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STRENGTHENING SUSTAINABLE ECOTOURISM IN AND AROUND NYUNGWE NATIONAL PARK (SSENNP)

“NYUNGWE NZIZA”

SURVEY OF CONCESSION SITES FOR SUSTAINABLE ECOLOGE
PLANNING AND DESIGN: FEBRUARY – MARCH, 2012



APRIL 2012

This publication was produced for review by the United States Agency for International Development. It was prepared by Diane Elliott Gayer, AIA as design consultant for DAI.

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ABBREVIATIONS

CBET	Community-based Ecotourism
DAI	Development Alternatives International
GIS	Geographic Information Systems
GPS	Geographic Positioning System
MOU	Memorandum of Understanding
NNP	Nyungwe National Park
NNPCAP	Nyungwe National Park Concessions Action Plan
PAB	Protected Areas Biodiversity Project
RDB	Rwanda Development Board
RFP	Request for Proposal
RWF	Rwandan franc
SOW	Scope of Work
SSENNP	Sustainable Ecotourism in and around Nyungwe National Park
T&C	Tourism and Conservation
TMZ	Tourism Management Zone
UNWTO	United Nations World Travel Organization
USAID	U.S. Agency for International Development
USNPS	U.S. National Park Service
WCS	Wildlife Conservation Society

I. SUMMARY: SUSTAINABLE ECOLOGE PLANNING

PROJECT OBJECTIVES

The Project Objectives were to survey of the concession sites identified in and around NNP for possible sustainable ecolodge development. The following description of the objectives is taken from the Contract between Diane Gayer and Development Alternatives Inc. (DAI) and is as follows:

1. Provide assistance to Rwanda Development Board (RDB) and Nyungwe Nziza in mapping and identification of alternative models of accommodation designs for the 5 concession sites in the park based on:
 - Existing conditions
 - Environmental conditions
 - Existing and required infrastructure
 - Surrounding context and attractions
 - Suitability of development to the site, size, location, aspect, environment
 - Massing studies¹ and master planning of alternative methods for development (site plan drawings)
2. Assist RDB and Nyungwe Nziza in providing specifications for an eventual RFP (Request for Proposals) or “business opportunity” prospectus:
 - Building design guidelines and drawings
 - Site analysis and infrastructure considerations
 - Master plan drawing for NNP

PROJECT OVERVIEW

The USAID-funded Strengthening Sustainable Ecotourism in and around Nyungwe National Park (SSENNP), or “Nyungwe Nziza,” work by DAI included the development of a draft Nyungwe Concessions Action Plan developed in collaboration with the U.S. National Park Service (USNPS). This plan identifies a number of potential sites for accommodation development based on conservation zonation and rehabilitation of derelict lands.

¹ Massing studies allow the exploration of design ideas by using shapes to conceptualize a building model. When the conceptual design is complete, building elements can be directly added to these shapes.

REPORTING RELATIONSHIPS

The following work was performed under the technical oversight of Jim Seyler, Nyungwe Nziza's Chief of Party, in close collaboration with Boaz Tumwesigye, Ecotourism Team Leader; and orthophoto mapping and GIS/GPS support from Firmin Karitanyi—all of DAI.

CONSULTATIONS AND INTERVIEWS WITH STAKEHOLDERS AND OTHER INTERESTED PARTIES

Stakeholder consultations in the fulfillment of this assignment included interviews and meetings with NNP's Chief Park Warden, Louis Rugerinyange, and Tourism Warden, Idlephonse Kambogu; Wildlife Conservation Society (WCS) staff; RDB staff; and various business owners, tour operators, and tourists.

LOCATION OF ASSIGNMENT

Site visits were conducted to the previously identified concession areas (by USNPS/DAI/RDB), as well as other locations within the park and the gateway communities over the duration of three weeks. A general overview of activities in and around Nyungwe National Park included site visits, hikes, field measuring and GPS data gathering, site photography and sketching. The DAI offices in Kigali (Gaculiro) provided conference room work and de-brief meeting space. The project report was finalized and sent from the consultant's office in Vermont.

SPECIFIC TASKS

- Site inspections, boundary demarcations and mapping
- Analysis of site conditions, climatic, environmental, vegetation and infrastructure
- Exploration of surrounding context—economic, cultural, and demographic
- Design of appropriate alternative models of accommodation establishments for each site
- Development of design guidelines (specifications) for an eventual RFP for business opportunities

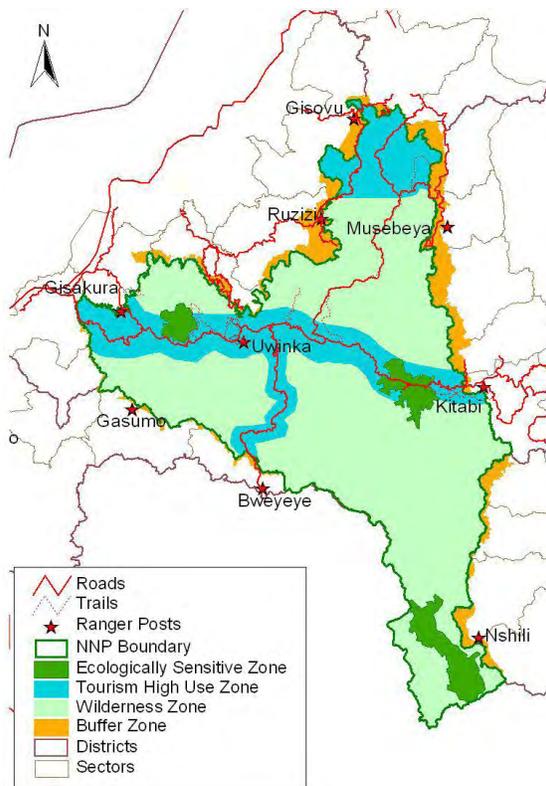
II: PROJECT REPORT

ELEMENT ONE: SITE ASSESSMENTS

PARK OVERVIEW

Nyungwe National Park (NNP) is a forest of 1,019km² and one of three major national parks in Rwanda. It offers the unique opportunity to visit perhaps the largest remnant forest in Central Africa. NNP is part of the Albertine Rift, contains headwaters for both Nile and Congo River basins, and is vital to the Rwanda's watershed system. Of special note are the forest canopy, the endemic species of birds and plants, and populations of chimpanzee and other primates. NNP is best visited by hiking its birding trails, doing the Canopy Walk, or longer explorations such as hiking up Mt Bigugu, and the three-day trek of the Congo-Nile Trail to the Source of Nile. All visitations are done with the help of a guide for reasons of both interpretation and safety.

Figure 1: Nyungwe National Park zonation map



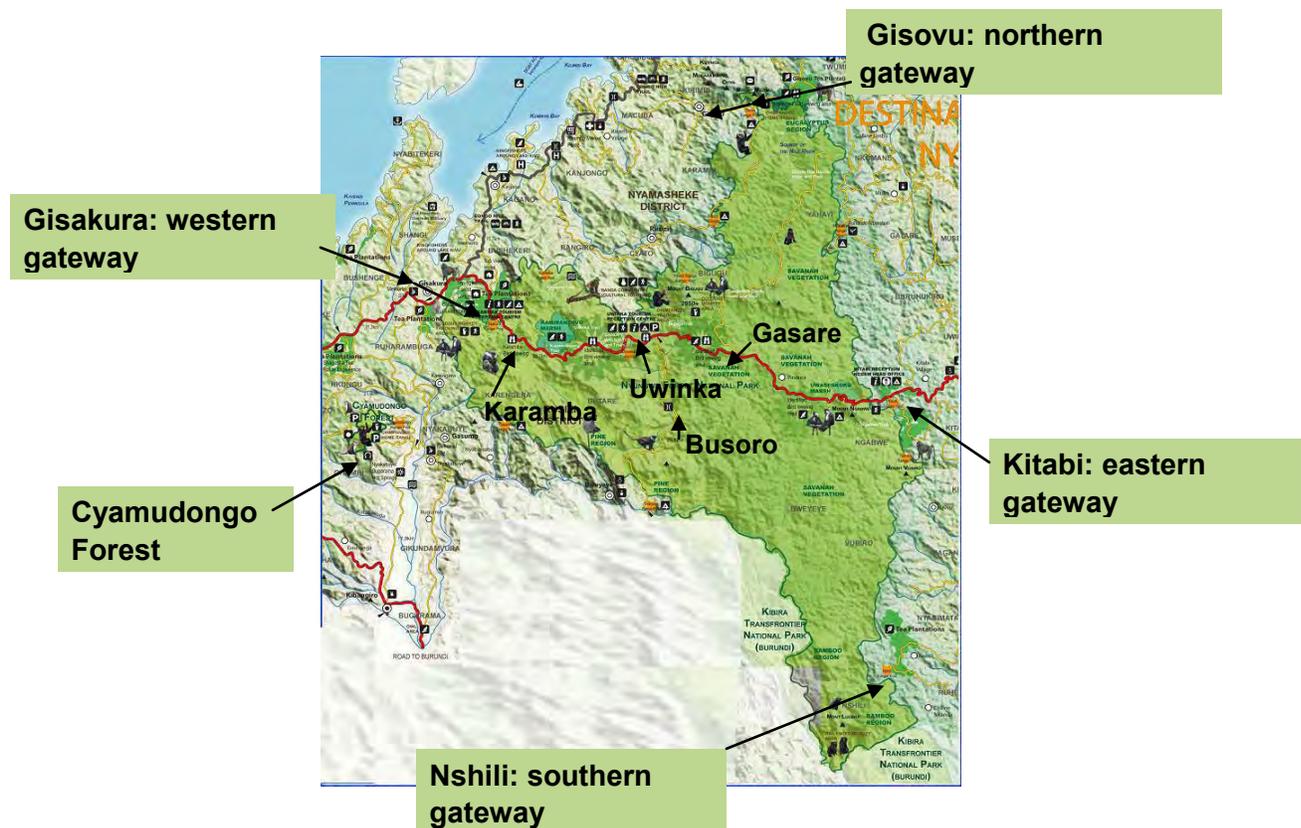
The park was established in 2004 and competes with the other two larger national parks (Volcanoes National Park and Akagera) for visitors. NNP is organized around zones of use and protection as the spatial management tool. Protection for key ecological features and sensitive habitats occurs in tandem with trying to establish sustainable uses of the park for tourism and other activities (NNP Management Plan p.4).

Developing a management plan and budget for balancing these opposing forces ensures that conservation efforts in fact protect the natural resource on which the tourism is based.

GATEWAYS TO THE PARK

Gateways or community entry points serve an important function for tourism in terms of defining sense of place, setting up the experience to come, and in some cases providing infrastructure and service sector. Gateways are a means of construction community partnerships. The entry point itself may have signage, information panels, reception, cultural amenities, toilet facilities, etc. to set the stage for what it to come. How this is developed sets the tone of expectation (i.e., that the Park is a special place), fee for services, sensitive natural environment, and type of cultural amenities. In this case several gateway communities are key entry points to NNP and act liaisons to the surrounding districts and community villages. Each is undergoing a process of development and beginning to be aware of the potential partnerships in cultural tourism as well as in longer-term investment. The gateways to the park are described below.

Figure 2: Overview map of Nyungwe National Park



KITABI is the most direct entry point to the park from Kigali. It hosts park offices, reception area with small concession stand (maps, t-shirts), and toilet facilities. Accommodations include rooms/cottages and a canteen at Kitabi College of Conservation and Environment facilities and a nearly completed community project called “Friends of Nyungwe” which is building a cultural facility for teaching and selling crafts, several indigenous structures based on the architecture of the king’s house which one can stay overnight in, and a terraced area for camping. Additional discussions included information on a proposed development by a local hotelier, but type and size of facility is unknown.

Figure 3: Kitabi Gateway



GISAKURA currently has the larger concentration of overnight accommodations of the surrounding communities. This western gateway to the Park has three places: Nyungwe Forest Lodge (22 rooms), Top View Hill Hotel (12 rooms), and the Guesthouse at WCS offices (8 rooms). All three provide food services and a range in cost and service from high end to medium low. Additionally there may be informal places to stay within the town and the tea factory.

Figure 4: Gisakura Gateway, western entry to the Park



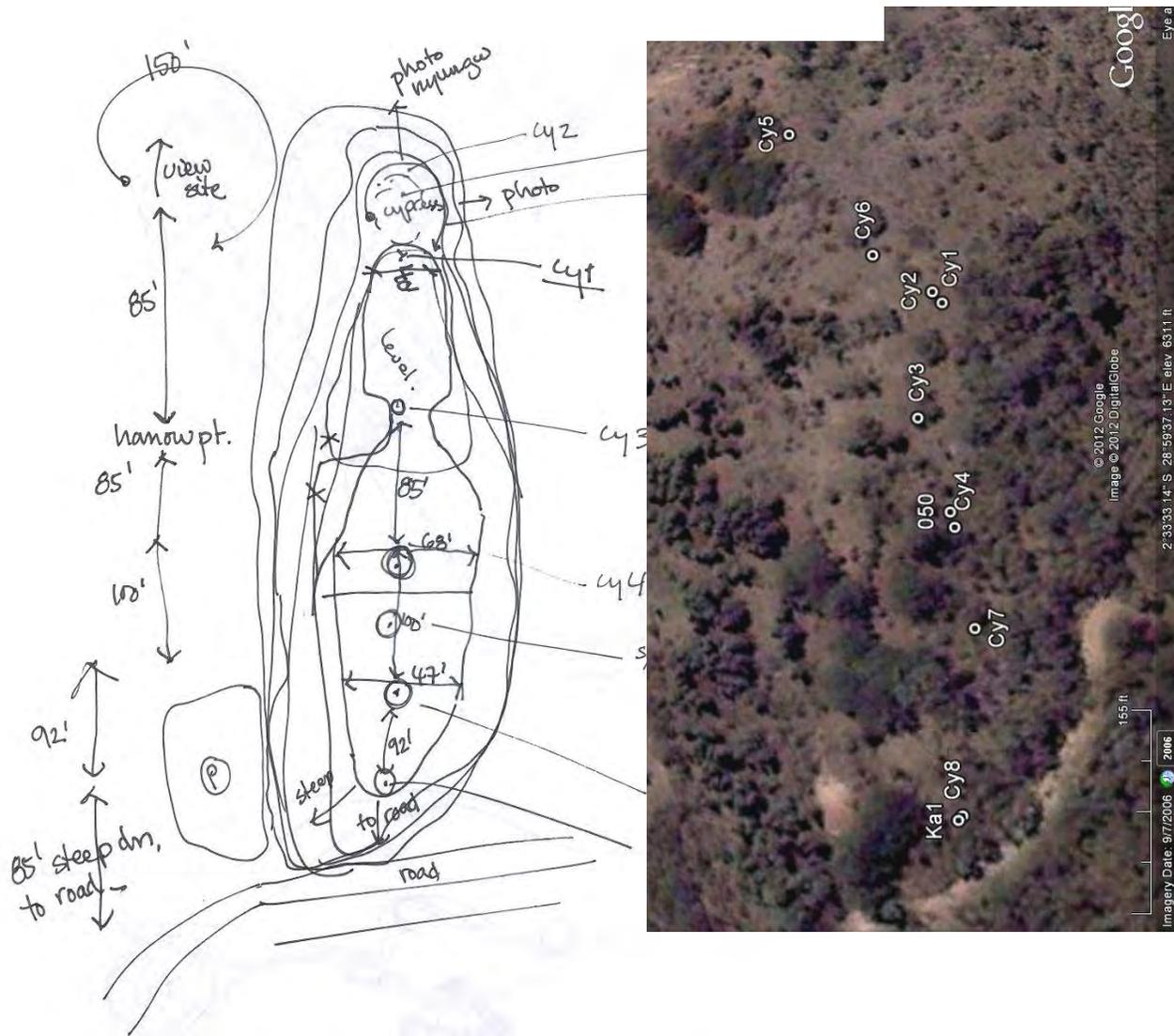
Figure 5: Gisakura Gateway, tea plantation and buffer zone



CYAMUDONGO is a remnant forest approximately 1.5 hour drive from Gisakura with no public accommodation facilities, yet several tourist draws—from the “chimps trekking”, tea plantation visits, to the Bugarama hot springs. There is a desire for creating a partnership between local communities and others to develop overnight accommodation, a crafts concession, and provision of food/tea service.

The currently identified concession site is a long, narrow ridge with tremendous views back to the forest (where one can hear the chimps early in the morning) and distant views from the knoll out across the valley toward Burundi. The site lends itself to birding, short walk for views, post-trek lunch/tea, and potential craft sales. It will not easily handle both overnight accommodation (a more private use) and the more public access of viewing and birding. Other sites, such as land uphill from this site could be reassessed as potential tent sites with platforms.

Figure 6: Cyamudongo Gateway



GISOVU is on the northern edge of NNP and could act as gateway to Kibuye, provide linkage to Lake Kivu activities, and further north to the Volcanoes National Park. It was once a lumber extraction site by a Swiss enterprise and still hosts approximately 20 brick and wooden structures. GPS points were established for each building, as well as measurements, and field observations.

Site conditions—access to water is immediately available and power is in the vicinity. The road to Kibuye is in rough condition, but the road south to Gasarenda is now in good shape and helps link the northern end of NNP with Kitabi. Apparently, the road also connects to the west (Gisakura) but is not currently used much. Status of Buildings—overall the buildings are a mix of condition from needing a new roof to disintegration into the forest; however the opportunity for reinvestment is tremendous. Currently two buildings house RDB chimp trackers.

Figure 7: Gisovu Gateway



NSHILI is referred to as the southern gateway to the park. Access from the major road is long, but views are good. The community site is surrounded by a large tea plantation and consists of two bungalows (one being lived in by the site manager), two octagon “tea” shelters, one bar/restaurant facility, water storage, outhouse, campground, and under construction is a craft center. All looks attractive, well-maintained, and relatively new.

The southern part of NNP borders Kibira National Park in Burundi and contains a bamboo forest as well as the rare owl-faced monkey. Currently there are no trails, little research activity, and one ranger post in this section. Of concern is the viability of this community site as a tourist destination.

Trails for birding, trekking through the bamboo forest, village cultural experience appear to be undeveloped. Sensitivity of the owl-faced monkey leads the consultant to recommend not habituating them, but to explore the park in other ways. For example, Nyungwe could become known as a place to experience the tropical mountain forest rather than competing with other locations for primate viewing. Developing activities such as walks through tea plantations, trails on existing local paths, or hiking up Mt. Lugera are possibilities. Out of the way camping and village experiences are also desirable.

Figure 8: Nshili Gateway, orthophoto and photo of community concession housing

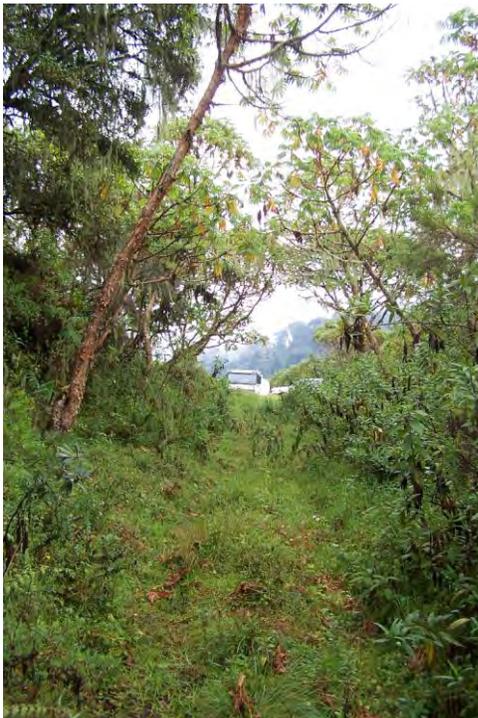


IDENTIFIED CONCESSION SITES - ORIGINAL LOCATIONS

The NNP concession sites were identified where the forest landscape was damaged by prior activity—both through historic uses and past road construction. Site inspections, boundary demarcations, and mapping were done for each, as well as, analysis of site conditions (climatic, environmental, vegetative and infrastructure). Exploration of surrounding context (economic, cultural, and demographic) led to the Gateway discussion in this report. Design of accommodation models and development of design guidelines for an eventual RFP for business opportunities follow this section.

The Nyungwe National Park General Management Plan (2006-2010) goals are to protect the biodiversity of Nyungwe National Park and maintain its ecological services for the benefits of the neighboring local community, the country, and the global community. The Plan also encourages development of concession operations to assist the park in this mission, promotes means for building community partnerships between NNP and local communities, and identifies revenue-sharing between RDB and the local communities “to ensure sustainable conservation of the National Parks by contributing to the improvement of their living conditions” (p.73).

Figure 9: View of Gasare access road and across length of upper field



GASARE is likely the most sensitive of the sites visited. This is a Zone 3 protection area, because of the wetland and bird habitat. The site is located on the south side of the main road on the edge of a small wetland, with great views of the forest. The paved area was used by the road construction crew. Any new development needs to take into account impacts on the wetland areas, especially at the water crossing. It was identified in the Concession Sites List as a possible location for “luxury” tenting accommodation with trails to be developed around the Uwasenkoko swamp for birding.

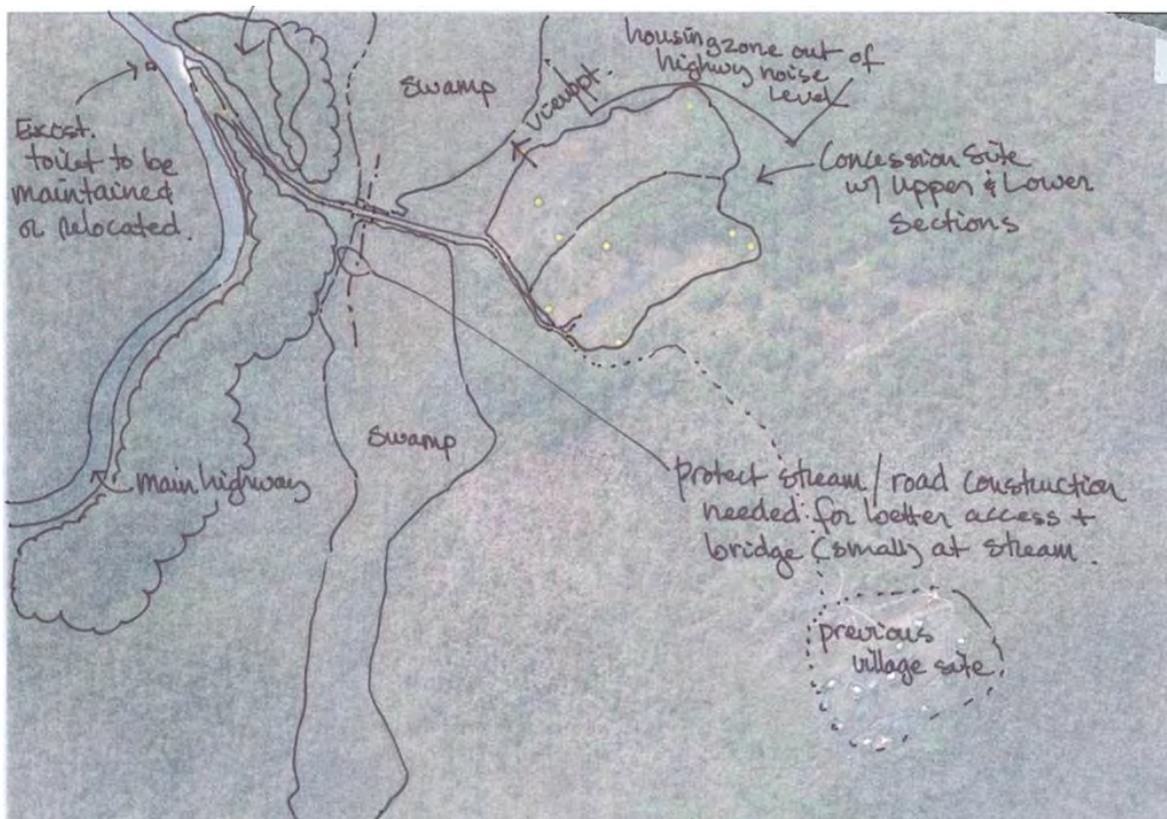
Figure 10: Gasare site with GPS points in yellow showing outline of each field. Access road crosses Uwasenkoko swamp and then connects to main highway at top of photo.

North
↑



- Existing roadside toilet facility will need to be maintained and linked to site development if accommodations or other investments are to occur.
- Road access to site is grown-in with vegetation but not trees. Gravel surface is still visible. Bridge crossing of small-stream connecting the two wetland areas will need environmental permitting for construction. Existing culvert will not support long-term use or public access, but is useable for pedestrian access.
- Tree cover at highway protects the two fields in terms of sightlines, but not from truck noise. Any overnight accommodations would want to be pushed to southern edge of degraded area.
- The two fields—upper and lower are also linked to a higher site that was only discovered using the orthophotos in DAI office. This was not been field verified and may be completely grown over.
- The upper field is the more public of the two and approximately 3m above the lower field. Lower field was measured to be approx 115m x 45m; upper field is narrower and similar in length. Measuring depended of how far into the tree cover or sloping edge was felt to be desirable for development.
- Views across wetland to mountains beyond are impressive. Both fields are showing signs of revegetation with some attractive species.

Figure 11: Sketch of site overlaid on orthophoto showing observations of existing conditions



BUSORO was identified as a special birding site with an opportunity for mid-range housing (tree house type eco-lodge), bar/restaurant facility, trails, and tree-canopy experience.

This site is located in Zone 3 in a previously disturbed area. It is a flat plateau that sits to the east of the road and has tremendous views of the surrounding hills and tree canopy. The site's proximity to new birding opportunities was identified by a team of U.S. National Park Service birding experts and makes it an ideal destination location.

As with the other proposed concession sites in the park no utilities are currently in place, however solar access is good.

Figure 12: Busoro site with the Bweyeye road circling around to south and east. GPS points in yellow show edge of visible site; the remainder is now overgrown and was difficult to access; this orthophoto was taken in 2009



Figure 14: Bweyeye Road



Figure 13: View of river below Busoro site



Figure 15: View of Busoro site from parking area



UWINKA is the Park's Visitor Center with information house, guide registry and starting point, toilet facility, and canteen. It is the main starting point for guided hikes, the Canopy Walk, longer hikes, and birding activities. It acts as information and logistics hub.

Other buildings here include staff housing, convenience store, and camping. Also discussions arose about an educational facility to be built across the highway from Uwinka at an existing staff site—this should raise long-term master plan and park facility planning and investment questions.

Figure 16: Guide starting and briefing point



Figure 17: Stairs to the Visitor Center

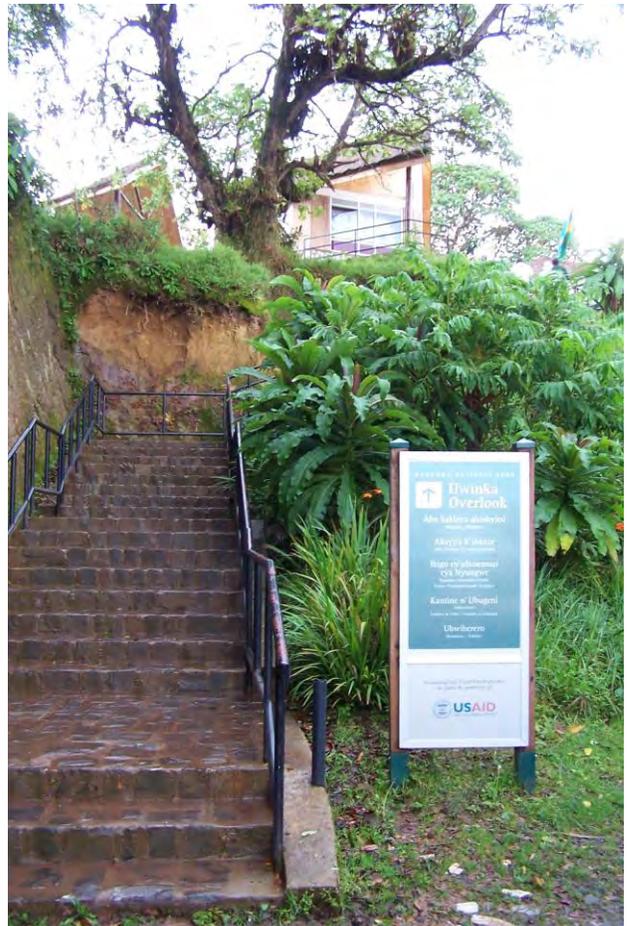


Figure 18: Canopy Walk



Figure 19: Uwinka campground

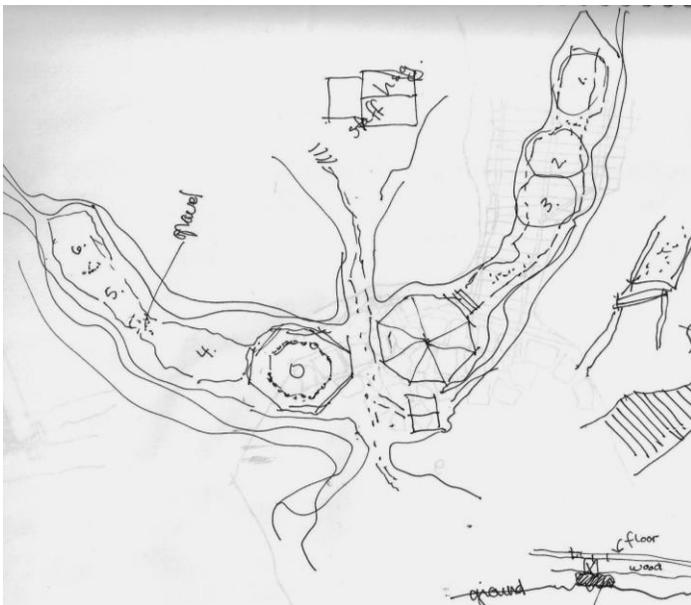


Camping accommodations are desirable in the mix of offerings, but it is not clear that they are being supported.

The quiet campsite at Uwinka hosts multiple tent sites. It has running water for the shower/toilet facility and a septic tank with leach field, but repairs are needed if use of these is to be continued. Two octagonal shelters were removed due to their degraded condition, but the concrete bases are still being used.

The site slopes slightly and can be wet. Tent platforms are requested to accommodate conditions and the bathhouse needs minor repairs if the site is to be continued. Until other options are developed this seems to be an easy solution and convenient location.

Figure 20: Uwinka campground site sketch



KARAMBA This site is located in an existing disturbed military camp area, a few kilometers from Gisakura. The entrance to the site is an extensive open area that was once used as a gold market and later turned into a camping site for the Rwandan Army.

Large open site with access to water creating a good opportunity for mix of housing, restaurant, market, crafts, and trails—could be by multiple concessionaires.

Figure 21: The Karamba Site



Figure 22: Tree canopy and views from the Karamba birding trail



Figure 23: Existing roadway into Karamba concession site and views from central meadow at site



Figure 24: The Karamba Site



OTHER OBSERVED SITES

MT BIGUGU hosts campsite(s), ranger post and research building, and solar-powered radio tower at 2,950m elevation. According to the NNPCAP Mt. Bigugu campsites are just beyond the peak is in Zone 3 and fit well within the Zonation Plan. However, the area of Bigugu peak should be surveyed to identify the Zone 1 areas with highly localized plant species in order to keep people from walking in certain areas, and to identify appropriate management recommendations.

The tent sites are adjacent to a viewpoint overlooking Rangiro and the Banda community and about a 15min walk from the top. These should be maintained as a special part of the park.

Additionally the ranger post and research facility houses one ranger as long-term resident in a facility built for multiple researchers. It has showers, running water, flush toilet, and lights.

Figure 26: Backyard of Mt. Bigugu ranger post



Figure 25: Mt. Bigugu campsite



Figure 27: Mt. Bigugu ranger post (front view)



BWEYEYE ROAD refers to a road construction site being dismantled as of February 2012. It housed multiple wooden structures which are being taken down and moved leaving a terraced site about 5km from main highway. It is an attractive location, with river access, and minor views. This degraded site was not on the Concessions List and thus raises the question about future construction sites as well as one about overall logistics regarding how to establish the most suitable locations for particular amenities and accommodations.

Figure 28: Bweyeye road construction site



SITE ASSESSMENTS MATRIX

Table 1: Site assessments matrix

NYUNGWE NZIZA: CONCESSION SITES AND GATEWAY COMMUNITIES				
Locations (from east to west & north to south)	Description	Type of Housing	Infrastructure Needs	Site Opportunities
KITABI	Key gateway to park; easy access on main highway	<ol style="list-style-type: none"> Existing buildings with a few guest rooms Reception & gift shop Minimal tourist information Community cultural project with crafts and overnight camping 	<ol style="list-style-type: none"> Better gateway signage & demarcation of NNP entry Better use of interpretive panels at reception Public toilet facility 	<ol style="list-style-type: none"> Gateway hotel (proposed by Golden Monkey?) Handicrafts market (under construction) Community concession signage and trail Handicraft center under construction
GASARE	<ol style="list-style-type: none"> Access from main highway; small river crossing at swamp No trails Additionally there may degraded land (or prior village) located further in & above site 	<ol style="list-style-type: none"> Proposed: Luxury tenting with food & beverage service was previously identified Site Assessment: Not recommended at this time due to infrastructure needs and cost/time of environmental permitting 	<ol style="list-style-type: none"> No existing services; no access to water; solar access good as tree cover is minimal Is this a stopover site or destination? How will this site help the park overall? 	<ol style="list-style-type: none"> Trails around small swamp (develop in conjunction with accommodations) Bar/restaurant open to public with viewing station over swamp & education panels Can this site be something else? Perhaps an —Orhid Garden” which is both tourist destination and park resource center?
BUSORO	Access from main highway down Bweyeye Rd and near junction in river (1hr/14km)	<ol style="list-style-type: none"> Proposed: Lodging mid-scale, eco-lodge with food & beverage Site: Good destination site with room to build multiple activities 	<ol style="list-style-type: none"> No existing services; solar access good although large tree surround site. Road is still to be worked on, at present condition would need to be marketed as part of the adventure. 	<ol style="list-style-type: none"> Great opportunity for special birding site Beautiful site for hike to river and possible birding-related cable line —Destination” site

NYUNGWE NZIZA: CONCESSION SITES AND GATEWAY COMMUNITIES

Locations (from east to west & north to south)	Description	Type of Housing	Infrastructure Needs	Site Opportunities
UWINKA	Key visitor center (current) and education facility (future)	<ol style="list-style-type: none"> 1. Key destination for Park visitors: information, view of forest, education activities, start of hikes, public toilet facilities. 2. Informal tenting (current) but commitment to future use? 3. Two staff housing buildings -- commitment to future use? 	<ol style="list-style-type: none"> 1. Maintenance program for existing buildings (with operations manager & budget). 2. Toilet facilities at tent site need work. 3. Café is close to functioning—needs concessionaire. 4. Decision-making around staff housing, camping, and educational facilities will help development and financing opportunities. 	<ol style="list-style-type: none"> 1. Long-term investment in Visitor Centre and key interface for people with NNP 2. Attractive site and appropriate starting point for trails—ensure ongoing maintenance and trail information. 3. Educational facility and activities need to be facilitated by a guide who engages visitors in the learning process.
KARAMBA	Large open plain within the forest; historic gold market; degraded site, returning to grasses; adjacent to existing birding trail.	<ol style="list-style-type: none"> 1. Space for a mix of overnight accommodations for multiple types of users (from tenting to bungalows). 2. Associated with overnight is the need for reception, bar, restaurant, groceries, and other supplies. 	<ol style="list-style-type: none"> 1. Easy access from and connection to main road. 2. Proximity to Gisakura (by bus, for supplies and services, etc.) is useful. 3. Access to water is proximate, and solar exposure is good. Not known as a windy site. 	<ol style="list-style-type: none"> 1. Opportunity for cultural (art, craft, music, food, etc.) investment, services, and activities. 3. History of gold market can be a cultural eco-tourism draw with education panels. 2. Adjacency to birding trail and viewpoint is important to this layering of activities.
GISAKURA	Key gateway to park from the west, including Lake Kivu; tea plantations with possible visit to factory; WCS park offices; local town with few tourist amenities; link to Cyamudongo Forest	<ol style="list-style-type: none"> 1. High-end hotel with bungalows (22) and meeting facilities; food, spa & pool, and trails 2. Mid-range hotel with 12 bungalows, food, views 3. Low-end guesthouse with family-style dining & camping option 	No town water/sewer—all is self-contained on site.	<ol style="list-style-type: none"> 1. Opportunity for gateway building for fees and information on park activities. 2. Gateways can also inform public about where to stay, eat, and other places to visit—thus adding to overall experience.

NYUNGWE NZIZA: CONCESSION SITES AND GATEWAY COMMUNITIES

Locations (from east to west & north to south)	Description	Type of Housing	Infrastructure Needs	Site Opportunities
CYAMUDONGO	Remnant forest with troupe of habituated chimpanzees, birds, and trails for trekking. Adjacent to local communities and other activities (e.g. hot springs).	<ol style="list-style-type: none"> To date no hotel or camping but looking to create overnight places to stay for easier chimp viewing in the early morning/late day. Adjacent hill might accommodate a few tent platforms along contours of hill that are accessed by foot. 	<ol style="list-style-type: none"> No water or sewer onsite. Land available is narrow ridge with views to forest and down valley. Adjacent hill allow for water collection? Top of hill has views beyond and owned by district (?). 	<ol style="list-style-type: none"> Are there opportunities within the villages for eco-tourism and camping sites? Are there other towns that could provide places within the region even if not at trailhead parking? Ridge provides great location for short walk after trekking with views, birding, eating lunch, and daytime cultural activities.
GISOVU	Previous lumber extraction site with 20+ buildings; northern gateway to NNP and Source of the Nile/Congo-Nile trails	<ol style="list-style-type: none"> Two buildings are inhabited by RDB trackers. Exist buildings offer a mix of private family-style housing, hostel-type bunkhouse—but in various states of disrepair. 	<ol style="list-style-type: none"> Access to water; electricity from wind generator and solar panels; hilly terrain with road connectivity to existing buildings. Additional buildings incl. admin office, previous sawmill, and remnant of hotel overlooking the forest. 	Opportunity for investment by developer(s) wanting to create a week-end retreat area with access to NNP. Once the houses are brought back into usable shape, the hotel and restaurant facility would be a draw for others.
NSHILI	Southern end of park near Burundi. Community concession site adjacent to village, and within tea plantations. Access to NNP not developed.	Concession site built by one man in some association with the local community. Site has 2 houses, 2 tea shelters, 1 small restaurant, camping, and craft center (under construction).	Water from rainwater and tank system; outhouse. Electric unknown.	Opportunity to link to trails (if park develops access to this zone) or market as out-of-the-way rural camping and small retreat center... or building local community cooperative connection?

NYUNGWE NZIZA: CONCESSION SITES AND GATEWAY COMMUNITIES

Locations (from east to west & north to south)	Description	Type of Housing	Infrastructure Needs	Site Opportunities
Hiking and other Guided Activities	Trails and viewpoints for birding, chimp and primate viewing, experiencing the forest and tree canopy occur in particular places within the forest, but they are not necessarily obvious (easy to find for visitors).	<ol style="list-style-type: none"> 1. Accommodations may be within NNP as key destinations, but supported by and supporting the surrounding communities. 2. Each needs the other to survive and be healthy. Workforce, cultural stories, natural resource protection, financial investment, etc. benefit both sides of the partnership. 3. Multiple and layered activities enhance the tourist experience and engagement of NNP as a destination. 	<p>A mix of toilet facilities that are well-cared for— public facilities along highway for public buses as well as others are important for overall functioning of a national park as a destination and protected area.</p> <p>Trash and toilet paper do nothing for Rwandan or tourist appreciation of NNP.</p>	<p>Opportunity to build toilet facilities as part of Kitabi and Gisakura gateway buildings. Uwinka educational facility would be another key stopping point.</p> <p>Mix of composting and water toilets, hand washing, drinking water are all useful depending on site availability.</p>
Source of the Nile Campground	Gisovu.	Day hike in northern part of the park with campground.	All water and food and to be self-contained. Toilet at beginning of trail; no shower facility; day hike.	Source of the Nile trail is a very special place offering within the park and should be protected as such. Tying it to information on the Albertine Rift is important and will attract tourists. Keeping the activities available and obvious goes hand-in-glove with providing accommodations.
Congo-Nile Divide Trail	Three-day trek with overnight camping and RDB guide.	Overnight in NNP—a rare opportunity to see forest zones and different times of day/night.	All water and food and to be self-contained. No shower facilities but pit latrines are available at the campsites.	The Congo-Nile Divide Trail is a unique, spectacular 3 day trek that winds along the ridge that separates two of the world’s greatest river basins, the Congo and the Nile. Currently, there are two raised platform campsites along the trail. Opportunities include self catering cabins and making the relatively moderate first 7 km into a day hike with viewing and picnic facilities.

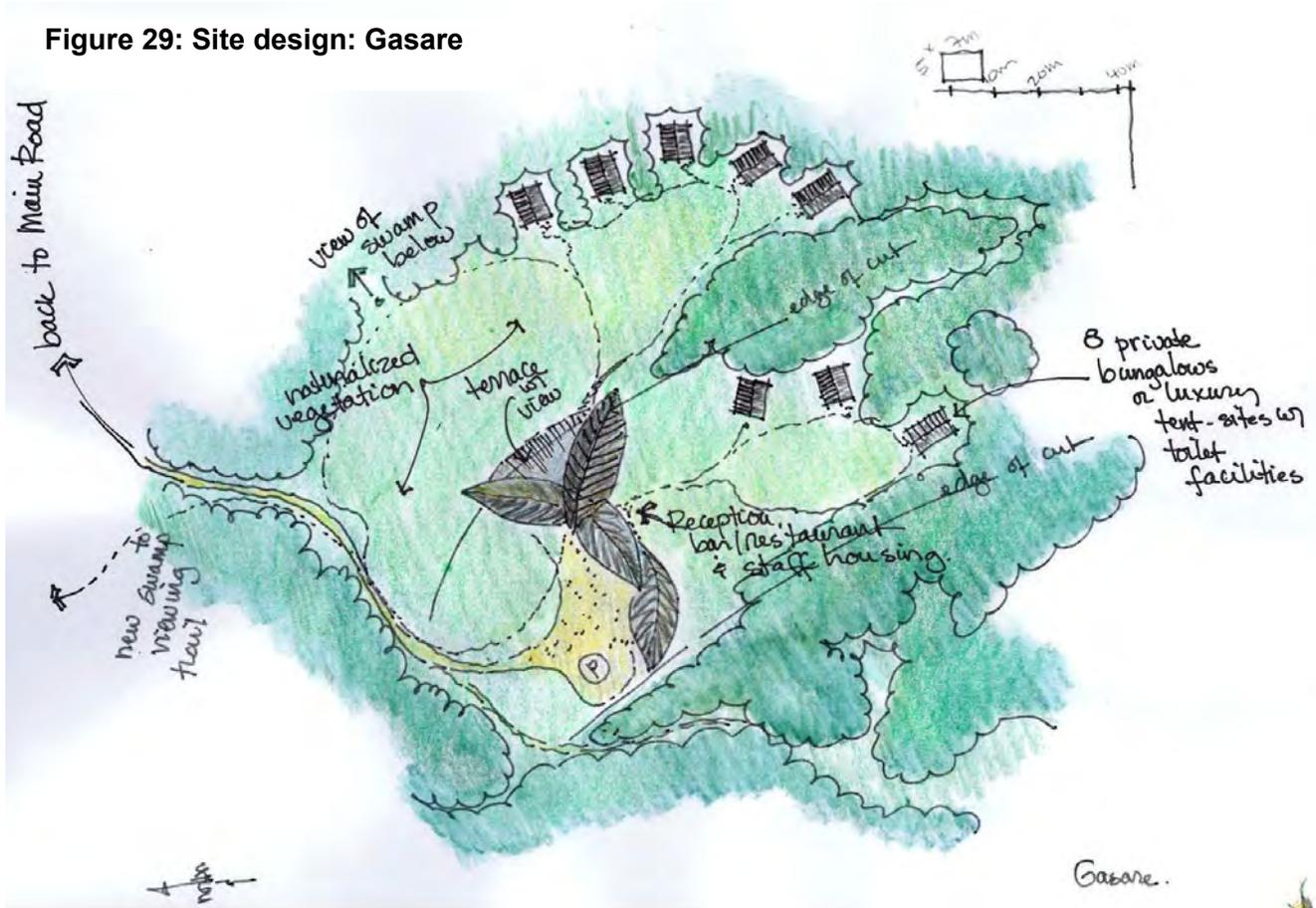
NYUNGWE NZIZA: CONCESSION SITES AND GATEWAY COMMUNITIES

Locations (from east to west & north to south)	Description	Type of Housing	Infrastructure Needs	Site Opportunities
Mt Bigugu	6-8 hour hike up highest peak in NNP. Views at top depend on cloud cover; endemic species birds and plants; unique experience of NNP forest.	1. Two campsites with no services; adjacent view/picnic site. 2. Top of Mt. Bigugu has ranger/research station with 4 rooms, cook house, park radio antennae site, and toilet facilities.	1. All water and food and to be self-contained. Toilet and shower facilities possible at ranger station. 2. Trail identification needed to protect vegetation from hikers and picnickers.	Mt Bigugu is a very special place within the park and should be protected as such. Most visitors won't hike to this location, but making it available will still be a tourist draw that gets attention.

ELEMENT TWO: SITE PLANNING AND BUILDING DESIGN

SITE DESIGN: GASARE

Figure 29: Site design: Gasare



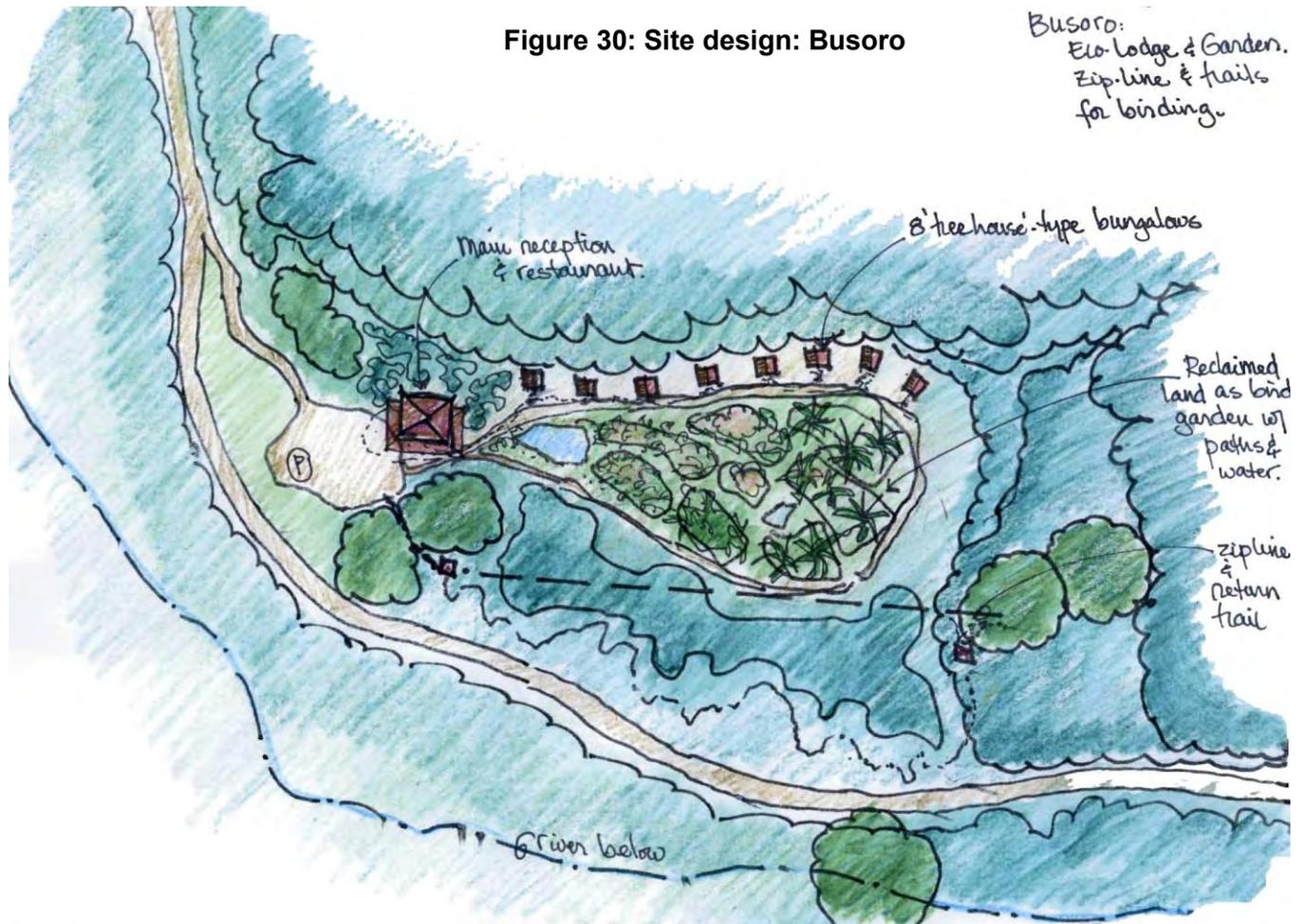
The Gasare site is the most sensitive of all the sites visited and the smallest overall. However it is in a key location due to its proximity to Kitabi and the entry to the park. It has beautiful views across the Uwasenkoko Marsh to Mount Ngabwe and down valley with mists rising. The drawing shows a site study with high-end accommodations and reception/restaurant. Design criteria reflected in this drawing include:

- Use of upper field for larger buildings and use of two-level site as separation of public activities (food services) v. private ones (rooms)
- Location of rooms at end of site away from highway noise, and within edge of treed area, connected by trails (not road).

Final recommendation is that it be used for lesser impact activities than overnight accommodations. Preliminary idea, in need of further study, is the development of an “orchid sanctuary” for research and tourism.

SITE DESIGN: BUSORO

Figure 30: Site design: Busoro



The site study for Busoro shows access road from the Bweyeye Road, scale of buildings, circulation and usage across the site. It is a most interesting concession site due to its lower elevation within the park, amazing mix of bird species, and sound of river below.

It is currently the least easiest to get to of the identified concession sites—but it offers a great destination for overnight activities and is within reach for daytime visitors especially if some level of accommodations are developed (food, birding trails, toilet facilities, etc.)

Design criteria reflected in this drawing include:

- Tree house-type eco lodging and reception/restaurant. Eight separate units are drawn, but there is room for 12 depending on other site uses and feasibility study. Units can be combined into one long building with terraces into the forest edge.
- Leaving the center of the site open to allow for views across to river valley beyond and space for other activities (gardens, birding, solar collectors, access to a “zip-line,” etc.)

Final recommendation is that it be used developed for overnight accommodations as a birding destination. Feasibility study should be done to determine number of units, associated size of restaurant, and other site amenities. This is a destination site within the park; it is not on the main highway.

SITE DESIGN: KARAMBA

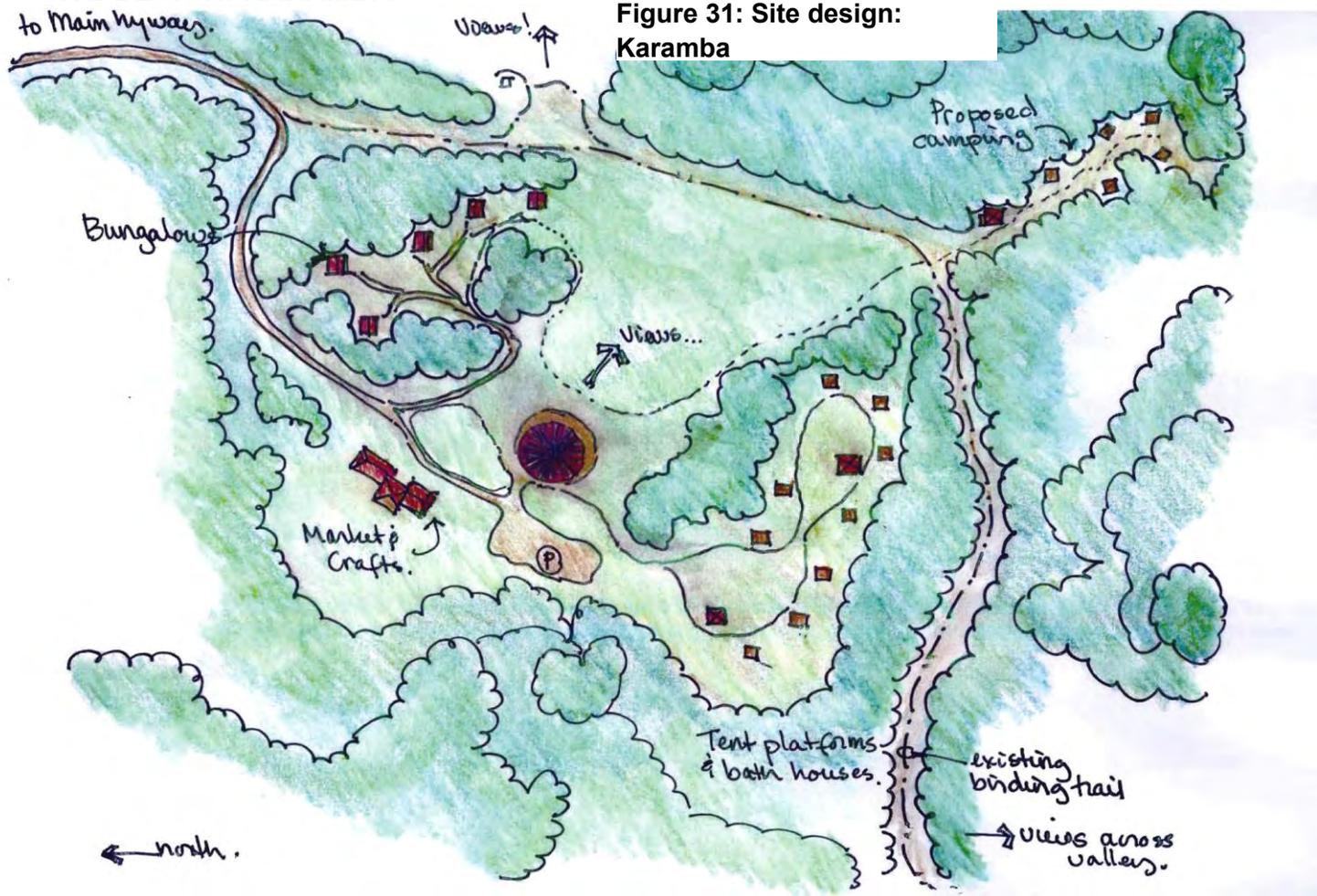


Figure 31: Site design: Karamba

The Karamba site is situated near the main highway and easily accessible from Gisakura. It is the largest of the concession sites and least sensitive ecologically as it has been used for many other human purposes in the past. The site includes an excellent birding trail, long-distant views across deep valleys with mix of large trees, access to water for site needs, and good solar access.

Design criteria reflected in this drawing include a mix of accommodations and services:

- The mix of accommodations can include family-type bungalows, tree house-type ecolodge, tent platforms, and other camping. Units can be combined into clusters or individual and located with small terraces along the forest edge. Revegetation of the site will allow for better usage by creating niches of activity within the current open meadow.
- The reception/restaurant/bar building needs to be sensitively sited in order to welcome and control visitor needs, yet take advantage of the views. This site can accommodate space for other activities (spa, gardens, walks, campfires, craft center, market, music, etc.)

Final recommendation is that Karamba is the easiest site and should be developed first. It can offer overnight accommodations for a mix of visitors, as well as daytime activities, and is on the main highway. Feasibility study should be done to determine number of units, associated size of restaurant, and other site amenities. Other site development drawings will be available shortly.

BUILDING DESIGNS: TYPES AND EXAMPLES: TREE HOUSES

Figure 32: Cormorant Lodge

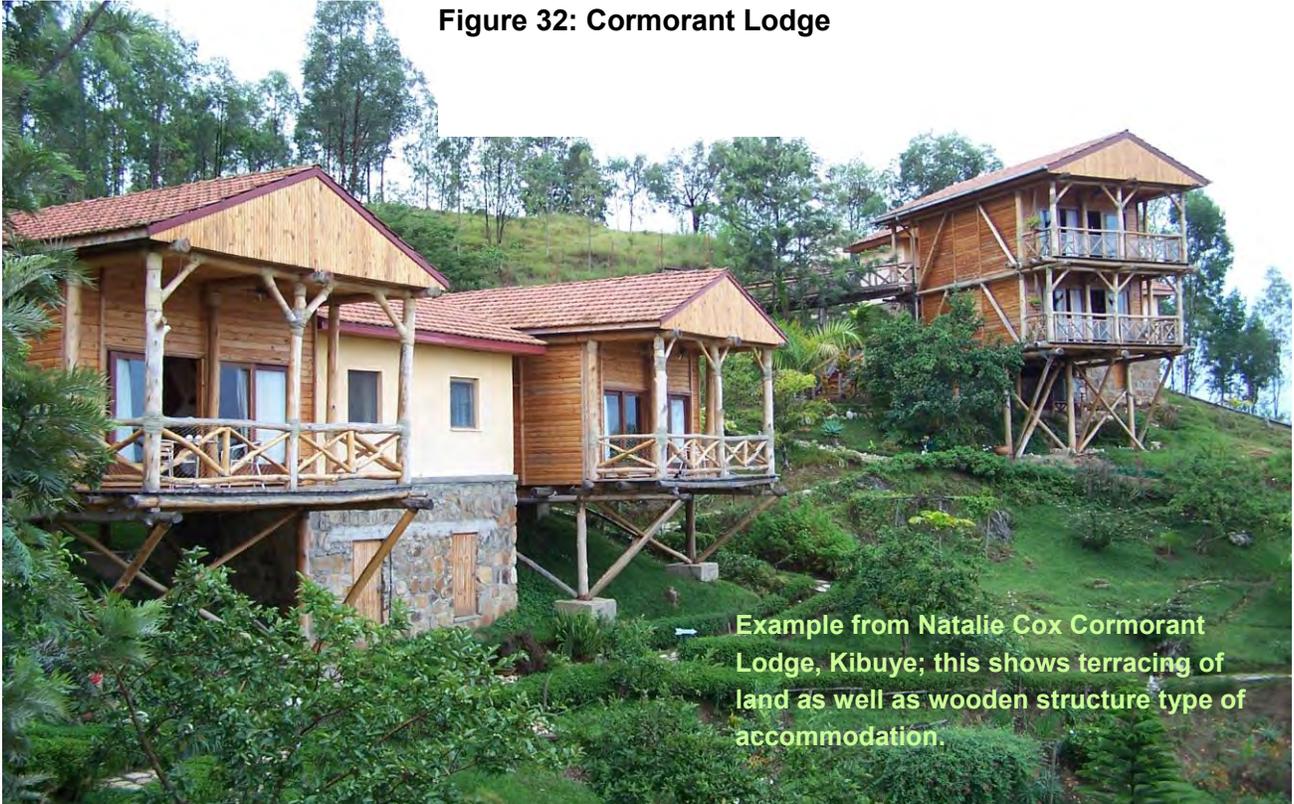


Figure 33: Tree house-type viewing platform, wheelchair accessible classroom, or be designed as a “zipline” landing

BUILDING TYPES AND EXAMPLES: BUNGALOWS AND FAMILY HOUSES

Figure 35: Example of family rental housing from national park in Lesotho made with materials—stone and thatch; overlooks a roaring river; protects from climate which can get cold



Figure 35: Model of the Bwanari Lodge Project, Madikwe Game Reserve, Northwest Province, South Africa by Peter Rich, South African architect

BUILDING TYPES AND EXAMPLES: RECEPTION/RESTAURANT/BAR



Figure 37: Example from Gorilla Nest—useful example as mix of natural materials and masonry walls with raised roof, natural ventilation, and natural daylight

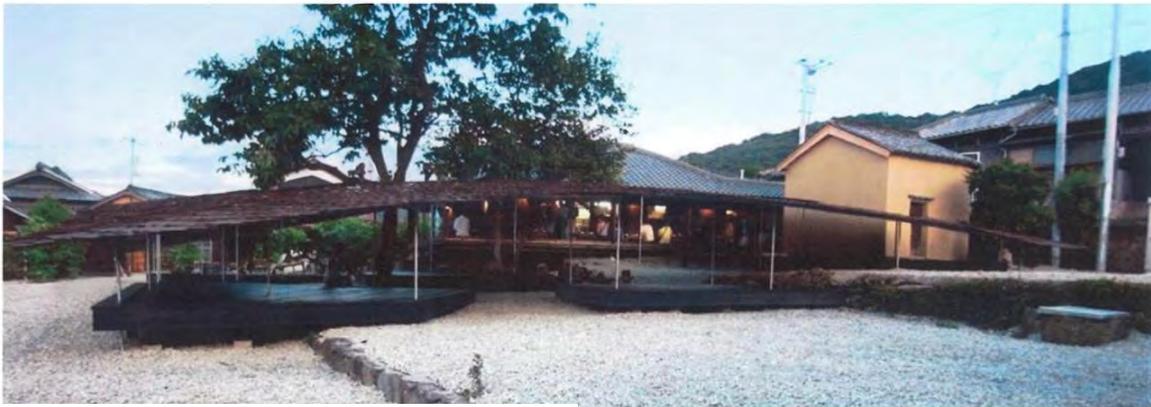


Figure 37: Tile roof extends out to shelter gathering space, yet still open to views; can be inclusive of trees in some locations and integrative of landscaping



BUILDING TYPES AND EXAMPLES: RECEPTION/RESTAURANT/BAR

Figure 38: Example of metal roof, wood construction on masonry foundation and integrative landscaping on sloping site



Figure 39: Opportunities for outdoor eating adjacent to landscaped and grassy areas are part of the attractive climate



BUILDING TYPES AND EXAMPLES: INTERIORS



Designing for both public eating and gathering spaces as well as more quiet reflective spaces are especially useful for tourist comfort. Natural materials, art, mix of formal and informal, comfortable seating, and social areas are all common.

Figure 40: Examples of interiors from Treetops, WCS Guesthouse, and Nyungwe Forest Lodge



BUILDING TYPES AND EXAMPLES: CAMPING



Figure 41: —Luxury” tented camping is not being recommended for Nyungwe sites due to cold and wind; example is from a proposed project in Akagera National Park.



Figure 43: Below, examples of fixed- tent camping with sleeping cots and individual terrace; built above ground on wooden platform; and shared bath facilities



Figure 43: Tent sites without platform; example is from Uwinka

BUILDING TYPES AND EXAMPLES: TOILET FACILITIES



Figure 47: Bathhouse with H/C water and septic system



Figure 44: Public facility with composting toilets and education panels



Figure 46: Bathhouse with exterior showers and common sink; stone foundation, green roof, wood and earthen plaster walls.



Figure 45: Examples of tile bathroom with composting toilet and exterior landscaping



BUILDING TYPES AND EXAMPLES: GIFTS, ARTS, AND CRAFTS



Figure 51: Gift shop—wood structure with tile roof in Kigali



Figure 51: Display of Rwandan arts, musical instruments, pottery, and baskets



Figure 51: Community craft center under construction in Kitabi; masonry with tile roof, bamboo shutters and concrete perimeter



Figure 51: Playful and informal display using driftwood of various crafted gifts and tourist items.

BUILDING TYPES AND EXAMPLES: SHELTERS



Figure 55: Tea pavilion in South Africa



Figure 55: Picnic shelter in Lesotho



Figure 55: Japanese construction in Florida botanical gardens



Figure 55: Adirondack mountain type —dan-to” shelter

Shelters for birding, sitting, viewing, picnicking, even camping may be out of logs, cut wood, masonry, or a mix of materials. Roofs may vary with climate, local environment, and available materials. Most often casual shelters like to blend with natural site.

BUILDING TYPES AND EXAMPLES: BOARDWALKS AND MORE



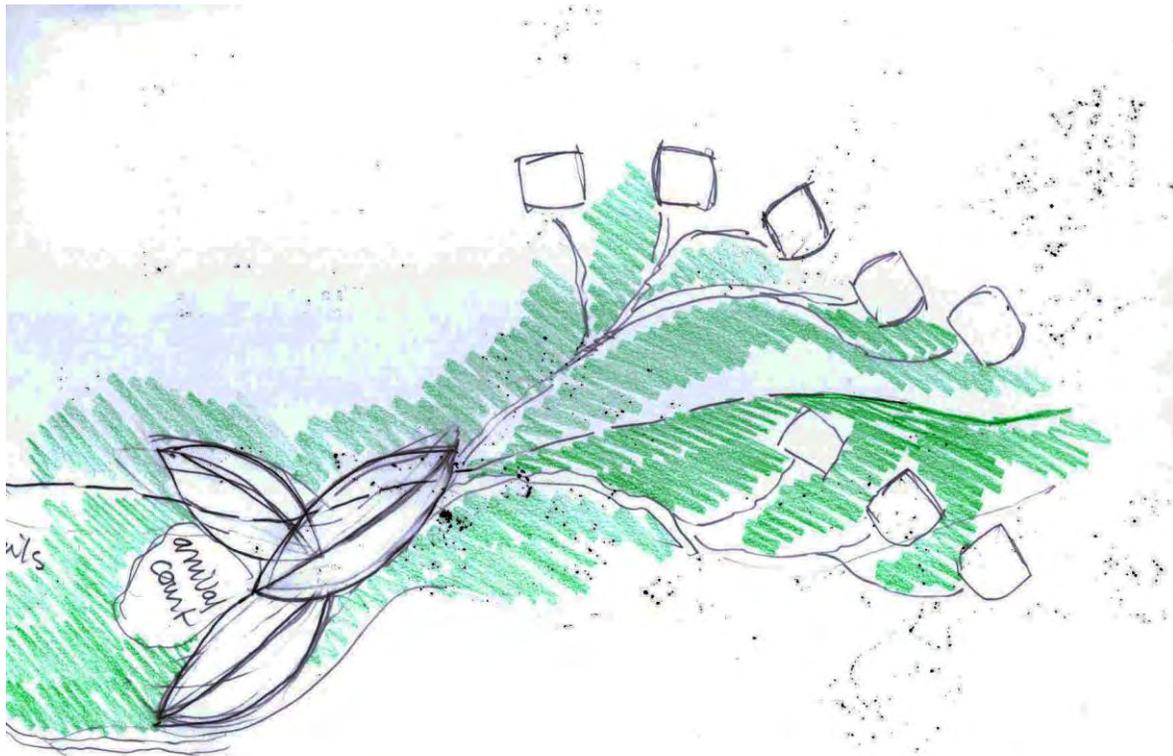
Figure 57: Boardwalk examples



Figure 56: Orchid garden as special attraction



BUILDING AND SITE DESIGN GUIDELINES FOR REQUEST FOR PROPOSALS



SITE: LANDSCAPING, DRAINAGE, PAVING, AND NYUNGWE FOREST EXPERIENCE (VIEWS, TREES, TRAILS, ETC.)

Each concession site is important to the overall Nyungwe Forest Experience and while separated contractually, is not separate from the tourist perspective or from dependency on other resources and activities. Concern for site development and management includes:

- Design of landscaping, water catchment and drainage ways, paving materials, gardens, food growing, and revegetation all contribute to the health of the forest as well as the tourist experience. For example, paved areas can act as infiltration zones if set in sand rather than mortar or storm water can be collected in rain gardens to provide habitat zones for plants and butterflies.
- Existing vegetation and tree canopy must be protected from construction. Each concession contract should be scaled to fit the designated plot of land without the cutting down of trees or the building new roads. After construction revegetation and landscaping should occur with appropriate species (non-invasives, etc.).
- Each concession site needs to identify views and trails to be maintained, revegetated, or added and improved as part of their plan. Provision for safe trails and viewpoints may include boardwalks in some cases, hand railings and stairs, benches and shelters, and

signage which are designed without destroying the natural habitat or placing amenities in a manner which obstructs a view shed.

ARRIVAL AND PARKING: RECEPTION, CIRCULATION, VEHICLES

Sense of arrival and ease of access are important for the well-being of personnel as well as visitors. The interface between natural surroundings and human activities needs to be organized and attractive. Visiting Nyungwe and the surrounding communities is about the “Nyungwe Forest Experience” at every level—from travel to overnight accommodation, from foods to crafts, and from tree canopy to tiniest endemic flower.

- Arrival at destination includes creating a sense of welcome (signage, parking, landscaping, overhead protection from rain, art, designated paths, lighting, etc.) within scale of the site and respectful of the park.
- Parking for vehicles (cars, buses, trucks) must be convenient with drop-off and turn-around zones, overnight parking, and vehicle wash area. Parking may be apart from lodging area especially if landscaped pathways are included in the site access, but deliveries and other services vehicles need to be planned for in the overall circulation. Composting, rubbish recycling, and other waste materials shall be planned for in an ecological manner.

OVERNIGHT ACCOMMODATIONS

(Level of accommodation (* to **), scale of buildings, siting of buildings within the context of the park, public/private zones, materials selection, quality of construction)**

- Overnight accommodations within the Park need to recognize the range which exists in the surrounding gateway communities rather than competing with them. For example, a bed count shows 22 high-end, 12 mid-range and 8 mid/low-end rooms in Gisakura, with minimal camping options. An inventory for Kitabi and proposed facilities is needed.
- Tourism, Ecotourism, and Protected Areas: The State of Nature-Based Tourism by Hector Ceballos-Lascuráin provides several studies on the impact of tourism on the economy. For example –According to the World Bank, as much as 55% of the developing world’s tourism profit “leaks back” to the developed world as a result of the need to import goods and services” (Lindberg 1991). Another study found that leakage was greater (approx. 64%) for the bigger hotels than for the smaller ones (approx.38%) (Ceballos-Lascuráin p11) for similar reasons, but also due to tour groups. They found that individual and low-end travelers tend to spend more money locally, while the

spending pattern of high-end travelers and tour groups is more likely to support an external economy.

- Recommended for NNP as a first endeavor is a mix of family-type bungalows, mid to low-end units, attractive tent platforms, and a mix of locations for tent camping. This means leaving the high-end accommodations to the private sector for now, for two reasons: one, they are trickier to develop and maintain (learning curve is higher), and two, they require a larger investment and the demand is not proven.
- The scale of the buildings and development plan needs to be in context with the site and overall sensibilities of the national forest and park (NNP). This includes the mix of accommodations, well-designed public/private zones with appropriate landscaping and pathways, and defining the types of activities allowed in a concession permit.
- Building materials need to be selected carefully with forethought to blending with the natural surroundings. The size, height, and number of buildings across a site must form an attractive whole even if built by different concessionaires. The quality of construction must be good and meet universal standards of health and safety.

INFRASTRUCTURE: WATER, SEWER, POWER, INTERNET

- Provision for onsite water collection plan from rainwater and management of surface runoff is important due to volume of rainfall during the rainy seasons. Graywater systems may be used for landscaping and other non-potable uses. Solar hot water is a convenient and effective pre-treatment for provision of hot water for bathing and cooking.
- Engineering an onsite sewage treatment plan—this may be a combination of low-flush water toilets, composting toilets, and separated graywater systems. Example of septic tank with constructed wetland treatment may be found at Top View Hill Hotel, Gisakura.
- Solar hot water, photovoltaic electrical generation, and wind electrical generation should all be included in site planning. Each location will be able to provide a different mix of solar and wind, but each needs to find a means of handling power as each site is remote and without obvious means of electrical connection to a municipal grid. Good examples of each are found within Rwanda.
- Internet connectivity will be desired for the operations of any type accommodation and expected by the guests.

VISITORS' ACTIVITIES: CONCESSION SITES, NNP, GATEWAY COMMUNITIES

- Visitor activities are a mix of passive and active—from birding and trekking to casual conversation and hands-on cultural activities. Each site needs not provide a full range but rather think about integration with other activities across the park and adjacent communities. Layering of activities rather than duplication will help the success of each, and thus the visitor experience.
- Educational experiences become an integral part of the design of a particular overnight accommodations when the facility is partnered with a local cultural group, co-located with a tea plantation (e.g., Nyungwe Forest Lodge), or even designed with an orchid garden as part of the landscape.
- Cultural and natural resource information contribute to the overall experience of NNP. Understanding how people and resources fit together is part of the “Nyungwe Forest Experience” and contributes to the heritage tourism which attracts visitors. While there is sensitivity to gold mining and past lumber extraction practices these are also interesting human stories to be retold which connect people and natural resources across time and place.
- Research and tourist experience can be co-located depending on the research activity. In some way the habituation of chimps is an example of this—trackers are observing and learning about chimps at the same time as it is becoming a tourist activity. Other examples could be: revegetation of the forest which teaches about critical species, developing an orchid sanctuary for both research and tourism (currently the hottest attraction in NY), zip-line which doubles as a means of learning more about tree canopy functions, etc.

MANAGEMENT PRACTICES

(Oversight, Maintenance of facilities and landscape, Personnel training, Ownership models, RDB partnership/oversight)

There is much the Nyungwe Forest offers, but this is dependent on conscious and respectful partnerships between concessionaires and RDB, local communities and visitors, building services and natural resources, researchers and the forest, and current and future partners.

- Oversight, management, and budgeting of the park buildings and NNP concessions takes expertise in building and contracts rather than natural resource and trails management. A staff dedicated to these functions will need to be brought on board as these resources are developed.
- Concessionaires will be a mix of developers and local cultural groups, but each will need a business and development plan based on tourism marketing strategies and available

financing. For example, the Karamba site is large enough to offer a mix of opportunity for concessionaires. Each site might have more than one contractor to meet NNP expectations.

- Ownership models and strategies will depend on the type of investment as well as the type of investor. For example bungalows might be built and owned by a company for 15 years, on NNP land, and then become property of NNP after that time—a model where the concessionaire makes back their investment, but the Park gains visitors, and only over time the buildings. Another model exists for guided trips, zip-lines, or orchid garden visits where there is a surtax applied per person which goes to RDB. More research is needed on the many options that exist.



III: CONTRACT DELIVERABLES

As defined in the DAI contract, deliverables include:

- 1. A PowerPoint presentation summarizing findings, conclusions, and recommendations of the consultancy.** The content from the presentation has been included in this report along with additional examples of accommodation design, physical site assessments, and overall park recommendations related to eco-tourism.
- 2. A one-half day workshop in Kigali to present summary findings.** This workshop was part of the PowerPoint presentation and included representatives from RDB, WCS, and USAID.
- 3. A consultancy report on the above tasks, summarizing findings, conclusions and recommendations for future activities related to this scope of work.** This report covers the findings, drawings, and recommendations related to the Survey of Concession Sites for Sustainable Ecolodge Planning and Design – February to March, 2012

IV: APPENDIX A: REFERENCES

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Nyungwe National Park Sector Map with Trail System & Administrative Sectors

Nyungwe National Park —Tourist Destination Map”

ORTPN Ecotourism Development Plan Nyungwe Forest National Park, Rwanda. Prepared by EDSA, March 2005 ORTPN Tourism Development Strategy for Nyungwe National Park, Rwanda. Prepared by Matt Walpole, March 2004

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Scope of Work Sample for Sample Project RFP for IDIQ RFP, 2011

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