplishments: http://hookena.org/history.asp

- *June 2004 - KUPA held it Second Annual Health Walk Pancake Breakfast fundraiser with the Community Store offering homemade bake goods, jams, jellies, pickles, flowers and produce, handmade crafts, and more."*

5.6 Conclusion

Community, government, business agency, and university and academy should collaborate together for SCD. Every field is linked like toothed wheels. Nowadays, it is impossible to deal with only one field for any kind of development in the society. How to compromise among those four sectors is the main key for the SCD. Each sector has specific and particular talent. Each sector can provide own special talent:

Table 5.1 Collaboration Structure of Social Community Development

Sector	Special Talent
Community	Passion & Action
Government	Legal & administrative Support
Business Agency	Economical Benefit Support
University & Academy	Theory, Research & Instruction

Source: (Park, Joonghee, 2008)

Building Trust is the main key for SCD Process. Emotional conflict, always exist into SCD. Frankly, emotional conflicts are found in any kind of social development. However, emotion is a more sensitive factor for SCD than other social developments. Emotion is the engine for SCD as well as a rudder to drive community behavior. Communities can be stopped or led wrong way by emotion. Sometime, communities prefer to be understood or respected through the process by other partners. Communities are not always focusing on economic benefit or efficiency. Justice, human right, moral and cultural issues could be the most priorities for SCD. Emotion is a nucleus for every community activity.

Building trust could account for half of SCD process. Building Trust could prevent to overflow of emotional disaster for SCD. Also, building trust can bring flexible and understanding working process for SCD. Based on trust, each sector doesn't state only own interest and need but also, consider other partners interest and need. Even though one sector makes a mistake, other sectors could cover and help for collaboration within trustable relationship.

Synergy & collaboration means that four sector's various knowledge, technology, experience, and skill make a synergy effect by collaborating.

Diversity always brings positive benefit and negative conflict. Ground rule & instruction for cooperation can reduce negative conflict. Ground rule & instruction must make with whole sectors deliberation and agreement. Also, Ground rule & instruction should be flexible to understand diversity and variety of four sectors.

Feedback is a safety device and a tonic for SCD. Community can find not only weakness, danger, and problem but also, strength, hope, and solution for problem.

Figure 5.4 Collaboration Structure of Social Community Development



Source: (Park, Joonghee, 2008)

Social Community Development (SCD) requires strategic and organized planning to improve. Many various strategies can help and support for SCD. Government, business agency, and university & academy can assist and aid for community. However, the most important thing is that how passionate community is. Nothing will happen without community action and challenge. Community requires rational brain to calm and passionate heart to challenge. Community should make a balance between ideal and reality for SCD.

Social Community Development Process

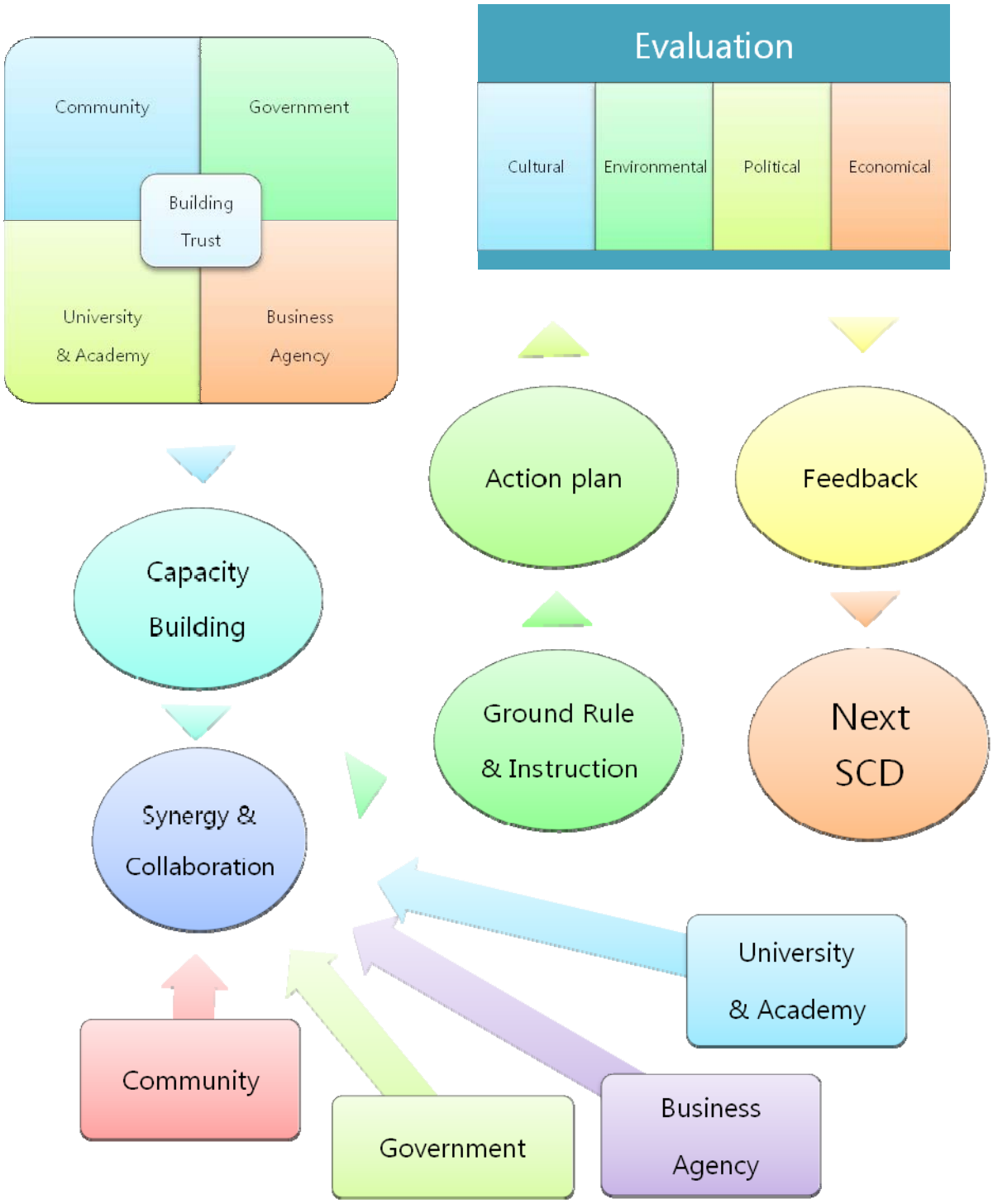


Figure 5.5 Social Community Development Process (Park, Joonghee)

5.7 References

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Tool Box – Bring Solutions to Light:
http://ctb.ku.edu/tools/en/sub_section_main_1085.htm

CHAPTER SIX: FIELD RESEARCH

6.1 February 16-18 KUPA Community Meeting

6.1.1 Trip Chronology[102]

From February 16 through February 18, 2008, Professor Luciano Minerbi and Practicum member Kaleo Manuel attended KUPA's community meetings in Hoʻokena, South Kona, Hawaiʻi, which convened to encourage community conversations about the future of the Hoʻokena area through a facilitated process.

On February 16 and 17, 138 residents, community members, and others with connections to Hoʻokena area attended the KUPA community meetings. KUPA's community meeting focused on developing daily agendas based the theme, "Honoring, Strengthening, Sustaining…Our Beloved Hoʻokena," which focused on community opportunities, concerns and issues. As part of the daily agenda, topics of discussion were drafted. These topics were assigned to discussion sessions throughout the day, where KUPA and community members broke up into subgroups and voiced their opinions and thoughts on the subjects at hand.

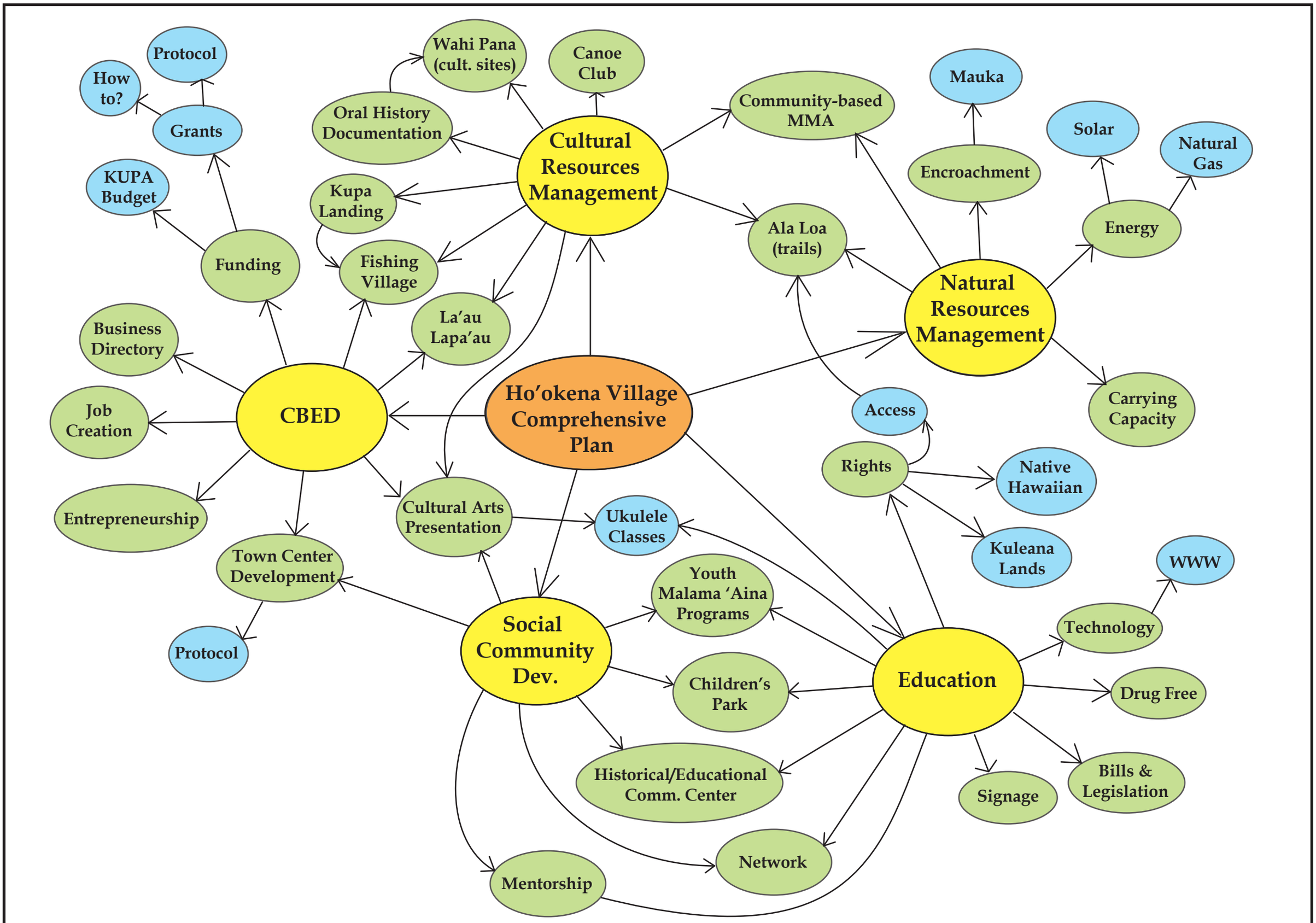
On February 18, after two days of successful discussion sessions, 45 participants at the community meeting developed topics for action planning sessions, or subjects that were priorities in the overall meeting agenda. The goal of these action planning sessions were to identify specific actions that could take place, the individual(s), group(s), or entity that would take on the responsibility of that action, and a deadline for the action to take place.

A Book of Proceedings was compiled, by the facilitator Eric Kapono with the Advancement Services for Native Nonprofits, with notes from the discussion and action plan sessions for all participants of the KUPA community meetings and the broader Hoʻokena community.

6.1.2 Hoʻokena Village Comprehensive Plan

During these two days of meetings, 37 discussion sessions and 10 action planning sessions took place and discussed various topics. To better understand the linkages and connectivity between these topics, the practicum created a Hoʻokena Village Comprehensive Plan fashioned similar to the conceptual model, from which this report is derived. This comprehensive plan includes topic discussed in the 47 sessions.

[102] KUPA Book of Proceedings, 2008.



KUPA Meeting-based Conceptual Model

April 1, 2008

UH DURP Sp 08 Practicum

The practicum's conceptual model and the Hoʻokena Village Comprehensive Plan are very similar and have some of the same attributes and topics. Unlike the conceptual model which has four primary components, the Hoʻokena Village Comprehensive Plan has five primary components: Cultural Resource Management (CRM), Natural Resource Management (NRM), Community Based Economic Development (CBED), Social Community Development (SCD), and Education. Education was a big part of the community discussion and could be separated from the previous four components found in the first conceptual model.

By comparing the two models, the practicum was better able to understand and comprehend the concerns, issues, and opportunities that are experienced in communities throughout Hawaiʻi. In addition, it displays how a theoretical and conceptual model can accurately portray the "real life" concerns and occurrences in a local community.

6.2 April 11-14 Kona Field Trip

6.2.1 Trip Chronology

From April 11 through April 14, 2008, the DURP Spring 2008 Practicum team traveled to the Island of Hawaiʻi to meet with several stakeholders in the restoration, protection, and establishment of trails in the South Kona Region.

On April 11, the project team met with NPS's Aric Arakaki, Ala Kahakai Trail superintendent, Professor Karen Kempt, GIS expert, and NPS archaeologist Richard Boston. The group discussed the data that had been gathered to date and the most effective ways to incorporate information into GIS, to assist with trail management efforts. Current trail access, clearing, and management issues were also discussed. On the same day, the project team also met with Deborah Chang, of Island Transitions. Ms. Chang was formerly employed at the Hawaiʻi State Nā Ala Hele Trail and Access Program. Nā Ala Hele is administered under the Division of Forestry and Wildlife in the DLNR.

On April 12, the practicum project team was invited to take part in a community meeting organized by KUPA to discuss their strategic priorities and action plans that resulted from the community workshop conducted in February 2008.

On April 13, the practicum team met with the South Kona Trail Group to monitor trail clearing activities in the ahupuaʻa of Kaʻohe, and to present to them the results of the practicum's research. Conclusions and impressions from each of these meetings are summarized below.

6.2.2 April 11 NPS Meeting

Questions discussed included technical discussions on how to integrate information database in GIS, and how to incorporate and synchronize information

for ease of use and conversion to GIS. The discussion was especially aimed at the work that was done by the research assistants in digitizing trails shown on old maps and in land ownership assessment within the Ala Kahakai Trail corridor. Trail management issues also discussed included:

1) Typology of activities in trail management;
2) Zoning, landownership, agencies involved in trail management and access issues;
3) SMA and trail overlap – permitting process and requirements;
4) Trail jurisdiction – whether Hawai'i State (DLNR), county, or federal;
5) Current rules and regulations pertaining to trails;
6) Native Hawaiian rights – to be held by native Hawaiians only;
7) Current trail maintenance activities;
8) Native Hawaiian sites/artifacts damage issues.

Conclusions of the discussion stressed the need for legibility, research-ability, and compatibility in GIS and database design and population.

6.2.3 April 11 Deborah Chang Meeting

The discussion with Ms. Chang revolved around public access issues and conflicts, landowner concerns, researcher concerns, and how stakeholders could possibly work together. A recurring concern was the issue of trail "access". How is public access defined? How can the State of Hawai'i maintain public access? Particularly, what are the implications of current planning rules and regulations in defining access for the general public, and also in relation to native Hawaiian rights?

One example of shoreline access issues was the inadequacy of the current shoreline definition in taking into account coastal cliffs. The current definition of the shoreline states[103]:

"the upper reaches of the wash of the waves, other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth, or the upper limit of debris left by the wash of the waves."

This definition does not account for sea cliffs and thus allows for limitations on public access to the shoreline in areas with rocky and steep coastal topography. This situation leads to exacerbated access conflicts. These issues affect coastal trail clearing and management activities and thus the State legislature should clarify such discrepancies.

The practicum group also felt that Ms. Chang thought trail management was more a State and agency task rather than one for the larger community. This approach to trail management was likely the result of concern about access

[103] Hawaii Revised Statutes, Chapter 205A-1

conflicts and community group trail clearing and management activities for various stakeholders.

Ms. Chang also stressed that State employees may be disconnected with the reality of the trails they are meant to manage because of lack of opportunity and funding to do ground reconnaissance studies or surveys all around the State. She also highlighted the complexity of trail management, indicating that it is difficult to have a generalized plan for all trails as each is unique. Management is site specific and changes with each type of trail (jeep trail, fishing trail, etc.)

The implications of the Highways Act of 1892 were also discussed. The Act was approved by Queen Lili‘uokalani and stated that all public highways and the land on which they lie shall be fee simple property of the Hawaiian Government. The definition of public highway includes trails that were already in existence when the Act was passed and those built by the government, or those built by private parties and dedicated to the public. It has proven problematic to uphold the provisions of the Highways Act, especially as landowners have fragmented the land and are reluctant to let people through their land; they have often also erased some of those trails. As laws can often conflict with each other, there is a need to create a framework to analyze a set of laws and to evaluate which laws take precedence over others in relation to native Hawaiian rights and access laws. Another area of concern relates to oral history as testimony of the presence of a trail in an area. The State government does not consider oral history strong evidence, while it should when properly assessed.

6.2.4 April 12 KUPA Meeting

At the April 12 meeting at Ho‘okena Beach Park, KUPA presented the strategic priorities they set for the organization based on the results of the February 16-18 community workshop that was held to identify concerns of the communities in the Ho‘okena area. There were about thirty participants in the meeting, including board members of KUPA, Ho‘okena community members, Aric Arakaki of NPS, representatives of the Community Conservation Network, and the UH DURP practicum student group. KUPA identified four strategic priorities:

1) Live Our History
2) Promote Appropriate Economic Development
3) Develop Funding Opportunities
4) Build Community Center



The meaning of “Living Our History” seemed to cause some confusion amongst members and to generate questions regarding how to go about doing that in

Ho‘okena. The DURP student group felt that KUPA should strive to continue communication with the people of the district so as to promote mutual understanding and synergy. Additionally, intergenerational communication and relationship building with young people of the area can expand. Population profile becomes an important tool to look at the population distribution in the area as well as age distribution. The important point here is “community representation”. In doing community work, the challenge is how locally-based organizations can reach a large part of the community. The practicum group thought that possibly, a communications officer could help and organize ways to continuously reach out to the community, whether it would be through newsletters, use of public places, public television, the internet, etc.

Another observed concern for communities was the lack of information caused in part by intimidation with academic and official documents. Some documents could be simplified and tailored to the needs of communities and be more effective at creating understanding. The practicum group was impressed with the interest of meeting participants with the work that the practicum did, and saw an opportunity for positive partnerships to form between government entities and the community. Maps were well received by the community and spurred a lot of interest because they seemed to help visualize the resources of the region. Dr. Minerbi reflected in retrospect that everything in community research needs to have clear explanations for clients to facilitate interest and understanding from communities and from those doing work with the communities. Participant observation and participatory methods of research are key objectives when working with communities. For example, maps, conceptual framework, etc. need to be clarified and explained so as to be useful to the ones that could gain the most from them.

The relationship of KUPA with NPS is currently not yet well defined but KUPA’s first objective, related to “Living Our History”, was to connect with the South Kona Trail Group to develop a trail management plan. Consequently, there is a shared recognition between the community group and NPS of the significance of conserving native Hawaiian trails. The current need is to clarify the ways in which NPS and KUPA can collaborate to promote best management practices for the conservation of these valuable historic resources while promoting more community support.

6.2.5 April 13 South Kona Trail Group Meeting



On April 13, 2008, the practicum team joined the South Kona Trail Group on their weekly trail clearing activities. The group was working on the coastal trail in the ahupua‘a Ka‘ohe, south of the practicum project focus area. The trail in that area runs across very dry lands with sparse brush vegetation, along a rugged coastline of black lava rocks. The water quality along the coast was excellent and coral reefs and fish were visible under water. The practicum group was impressed by the clean look and visibility of the trail, which could be seen meandering into the distance along the coast. Along the trail, several ancient Hawaiian burials were observed, as well as indications of mauka-makai trails intercepting the coastal trail, and what was thought to potentially be an ancient canoe landing. On some portions of the trail, white coral pebbles and cobbles were lined along the edge of the trail. These rocks were placed by fishermen so as to be able to follow the trail when fishing at night.

The practicum group was also impressed by the passion of the community members who wanted to help preserve the trail, and by the collaboration of people from different backgrounds. However, it was also observed that more guidance can be provided to the group members on proper trail clearing activities so that the techniques used protect the integrity of the historic trail. The question then might be how can NPS help the community to find the right way to preserve and manage trails? There needs to be a strong and honest relationship between stakeholders in order for them to work effectively together. *Passion*, *energy*, *synergy*, and *honesty* are essential in forming positive relations for the benefit of all parties.

Currently, the South Kona Trail Group, NPS, and DLNR can harmonize their own methods and regulations for managing trails. Future work should investigate the development of a set of procedures that everyone can follow and agree on in order to make the preservation of these trails most effective. These procedures or “best management practices” should be developed with the input of all involved so that everyone from all sides can benefit from information sharing instead of digging trenches between groups as the government’s top-down approach has often caused.

Appendix A

List of Maps

List of Maps

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Cultural Resource Management:

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B. He Wahi Mo'olelo Na Ke'ei ma Kona Hema, Hawai'i
C. Ka Hana Lawai'a A Me Na Ko'a O Na Kai 'Ewalu
D. He Wahi Mo'olelo No Na 'Aina, A Me Na Ala Hele I Hehi 'Ia, Mai Keauhou a I Kealakekua, Ma Kona, Hawai'i

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D-6	County of Hawaii Department of Research & Development - R&D Grant Award
D-7	Economic Development Administration (EDA) - Revolving Loan Fund (RLF)
D-8	Office of Hawaiian Affairs (OHA, if you are of Hawaiian ancestry)
D-9	Rural Community Assistance Corporation
D-10	National Park Service: National Center for Preservation Technology & Training (NCPTT)

First Nation Development Institutes - Native Agriculture and Food Systems Initiative (NAFSI)

First Nations Development Institute is for Native American economic development organization whose mission is to work with tribes and Native communities to help self-reliant and sustainable economies. This organization has 5 kinds of grant and they also have loans. To qualify for ESF funding, all projects must be located on, or linked through the provision of a service or product to, a reservation or rural Native community. ESF currently offers three different types of general grants: Seed, Start-Up, and Working Capital, as well as special initiatives.

With support from the W.K. Kellogg Foundation, First Nations has launched the Native Agriculture and Food Systems Initiative. This initiative addresses issues confronting tribes and Native communities as they seek to strengthen the food system in their communities, improve health and nutrition, and build food security. Through an integrated program approach, this initiative seeks to increase the control over Native agriculture and food systems by providing an opportunity for Native communities to develop innovative projects that strengthen the ability of the community to use, create, leverage, retain, increase or control their agricultural and food-related assets.

Tel.303.774.7836
First Nations Development Institute
703 3rd Avenue, Suite B, Longmont, CO 80501

Administration for Native Americans (ANA) - Social and Economic Development Strategies for Native Americans

Established in 1974 through the Native American Programs Act (NAPA), ANA is the only federal agency serving all Native Americans, including 562 federally recognized tribes, American Indian and Alaska Native organizations, Native Hawaiian organizations and Native populations throughout the Pacific basin (including American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands). ANA is the only Federal agency providing grants, training and technical assistance to all Native Americans. Social and Economic Development Strategies for Native Americans (SEDS): ANA provides project funding to eligible applicants for the purpose of assisting Native communities to achieve the goal of economic and social self-sufficiency.

Administration for Native Americans
Mail Stop: 2nd Fl. West Aerospace Center
370 L'Enfant Promenade SW
Washington, D.C. 20447-0002

ALU LIKE-Kulioa Like (Financial Literacy)
ALU LIKE, Inc. is a non-profit organization for Native Hawaiians. The organization has assisted Native Hawaiians in their efforts to achieve social and economic self-sufficiency for over 30 years. Incorporated in 1975 as a private, non-profit service organization, ALU LIKE, Inc. remains committed to the vision and mission of the organization's founders.

ALU LIKE, Inc. Central Administration

Hale O Nā Limahana
458 Keawe Street
Honolulu, HI 96813
Phone: 808.535.6701

Hawai'i Community Foundation West Hawai'i Fund

Established in 1916, the Hawaii Community Foundation is one of the oldest community foundations in the U.S. Like most similar philanthropies, it serves as a pass-through vehicle for donors who would prefer to avoid setting up their own foundations.

Grants & Requests for Proposals: Hawai'i Community Foundation distributes charitable funds to Hawai'i's nonprofit organizations through a variety of programs. Our internal programs, such as the Organizational Capacity Building and Mo' Bettah Together Programs, are strategic investments in the strengthening of our community. We also assist private foundations in Hawai'i in administering their grant-making activities. Through government-based initiatives and funder collaborations, we help increase the level of charitable investment into Hawai'i's community. We also administer a number of smaller funds focused on supporting specific fields of nonprofit work, such as education or health.

HCF Office in Hawaii island
65-1279 Kawaihae Road
Parker Square # 203
Kamuela, HI 96743
Tel: 808-885-2174

Department of Hawaiian Homeland - NAHASDA Community Grants Program

The Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA) reorganized the system of housing assistance provided to Native Americans through the U.S. Department of Housing and Urban Development by eliminating several separate programs of assistance and replacing them with the Indian Housing Block Grant. Applicants must be engaged in developing,

conducting, administering, or coordinating assistance programs that aid eligible beneficiaries. The minimum funding level for these grants is $10,000.

Department of Hawaiian Home Lands
1099 Alakea Street, Suite 2000
Honolulu, Hawaii 96813
Phone: Hawaii: 974-4000

County of Hawaii Department of Research & Development - R&D Grant Award

The intent of the grant awards is to improve the quality of life for the people of Hawai`i County through responsible and sustainable economic, societal and environmental practices in agriculture, tourism, new industry development, energy and film resources. Proposals must address and support the program goals and objectives for the subject areas above. The Department awards grants in the range of $3,000 to $30,000 for tourism projects to: 1) develop projects that create awareness and education of cultural and natural resources; and 2) support sporting events and emerging visitor market segments. Additionally, awards for expanded and complex marketing and promotion of the island as a preferred visitor destination may be supported.

County of Hawai`i
Department of Research and Development
Physical & Mailing Address: 2100 Kanoelehua Avenue, C-5
Hilo, Hawai`i 96720
Telephone: (808) 981-8395

Economic Development Administration (EDA) - Revolving Loan Fund (RLF)

The Economic Development Administration (EDA) was established under the Public Works and Economic Development Act of 1965 (42 U.S.C. § 3121), as amended, to generate jobs, help retain existing jobs, and stimulate industrial and commercial growth in economically distressed areas of the United States. EDA assistance is available to rural and urban areas of the Nation experiencing high unemployment, low income, or other severe economic distress. Currently there are 20 grants

Office of Hawaiian Affairs (OHA, if you are of Hawaiian ancestry)

The Office of Hawaiian Affairs Grants Program assists community-based non-profit organizations working to address the needs of the Hawaiian Community in the areas of: Education, Health, Human Services, Housing, Economic Development, Land/Natural Resource Protection, Native Rights and Culture. Grant awards of up to $100,000 will be made to support programs which address

OHA Strategic Plan goals in the areas of Education, Health, Human Services, Housing, Economic Development, Native Rights, Culture, Land Management, and Governance.

Office of Hawaiian Affairs
711 Kapi'olani Blvd., Suite 500
Honolulu, HI 96813
Phone: (808) 594-1888

Rural Community Assistance Corporation

Rural Community Assistance Corporation was founded in Sacramento, California on Oct. 1, 1978. Funding from The Rosenberg Foundation allowed RCAC to establish itself as a multi-state agency helping to build the capacity of other nonprofit agencies and create new agencies to serve low-income people living in rural communities in the western United States. RCAC's loan fund provides small communities and nonprofit organizations with suitable and innovative solutions to their financing needs. RCAC is certified as a Community Development Financial Institution (CDFI) by the United States Treasury. Among other projects, RCAC provides short-term and interim financing.

Rural Community Assistance Corporation
3120 Freeboard Drive, Suite 201 - 2nd Floor
West Sacramento, CA 95691
Phone: (916) 447-2854

National park Service: National Center for Preservation Technology & Training (NCPTT)

NCPTT seeks innovative projects that advance the application of science and technology to historic preservation. PTT Grants fund projects that develop new technologies or adapt existing technologies to preserve cultural resources. Grants are awarded competitively with a maximum award of $50,000 (including indirect costs). Grants are funded by annual federal appropriation and are subject to availability of funds.

NCPTT - National Center for Preservation Technology and Training
645 University Parkway
Natchitoches, LA 71457
Phone: (318) 356-7444