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TOURISM VALUE CHAIN ANALYSIS FOR NYUNGWE NATIONAL PARK

FINAL REPORT



September 2012

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TOURISM VALUE CHAIN ANALYSIS FOR NYUNGWE NATIONAL PARK FINAL REPORT

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by author

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ABBREVIATIONS

ANP	Akagera National Park
DAI	Development Alternatives Inc.
DRC	Democratic Republic of the Congo
ICT	Information and communication technologies
ICT	Costa Rican Tourism Board
KCCEM	Kitabi College of Conservation and Environmental Management
NNP	Nyungwe National Park
NUR	National University of Rwanda
ORTPN	Rwandan Office for Tourism and National Parks
PCFN	<i>Projet Conservation de la Foret de Nyungwe</i>
PES	Payment for Ecosystem Services
PPD	Public-Private Dialog
RDB	Rwanda Development Board
REDO	Rwanda Environment and Development Organization
RTC	Rwanda Tourism Chamber
RTTA	Rwanda Tour and Travel Association
RTUC	Rwanda Tourism University College
SANParks	South African National Parks
STM	Sustainable Threshold Methodology
TNC	The Nature Conservancy
USAID	United States Agency for International Development
USNPS	US National Park Service
VNP	Volcanoes National Park
WCS	Wildlife Conservation Society
WEF	World Economic Forum

EXECUTIVE SUMMARY

Objectives

The main objectives of assignment were to conduct an analysis of the value chain as a basis for making recommendations to improve revenues from tourism in the Nyungwe region, and to provide a framework to assess the potential for leveraging private sector investment. Given the emphasis of the *Nyungwe Nziza* project on improving outcomes for local communities, the standard literature search and stakeholder interviews were supplemented by eight interactive meetings with local cooperatives, ranging from 8 to 25 participants, a mid-point review of preliminary results with 15 stakeholders in Kigali, and a training workshop with 25 local participants at the Kitabi College of Conservation and Environmental Management (KCCEM) classroom in Nyungwe.

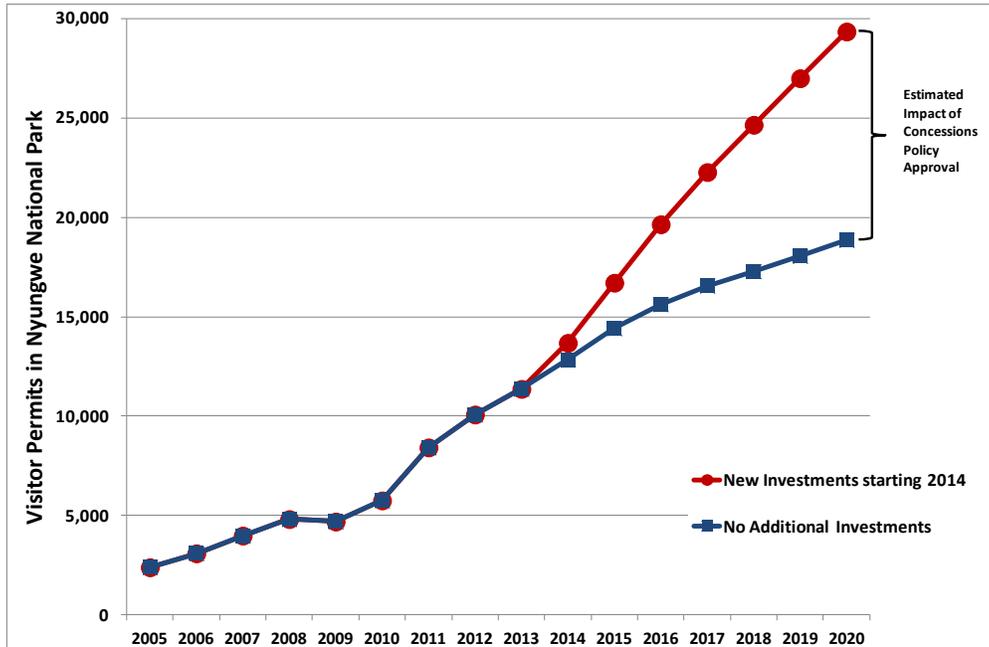
In order to provide a framework to assess the potential impacts of private sector investments, a basic forecasting model was constructed, linking investments to flows of tourists and revenues, which provided quantitative estimates of impacts on five of the ten primary pro-poor income streams: food purchases by lodges, handicrafts, cultural tourism, kiosks, and wages from hotel employment. The analysis was conducted in May and June of 2012.

Key Findings and Recommendations

- The project's strategy is and should remain two-fold: facilitating efforts to increase overall tourism revenues in Nyungwe National Park, and improving the capacity of local communities to capture a larger share of those revenues.
- The flow of tourists to Nyungwe National Park has grown rapidly since it became a park in 2005, particularly with the advent of two new lodges and a canopy walk in 2010-11. Still, the current average of 22 visitors per day is not a broad base from which to generate income streams intended to modify the behavior of the estimated 360,000 population directly bordering the Park.
- Despite past growth trends, Nyungwe's future growth potential will be limited if it continues to position itself primarily as an add-on to the high-end packages in Volcanoes National Park (VNP). VNP is itself a narrow niche market among African wildlife destinations, and Nyungwe's chimpanzees and other primates do not carry the same appeal as the gorillas which attract those particular high-end tourists to Rwanda. This conclusion is supported by the fact that Nyungwe's new lodges are experiencing occupancy rates below 20%, which are unsustainably low.
- The market profile for Nyungwe needs to be re-positioned, with a sharper branding focus on ecotourism. This market segment would place a higher value on: 1) Nyungwe's biodiversity; 2) the fact that Nyungwe forest has existed for hundreds of thousands of years and is one of Africa's oldest; 3) efforts to involve local communities in conservation efforts; and 4) the fact that Nyungwe is a wonderful place to "escape." Without in any way reducing the region's continued appeal as a follow-on destination for the gorilla packages, broader positioning would significantly increase foreign and domestic tourism revenues. While local stakeholders and park staff appear to be aware of this situation, officials in Kigali have until recently been less responsive in adjusting policy to conform to the emerging market reality. In August 2010, the Strategy and Policy Unit at the Office of the President and the Rwanda Development Board have commissioned a market research study and development of marketing strategies for priority tourism sectors, to move the tourism sector "beyond gorillas."

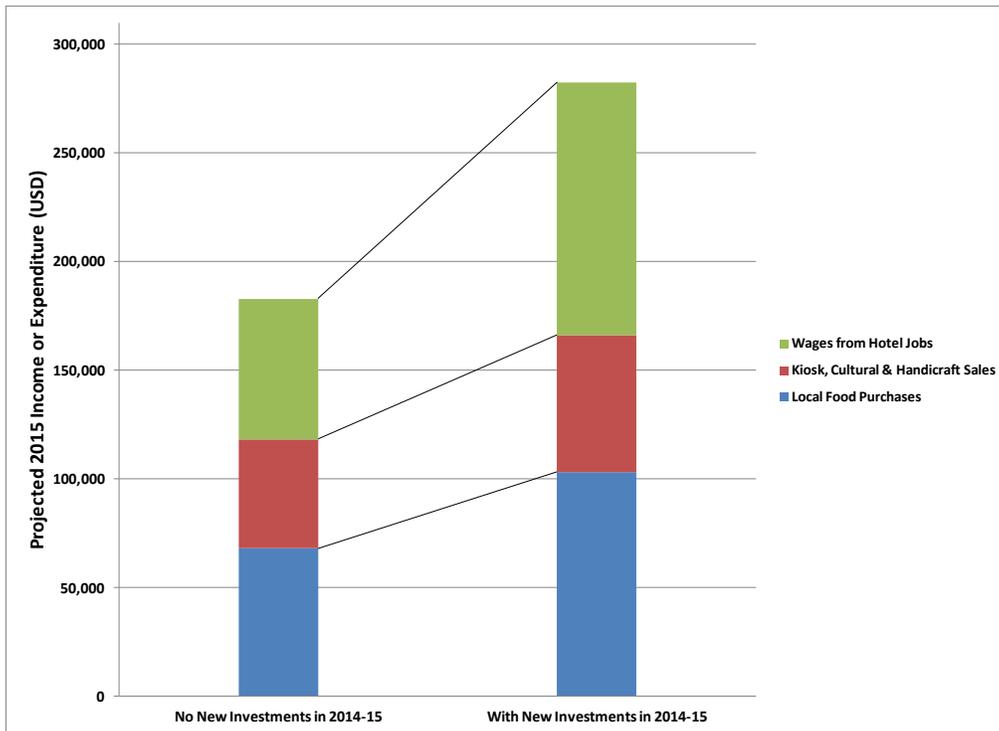
- As evidence of Nyungwe’s attractiveness as an ecotourism destination, the new canopy walk, a classic ecotourism amenity introduced in 2010, was already responsible for over one-quarter of the park’s visits by 2011.
- Local communities face four main obstacles in earning income from tourism: lack of scale, inadequate infrastructure, and organizational and technical constraints.
 - Lack of scale. The burden of some of the other three obstacles would be considerably lighter with a higher volume of tourists. Due to lack of scale economies, local cooperatives face high fixed costs for transportation, for production equipment and other investments related to provision of food products, handicrafts, management of kiosks and campgrounds, and transaction costs. In the short and medium term, the two actions that could have the biggest impact on overall tourist volumes would be to reorient the marketing and promotion strategy, and to approve the National Concessions Policy, both of which would greatly facilitate the Park’s ability to leverage private sector investment funding.
 - Inadequate infrastructure. Lack of roads for local communities is the most serious constraint, as tourists have difficulty accessing communities with cultural attractions, and cooperative members have similar difficulties reaching park facilities and lodges to interact with tourists. Most of the road construction investments are controlled by the district government, and *Nyungwe Nziza* as well as park officials are engaged in lobbying for higher priority to access roads near and into the Park.
 - Organizational constraints. The formation of cooperatives has allowed local residents to share in the benefits arising from the creation of new attractions (e.g. cultural villages) and access to premium markets for food products (lodges) and handicrafts. *Nyungwe Nziza* has moved forward energetically to address the needs of these cooperatives for assistance with improved organizational structures and financial management. However, having demonstrated its value-added, the project needs to find a way to increase the total number of cooperatives being served.
 - Technical constraints. The value chain analysis has also identified requirements among several cooperatives for technical assistance, particularly in food production and handicraft design. Cooperatives have great difficulty, for example, in meeting the exacting requirements of lodges for specific types and standards of fruits and vegetables, some of which would ideally be greenhouse-grown. An experienced agronomist or horticulture specialist would be able to provide cooperatives with valuable assistance in production and marketing. Since reliability of supply of local produce is one of the main factors in the decision of lodges to procure locally, this specialist could also assess the potential to establish a local exchange or aggregation system, whereby products could be reliably collected, stored and distributed to local establishments serving tourists.
- The visitor and expenditure forecasting analysis concludes that additional private sector investments in Nyungwe, which would be made possible once the National Concessions Policy is approved and implemented, could have a significant impact on the earning streams for local communities in the near term. Using very conservative estimates, new investments in lodging facilities and new amenities would boost the number of visitors by 2,300 visitors as early as 2015, if action is taken soon, and leading to a 56% increase in visitors by 2020, as shown in Figure 2, the additional pro-poor income is conservatively estimated to rise by 50%, representing nearly \$100,000 more for local communities.

Figure 1: Increase in Visitors to Nyungwe National Park with Concessions Policy



- Cost of delay. A separate sensitivity analysis demonstrated that a one-year delay in approval and implementation of the policy would result in a cumulative loss of \$115,000 for local communities over the years 2014-2016, depriving them of a significant supplement to their incomes and a much-needed kick start to their emerging entrepreneurial ventures.

Figure 2: Local pro-poor income in 2015 with and without Concessions Policy



- Cluster approach. The recommended measures call for a complex set of initiatives, involving a new approach to marketing and branding, greatly expanded private sector investment, new infrastructure, an expanded role for cooperatives, and stepped up technical assistance, all of which will require a daunting level of coordination among stakeholders. Given the current fragmentation among the private sector organizations, and the limited degree of public private dialog, a cluster approach is recommended to support the inclusive implementation of this overall package of recommendations. The Rwanda Development Board has already indicated its intention to adopt clusters for its sectoral development initiatives, and *Nyungwe Nziza* can facilitate the launch of a pilot initiative within the tourism sector. The project could bring these key players and other stakeholders together, using a common fact base of analysis, to develop a shared vision for the future of Nyungwe along with a mutually agreed action plan with defined roles for all participants.

1. BACKGROUND & METHODOLOGY

One of the key justifications for the USAID-funded “Strengthening Sustainable Tourism in and around Nyungwe National Park” project (hereafter referred to by its local name, *Nyungwe Nziza*) is to enhance the economic and social benefits of tourism for local communities bordering the Nyungwe National Park, to increase their stake in sustainable ecotourism. The pressure of local populations on the park – in the form of poaching, timber removal, and fires started as a result of other encroachments such as mining and illicit crop production – is the single greatest threat to Rwanda’s ability to preserve this precious natural resource base. Thus, *Nyungwe Nziza* aims to assist in the expansion of responsible ecotourism to the Park, while simultaneously working to ensure that local communities extract the maximum possible benefits from the presence of tourists in the region.

The focus of the project is two-fold: inclusive ecotourism development for the benefit of local communities surrounding the park and leveraging private sector investment in the management, construction, and maintenance of new and existing park infrastructure.

In keeping with the two-fold nature of the project, this report has two related objectives:

- a) to provide a better understanding of the tourism value chain (and related sub-value chains such as food production) in the Nyungwe region, as a basis for recommendations to improve both the total revenues from tourism, as well as the share going to local communities, and
- b) to provide a framework to assess the potential for leveraging private sector investment.

Methodology of the mission

Following a literature review, interviews were conducted with 15 tourism-related business owners in Kigali and in the Nyungwe region, 8 cooperatives, and 5 government officials, and other stakeholders. A mid-point review of the preliminary results was conducted in Kigali in the third week of the assignment, with a broadly representative group of public and private stakeholders as well as *Nyungwe Nziza* project and USAID staff, which provided a valuable opportunity for review and feedback. Finally, a 5-hour cluster development training workshop was conducted at the KCCEM classroom in Nyungwe National Park in the final week of the consultancy, at the request of Nyungwe’s Tourism Warden, in which 25 local stakeholders participated, including representatives of local cooperatives, RDB officials, managers of two of the three private sector lodges, and guides and trackers enrolled in the KCCEM courses.

In addition to the value chain analysis, an analytical model was developed to provide a rudimentary forecast of visitors to the Park under various private sector investment scenarios, allowing for projections of the impact on earnings accruing to low-income local communities via several different tourism revenue channels, such as food production, hotel employment, and handicraft sales.

2. END MARKET ANALYSIS

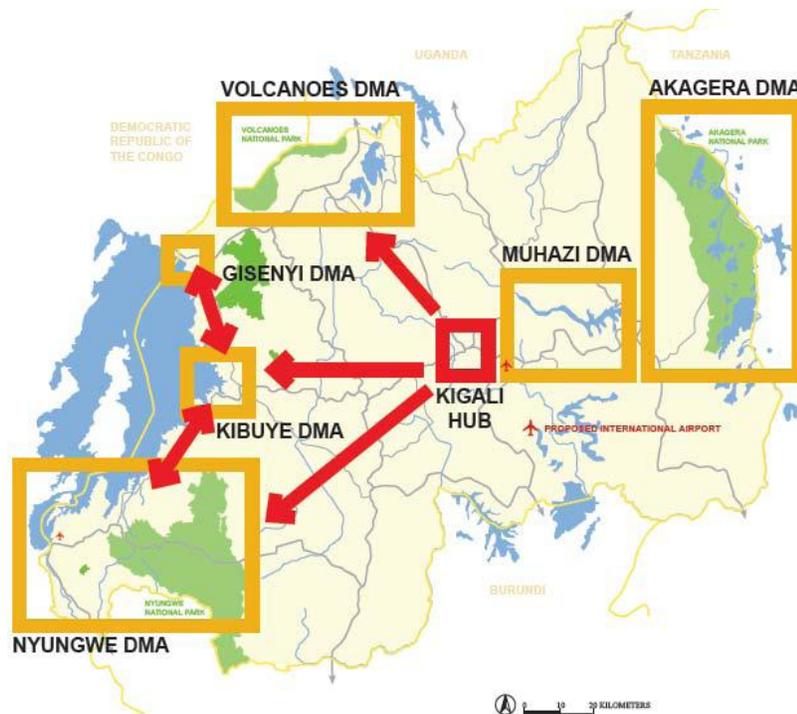
Introduction – what does Nyungwe offer?

The bulk of leisure tourism in Rwanda is related to its three national parks: Volcanoes National Park in the north, Akagera National Park in the east, and Nyungwe National Park in the south (see Figure 3). Of the three national parks, Nyungwe is the newest, having been inaugurated in 2005, and currently attracts far fewer visitors than either Volcanoes or Akagera.

Nyungwe is considered the best preserved montane (high altitude) rainforest in East Africa. Not only is a significant portion of the Park's 970 km² undisturbed primary rainforest, but it harbors a far greater diversity of plant, insect, bird and mammal species than other primary rainforests of similar size.

It is also one of the oldest *continuous* rainforests in the world. During the last major ice age, changing weather patterns reduced precipitation levels in most of the rainforests in Central Africa to the point that they were essentially converted into savanna-like open canopy grasslands with smaller, wider spaced trees. Species that were highly adapted to a closed canopy wet rainforest environment either perished or managed to make their way to one of three remaining rainforests, one of which was Western Nyungwe. Thus, having served as a sort of oasis or Noah's Ark for those species, Nyungwe to this day retains a much higher degree of biodiversity, as compared to the majority of rainforests which, although they reverted back into wet, closed canopy rainforests as weather patterns normalized, were not in a position to regenerate the same richly layered diversity of flora and fauna that Nyungwe can boast.

Figure 3: Location of Rwanda's Three National Parks



Notable among the mammal species in Nyungwe are the 13 species of primates, including L'Hoest's monkeys, colobus, mangabeys, the exceedingly rare owl-faced monkey and one of Africa's greatest concentrations of chimpanzees.

However, instead of appreciating the wide-spectrum wonders of Nyungwe's topography and ecosystems, most tourists arrive with a narrow focus on a single objective: to spend quality time with chimpanzees. This orientation arises because the majority of Nyungwe's visitors have been induced to come as an add-on to a visit to Volcanoes National Park (VNP), which is known as the world's premier location for observing mountain gorillas in their natural habitat.¹ However, chimpanzees are far less sedentary than gorillas, spending much more time in the high canopy, and are also more intelligent, which makes it easier for them to keep their distance from clumsy bands of tourists, so that relatively intimate experience with the gorillas is hard to replicate with chimpanzees.

Nevertheless, Rwanda's market position as the premier gorilla destination – widely regarded among primate aficionados as superior to both Uganda and the Democratic Republic of the Congo, the only other options for observing mountain gorillas in their natural habitat – is important for Nyungwe, since without that flow of relatively high-end visitors, Nyungwe's visitation figures would be far lower than they are today.

As shown in Figure 4, Volcanoes National Park and Akagera National Park both experienced rapid growth during Rwanda's crucial 2000-2005 tourism recovery period, averaging 50% annual growth rates, as they essentially re-built their previous clientele from before the 1994 Genocide. While Nyungwe still had a respectable average 25% annual growth during that period, its lack of a recognized profile both domestically and internationally meant that each increment of new visitors had to be earned rather than inherited.

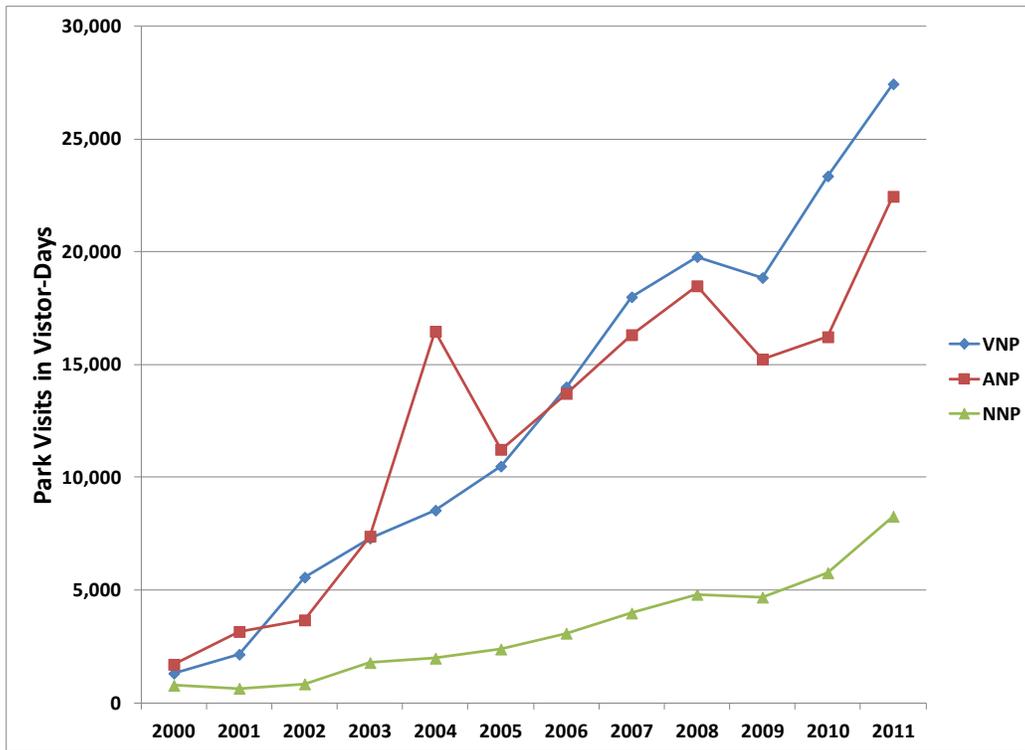
Akagera National Park (ANP) mainly features savannah habitats and wildlife. While the standard is improving, Akagera is currently not competitive with other countries such as Kenya, Tanzania and Uganda in this classic "safari" segment.

For Rwanda, the packages offered by the adventure, generalist and wildlife tour operations are mainly mountain gorilla tours (3-5 days) to VNP, *linked with another East African destination*.² Thus, despite Rwanda's success in terms of recovery from its status as a tourism pariah two decades ago, it is not yet regarded as a first-tier, stand-alone destination for leisure tourists, but rather as a secondary location, only worth including for tourists who've already decided to take in multi-country itinerary in East Africa.

¹ While all of the gorillas in VNP, as well as the chimpanzees in Nyungwe, are wild, many of them have been deliberately and painstakingly habituated, which means that through repeated, neutral contact with humans, these primates exhibit normal behavior when people are in close proximity.

² "Tourism Market Profiles for Nyungwe National Park," DAI, December 2010, Nancy Cockerell.

Figure 4: Visitor Permits to Nyungwe, Volcanoes and Akagera National Parks 2000-2011³



Source: Rwanda Development Board (RDB) Tourism and Conservation Department, 2012

During the period 2005-2011, since its official opening as Nyungwe National Park (NNP), the Park has actually experienced higher annual growth rates at 23% per year, than either Volcanoes (17%) or Akagera (12%). All three parks experienced a decline in 2009 due to the global financial crisis. But, as shown in Table 1, Nyungwe rebounded in 2011 with a sharp one-year increase in visitors of 43% in 2011, which is attributed to the introduction of two new lodges and the addition of a popular new attraction, the canopy walk.

Table 1: Visitors to Nyungwe National Park 2005-2011

Year	Visitors	Annual Growth Rate
2005	2,386	
2006	3,088	29.4%
2007	3,981	28.9%
2008	4,810	20.8%
2009	4,688	-2.5%
2010	5,769	23.1%
2011	8,274	43.4%

Source: RDB, Tourism and Conservation Department, 2012

³ RDB records for visitors are actually slightly over-reported. These statistics show the total number of entry fees or activity fees collected in a given day, so visitors who pay for more than one activity are double-counted. Apparently less than 10% of visitors undertake more than one activity. Also, some visitors to the parks may stay in their hotels without incurring a visitor fee for any activity, while still spending money locally and impacting the local economy.

Competition and trends

Wildlife tourism in East Africa is a large market, within which Rwanda currently occupies a relatively minor niche. The three largest destinations in the region are Kenya, Tanzania and Uganda. Rwanda's tourism segment in 2009 was less than 5% the size of Kenya's, with over one million leisure tourists arriving each year. A direct comparison should be relatively meaningless, since each of those countries is far larger, with much more land area and many more national parks and reserves (Kenya has 19 national parks and ten reserves, for example; Tanzania has 16, including the world famous Serengeti National Park). However, in the eye of the typical tourist, without those larger countries, with their greater variety of landscape types and rich endowments in "Big Five" game animals (lion, African elephant, Cape buffalo, leopard, and rhinoceros), these destinations inevitably attract the largest share of the wildlife tourism market (see Table 2).

Table 2: Benchmarking Rwanda's tourism against East African competitors, 2009

	Rwanda	Uganda	Tanzania	Kenya
Total international arrivals	699,000	806,000	714,367	1,490,400
Of which for leisure tourism	50,476	126,000	565,064	1,061,200
Visits to national parks	38,441	151,818	500,881	2,385,300

Source: National Ministries of Tourism

In fact, the New York Times' list of the top ten wildlife and safari destinations in Africa does not include Rwanda (see Table 3), although it does list neighboring Uganda's Bwindi Impenetrable Forest, highlighting the fact that one can see both gorillas and chimpanzees.⁴ In addition, this experience is still available for \$500 per foreign visitor, while Rwanda is now charging \$750 per visitor.

The World Economic Forum's (WEF) Travel and Tourism Competitiveness Report included Rwanda for the first time in its 2011 Travel & Tourism Competitiveness Index. Rwanda's tourism industry was ranked 7th among the 30 Sub-Saharan African nations in the index, slightly above Kenya (8th), Tanzania (11th) and Uganda (13th). Rwanda received high marks for its focus on sustainability, safety, and its tourism policies, but low scores regarding tourism infrastructure, ICT, and the health & hygiene indicator.

Overall, Nyungwe's biggest direct competitor is Uganda. Having seen gorillas in Bwindi, tourists can also view chimpanzees at Kibaale National Park, which is only three hours away (one third the time it takes to drive from gorillas to chimps in Rwanda) over easier terrain, a far higher probability of actually encountering the chimps⁵ and better guides⁶. Uganda is now reportedly issuing tenders to build a canopy walk in Kalinzu Forest, which also has habituated chimps.

⁴ The commentary to the list states that Bwindi is "home to almost half of the world's population of mountain gorillas. Besides offering a wonderful backdrop to Gorilla tracking, you can also see chimpanzees, and many other mammals. Bwindi has been designated a World Heritage Site." Bwindi National Park attracted 12,000 visitors in 2009, having recovered from very low levels following the massacre in 1999 of 12 persons, eight of whom were foreign tourists.

⁵ It's possible in Nyungwe to pay for a chimp trek and not end up sighting them, which happens far more often than with gorillas, as they are more mobile and more intelligent. Lodge managers report that particularly their wealthier visitors complain loudly when this happens, because they were led to expect a primate sighting rather than the broader experience of hiking and taking in the wide variety of flora and fauna on display. The promotional materials and guide behavior (very chimp-focused) also reinforces this expectation and orientation.

Table 3: Top Ten Wildlife/Safari Destinations Africa

<u>Destination</u>	<u>Country</u>
1. Masai Mara National Reserve	Kenya
2. Chobe National Park	Botswana
3. Kruger National Park	South Africa
4. South Luangwa National Park	Zambia
5. Serengeti National Park	Tanzania
6. Bwindi Impenetrable Forest	Uganda
7. Etosha National Park	Namibia
8. Okavango Delta	Botswana
9. Ngorongoro Conservation Area	Tanzania
10. Hwange National Park	Zimbabwe

Source: New York Times, About.com

Partly as a result of the tendency for wildlife tourism in Africa to fixate on observing a specific type of game (itself surely a legacy of the big game hunting safaris that captured the imaginations of earlier generations of tourists), ecotourists in East Africa and Southern Africa don't tend to visit a region primarily with the intention of experiencing the full diversity of the ecosystem, deriving their satisfaction from the variety of species observed and the uniqueness of their own experience, as do visitors to an ecotourism destination such as Costa Rica, which doesn't promote any specific species. For this reason, the typical visitor to Rwanda arrives to observe gorillas as part of a multi-country tour, in which Rwanda is considered a secondary or add-on destination.

Over the past decade, Rwanda has wisely accepted this reality. Instead of attempting to compete directly with the larger and more established destinations for mass tourism, a tourism strategy focusing on high-end ecotourism was developed in the early 2000's, and formally approved by the Cabinet in 2002. Over the past ten years, a primarily government-driven approach for the VNP has gradually evolved through public-private dialogue into a comprehensive marketing and product development strategy that is one of the case studies of a tourism success story. The threats to gorillas and their habitat have been steadily reduced, with direct enforcement significantly enhanced by the impact of inclusive tourism on community support for conservation.

⁶ See "Ecotourism Potential of Nyungwe National Park: An Assessment Conducted by the Jane Goodall Institute for the Nyungwe Nziza Project," DAI, November 2010.

Visitor profile

Overall, foreigners comprise 86% of the current market for Nyungwe, even higher than the national average of 80% for all parks. As shown in Table 2, this percentage varies significantly by park. In 2009, roughly 10% of the visitors to Nyungwe were Rwandans, while 77% were foreign visitors.

Table 4: Breakdown of Park Visitors by Residence Status, 2009

National Parks	Rwandan Residents		Foreign Residents		Foreign Visitors		Total	
		%		%		%		%
Akagera	6,496	44%	2,364	16%	6,030	40%	14,891	100%
Nyungwe	478	10%	599	13%	3,618	77%	4,695	100%
Volcanoes	887	5%	592	3%	17,386	92%	18,865	100%
Total	7,861	20%	3,555	9%	27,034	70%	38,451	100%

Source: RDB, 2010

Already by 2011, this profile had changed considerably. Table 5 shows the same breakdown for Nyungwe National Park (comparable data was not available for VNP and ANP), and the share of domestic market – including both Rwandan and foreign residents together – rose from 23% in 2009 to 38% in 2011.

Table 5: Breakdown of Park Visitors by Residence Status, 2011⁷

National Parks	Rwandan Residents		Foreign Residents		Foreign Visitors		Total	
		%		%		%		%
Nyungwe	1,133	14%	1,985	24%	5,137	62%	8,255	100%

Source: RDB, 2012 (unpublished)

The top six nationalities of foreign visitors to Rwanda's national parks is dominated by the United States, accounting for nearly 30%, followed by the United Kingdom, Belgium, Canada, Germany, and India.

Target market segments

Rwanda's tourism strategy, established in the 2005 Tourism Master Plan and implemented by the Rwanda Development Board's Tourism and Conservation Division, has centered on a high-end wildlife niche market, featuring a premier gorilla trekking experience. Rwanda's ability to reconstitute its gorilla tourism product following the Genocide in 1994 is an inspiring success story in itself. This strategy has been largely successful to date, attracting high-spending tourists at a high growth rate. Updated statistics are not available, but an RDB/ORTPN/MINECOFIN analysis indicates that average leisure tourism spending in 2009 was \$1,136 per visit for visitors from other African countries, and US \$1,623 by non-African visitors. For comparison purposes, according to a World Bank sponsored survey for 2009, the average leisure tourist in Uganda spends about \$785 per trip.⁸

⁷ The total for 2011 in this unpublished data differs by 19 visits from the total reported officially by the RDB.

⁸ Uganda Tourism Subsector Study, ECI Africa, 2011.

A recent World Bank report goes on to say:

Most leisure tourists visit the region as part of a multi-country itinerary and do not yet consider Rwanda as a stand-alone destination. A recently conducted survey of tourists, tour operators and accommodation providers in Rwanda (SNV and RDB, 2009) finds that the highest share of domestic tourists has a trip length of 2 days; the most frequently cited length of stay by international tourists was 4 days.⁹

On the other hand, the RDB's recent decision to increase the price of a permit to experience mountain gorillas in the VNP from US \$500 to \$750 for foreign nationals is expected to negatively impact tourist arrivals for Nyungwe. In comparison, Virunga National Park in the Democratic Republic of Congo (DRC) currently offers mountain gorilla trekking permits for 400 USD for foreign nationals, and gorilla trekking in Bwindi Impenetrable National Park in Uganda currently offers mountain gorilla trekking permits for 500 USD for foreign nationals. It is difficult to rank the overall quality of the experiences, as they are quite different, but it can be said that Bwindi guides are considered to be much better than those in Rwanda, that Uganda offers a number of other wildlife experiences that Rwanda does not, and the visitation fees for many of the add-on experiences, such as guided trail hikes and waterfalls are at far lower rates.

Opportunities

The information presented in the preceding sections suggests that a re-examination of Rwanda's overall tourism strategy may be in order. If Nyungwe continues to be viewed almost exclusively as an add-on activity for high-end foreign wildlife eco-tourists focusing primarily on primates, its ultimate market will be limited, and the impact of policies, like the recent permit price increase for the gorillas, could be potentially devastating. If Nyungwe can broaden its appeal to develop dedicated followings within segments such as adventure tourism, bird watching and cultural tourism, it will have a larger, more diverse market, less vulnerable to downturns in any particular market.

Currently, there are only rare cases where tour operators are able to sell Nyungwe as a standalone destination. The tour operators interviewed estimate that nearly all of their packages combine VNP and Nyungwe. In those cases where they are able to provide packages for Nyungwe alone, a good portion of these are residents or business travelers and not international leisure tourists.

Nyungwe's potential in the domestic market should also not be overlooked. The domestic market consists of both Rwandan residents and foreigners who reside in Rwanda. As highlighted in a WCS-sponsored report in 2004, although domestic tourists may be lower spending, they have a range of potential advantages:

- They often stay longer
- They generally have lower expectations regarding the quality of infrastructure and services, so are easier and cheaper to satisfy.
- They tend to engage more with the local economy, spending more locally on supplies, transport, etc... and demanding less by way of goods and services that must be imported from elsewhere.
- They often consume fewer resources (hot water, power, etc) and as result less pressure on the utilities and natural resources.

⁹ "The Success of Tourism in Rwanda – Gorillas and More: Background paper for the African Success Stories Study," Hannah Nielsen Anna Spenceley, World Bank and SNV, April 2010.

- They offer a foundation upon which the domestic tourism industry can build and gain vital experience as it develops towards higher goals.
- As larger numbers of Rwandans experience tourism from the demand side, they will begin to understand it, begin to demand higher standards, and be able to engage on the supply side more effectively.
- Domestic tourism to Nyungwe has the potential to generate environmental awareness among the population, which would contribute to conservation goals.¹⁰

Foreign residents represent a particularly susceptible portion of the domestic market. Primarily made up of diplomats, donor representatives and volunteers, this group is highly adventurous, used to weekend getaways, more forgiving of rustic accommodations, and always interested in finding something new. Even volunteers, who may not have high travel budgets, tend to travel often, and many of them have two parents and four grandparents who are motivated to visit their children. This sub-market is also highly networked socially, and in a position to influence other potential travelers through word-of-mouth on their return to their country of origin.

¹⁰ “Tourism Development Strategy for Nyungwe National Park: Proposals for the short to medium term sustainable development of tourism in southwest Rwanda,” ORTPN & WCS, March 2004.

3. VALUE CHAIN ANALYSIS

Value chain map and description of nodes

The value chain map provides an outline of the main elements of the “system” of economic actors in the Nyungwe tourism value chain, as shown in Figure 4.

Selection and booking

According to the Nyungwe National Park Visitor Survey¹¹ carried out in 2011, 40.3% of visitors to Nyungwe are part of a tour package, with the remaining visitors characterized as independent travelers. Their demographic characteristics, preferences and spending habits are quite different, with package tourists focusing on primate tracking and shorter trails such as the Waterfall Trail, while independent travelers are more focused on activities such as bird watching, and other longer trails. Both groups seem to have a high level of satisfaction with the canopy walk, with both groups reporting a 70% “very satisfied” rating for the canopy tour, the highest for any activity in the Park.

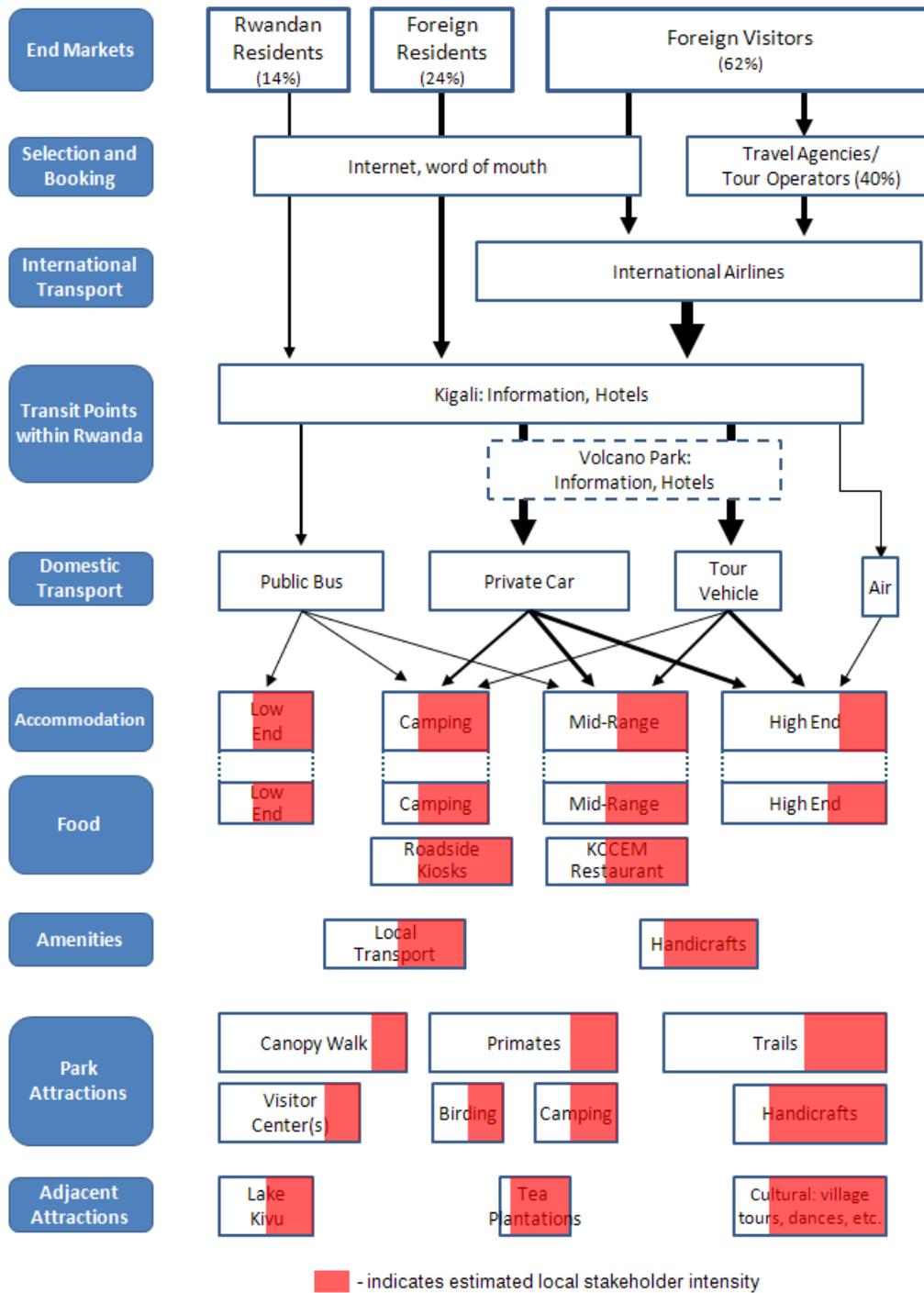
Of those who used tour agencies, 45% used a Rwandan tour agency, 37% used a tour agency from their own country, and the remaining 18% booked their travel with an agency from a third country.

There are 22 incoming tour operators and travel agencies in Rwanda, three of which can be considered leading firms, with roughly 20-30 employees, and most of the remainder having fewer than ten employees. Many of them own their own lodges and vehicles. Most have some connection with international wholesalers operating in origin countries, although the internet has allowed many of them to attract and service customers directly as well (especially the larger ones). The leading operators also have offices or affiliations with agencies in nearby countries such as Kenya, Uganda and Burundi, making it easier to offer circuit packages that include more than one country.

Interviews indicated that, despite the efforts of the Rwanda Tour and Travel Association and the Rwanda Tourism Chamber to share views and build awareness, the industry is highly fragmented, making it difficult to launch joint initiatives such as certification and quality control, or to lobby effectively.

¹¹ See “Optimization of Activities Fees for Improved Visitor Satisfaction in Nyungwe National Park”, DAI, February 2012

Figure 5: Tourism value chain map for Nyungwe National Park



International transport

Air travel has been typically fairly expensive to Rwanda, with limited competition among carriers. However, in summer 2012, both Turkish Air and Qatar Airways have entered the market, and have aggressively priced fares to and from Europe and the U.S. This should put downward pressure on fares from all carriers, creating new opportunities for promoting Rwanda to non-traditional market segments.

Domestic transport and transit points within Rwanda

Virtually all tourists entering the Park originate from or pass through Kigali, the capital city, prior to visiting Nyungwe, and a significant percentage will have also visited Volcanoes National Park as well. Accordingly, these locations represent an important linkage in the value chain, where visitors obtain information, lodging, and transportation services.

The drive from Kigali to Nyungwe (Kitabi entrance) takes 4-5 hours, depending on traffic conditions, with many travelers stopping for the night at hotels on the eastern side of the park (in Butare) before heading into the park in the morning. Among foreign travelers, some of the independent backpackers use the commercial bus services. There is a small airport (Kamembe) located an hour east of the park, and a helicopter pad is available at the Nyungwe Forest Lodge, but on the whole air travel accounts for a negligible share of visitors to date. See Constraints section for discussion of transportation issues inside and around the Park.

Figure 6: Map of Nyungwe National Park



Source: RDB

Lodging

Until 2010, visitors to the park were limited to the Gisakura Guest House on the western side for lodging, or on a space-available basis, the student housing facilities at the Kitabi College of Conservation and Environmental Management on the eastern border to the park. These are characterized as mid-range accommodation, rather spartan but clean.

In 2010 the high end luxury Nyungwe Forest Lodge opened its doors, followed by Top View Hill Hotel in the first quarter of 2011. While the Gisakura Guest House has high occupancy rates, especially in the high seasons (June- August and December-January), the two new establishments have experienced occupancy rates in the 20% -30% range, indicating an oversupply of accommodation for 2012.

Posted rack rates are:

Accommodation	Rate/night (USD)
Gisakura Guest House	43 single, 60 double (breakfast included)
Top View Hill Hotel	150 per person (breakfast included)
Nyungwe Forest Lodge	245 per person, 175 for Rwanda residents (full board)

Lodge owners and managers report that they make every effort to hire locally, and the share of local employment averages around 75% for the three lodges. To honor this commitment has required extensive training, as most of the local population has had little experience in the service industry and low levels of education, and probably results in higher costs in the short run, but the philosophy of the lodge owners supports this approach. They point out that this approach not only benefits local communities in the short run, but will also result in improved cost management once the needed skill levels have been reached. Nevertheless, the quality of service in some of the lodges is an issue for some tourists, especially English language proficiency.

Figure 7: Vista from Top View Hill Hotel toward Lake Kivu and Eco-Bungalow at Nyungwe Forest Lodge



Source: Author photos

Mainly due to the lack of local mobility, most visitors obtain their meals where they lodge, as indicated by the dotted line connecting lodging with meals in the value chain map. Nevertheless, as the three main lodges are all clustered within a 2km radius near the western entrance to the Park, occasionally guests dine at nearby lodges, especially repeat visitors who know what the alternatives can offer.

Food production sub-value chain

As detailed in Section 4 (Revenue Flows and Pro-Poor Income) and Appendix A, provision of food to tourists, mainly via lodges, is one of the primary sources of income for local communities. Food production and distribution is in itself a value chain, with its own set of nodes, linkages, institutions, and issues, as detailed in the sub-value chain map in Figure 8.

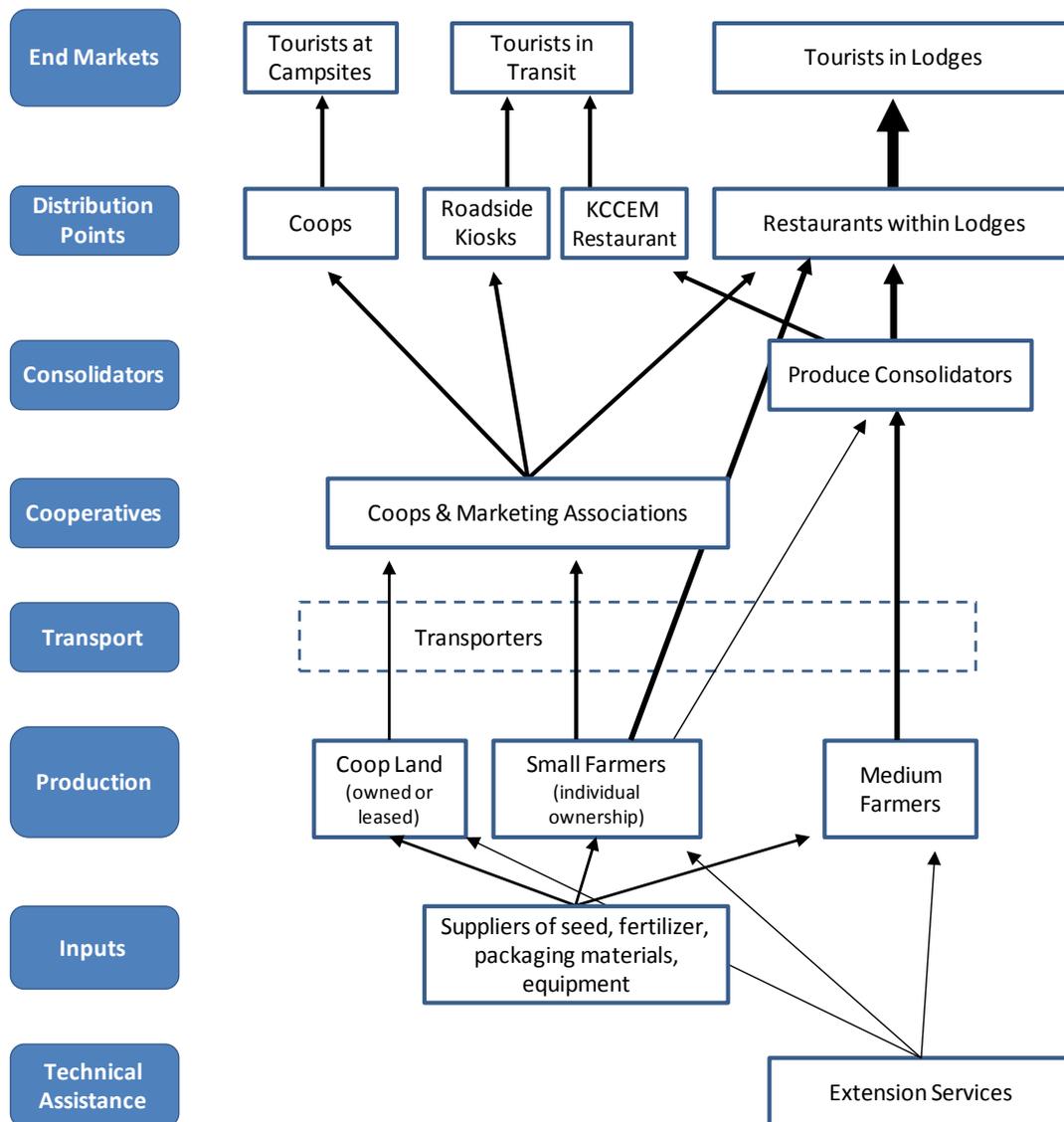
Currently, the bulk of the local food items that enter the tourism value chain are fruits and vegetables purchased by the three main lodges. They buy none of their grains, dairy, eggs, meat or fish locally. Lodges report issues with quality and reliability of local produce, and have difficulty obtaining fresh ingredients such as coriander that are required for international cuisines.

Small local producers, whether individuals or members of cooperatives, have difficulties supplying lodges on a regular basis, as they are not large enough to stagger their planting and harvesting sufficiently. Cooperatives have been formed with the intention of supplying specific types of produce that lodges have indicated they require, such as

- Fruits: bananas, oranges, passion fruit, tree tomato, pineapple, mango, lemon, tangerine
- Vegetables: carrots, onions, cabbage, green pepper, eggplant, spinach, potato, cauliflower, celery
- Spices: pepper, others

However, two coops indicated that they had already started supplying lodges, but could not continue for a variety of reasons, such as lack of finance and reliability issues, as described below.

Figure 8: Food Production – Sub-Value Chain to Nyungwe Tourism Value Chain



Key constraints in food sub-value chain include:

- **Cold storage.** A key ‘missing link’ in the food sub-value chain. None of the local farmers or consolidators interviewed owned or had access to such facilities. They indicated that such access would greatly enhance their ability to deliver higher quality produce on a regular basis to lodges.
- **Transportation.** Most small farmers lack a reliable form of transportation for their produce. Even for relatively short hauls, local transporters charge 50% of the final value of the produce, severely cutting into the producer’s return.
- **Finance.** Hotels only pay two months after delivery. Thus some form of financial intermediation will be crucial for smallholders to gain access to this market.

- Greenhouses. Nyungwe Forest Lodge indicated to farmers that for many of their dishes they require vegetables and herbs that are grown in greenhouse conditions. No local farmers have experience with greenhouses and do not know where to obtain financing or technical assistance.
- Consolidators. A potential solution to the lodges' need for reliable supplies over an extended period of time is consolidation. One newly formed cooperative, which currently sells at the roadside at a major intersection (mainly to truckers and other local customers) attempts to consolidate produce from a variety of farms around the region; however their organizational structure is weak and it's not likely they will be able to form a relationship with a lodge.

Some of these issues, such as transportation and cold storage, may sort themselves out as the total volume of demand rises and economies of scale can be realized. However, in the meantime, more coordination and targeted technical assistance could increase the share of local food purchased by lodges.

Visitors staying at campsites near cooperatives such as Banda Village or Friends of Nyungwe can obtain meals prepared by the cooperative; while the numbers are very limited today, provision of direct meals outside of the lodges is expected to grow. Other cooperatives, such as the Cyamudongo Tourism Promotion Cooperative, have built kiosks providing roadside snacks and, eventually, meals.

In addition to the lodges, due to its strategic location at the eastern entrance, the KCCEM restaurant also attracts some visitors for lunch, and this can be expected to grow as more attractions are located near that side of the Park.

Attractions

As shown on the value chain map, there are five activities within the Park for which RDB charges a service fee and collects data, as well as adjacent attractions that are part of the Nyungwe “experience”.

Table 6: RDB Permits by Activity in Nyungwe, 2008-2011

Year	Birding	Camping	Canopy	Primates	Trails	Total
2008	106	581	0	2,316	1,807	4,810
2009	129	453	0	2,157	1,949	4,688
2010	122	431	602	1,927	2,673	5,755
2011	214	320	2,315	2,556	2,869	8,274

The park currently has three chimpanzee troops that are habituated to humans: Gisovu in the northern part of the park, the Maybebe group located around Uwinka/Banda Community from June-September (but highly mobile and dispersed in other months), and Cyamudongo, a remnant forest located about an hour's drive from Gisakura. Tourists generally prefer the Cyamudongo group (35 chimps) because it is easily accessible and has a relatively high viewing rate. The Maybebe groups is much larger and can be easily seen around Banda during the summer months as this is when the fig trees around Banda are in fruit. If the road were in good condition, this troop (and the other cultural tourism attractions constructed by the Banda cooperative) would be accessible with a 45-minute drive. However, the road is in such poor condition that tour operators refuse to risk damage to their vehicles, so tourists are required to hike for two hours in order to access the area. Until the road is upgraded, very few tourists will have access to these attractions. As more primate groups are habituated and more roads are upgraded, a more extensive menu of primate options will become available to tourists.

Many of the other attractions, such as birding and trails, have only been minimally developed to date. For bird watching, for example, preparation of bird watching-specific promotional materials, more specialized training of guides, and launching a variety of activities aimed at this specific market segment is likely to generate a response from this very motivated group.

The public response to the canopy walk has been remarkable. It's especially notable that, while Rwandan residents overall account for 14% of visitors to the Park, they account for 36% of the visitors to the canopy walk. This response suggests that the domestic market (both Rwandan residents and foreign residents) has far more potential in Nyungwe than had previously been assumed. Some of the foreign visitors who have experienced canopy walks in other countries commented on some perceived deficiencies in the design of the one in Nyungwe. Similar structures in Costa Rica, for example, bring the tourist much closer to the actual canopy.

The expansion of facilities within the park should also be accompanied by selling points where local communities can offer food, handicrafts, and promotional materials regarding their campsite and cultural tourism offerings.

Handicrafts

Two of the four cooperatives produce handicrafts. The Kitabi Women's Handicraft Cooperative focuses primarily on handicrafts, and with 55 members, has been in operation for a few years. They produce traditional baskets, placemats, shopping bags, jewelry, wood carvings, and sweaters, some of which are pictured in Figure 9. The outlet is in a good location, and will soon be combined with a honey processing and sales operation next door which will increase the level of activity in that location, benefiting both tenants.

Figure 9: Items produced and sold by Kitabi Women's Handicraft Cooperative



Source: Author photos

While some of these items represent authentic Rwandan heritage or traditions (such as the wooden milk container in the right-hand photograph), and others such as the wooden carvings demonstrate considerable skill in craftsmanship, their market appeal is somewhat limited. In particular, many of the woven baskets and placemats would appeal more to tourists with improved design. The coop has not yet succeeded in placing its products in any of the lodges nor inside the Park Visitor Centers, which will be an important milestone in their development.

In order to boost the sales and appeal of their offerings, the cooperative should consider marketing some products that they themselves don't produce. There are other locations in Rwanda that have specialized in production of certain handicrafts, especially in the VNP area, and have proven market appeal. While the margin for sales of such items will be lower, if it increases volume and brings more attention to some of the local offerings, overall net income should rise. In particular, identifying items that international tourists traveling by air can conveniently carry is a key criterion. In addition, handicraft sellers may find that a certain segment of the market would find replicas of some of the classic Rwandan woven basket designs more appealing, such as those in the National Museum collection.¹²

The Cyamudongo Cultural Cooperative, while primarily focusing on construction and opening of its new kiosk at this time, has also started producing prototypes of handicraft products. Leaders of the cooperative, pictured with some of their products in Figure 10, recognize that they have a long way to go in terms of designing products that will appeal to tourists (for example, the chair in the picture at left, intended for residents of Kigali, needs lower arm rests). However, their based weaving designs are more traditional and may appeal to the appetites of market segments not currently being addressed by the coop in Kitabi.

Figure 10: Members of Cyamudongo Cultural Cooperative with handicraft samples



Source: Author photos

Challenges

The 2011 Economic Baseline Survey conducted by *Nyungwe Nziza* identified the following key challenges facing the existing cooperatives:

- Income for the cooperatives still too low.
- Lack of enough working capital.

¹² Excellent photographs and documentation of these artifacts can be found in “Regards sur le Rwanda: Collections du Musee National,” by Celestin Kanimba Misago and Thierry Mesas, which can be purchased at the Gisakura Guest House.

- Poor management skills in cooperative management.
- Lack of opportunity to get income from NNP.
- Lack of clear vision.
- Lack of access to the market.
- Challenges of marketing cooperatives products and services.
- Linkage with partners, lack of training, lack of visits at the field to evaluate their activity.
- Lack of modern machines.
- Lack of headquarters/offices where to be permanently stationed.

The interviews supported these overall findings. Most of them are still finding their way, although *Nyungwe Nziza* is helping them make progress especially in terms of organizational structure and financial management, which are essential to create transparency and build greater trust and cohesion. However, overall some of the existing cooperatives appear to lack access to technical assistance that *Nyungwe Nziza* could provide, particularly in handicraft design and marketing, and food production and marketing.

Stakeholders

The key stakeholders in the success of tourism in Nyungwe National Park include:

- Bordering communities
- Environmental beneficiaries
- The Rwanda Development Board (RDB)
- Private sector, including chambers, associations, and investors
- Non-governmental organizations, including the Wildlife Conservation Society and Rwanda Environment and Development Organization (REDO)
- Universities & Research Centers
 - National University of Rwanda (NUR)
 - Antioch University (USA)
 - East Anglia University (Payment for Environmental Services Program)
- Donors, primarily USAID and the Global Environmental Fund (GEF), although this latter is currently winding down with no follow on plans

Bordering communities and environmental beneficiaries

Direct economic beneficiaries

Nyungwe Nziza's core mission is to engender a higher sense of ownership and investment in Nyungwe's environmental sustainability on the part of those communities located on the periphery of the Park. To appreciate the magnitude of the task, consider the calculation in Table 7, which

suggests that the population living within a 5km radius of the Park’s boundaries is approximately 360,000.¹³

Table 7: Estimated population in 5km border zone of Nyungwe National Park

	160 km	Circumference of Nyungwe National Park
x	5 km	Depth of border zone
	800 km ²	Total area of border zone
x	450 km ²	Population/km ²
	360,000	Population

However, the number of people in local communities who are currently impacted directly by tourism is a little over 500, as shown in Table 8. Even if one assumes that each person identified in Table 8 is responsible for a family with on average five dependents, we are asking economic benefits accruing to roughly 2,500 persons to influence the attitude and behavior of the entire population, when they account for less than one percent of that population. Even starker is the contrast between the number of tourists, which averaged 22 per day in 2011, and the border population.

Table 8: Estimated direct local beneficiaries of tourism

	200	Park staff (RDB & KCCEM)
	64	Local hotel staff
	200	Members of cooperatives
+	50	Other local vendors
	514	Direct local beneficiaries

Fortunately, not all members of the community need to obtain direct benefits from tourism, in order for tourism to have a dampening effect on behaviors that threaten sustainability. Peer pressure and awareness raising campaigns have a significant multiplier effect.¹⁴ Nevertheless, the need to increase the ratio of direct beneficiaries to community members is paramount, and this can be achieved through pursuit of two main strategies:

- a) Increasing the flow and spending of tourists into Nyungwe National Park
- b) Increasing the share of benefits to local communities from each tourist

The orange areas highlighted in the value chain map indicate the estimated share of each activity that currently accrues to local stakeholders, based on the assumptions detailed in Appendix A. *Nyungwe Nziza*’s activities are designed to enhance these shares; for example, assistance to four current and several prospective cooperatives should result in improved quality and reliability of food products that can be used by local hotels, thereby increasing the share of local communities of tourist spending. The potential economic benefits of this work are estimated in Figure 15 and in Table 11.

¹³ Using a slightly different approach, the KCCEM also made an estimation of the relevant population in bordering communities, and came up with an estimate of 300,000, which is reasonably close to the DAI estimate.

¹⁴ The success of the Clean-Up Rwanda campaign was cited by Louis Rugiranyange, the Chief Park Warden of Nyungwe National Park, as an indication of the power of Rwanda’s social fabric to not only create awareness but to translate awareness into action and compliance.

Other occupations not directly related to tourism also benefit from Nyungwe, such as the estimated 1,370 beekeepers deriving income from bees foraging in the Park, and contractors benefiting from timber and bamboo harvesting in the Park's *zone tampon* (buffer zone).

Environmental beneficiaries

The Wildlife Conservation Society¹⁵ estimates that 70% of Rwanda's water resources are derived from Nyungwe National Park, due to its location as a rainfall catchment zone. This ability is crucially dependent on Nyungwe's ability to maintain healthy vegetation and act as a "sponge", retaining water during the rainy season and releasing it over time during rest of the year. Public awareness of the importance of this function has been raised as Rwandans have seen the negative impacts on water retention of unsustainable cropping patterns on steep hillsides in regions where some populations that returned to the country after the Genocide were relocated. Neighboring countries, especially Burundi, also benefit from Nyungwe's key role in the region's water catchment system.

Other environmental benefits include the remarkable biodiversity of the Park, which contains 13 different primate species (25% of Africa's total), 275 bird species, 1068 plant species, 85 mammal species, 32 amphibian and 38 reptile species. These benefits represent an invaluable asset not only from a tourism perspective, but as the birthright of every Rwandan citizen.

Government institutions

The key government agency relevant for Nyungwe is the Rwanda Development Board's Tourism and Conservation Department. It manages all aspects of the Park, both on the conservation side (wardens) as well as tourism development.

The RDB administers a revenue sharing program, whereby 5% of the revenues from park permit fees are deposited in a fund, which is used to support economic and social development initiatives in communities adjacent to the three national parks. Nyungwe has been allocated to receive 30% of those funds (a higher proportion than Nyungwe's visitor permits contribute). Although the selection of initiatives is administered in consultation with representatives of local communities, greater frequency and transparency of consultations has been called for by some stakeholders.

The local district governments that border the Park also have an important role to play, especially regarding infrastructure development, as they have the funding and mandate to build roads. Activities supporting Nyungwe among these entities are coordinated using a Joint Action Forum chaired by the Chief Warden (RDB).

Private sector chambers and associations

The Rwanda Tourism Chamber is an umbrella organization for a number of associations that represent the key suppliers in the industry. The largest and best organized among these is the Rwanda Tour and Travel Association. The Rwanda Safari Guides Association and the Hospitality and Tourism Training Institutions Association of Rwanda were established more recently.

Other stakeholders

The Wildlife Conservation Society, headquartered in New York, has been active in the Park for several decades, providing valuable technical support and training, with a primary focus on

¹⁵ Headquartered in New York and active with a significant presence in Nyungwe since 1984, under the auspices of the *Projet Conservation de la Foret de Nyungwe* (PCFN).

conservation. The constant flow of university researchers, donors, and prominent experts associated with the WCS, especially world-renowned primatologists Amy Vedder and Bill Weber, has not only furthered the cause of conservation but also helps in promoting sustainable tourism.

Opportunities

Some of the key opportunities mentioned in interviews and focus groups include:

- Concessions Policy – major investors, such as the Dubai World Group, which already has a significant investment locked up in the Nyungwe Forest Lodge, have a direct incentive to invest in additional attractions such as world class cable lines in order to bring more visitors to their lodge. Their luxury lodge, which was originally priced at \$500/day, has reduced its prices to the \$200/day range for the time being, and will not be as profitable as originally intended until the volume of tourists increases. Other international and well qualified investors are also expected to bid on such concessions in the park, as soon as the draft concessions policy, currently under review by the Prime Minister’s Office, is approved.
- There is some potential for cross-marketing, with local tea estates, attractions on Lake Kivu, etc. When the new highway along Lake Kivu toward Kigali is completed, new opportunities for more attractive circuits will emerge.
- Clustering – the President’s office has mandated that RDB will now start implementing a cluster approach (not just in tourism but in a number of industries), but at this point no one appears to know what a “cluster approach” is, and everyone is using a different definition of cluster.
- Cultural tourism. There is significant potential to increase local incomes from cultural tourism, and some cooperatives have taken the initiative to construct traditional architecture and provide local food, dancing, and other experiences allowing visitors to experience the traditional lifestyle (see Figure 7). However, for some communities, such as Banda Village Cooperative, poor road access critically constrains their ability to leverage such assets.

Figure 11: King’s House replica under construction by “Friends of Nyungwe” Cooperative



Source: Author photo

Constraints

The following list of constraints emerged from interviews and focus groups:

- Lack of **local road access** to attractions (inside park) and communities (adjacent to park).
- **Marketing and promotion** – budget is low and overly focused on primates and on the international market.
- “Everybody in Rwanda is still talking about **gorillas**.” Nyungwe is still relatively unknown, and its true potential is not being promoted. When expectations regarding primates are raised too high, visitors who don’t get to see the chimps end up disappointed.
- **Guide training** needs improvement.
- **Food production** – the food value chain needs technical assistance specific to agriculture. Helping coops with administrative and organizational matters is important but not enough to boost sales to hotels, which are looking for quality and reliability levels that the coops do not know how to provide.
- There is no established **transportation system** in and around Nyungwe for visitors who have arrived without their own independent transport – especially backpackers. Local car rental rates are prohibitively high. This lack of mobility hampers the full utilization of Park amenities, and the opportunities for visitors to interact with local residents, which in turn limits potential revenues from cultural tourism¹⁶ and purchases of handicrafts.
- **Pricing**¹⁷ should be adjusted to be more in line with international standards for similar attractions (e.g. trails, canopy walk).

¹⁶ Members of the Banda Cooperative reported that in order to put on a dance performance at one of Nyungwe’s lodges, the dancers must first walk for two hours to the Uwinka Visitor Center, then arrange for a vehicle to transport them to the lodge, and then return by the same route in the evening. While less walking is involved, the cooperative in Cyamudongo faces similar constraints due to lack of public transportation alternatives.

¹⁷ See “Optimization of Activities Fees for Improved Visitor Satisfaction in Nyungwe National Park”, DAI, February 2012

4. REVENUE FLOWS AND PRO-POOR INCOME

Estimating the impact of new investments on tourist arrivals

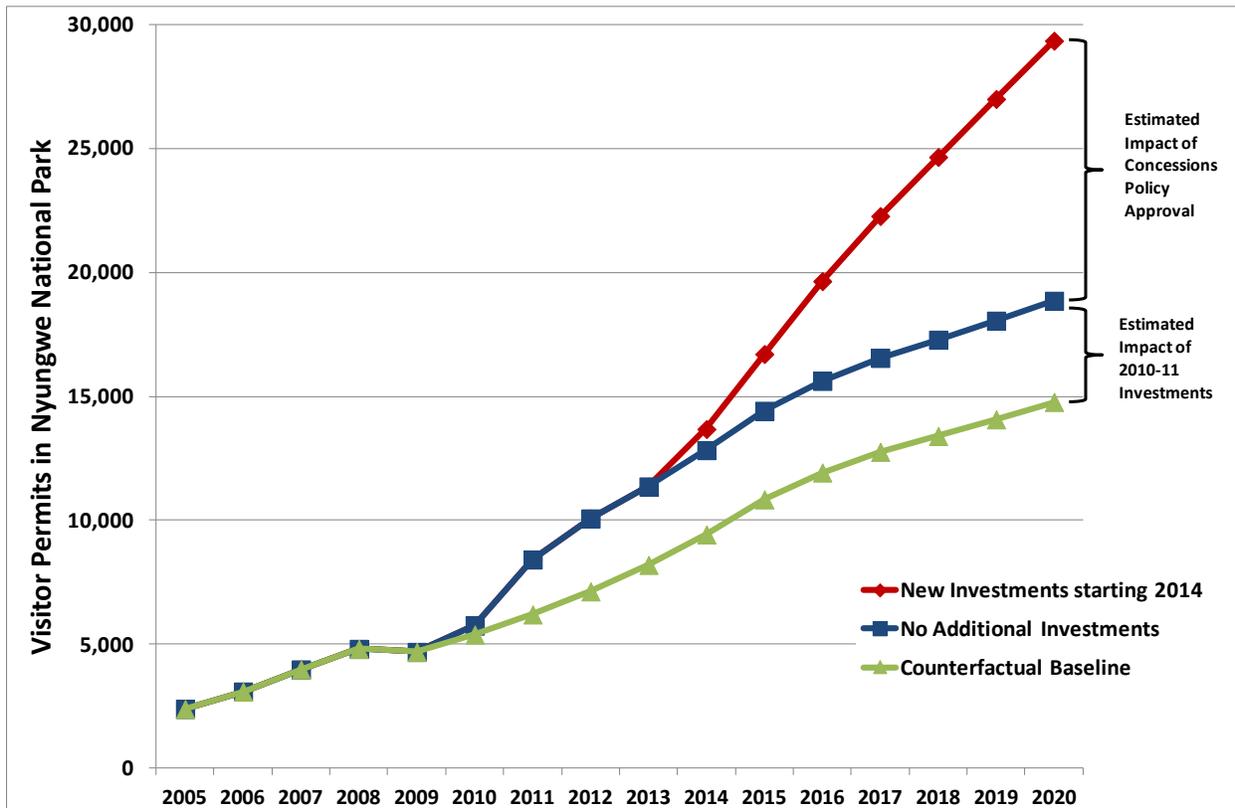
One of the clear successes for Nyungwe National Park to date has been the sharp increase in visitors to the park in 2011 (43%), more than twice the annual increase in visitors for Volcanoes National Park for the same year. This increase can clearly be attributed to the impact of two key events that took place in late 2010 and early 2011:

- **New lodges** - two new accommodations opened, the Nyungwe Top View Hill Hotel and the Nyungwe Forest Lodge, increasing the local availability of beds from 12 to 72, with a significant upgrade in quality as well as quantity; and
- **Canopy walk** – situated below the Uwinka Visitor Center, attracting 2,315 visitors, 28% of Nyungwe’s total, in 2011.

A simple economic model was constructed to estimate the impact of these new investments on Nyungwe and the surrounding economy, and to provide projections of the likely impact of future investments of this type in and around the park. The model is driven by a baseline estimation of visitors attracted to the park, which is then modified based on activities taking place in the park.

The estimates of the overall impact of the approval of the concessions policy are summarized in Figure 12. The lowest line, labeled *counterfactual baseline*, shows the estimated number of visitors if the 2010-2011 investments in new beds and attractions had not taken place. The middle line shows the actual data up to 2011, after which it projects the likely volume of visitors if there were little or no new investment. The third line shows the impact of new private sector investments that could be made as a result of the implementation of the concessions policy, assuming that new capacity would start coming online by mid-2014. Even using very conservative estimates regarding the impact of investments, the model estimates that by 2020 Nyungwe would attract 56% more visitors if the concessions policy is implemented.

Figure 12: Projected Growth of Visitors to 2020



Source: DAI estimations. See Appendix A

In order to provide a more detailed examination of the near-term impacts of the concessions policy, two additional simulations were developed. The first simulation limits the new investments to a single “burst” in 2014-15, as shown in Figure 13. This timeline is relatively optimistic, as it assumes that the policy will be adopted and implemented decisively, with short but reasonable intervals for preparing proposals (3 months) and selecting winning proposals (also 3 months). It assumes that upon approval of the proposal, a typical attraction would take 12 months to become operational, while a typical lodge would require 18 months.¹⁸

¹⁸ Some attractions, such as campsites, kiosks, and trails would take less than 12 months, while others such as canopy walks or cable lines may take a little longer. Refurbishing an existing lodge could take as little as 12 months, while full construction once permits are in place would average 18 months.

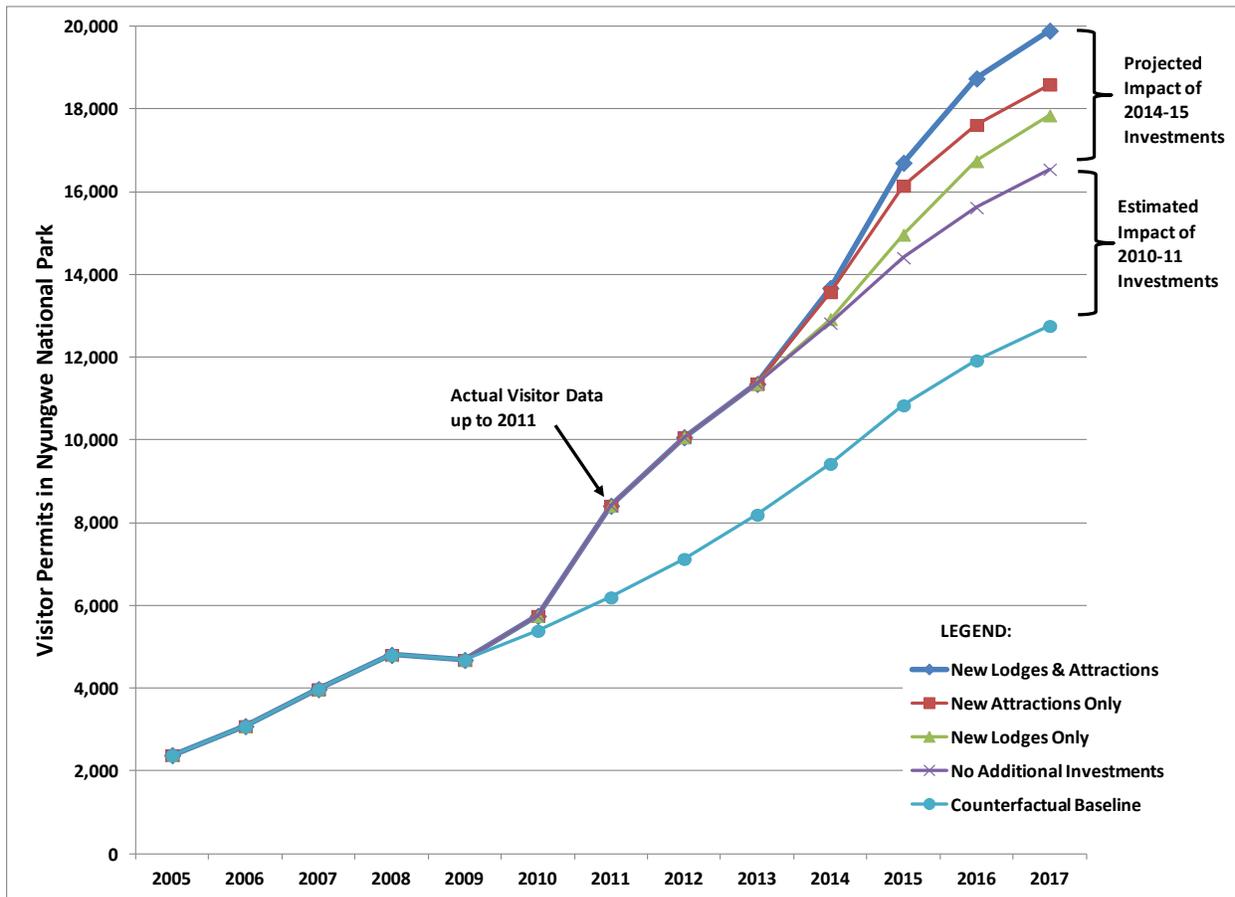
Figure 13: Timeline for New Investments under Concessions Policy



A more detailed breakout of the model’s projections, examining a single ‘burst’ of investment similar to the magnitude in 2011, is shown in Figure 14 using the following five scenarios:

<u>Scenario Label</u>	<u>Assumptions</u>	<u>Implications</u>
Counterfactual Baseline	Projected baseline of visits to Nyungwe National Park if the investment in new lodges and canopy walk in 2010-11 had not taken place	Growth in visits would have been lower, reaching only 6,200 in 2011 and tapering off thereafter
No Additional Investments	Captures the effect of the investments in 2010-11, but assumes no additional investments will be made in 2014-15	Park gets a one-time boost in 2011-2012, but growth stagnates thereafter
New Attractions Only	Assumes that two new attractions (e.g. canopy walk/cable line) are added but no new hotels	New attractions will boost visitors and help fill empty beds in existing lodges
New Lodges Only	Assumes that new lodges provide an additional 50 beds in 2014-15, but no new attractions	New lodges will boost visits, but not as much as attractions
New Lodges & Attractions	Assumes new investments in two new activities (e.g. canopy walk or cable line), and two new lodges in 2014-15	New investments in both lodging and attractions will help sustain healthy growth

Figure 14: Projected Growth in Visitors to Nyungwe under 5 Scenarios



Source: DAI estimations. See Appendix A

The growth projections are based on the assumptions shown in Table 9, allowing for 20 new beds in 2014 (presumably from refurbishment of an existing structure) along with a new wildlife viewing attraction (for example, a cable line), and an additional 30 new beds and attraction in 2015.

Table 9: Assumptions for Expansion of Park Capacity used in Projections

Year	Lodge Capacity (beds)	Cable or Canopy-type Attractions
2012	72	1
2013	72	1
2014	92	2
2015	122	3

These assumptions are somewhat arbitrary, as they are designed primarily to conservatively illustrate the impact of quick action in approving and implementing the proposed concessions policy¹⁹. Detailed recommendations for a variety of potential concession sites are spelled out in the Survey of

¹⁹ Nyungwe National Park Concessions Plan, March 2011.

Concession Sites for Sustainable Eco-Lodge Planning and Design (April 2012). At present, given the number of attractions currently offered in the park, there is an oversupply of high end and upper mid-range lodging, as the two new lodges have occupancy rates ranging from 20-30%. However, there is already excess demand for additional lower mid-range accommodation, since the Gisakura Guest House is often fully booked during the high season. Moreover, an attractively situated lodge can generate its own demand. For example, as detailed in a report prepared for *Nyungwe Nziza* in March 2012,²⁰ new accommodations can generate additional demand by using designs such as “treehouse” style eco-lodging (site design for Busoro). In addition, while there is currently an oversupply in the area adjacent to the western entrance to the Park, new capacity in other locations will generate new demand, since they will in effect provide new access to regions that have not been convenient for visitors. In particular, new capacity in the northern Gisovu gateway will be very attractive for Rwandan residents as a weekend get-away. In any case, with additional attractions operational by 2014, and hopefully improved road access to attractive, developed sites such as Banda Village, there will be a need for new lodge space to accommodate increased demand.

As described at the end of this section, delays in this timeline, either due to slower processing and approval of tenders, or construction on the part of the bidders, would directly impact local communities by a loss of at least \$116,000 in sales of food and handicrafts, revenues from kiosks and cultural tourism, and wages from hotels. The actual costs of delay are almost certainly greater than this conservative estimate, as the model does not take into account potential revenues from operation of campground and canteens, management of trail bike concessions, servicing proposed rest stops, and provision of porters. Also, it should be noted that the model only focuses on pro-poor income – there would be additional lost revenues for owners of lodges and other major concessions that would often be controlled by outside investors.

Estimating income streams for local communities

Increasing the flow of visitors – tourist arrivals – is the primary driver of the benefits that can be obtained by local communities from ecotourism. The significant increase in visitors experienced in 2011 demonstrates the power of improved attractions and accommodations to bring in tourists. However, given the market positioning challenge faced by Nyungwe National Park, clearly, a continuous pipeline of investments will be necessary until saturation or some other constraint, in terms of optimal use of park resources, is reached.

Additional visitors are not enough

Visitors are not the only determinant of benefits to local communities. Once visitors have been induced to come to the park, several other factors come into play. These include:

- The propensity for lodges to purchase food locally
- The propensity for lodges to hire local labor
- The propensity for visitors to purchase directly from local communities, such as kiosk services, handicrafts, local food products (such as honey) and cultural tourism services

Figure 15 illustrates some of the trade-offs involved in food purchases by lodges. Food expenditures by lodges account for roughly 25% of total costs, and, while it varies by lodge, on average we estimate that no more than one-quarter of that food is purchased locally (of local origin). Based on

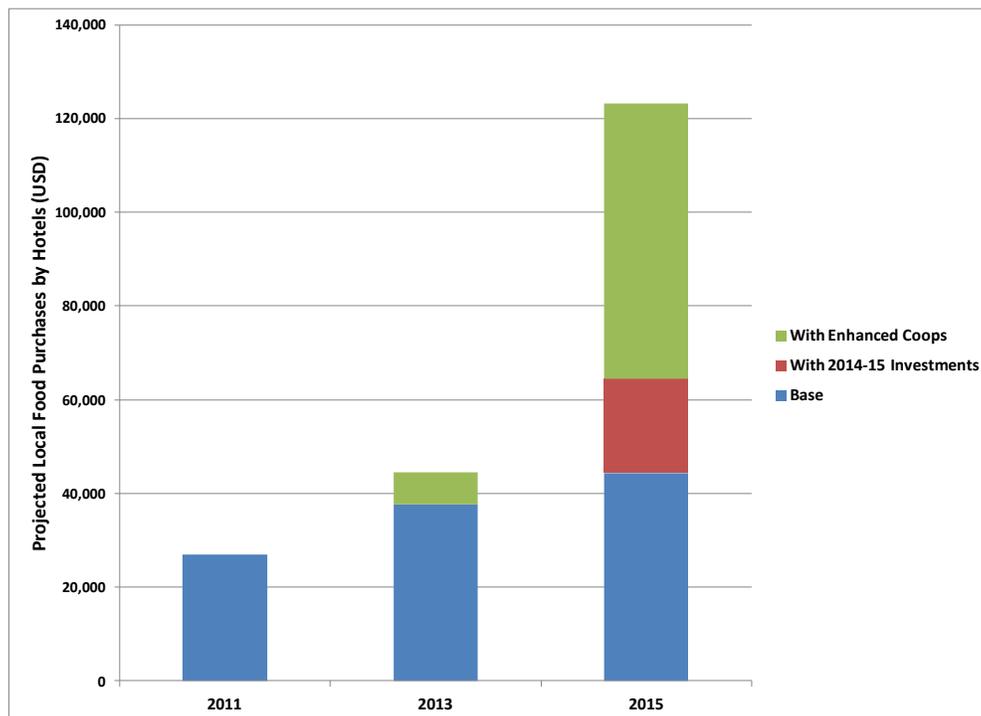
²⁰ “Survey of Concession Sites for Sustainable Ecolodge Planning and Design,” Diane Elliott Gayer, DAI, March 2012.

interviews and survey data, local food purchases in the region were estimated to be around \$27,000 for 2011. With expected growth in the number of visitors, even without additional investments in attractions and accommodation, this number is expected to grow to \$38,000 by 2013 and \$46,000 by 2015.

However, with investments in new hotel capacity and attractions in 2014 and 2015, an additional \$22,000 in local food purchases would take place by 2015, increasing the total to \$68,000.

An additional effect is also captured in the figure: as *Nyungwe Nziza*'s work with cooperatives moves forward, the cooperatives will learn how to produce more food that is of an acceptable standard, both in quality and reliability, to the lodges. If successful, this effort will induce lodges to increase their share of local purchasing. This effect is captured in the model under the rubric of "enhanced coops", with an assumption that local purchases will rise incrementally from 25% of total food expenditures in 2012, to 31% in 2013, 38% in 2014, and 44% in 2015. As shown in the top bar in Figure 15, this activity has the potential to further increase the total local food purchases in 2015 to \$108,000.

Figure 15: Projections of Local Food Purchases by Hotels 2011-2015



Estimated overall impact of concessions policy approval

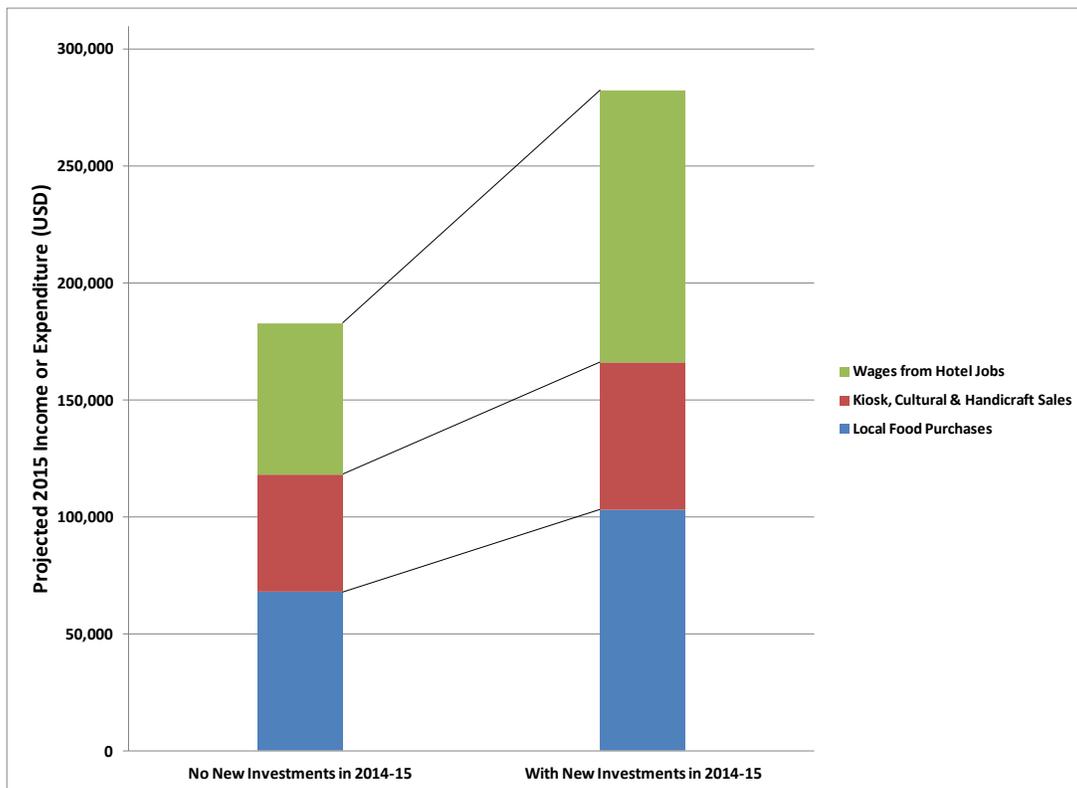
Food sales are only one potential channel for local communities to benefit economically from increased tourism in Nyungwe. There are a variety of ways through which new concessions will impact communities:

- Food purchases by lodges
- Revenues from kiosks
- Revenues from handicrafts
- Revenues from cultural tourism

- Wages from hotel employment
- Operation of the campground and canteen at Uwinka Visitor Center
- Management of trail bike concession
- Additional campgrounds in other areas of the park
- Servicing proposed rest stops
- Provision of porters (available in most parks in Africa, including Volcanoes National Park)

Of these ten opportunities, enough information was collected to estimate revenue flows from half of them, the top five in the bulleted list above. Figure 16 summarizes the likely revenues from three channels: food purchases by lodges; revenues from kiosks, handicrafts and cultural tourism; and wages from hotel employment. These estimates were derived using a rudimentary model that projects expenditures based on past trends and anticipated growth in visitors (see Appendix A for a description of this model). The model projects that by 2015, local revenues from such activities would total \$183,000 without new investments, and \$282,000 with the new investments. Thus, rapid approval of the concessions policy and streamlined implementation of the guidelines would generate a 55% increase in the direct economic impact of the park on local communities.

Figure 16: Local income in 2015 with and without new investments in 2014-15



Impact of delays

One additional simulation was run, to determine the impact of a one-year delay in implementation of the concessions policy. Under this scenario, the new investments programmed for 2014-15 in the above example were postponed by one year, to 2015-16. As compared to the rapid implementation

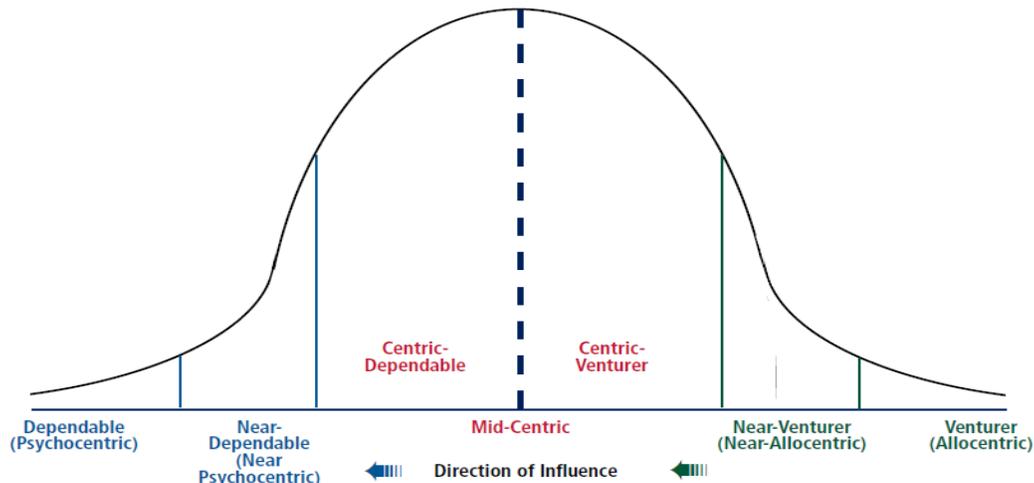
scenario, the delayed scenario resulted in 20% lower earnings for local communities in 2014 and 2015, totaling \$115,000 in lost income by 2016. Accordingly, rapid implementation of the concessions policy can significantly improve welfare in the communities bordering Nyungwe, with concomitant impacts on improved attitudes toward tourism and ecological sustainability of the Park.

5. RECOMMENDATIONS

Tourism market segmentation specialists construct profiles of each tourism segment, not defined by types of tourism product at the destination (e.g. beach, adventure, cultural), but in their source countries in terms of the psychological motivations of the potential tourist, broken out by geographic region, income, and other demographic and behavioral characteristics. One of the overriding factors is the tourist's personality type, ranging at one end of the spectrum from "venturers" who value authenticity, spontaneity and independence, to "dependables" who value reliability, predictability and popular brands on the other end of the spectrum (see Figure 17). An optimal marketing strategy for a relatively undeveloped destination such as Nyungwe is to appeal initially to the venturers, who can act as pioneers, gradually folding in special interests, such as bird watches and conservationists, who can ultimately influence and increase the destination's appeal to more mainstream visitors once a stronger brand image and more comfortable, reliable accommodations and attractions have been established.

Figure 17: Personality types for tourism market segmentation

Psychographic personality types



Source: S. C. Plog, "Why Destination Areas Rise and Fall in Popularity: An Update of a Cornell Quarterly Classic," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 42, No. 3 (2001), pp. 13–24.

Nyungwe's market positioning has not followed this pattern, in part due to the strong influence of the high-end niche strategy adopted for the premium gorilla trekking product in the north, and the opportunity to entice add-on visitors to Nyungwe from that demographic. While this segment is undoubtedly an important market upon which Nyungwe can draw, it cannot and should not be Nyungwe's primary target market if the Park is going to reach its full potential as a sustainable income source for local communities.

Without threatening the high-end segment of the market, Nyungwe's profile can be broadened to appeal to a wider variety of 'venturer' and special interest travelers, whose social values are closely aligned with the local community's need for environmental and cultural sustainability. Such an approach will not only optimize the number of tourist visitors to the region, but also facilitate the effort to identify means to maximize the local benefits of the tourism activities.

Recasting Nyungwe's tourism profile

The recent upsurge in visitation associated with the canopy walk suggests that Nyungwe's profile can indeed move out of the shadow of VNP and become, for many tourists, a destination in its own right. Costa Rica's success in this regard may provide a useful case. In comparison with neighboring countries such as Colombia, Guatemala and Honduras, Costa Rica cannot boast rich resources in terms of coral reefs, spectacular mountains, ancient ruins nor even rain forests and wildlife. However, Costa Rica's tourism sector out-performs all of those countries on a per capita basis, because it has positioned itself in the traveler's mind as an overall *ecotourism experience*.

Costa Rica's marketing pitch does not feature the 'objective' characteristics of its rain forests and wildlife (a comparison where it will generally fall short against other destinations), but the high quality of the guides, the seamlessness of the logistics, the comfort of its accommodations, and the *bona fide* sustainability of its overall national conservation policies as well as the specific "green" certification of most of its attractions. Combined with its reputation as the safest destination in the region – a distinction that Rwanda also shares, although it is less widely recognized – Costa Rica offers an experience that provides high satisfaction, and therefore high customer loyalty and word-of-mouth marketing, in the ecotourism market.

What is cluster-based development?

Although many Rwandan stakeholders, particularly in government, have been calling for a cluster approach to tourism development, Rwanda has little experience with this technique and there is no commonly understood definition. This approach was initially developed to accelerate the formation of industrial clusters, which are geographically concentrated companies and related institutions that maintain a competitive edge through use of shared resources such as training and applied research facilities, marketing centers, and most importantly, a shared sense of strategy. This ability to work together often leads to faster adoption of innovations, improved productivity, and a sharper market focus, often toward premium and niche markets.

Experience has shown that one of the key success factors in enabling this process to accelerate has been improved public-private dialog (PPD). Typically this process starts by addressing private sector fragmentation, allowing a clear message to be conveyed to government regarding the economic potential of the sector, and the key public policies and regulations that require reform in order to make the sector more competitive. The most successful cluster initiatives are primarily private sector driven, while the government's role is to support the initiative by providing resources for high quality analysis and facilitation, engaging with other stakeholders in a collaborative strategy development process, and taking part in implementation initiatives such as policy reform and infrastructure provision as called for in the strategy.

Why do cluster initiatives work? What market failures do they address? Typically, these initiatives work best in environments with fast-changing markets and a relatively concentrated set of producers, where there is an opportunity to make a transformational shift in the local industry to achieve recognition for a premium product. The market failures they address are the lack of flow of information and coordination failures, which become obstacles when there is a low level of trust and accepted 'institutions for collaboration.' In the case of Nyungwe, all of these indicators are present, as coordination and public-private dialog are limited, and a clear and well-accepted strategy is not in place.

Cluster-type initiatives in tourism have taken place in South Africa, Costa Rica, Turkey, all followed by increases in tourism revenues. The collaborative, stakeholder-driven approach of a cluster

initiative also lends itself well to Nyungwe’s specific challenge of involving local beneficiaries in order to reinforce incentives for conservation.

A good framework for launching such an initiative would involve the following six steps:

Step 1: Forming a Joint Private-Public Leadership Team

Step 2: Competitive Analysis & Evaluation

Step 3: Forming Cluster Working Groups

Step 4: Developing Action Initiatives

Step 5: Organizing for Continuity

Step 6: Communication & Outreach

The essence of the approach is to create a credible platform where top private and public sector leaders are motivated to take part, because this group has the latest information, the best analysis, and becomes a proper forum not only for strategy development but also for shaping and monitoring joint action initiatives in the common interest. “Early-wins” that this group could focus on include initiatives such as provision of more local transportation alternatives (for both tourists and coop members), custom training for lodge employees by RDB staff on ecological aspects of Nyungwe Park, expansion of bird watching and mountain biking amenities, and coordinated lobbying for approval of the concessions policy. Once confidence has been built from successful implementation of such shorter term initiatives, a more ambitious and comprehensive strategy can be adopted.

Further Readings on Cluster Development

A Practical Guide to Cluster Development, UK Department of Trade and Industry, 2009.

Clusters for Competitiveness: A Practical Guide and Policy Implications for Developing Cluster Initiatives

Industrial Clusters and Micro and Small Enterprises in Africa: From Survival to Growth. World Bank Directions in Development series - Private Sector Development, 2010

Competitiveness Partnerships: Building and Maintaining Public-Private Dialogue to Improve the Investment Climate. A resource drawn from the review of 40 countries’ experiences. Benjamin Herzberg and Andrew Wright, World Bank, Private Sector Development, 2003.

Tourism Clustering and Innovation: Paths to Economic Growth and Development. Sara Nordin, European Tourism Research Institute, 2003.

Tourism Cluster Competitiveness and Sustainability: Proposal for a Systemic Model to Measure the Impact of Tourism on Local Development. Da Cunha & da Cunha, Universidade Federal do Paraná , 2005.

All of these titles are downloadable free on the internet by searching on the title.

Implications for project planning and activity development

To implement the approach described above, the following actions are recommended:

General

1. **Updated marketing strategy.** Re-evaluate the marketing strategy Nyungwe National Park within the overall Rwandan tourism policy framework, taking into account the region’s specific opportunities and constraints. An updated marketing strategy for Nyungwe would allow for a revised pricing structure that is more in line with the principles laid out in USAID’s recent

pricing study²¹, making the Park more competitive with similar products in other countries, and devote the necessary resources to promotion and marketing as well as product enhancement. Overall, the strategy should aim at greater product differentiation and segmentation.

2. **Develop Public Private Partnership approach.** Nyungwe’s challenge to funding needed infrastructure and conservation programs is not unique – parks across Africa face similar challenges. Enactment of the draft National Concessions Policy would represent a major step forward in this direction, but even with that legal framework in place, a wider understanding of how to manage and implement the policy will be necessary. Inspiration can be drawn from the experiences of South African National Parks, which developed a concept of “commercialization as a conservation strategy,” Gorongosa National Park in northern Mozambique, which signed a 20-year contract with the Carr Foundation, and the African Parks Network, which already has a working relationship with ANP.²²
3. **Adopt cluster approach.** To support the inclusive implementation of this overall package of recommendations, *Nyungwe Nziza* can facilitate the launch of a cluster development process, responding to the RDB’s new mandate. At present, there is no recognized platform for broad, comprehensive solutions in tourism. On the part of the public sector, there is a significant lack of ability to respond to market conditions and private sector opportunities and constraints; the private sector is fragmented and unable to pull together to collaborate effectively with the government to co-develop a cohesive marketing plan; and the local communities feel disenfranchised. The project can bring these key players and other stakeholders together, using a common fact base of analysis, to develop a shared vision for the future of Nyungwe along with a mutually agreed action plan with defined roles for all participants. Identifying ‘quick-win’ opportunities, such as improved provision of food to lodges and a world-class design for a new cable line or similar attraction would provide momentum and encourage the group to take on more ambitious goals over time. Given the lack of previous experience in Rwanda with this approach, such an effort should not be launched without an experienced cluster facilitator, or extensive training of local facilitators in action-oriented cluster development methods.

Specific short term actions

1. **Approve National Concessions Policy.** Approve the policy and rapidly implement the associated *Nyungwe National Park Concessions Action Plan*,²³ which provides guidelines for managing private sector investments that reduce the financial and managerial burden on the public sector, while ensuring that sustainable practices are followed. As indicated by the investment impact model, net economic benefits to local communities are conservatively estimated at total approximately \$135,000 by 2015 (increasing local tourism income by 56%), growing to \$350,000 by 2017. The urgency of this action for local communities is highlighted by the fact that each year of delay for his policy would result in a permanent loss of potential local earnings of approximately \$115,000.
2. **Assist RDB with planning process.** To support the rapid implementation of the concessions policy once it has been approved, *Nyungwe Nziza* can provide technical assistance providing

²¹ See “Optimization of Activities Fees for Improved Visitor Satisfaction in Nyungwe National Park”, DAI, February 2012.

²² See “Managing National Parks: How Public-Private Partnerships Can Aid Conservation”, Nico Saporiti, World Bank, June, 2006.

²³ *Nyungwe Nziza* has prepared two draft proposals, the “Rwanda Protected Areas Concessions Management Policy”, last revised in April 2012, and the “Nyungwe National Park Concessions Action Plan”, March, 2011, which spells out in greater detail how the national policy, once approved, could be applied in Nyungwe.

design criteria and detailed information regarding costs and reasonable revenue expectations for prospective new attractions to be funded through private sector investments. Providing such information will allow the RDB to initiate the bidding process for such concessions with greater confidence that competent investors will compete and a satisfactory outcome will be obtained. In this context, feedback on the existing canopy walk from visitor groups familiar with world-class facilities in other locations indicate that a higher quality product can be attained, leading to greater visitor satisfaction and therefore promotion potential.

3. **Expand technical assistance in agriculture and handicrafts.** Expand *Nyungwe Nziza*'s support for community development activities to include more technical assistance, especially in the areas of food production and handicrafts. Existing and potential cooperatives in the communities adjacent to the Park would in particular benefit from targeted expertise in small-scale agribusiness development, enhancing the cooperatives' ability to produce and deliver higher quality food products according to the hotels' specifications. As reliability of supply of local produce is one of the main factors in the decision of lodges to procure locally, this specialist could also evaluate the potential to establish a local exchange or produce aggregation system, whereby products could be reliably stored and distributed to local establishments serving tourists. Similarly, revenues to handicraft producers could be enhanced with assistance in improving product design and marketing.
4. **Expand the number of cooperatives in the project.** Currently there are four cooperatives representing some 250 members receiving direct assistance from *Nyungwe Nziza*, with a handful of cooperatives that appear to be promising in terms of their potential to meet the project's requirements in the near future. If possible, the project should expand its 'pre-accession' activities, identifying more candidates and providing easily accessible trainings for the formation of more cooperatives. If other key recommendations in this report are adopted (e.g. concessions policy and updated marketing strategy) the increased number of tourists will be able to support the additional cooperatives.
5. **Weekend charter bus.** Evaluate the opportunities for expanding the role of domestic tourism in Nyungwe. For example, many Rwandan residents and foreign residents residing in Kigali would like to visit Nyungwe on weekends. It's possible that a dedicated, good quality charter bus that leaves Kigali on Friday evening and/or Saturday morning would encourage more visitors.
6. **Conduct international study tours.** Many tourism stakeholders in Rwanda have travelled abroad, but very few actively benchmark their tourism offer against other countries, which limits the ability of leaders to inculcate the necessary sense of urgency regarding the competitiveness of the industry. While the neighboring countries may provide the best benchmark for Volcanoes and Akagera National Parks, for Nyungwe the most productive study tour destination is probably Costa Rica. Not only would participants observe firsthand the extraordinary success of Costa Rica in providing and marketing a world class ecotourism destination, but it would also provide participants with an opportunity to develop a *shared understanding of the ecotourism market*. If, unlike previous study tours, the group is composed of a balanced mixture of relevant public sector decision makers, private sector leaders and stakeholders, the improved mutual understanding, and the deeper relationship forged on the trip itself, can lead to a higher level of mutual trust and the opportunity to create a shared vision for Nyungwe's future. The Costa Rican Tourism Board (ICT) is an exemplary organization to learn from and partner with, which uses sophisticated market segmentation tools and understands how to engage inclusively with both local communities and private sector tourism operators. Setting up a tour that goes "behind the curtain" to conduct in-depth interviews with key leaders who have helped the country transform its tourism industry over the past 20 years may provide an invaluable foundation stone to Nyungwe's own transformation.

7. **Expand linkages to universities.** In ecotourism, awareness and reputation are linked to the quantity and visibility of research and volunteer activities. Nyungwe have been fortunate to have a long-term connection with the World Tourism Council, which has sponsored activities with the National University of Rwanda, as well as Antioch University in the U.S. and East Anglia University in the U.K. However, there may be potential to expand these programs – primarily for the sake of the conservation benefits – and if so, the benefits to the Park from the increased presence of internationally recognized researchers, as well as interns and volunteers who tend to be ‘market influencers’, would be powerful. In Costa Rica, in particular, the spillover effect from the presence of research stations on the quality of guide services has been remarkable, as guides who interact with researchers and volunteers learn not only better English, but also understand more fully the cultural and scientific context that will help relate better to tourists. With an average of only 22 tourists in Nyungwe on any given day, the presence of a few longer-term residents, whether from Kigali or abroad, would have a beneficial impact on the outward orientation of the community. While the main research ‘attraction’ in Nyungwe is the biosphere, a research or volunteer project focusing on community interactions with the Park would also be beneficial.

APPENDIX A: NYUNGWE VISITOR AND EXPENDITURE FORECASTING ANALYSIS

The analysis was conducted by building a rudimentary model to forecast visitor arrivals and expenditures in the Nyungwe region. The forecasting model was developed for a specific purpose – to evaluate the impact of targeted investments under a concessions policy in Nyungwe National Park on tourist expenditures reaching local communities, *all other things being equal*. It is not intended as an argument that such investments are more important than other measures to improve sustainable tourism benefits in the Park, such as improved marketing, promotion, road construction and guide training, but simply as an illustration of the potential benefits of the investments if the concessions policy is approved in the near future.

In this model, expenditures by hotels on food and staff, as well as direct expenditures by visitors on local community products such as kiosk sales, handicrafts, and cultural tourism offerings is driven by the number of visitors, which is forecast using baseline projection. In this model, new investments in hotel beds or attractions in the Park (e.g. cable line, canopy walk) will trigger additional tourists to visit the Park, which will in turn stimulate additional expenditures on local communities.

Clearly, many other factors influence the number of visitors to the park, such as marketing, promotion, pricing of related activities (e.g. gorilla trekking in VNP; international air fares), etc. However, in order to highlight the trade-offs involved in the proposed concessions policy, the model focuses only on the likely economic impacts of illustrative investments of the type that might be forthcoming after the approval and implementation of the concessions policy. Again, while a wide variety of new attractions/investments in the Park are currently being contemplated, the recent experience with the new lodges and canopy walk provides a reference on which a reasonable projection can be based, while projections based on new investments that have not been tried yet would be closer to speculation. Once the concessions policy is in place, the actual mixture of new concession opportunities will be determined by the RDB in dialogue with prospective investors/operators.

Assumptions behind the model

Baseline growth in visitors – 15% per year from 2012-2015, decreasing slowly thereafter to 5% by 2018. The 15% growth rate is below the historic average growth rate of 23% from 2005 – 2011, which has been higher than that of Volcanoes and Akagera, partly since it was a new park and partly due to the new investments in 2010 and 2011. The projected decrease in the growth rate after 2015 reflects the assumption that without additional new investments growth rates will begin to decline rather than maintain a geometric growth path.

Impact of new lodging – each additional room in a lodge near the Park will result in 5 new visitors in the first year, an additional 15 new visitors in the second year and 5 new visitors in the third year, for a total of 25 additional visitors per year after the third year. This is extremely conservative, as it is based on the experience of the new lodges that have come to Nyungwe in the past two years; however, it is consistent with recent data, and if new investments actually have higher occupancy rates than the existing lodges, the economic impacts will be significantly higher. As discussed in Section 4 of the main report, even though there is excess demand for higher-priced lodging in the

Western entrance to the Park, new lodges in other areas will likely create new demand, rather than spreading the same number of tourists over a larger amount of bed capacity.

Impact of new attractions – each new attraction comparable to the existing canopy walk will attract 750 new visitors in the first year of operation and 200 additional visitors in the second year, for a total net increase of 950 visitors after two years. How can this assumption be made when the new canopy walk in Nyungwe registered 2,316 visitors in 2011? Because the assumption is that many of those visitors would have visited the park regardless (for example for trail walks or primate trekking) and only about 40% of them came to the park solely due to the presence of the canopy walk. This may be better understood when one keeps in mind that from 2010 to 2011, there were 2,505 additional visitors to the park – and this is the same year in which two lodges started operating, increasing significantly the Park’s ability to house tourists overnight.

Timeline – as documented in **Error! Reference source not found.**, approval of the proposed concessions policy in mid-2012 can result in some investments (such as a cable line or refurbishment of existing structures) becoming operational in late 2014, and others, such as a new lodge, in 2015. The assumptions used here, for illustrative purposes, are that “new attractions” means one becoming operational in 2014 and the second in 2015; “new lodges” assumes 20 new beds available in 2014 and 30 in 2015.

In Table 10, the Counterfactual Baseline shows the assumed growth in visitor permits if the 2010 investments in the canopy walk and new lodges had not been made. No Additional Investments assumes that those investments had been made, but that the concessions policy is postponed and no additional investments take place. “New Lodges & Attractions” assumes that additional investments approved in 2013 become operational in 2014-15. The final two columns show the estimated impact if one new investment is made, but not the other (corresponds to Figure 14 in the main report.)

Table 10: Projections of Visitors to Nyungwe National Park – Actual and 5 Scenarios

Year	Actual*	Counter Factual Baseline	No Additional Investments	New Lodges & Attractions	New Attractions Only	New Lodges Only
2005	2,386	2,386	2,386	2,386	2,386	2,386
2006	3,088	3,088	3,088	3,088	3,088	3,088
2007	3,981	3,981	3,981	3,981	3,981	3,981
2008	4,810	4,810	4,810	4,810	4,810	4,810
2009	4,688	4,688	4,688	4,688	4,688	4,688
2010	5,769	5,391	5,751	5,751	5,751	5,751
2011	8,274	6,200	8,417	8,417	8,417	8,417
2012		7,130	10,073	10,073	10,073	10,073
2013		8,199	11,363	11,363	11,363	11,363
2014		9,429	12,831	13,681	13,581	12,931
2015		10,844	14,415	16,708	16,153	14,970
2016		11,928	15,624	18,747	17,623	16,749
2017		12,763	16,552	19,903	18,600	17,854

* Source: Actual visitor permits from RDB Annual Report. All other data estimated by DAI.

Table 11 shows the projected differences between the spending on local food products with no additional investments, as compared with the additional spending if visitors rise due to new

investments coming operational in 2014-15. The final column illustrates the additional boost given to the local impacts by activities of *Nyungwe Nziza* in assisting the development of local cooperatives. Assuming that the cooperatives will be more effective in growing and selling crops to the high standards of local hotels, producing marketable handicrafts, and developing strong cultural attractions, this effect is illustrated by showing a 25% boost in local sales in 2013 above the baseline amount, a 50% boost in 2014, and a 75% boost in 2015 and beyond. In effect, this amounts to an assumption that, due to *Nyungwe Nziza*, on average local purchases of food by hotels will rise from a 25% share of total expenditures in 2012, to 31% in 2013, 38% in 2014, and 44% in 2015 (corresponds to Figure 15 in the main report.)

Table 11: Estimated Local Food Purchases

Year	No Additional Investments	With 2014-15 Investments	With Enhanced Coops
2011	26,915	26,915	26,915
2012	34,405	34,405	34,405
2013	37,630	37,630	44,565
2014	41,194	48,646	67,281
2015	44,391	64,489	103,046
2016	46,795	74,172	119,009
2017	48,613	77,989	124,933

Source: DAI estimate

Table 12 shows the difference in total local expenditures from three major categories of spending in the scenario in which there are new investments in 2014-15, as compared with a scenario in which such investments do not take place (corresponds to Figure 16.) By 2015, pro-poor income streams would be 55% higher with the new investments, for a cumulative total of \$134,000 in increasing income in the local region.

Table 12: Projected Local Expenditures**Scenario A: With New Investments in 2014-15**

Year	Local Food Purchases	Kiosk, Cultural & Handicraft Sales	Wages from Hotel Jobs	Total
2011	26,915	19,877	40,625	87,417
2012	34,405	27,179	57,395	118,978
2013	44,565	34,094	59,543	138,202
2014	67,281	43,593	82,563	193,437
2015	103,046	63,048	116,346	282,440
2016	119,009	82,156	119,742	320,907
2017	124,933	90,356	121,665	336,955

Scenario B: With No New Investments in 2014-15

Year	Local Food Purchases	Kiosk, Cultural & Handicraft Sales	Wages from Hotel Jobs	Total
2011	26,915	19,877	40,625	87,417
2012	34,405	27,179	57,395	118,978
2013	44,565	34,094	59,543	138,202
2014	56,104	40,165	61,985	158,254
2015	67,874	50,291	64,623	182,788
2016	71,100	59,856	66,637	197,592
2017	73,525	64,752	68,181	206,457

Source: DAI estimate

Difference between Scenario A and Scenario B

Year	Scenario A	Scenario B	Difference	Cumulative Difference
2011	87,417	87,417	-	-
2012	118,979	118,978	-	-
2013	138,202	138,202	-	-
2014	193,437	158,254	35,183	35,183
2015	282,440	182,788	99,652	134,835
2016	320,907	197,592	123,315	258,150
2017	336,955	206,457	130,498	388,648

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