KAUAI Biologically Important Areas Background Information NORTH OF KUIA

Location	Target	Natural Communities	Designation/Ownership
	ecosystem		
Plateau above	Mon. Mesic,	Native dry cliff vegetation, Mesic to dry	Na Pali-Kona Forest Reserve,
Honopu to Kalalau	Low. Mesic,	forest shrubland, Wet cliff vegetation,	Kokee State Park
	Dry Cliff	Open ohia forest, Koa/Ohia forest	

Additional notes on biological importance:

- -Endangered seabirds located in upper Honopu cliff areas.
- -High concentration of endangered plants & predicted plant sp. richness, critical habitat.
- -One of the most intact areas of Kauai diverse mesic forest. There are fewer than 5,000 acres of montane mesic forests in NARS statewide.

Priority Threats:

Ungulates: Goats, deer and pigs

Weeds: lantana (*Lantana camara*), fayatree (*Myrica faya*), guava (*Psidium sp.*) molasses grass (*Melinis minutiflora*), bushy beard grass (*Schizachyrium condensatum*), ginger (*Hedychium gardnerianum*).

Issues for conservation management:

- -Kokee Resource Conservation Program and Kauai Watershed Alliance control weeds.
- -There is an easement for a well owned by the military in that area.
- -Good opportunity for management since it is flatter, accessible, and has intact forest.
- -Perhaps a NAR should be expanded to Honopu trail, or to the Awaawapuhi trail, cutting off the military easement.
- -Forest products are gathered near the road, especially maile. NAR designation should be at least ¼ mi from the road to not affect gathering.
- -Future fences should be kept away from roads or view corridors. It is a highly accessible area with many hunters that would be impacted by fences.

KALALAU PALI

Location	Target ecosystem	Natural Communities	Designation/Ownership
Pali and very back of valley	Mon. Wet, Mon. Mesic, Low. Mesic, Wet Cliff,	Native dry cliff vegetation, Mesic to dry forest shrubland, Wet cliff vegetation,	Na Pali State Park
	Dry Cliff	Open ohia forest, Closed ohia forest	

Additional notes on biological importance:

- -Seabirds located and nesting in cliff areas
- -Very high concentration of endangered plants and predicted plant species richness 60 rare plants recorded critical habitat.
- -Green Sphinx Moth and Errina Newcombi found in area.
- -Headwaters of outstanding stream

Priority Threats:

-High intensity and widespread goat browsing, less widespread pig disturbance

- -Most prevalent weeds: Firetree (*Myrica faya*), Banana Poka (*Passiflora mollisima*), Strawberry Guava (*Psidium cattleianum*), Daisy Fleabane (*Erigeron karvinskianus*) lantana (*Lantana camara*)
- -Localized populations: White and Yellow Ginger (*H. coronarium* and *H. flavescens*), Japanese Honeysuckle (*Lonicera japonica*), Firethorn (*Pyracantha angustifolia*), Glory Bush (*Tibouschina urivelleana*)

Issues for conservation management:

- -Proposed strategic fences of "Box Canyon" and beneath Puu O Kila, but these may not be successful since goats can get anywhere on the pali. Without ability to maintain exclosures on vertical pali, daisy fleabane will take over. Aerial paintball method would be the only way to control weeds, but that has a limited application. Also rockslides may sweep the fence down, destroying plants. Kalalau squatters may cut a fence inside the flatter portions in the back of the valley. People are squatting close to native forest areas.
- -Staff hunting is a possibility, and the summer trips for public hunting with rifles were helpful. Aerial herding does not seem useful.
- -One possibility to save endangered species on Kalalau Pali would be to outplant them in manageable exclosures in mesic forests in Kuia North area.

UPPER KOAIE CANYON

Location	Target ecosystem	Natural Communities	Designation/Owner
			ship
Portion of	Mon. Wet, Mon. Mesic,	Native wet cliff vegetation, Native	Alakai Wilderness
Easternmost Alakai	Low. Mesic, Wet Cliff,	forest and shrubland, Open ohia	Preserve (Part of
Wild. Preserve and	Dry Cliff	forest, Closed ohia forest, Open	Na Pali Kona
into Koaie canyon	-	Koa/Ohia Forest	Forest Reserve)

Additional notes on biological importance:

-Unrepresented ecosystems in the NARS, very high quality mesic and wet forests with plant critical habitat, bogs in upper plateau and critical habitat for both critically endangered and candidate bird species. Some plant species have been rediscovered after turn of the century or newly discovered. 2,800-4,000 feet in elevation has mesic to wet forest gradient. At lower elevations, the vegetation becomes more diverse, but also the more degraded.

Priority Threats:

- -High intensity and widespread goat browsing and pig disturbance
- -Strawberry Guava, daisy fleabane, lantana main invasive species of canyon. In plateau, outlying ginger patches in eastern Koaia area, ATF scattered in low numbers.

Issues for conservation management:

- -Access: Mohihi Waialae trail, various LZs.
- -Area is part of Unit E (Alakai WP and North above Na Pali) Hunting Regulations allow: Pigs 1/hunter/day, Year round, only on Sat/Sun/Hol. Goats 1 goat/tag, 8 consecutive weekends, Public lottery. No deer hunting allowed.

- -A management plan is being circulated publicly for the Na Pali Kona Forest Reserve, which includes the Alakai Wilderness Plateau. To protect watershed values, plan is to "Increase public hunting in the Alakai WP."
- -KWA already has a management plan for the Koaia area, including minimizing ungulate numbers and weeding. KWA has eradicated kahili ginger populations in Koaia, and contained it in Mohihi to Camp 10 area. Next year will target ATF, and release resource mapping of weeds.
- -In some cases, will need to outplant endangered species in outlier populations.
- -Wilderness Preserve is a land designation for conservation.

BLUE HOLE

Location	Target	Natural Communities	Designation/Owner
	ecosystem		ship
Cliffs below Waialeale and in	Lowland Wet,	Native wet cliff vegetation, Native wet	Lihue/Koloa Forest
ampitheater valley/headwaters	Wet Cliff	forest and shrubland, Open ohia forest	Reserve
of Wailua river		-	

Additional notes on biological importance:

Many rare plants only known from that area, geological features, Critical habitat. High-quality lowland wet and wet cliff ecosystems effectively unrepresented in Kauai NARS.

Priority Threats:

Weeds: Albizzia, Strawberry Guava, Clidemia, ATF. Pig disturbance makai.

Issues for conservation management:

It would be good to have a base camp there to target invasives. This area is adjacent to two units actively managed by KWA for weeds: East Alakai core region, and Ililiula Drainage. Increasing weed management would be leveraged by KWA's efforts. It is also adjacent to the area being proposed for the KWA fence.

NAMOLOKAMA

Location	Target	Natural Communities	Designation/Owner
	ecosystem		ship
Plateau and Pali above Hanalei	Montane Wet,	Native wet cliff vegetation,, Open ohia	Kamehameha
	Wet cliff	forest, Closed ohia forest, Native forest	Schools, Halelea
		and shrubland	Forest Reserve

Additional notes on biological importance:

-Bird habitat, plant critical habitat. Bogs with rare elements not found in Alakai. High quality Mon Wet and Wet Cliff ecosystems which are not represented in Kauai NARS.

Priority Threats:

Pigs and goats disturbing bogs

Weeds: Clidemia hirta, Cyathea cooperi, Juncus planifolius, Axonopus fissifolius Cyperus meyenianus, Rubus rosifolius, Setaria gracilis

Issues for conservation management:

-Strategic wing fences have been proposed by KWA, but access is an enormous problem. It is too wet to have reliable helicopter access, and there is no hiking access.