



# **Global Environment Facility** **Project Document: Full Project**



## **Government of Republic of Rwanda** **United Nations Development Programme**

### **“Strengthening Biodiversity Conservation Capacity in the Forest Protected Area System of Rwanda”**

PIMS 1922

**Brief Description:** Conservation in Rwanda must be understood in the context of that nation’s recovery from a decade of civil war and its chronic underlying problems of poverty, landlessness, and HIV/AIDS. Despite these preoccupations, Rwanda views conservation of its montane forests as a priority concern. The Volcanoes National Park and the newly created Nyungwe National Park are recognized sites of global importance for their biodiversity and endemism values: both among the highest within the biologically rich Albertine Rift ecoregion. These parks are also seen as primary sources of tourism revenue and ecological services, such as water catchment, water supply, erosion control, and hydroelectric development potential. Yet altogether, Nyungwe (1,013 km<sup>2</sup>), Volcanoes (160 km<sup>2</sup>), and the two relict forest reserves of Mukura (8 km<sup>2</sup>) and Gishwati (7 km<sup>2</sup>) now cover less than 5% of the national territory.

This forest estate remains under threat from the land and resource needs of a still-growing human population that occupies the rural landscape at average densities of 345 per km<sup>2</sup>. These pressures have resulted in past habitat losses and degradation, as well as local species extinctions. To combat these problems the GOR, with support from international NGOs, has invested in rehabilitation of park infrastructures, restructuring of the national park service (ORTPN), and preliminary strategic planning. This GEF Proposal seeks additional resources to enhance this baseline capacity to effectively manage Rwanda’s montane forests and thereby assure the long-term maintenance of their biodiversity, ecological functions, environmental services, and economic benefits.

Proposed investments target the sustainability of the entire PA system, with particular attention to three key areas: 1) central government policies and laws, staff capacities, and collaborative frameworks; 2) local district capacity to plan, co-manage, and benefit from appropriate development activities on PA-adjacent lands; and 3) PA adaptive management capacity to assure long-term biodiversity values through applied research, monitoring, and evaluation. Project activities include support for capacity-building at all levels, increased collaboration between central-central and central-local government bodies, and a complementary set of income and employment generating activities in targeted PA-neighbor communities. This proposal builds on extensive national and regional experience and responds to Strategic Priority BP1 and Operational Programs OP3 and OP4 of the GEF.

## Table of Contents

---

PART I: Situation Analysis .....	4
Environmental Context.....	5-4
Global Significance of Biodiversity .....	7-5
Rwanda's National Protected Areas (PA) System .....	7
Socio-Economic and Sustainable Development Context .....	10-10
Institutional Context .....	<b>Error! Bookmark not defined.</b>
Baseline Course of Action.....	<a href="#">178</a>
 PART II : Strategy.....	<a href="#">21</a>
Project Rationale and Policy Conformity .....	21
Project Goal, Objective, Outcomes and Outputs .....	22
Project Indicators, Risks and Assumptions .....	26
Country Ownership: Country Eligibility and Country Drivenness .....	28
Linkages with the UNDP Country Programme .....	29
Linkages with UNDP/GEF Financed Projects .....	30
Linkages to Other GEF Financed Projects in Rwanda .....	30
Sustainability .....	30
Replicability .....	31
 PART III : Management Arrangements .....	31
Execution and Implementation Arrangement.....	32
 PART IV : Monitoring and Evaluation Plan and Budget .....	32
 SECTION II: Strategic Results Framework and GEF Increment (Log Frame) .....	34
 SECTION III: Total Budget and Work Plan.....	33
 ANNEX 1: Financing Strategy.....	40
ANNEX 2: Maps.....	48
ANNEX 3: Threats and Root Causes Matrix.....	53
ANNEX 4: Stakeholder Involvement Plan .....	55
ANNEX 5: Monitoring and Evaluation Plan.....	60
ANNEX 6: Lessons Learned .....	85
ANNEX 7: Replication Strategy .....	88
ANNEX 8: Endorsement and Co Finance Letters (See separate file) .....	89
ANNEX 9: PDF B Outcomes.....	90
ANNEX10: Summary of Alternative Income/Sustainable Livelihood Analysis.....	94
ANNEX 11: References.....	106

## List of Abbreviations and Acronyms

ACNR	Association for the Conservation of the Nature of Rwanda
ADB	African Development Bank
ARASI	Rwandan Association for the Protection of Infrastructures
ARCOS	Albertine Rift Conservation Society (A regional NGO, HQ in Uganda).
ARE	Albertine Rift Ecoregion
AREDI	Rwandan Association for Environment and Integrated Development
ASCOB&D	Association of commercial wood products
CBC	Community Based Conservation
CBD	Convention on Biological Diversity
CDF	Community Development Fund
CFM	Collaborative Development Fund
CIDA	Canadian International Development Agency
DED	German Development Service
DEMP	Environment Decentralised Management Programme
DFGF-E / I	Dian Fossey Gorilla Fund – Europe / DFGF - International
EU	European Union
GEF	Global Environment Facility
GOR	Government of Rwanda
KIE	Kigali Institute of Education
ICDP	Integrated Conservation and Development Project
KIST	Kigali Institute of Science and Technology
IGCP	International Gorilla Conservation Program
IUCN	World Conservation Union
JFM	Joint Forest Management
MGNP	Mgahinga Gorilla National Park (Uganda)
MGVP	Mountain Gorilla Veterinary Project
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government, Community Development, and Social Affairs
MINECOFIN	Ministry of Finance and Economic Planning
MINICOM	Ministry of Commerce, Industry, Investment Promotion, Tourism, and Cooperatives
MINITERE	Ministry of Land, Environment, Forestry, Water, and Mines
NBSAP	Nation focal point for the Convention on Biological Diversity
NEMA	National Environmental Management Authority
NGOs	Non-governmental Organizations (INGOs = International NGOs)
NUR	National University of Rwanda
NNP	Nyungwe National Park
NVL	National Veterinary Laboratory
ORTPN	Rwandan Office of Tourism and National Parks
OTF	On The Frontier Group
PAFOR	MINITERE/ADB Project to Support Forest Management
PAs	Protected Areas
PDF-A/ PDF-B	Project Development Framework, Phase A or B
PRSP	Poverty Reduction Strategy Plans
REMA	Rwanda Environment Management Authority
TB / TBNRM	Trans-Boundary / Trans Boundary Natural Resource Management
UNDP / UNEP	United Nations Development Programme / Environmental Programme
UNR	National University of Rwanda
USAID	United States Agency for International Development
VNP	Volcanoes National Park
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

## PART I: Situation Analysis

### *National Environmental Context*

The conservation of environmental values in Rwanda must be understood in the context of on-going recovery from a decade of civil war, genocide, and subsequent instability. As conditions improve, renewed attention is given to chronic problems of poverty, landlessness, and HIV/AIDS. This context shapes government and donor priorities with regard to sectoral expenditures. Despite this situation, Rwanda's montane forests are increasingly viewed as a priority concern. The Volcanoes National Park and Nyungwe National Park are sites of global importance for their biodiversity values, which are among the highest within the Albertine Rift ecoregion. Within Rwanda, these parks – especially the VNP, where mountain gorilla ecotourism originated 25 years ago – are seen as primary sources of tourism revenue and ecological services<sup>1</sup>. These include sustainable domestic water supplies, erosion control, and hydroelectric development potential. Yet Nyungwe (1,013 km<sup>2</sup>), Volcanoes (160 km<sup>2</sup>), and the relict forest reserves of Mukura (8 km<sup>2</sup>) and Gishwati (7 km<sup>2</sup>) now cover less than 5% of national territory. This forest estate remains under threat from the land and resource needs of an already large and still growing rural human population. Rwanda's rural population densities average > 320 per km<sup>2</sup>: the highest in continental Africa.

Rwanda has now emerged from the war. Infrastructure is rebuilt, security clearance is lifted, Gorilla tourists are equal to highest levels ever; there is a building boom. Donor support increases, and into development not restoration. The Rwanda UNDP Cooperation Co-operation Framework is explicit on this, the CCF in 2001 stated: *“As of mid 2001, however, the situation in Rwanda had evolved significantly beyond the emergency phase. However, it is important to maintain continuity between the two aspects of the programme {restoration and development} and flexibility in programming instruments”*. The CCF for 2002 – 6 goes on to say *“ Within the context of this overall sustainable human development objective, the period of the second CCF will be marked by (a) a clear shift from emergency responses to developmentally- oriented initiatives, and (b) a shift to even greater emphasis on upstream policy support and advocacy/advisory initiatives”*. We stress this history, and show how there has been a shift from recovery to investment in poverty land and human development issues such as HIV AIDS. Whilst Government did not prioritise environment as compared to infrastructure and institutional development at the start of this recovery it is increasingly happening: witness the increased subventions to ORTPN, strengthening the Ministry and increasing decentralisation of environmental governance.

The pressures that result from high population densities have resulted in habitat<sup>2</sup> and species losses, as well as habitat degradation. To combat these problems the GOR, supported by international NGOs, has invested in rehabilitation of park infrastructures, restructuring of the national park service (ORTPN), and initial strategic planning for the sector. But capacity and resources are still limited. This GEF Proposal seeks additional resources to enhance this baseline capacity to effectively manage Rwanda's Protected Area Network with specific reference to montane forests, and assure the long-term maintenance of the biodiversity, ecological functions, environmental services, and economic benefits accruing from the Protected Areas. The PA network and present pattern of support is shown in Figure 1 at the end of this summary. This GEF project focuses on the overall PA institutional system (see next paragraph), with on ground interventions in the montane forest PAs. The project provides limited support to planning functions

---

<sup>1</sup> The tourism numbers and revenue figures show tourism is an important force for development. This change is quantified in the ProDoc Annex 1 on Sustainable Financing – tourist direct revenues have gone from 250,000\$ in 2001 to 2,200,000\$ in 2004

<sup>2</sup> The great loss in PA habitat was in Akagera during the immediate post-war situation with the invading forces (now Government) from Uganda. Akagera halved. Our documentation stresses that since then the GoR has been able to prevent further pressure for degazettement (from returning refugees) in the two forest PAs), and Akagera has been at the same size for ten years.

for the savanna PA (Akagera), which is a totally different ecosystem, with potential support from other GEF processes.

Investments target the sustainability of the entire PA system, with particular attention to three key themes: 1) central government policies and laws, financing mechanisms, staff capacities, and collaborative frameworks; 2) local district capacity to plan, co-manage, and benefit from appropriate development activities on PA-adjacent lands; and 3) within-PA capacities to better assure long-term biodiversity values through adaptive management practices; this last outcome is in close cooperation with conservation and development partners on the ground.. Project activities include support for capacity-building at all levels, increased collaboration between central-central and central-local government bodies, and a complementary set of income and employment generating activities in targeted PA-neighbor communities. This proposal builds on extensive national and regional experience and responds to Strategic Priority BD1 and Operational Programs OP3/4 of the GEF.

### *Global Significance of Biodiversity*

Given limited resources, conservation organizations try to concentrate their effort and funding on those areas of greatest value. Value is generally a function of diversity, rarity, and threat. By these criteria, Rwanda's remaining montane forest protected areas are among the highest priority sites for conservation in Africa.

The Albertine Rift is the richest area of the African continent in terms of vertebrate species, with 52% of African birds, 39% of mammals, 19% of amphibians, and 14% of reptiles (Plumptre *et al* 2003a). The ecoregion also ranks first out of the 119 distinct terrestrial eco-regions of continental Africa in terms of endemic vertebrate species (1,100) and second in terms of globally threatened species (108) (Dinnerstein *et al* 2003). Most of these biodiversity values are in the natural forest ecosystems. Geographically the Albertine Rift ecoregion extends southwards from northwest Uganda through Rwanda, Burundi, western Tanzania and eastern Democratic Republic of Congo (DRC) (Map 1, Annex 10). In addition to its designation as a WWF "Global 200 Ecoregion," the entire area has been recognized for its significance as an "Endemic Bird Area" by Birdlife International, and as a "Biodiversity Hotspot" by Conservation International.

Two of the most important forests within the Albertine Rift region are contained in Rwanda's Volcanoes National Park (VNP) and the Nyungwe National Park (NNP) (Map 2, Annex 10). Of the 38 protected areas assessed within the Albertine ecoregion (Plumptre *et al* 2003a), the Virunga volcanoes<sup>3</sup> and the Nyungwe Forest consistently rank at or near the top in species diversity and endemism across taxonomic groups. Considering Albertine endemics – those species found nowhere on earth outside the ecoregion – Nyungwe ranks first among all sites with the Virunga volcanoes a close second. Across specific taxa, their respective rankings are: trees, 2<sup>nd</sup> and 3<sup>rd</sup>; butterflies, 2<sup>nd</sup> and 3<sup>rd</sup>; amphibians, 3<sup>rd</sup> and 1<sup>st</sup>; reptiles, 2<sup>nd</sup> and 3<sup>rd</sup>; birds, 3<sup>rd</sup> and 7<sup>th</sup>; and mammals, 5<sup>th</sup> and 2<sup>nd</sup> (Table 1). When rankings for endemic species are combined with those for threatened (IUCN listed) species, Nyungwe finishes a close second to DRC's Kahuzi-Biega NP, while the Virunga region ranks 5<sup>th</sup> among the most important forest sites for conservation within the Albertine ecoregion (Table 2) (Plumptre *et al*, 2003a).

Rwanda's montane forest PAs are also home to species of particular global concern. These include rare mountain gorillas (*Gorilla gorilla beringei*) and golden monkeys (*Cercopithecus mitis kandti*) in the VNP, while Nyungwe has chimpanzees (*Pan troglodytes*), owl-faced monkeys (*C. hamlyni*), and black-and-

---

<sup>3</sup> The Virunga range is divided among three countries: Rwanda (Volcanoes National Park); Uganda (M'Gahinga Park); and Congo (Virunga National Park). The Albertine Rift analysis did not distinguish among these three parks, but rather treated the transboundary volcanic region as a contiguous entity. Though Rwanda's VNP is somewhat less diverse than the whole, most species are found and move across the entire region. The analyses in this section treat the Virunga volcanoes region as a whole, yet separate from the larger Virunga Park in DRC, which includes many non-forest habitats.

white colobus monkeys (*Colobus angolensis*) (Table 3), noting their permanent associations of 300-400 individuals: the largest recorded group sizes for any arboreal primates. Among 30 Albertine endemic bird species found in the two parks are the highly endangered Grauer's rush warbler (*Bradypterus graueri*), the Ruwenzori turaco (*Tauraco johnstoni*), and several endemic sunbird (*Nectarinia*) species.

**Table.** Total species, Albertine endemic species (AR Endemics), and IUCN listed species for key taxa in the Nyungwe NP and Virunga Volcanoes.

	<u>Virunga Volcanoes</u>			<u>Nyungwe National Park</u>		
	<i># Species</i>	<i>AR Endemics</i>	<i>IUCN Listed</i>	<i># Species</i>	<i>AR Endemics</i>	<i>IUCN Listed</i>
Plants (trees)	878(81)	124	5	1105	137	9
Mammals (large)	86(34)	18	16	86 (42)	14	16
Birds	294	20	7	280	26	11
Reptiles	43	7	0	43	8	1
Amphibians	47	16	14	31	15	12
Butterflies		21			21	
<b>TOTALS</b>	<b>1348</b>	<b>206</b>	<b>42</b>	<b>1545</b>	<b>221</b>	<b>49</b>

**Table.** Rankings (1=best) of Albertine forest sites by key taxa, total AR endemics, IUCN listed species, and conservation importance (adapted from Plumptre et al, 2003).

<b>PA/Site</b>	<b>ARE Plants</b>	<b>ARE Mammals</b>	<b>ARE Birds</b>	<b>ARE Reptiles</b>	<b>ARE Amphibians</b>	<b>ARE Butterflies</b>	<b>ARE Species</b>	<b>IUCN Listed</b>	<b>Conservation Priority</b>
Kahuzi-Biega	1	4	2	3	4	4	2	2	1
Nyungwe	2	5	3	2	3	2	1	4	2
Bwindi	4	1	5	5	5	1	4	3	3
Itombwe	NA	7	1	6	1	-	6	1	3
Ruwenzori	5	2	6	1	7	5	5	5	5
Virunga volcanoes	3	2	8	3	1	3	3	7	5
Kibale	-	7	-	7	9	10	7	5	7
Kibira	NA	6	6	9	NA	NA	8	8	8
Kabobo	NA	NA	NA	9	6	NA	10	10	9
Echuya	9	10	-	NA	-	5	9	-	-

**Table** Primates of Rwanda's Montane Forest Protected Areas (flagship species in bold).

<u>Nyungwe National Park</u>	
<b><u>Pan troglodytes schweinfurthi</u></b>	Chimpanzee
<i>Papio anubis</i>	olive baboon
<i>Cercopithecus hamlyni</i>	owl-faced monkey
<i>Cercopithecus lhoesti</i>	mountain monkey

<i>Cercopithecus mitis doggetti</i>	blue monkey
<i>Cercopithecus mitis kandti</i> *	golden monkey
<i>Cercopithecus ascanius</i>	red-tailed monkey
<i>Cercopithecus mona denti</i>	mona monkey
<i>Cercopithecus aethiops</i>	vervet monkey
<i>Cercocebus albigena johnstoni</i>	grey-cheeked mangabey
<i>Colobus angolensis ruwenzori</i>	black and white colobus
<i>Galago crassicaudatus</i>	greater bushbaby
<i>Galago inustus</i>	eastern needle-clawed galago
<i>Perodicticus potto</i>	Potto
<b>Volcanoes National Park</b>	
<b><i>Gorilla beringei beringei</i></b>	Mountain gorilla
<i>Cercopithecus mitis kandti</i>	golden monkey
<i>Galago crassicaudatus</i> *	greater bushbaby
<i>Galago inustus</i> *	eastern needle-clawed galago
<i>Perodicticus potto</i>	Potto

\* to be confirmed

The Nyungwe NP is Africa's largest remaining block of lower montane forest. The effective area and diversity are even greater if contiguous sectors of Burundi's Kibira NP (~200 km<sup>2</sup>) are included. Nyungwe is Rwanda's most important water catchment, providing an estimated 40% of dry season flow in the Nyabarongo River system. More than 235 tree species are found in a rich variety of associations within Nyungwe's 1,013 km<sup>2</sup>, across an altitudinal gradient from 1600 m to 2990 m. *Entendrophragma excelsum* is a giant (50-60 m) emergent, previously overexploited for its valuable mahogany-like hardwood. The distinctive forms of *Newtonia buchanii*, *Symphonia globulifera*, and *Syzgium parvifolium* also dominate the upper canopy, while providing food and shelter for diverse biota. Native bamboo (*Arundinaria alpina*) is limited to barely 16 km<sup>2</sup> in southeastern Nyungwe, where it supports the only population of owl-faced monkeys outside of the Congo Basin. The Volcanoes NP has a larger bamboo zone, yet has less tree diversity -- only 81 recorded species -- due to its smaller size (160 km<sup>2</sup>) and lack of any true lower montane forest. It's greater elevation range (2700 m to 4507 m), however, supports distinctive *Ericaceous* and Afroalpine habitats. The size and diversity of the VNP are augmented by extension into contiguous PAs in DRC and Uganda.

Conservation in Rwanda's montane forests has benefited in recent years from the Albertine Rift Strategic Planning Framework (ARCOS 2003). This process began with a meeting of interested stakeholders from five countries in Cyangugu, Rwanda in 2001. The initiative is intended to assist conservation planning within the region; assess relative diversity values across sites; identify priority conservation targets; share information and experiences; and focus government, NGO, and donor attention on key areas and needs. This project will complement a parallel GEF activity focused on the Northern Forests of the Ugandan Albertine Rift, as well as other on-going projects (CARPE, IGCP) in southern Uganda and eastern Congo.

#### *Rwanda's National Protected Areas (PA) System*

Rwanda's three gazetted National Parks represent 8% of the national territory, with a diversity of habitats:

- Nyungwe National Park (1,013 km<sup>2</sup>): Africa's largest remaining block of lower montane forest, species-rich and the nation's primary water catchment;
- Volcanoes National Park (160 km<sup>2</sup>): Montane forest capped by afro-alpine systems which harbor highly-endangered biota, including mountain gorillas and golden monkeys; and
- Akagera National Park (900 km<sup>2</sup>): Extensive wetland/savanna complex that supports a diverse large mammal fauna, in addition to nearly 600 species of birds.

These PAs are all Trans-Boundary (TB) in nature. The project follows GEF BD 1 guidance to support the GoR to address TB issues by building capacity in the GOR PA system to work with TB initiatives through stronger linkages to neighbouring countries. The northern Parc des Volcans has perhaps Africa's most advanced and functional TB process, between Uganda DRC and Rwanda. This has MOU between Governments and between Agencies and between donor partners – this alliance is managed by the IGCP and managed well. IGCP provides considerable support to GOR PA agencies, and are main co-financiers to this project for the Northern Areas. TB NRM is functioning WELL at this site. This project will support government agencies to maintain their leadership role.

In the South, strong cross-border action is not yet possible as there are still freedom / guerrilla groups in the Kibira forest – they are slowly reducing but still there. GoR is in contact with Government of Burundi on this, we take our lead from Government. The development of this project has had strong linkages to the Albertine Rift Conservation Strategy Process (MacArthur and WCS funded) who provide support to cross border planning across the whole eco-region. Implementation includes MacArthur inputs to such regional and cross-border planning projects. Again, we are strengthening Rwanda's capacity to engage.

Akagera NP links cross-border across the Kagera River (which feeds Lake Victoria and the Nile) into the swamp systems of Tanzania, site of a developing Wetland Reserve, supported via other GEF projects.

ORTPN has a new cadre of PA professionals. The PDF B process started TB planning with linkages to Ugandan PA authorities, beginning a broader process of trans-boundary and regional engagement, including broader environmental and wetland management issues (linking REMA Rwanda to NEMA Uganda for institutional best practice).

The diversity of these three PAs results from a distinctive combination of location, topography, and environmental history. Rwanda is situated at the confluence of four major bio-geographic zones (Zambezian, Soudanian, Afro-montane, and Guineo-Congolian), fostering a rich and unusual mix of species assemblages. It is also located on one of the world's major avian migratory flyways, attracting both seasonal and transitory migrants. Furthermore, Rwanda's altitudinal gradient – from volcanoes topping 4700 m to the Akagera wetlands at barely 1000 m – contributes to an even greater diversity of habitats within a limited extent of land. Finally, the fact that the forests of the Congo-Nile Divide served as refugia for moist forest species during drier times of Pleistocene climate change has meant that an unusually high number of species have evolved and survived in the region, many Albertine Rift endemics.

Rwanda has nevertheless suffered very serious losses to its natural areas over the past 40 years. Since Independence in 1962, the total area within PAs has been halved: from 4115 km<sup>2</sup> to 2073 km<sup>2</sup>. More than 1600 km<sup>2</sup> have been lost in just the last 10 years, almost all of this from the Akagera National Park<sup>4</sup>. Rwanda's forests have not been spared, however. The Volcanoes NP has lost nearly half of its habitat since the end of the colonial period (310 km<sup>2</sup> to 160 km<sup>2</sup>), while Nyungwe NP has lost more than 13% (from 1175 km<sup>2</sup> to 1013 km<sup>2</sup>). Troubling as this situation is for Rwanda's parks, it is catastrophic in the forest areas outside the PA network. Of 280 km<sup>2</sup> of natural habitat within the Gishwati Forest Reserve in 1980, only 7 km<sup>2</sup> remain; of the 50 km<sup>2</sup> within the Mukura Forest Reserve, no more than 8 km<sup>2</sup> of degraded habitat remain. All of these have resulted from pressure to clear and occupy land for human settlement and agricultural exploitation in a context of high population growth, immigration, and poverty – juxtaposed with a weakened institutional capacity to enforce established conservation mandates.

Rwandan PAs have also suffered some notable losses and declines in key species. Conflicts with neighboring pastoral communities have resulted in the poisoning and near elimination of Akagera's lion

---

<sup>4</sup> See footnote 2 on Akagera past degazettement.



population in recent years. In Nyungwe, once-abundant Cape buffalo were decimated by hunters to feed gold-mining camps and eliminated in the mid-1970s. In 1999, poachers killed the last Nyungwe elephant. In the Virungas, the world's attention has focused on the flagship mountain gorilla population for decades. Following George Schaller's pioneering count of ~450 gorillas in 1960, the population crashed to a low of 262 in 1979, due to a combination of poaching and habitat loss (Weber 1981, 1983). With the advent of the Mountain Gorilla Project and its successor International Gorilla Conservation Programme – and government support fueled by ecotourism revenues – gorilla numbers began to recover. As of late 2003, the population had climbed to 390 individuals (WCS/IGCP 2004). Population trends for most other species are not known, however, due to a lack of baseline data.

The social, economic, and political pressures on Rwanda's natural areas remain strong and place the survival of the country's protected areas, and the biological diversity that they contain, under considerable threat. In July 2004, a 3-day workshop was organized by WCS and ORTPN under the auspices of this project to determine priority threats. The ranked results for each park are presented in Table 7.

Poaching of wildlife is a prime concern for both PAs, as is the illegal cutting and collection of wood, bamboo, and grass. Otherwise, there is considerable variability between the parks. Fire is the number one threat facing Nyungwe, where more than 13,000 ha have burned over the past decade – primarily due to human-set fires, complicated by drought conditions. This in turn is linked with problems of regeneration following disturbance. Mining also ranks fairly high on the Nyungwe threats list, although this decades-old problem appears to be largely under control in recent years. For obvious reasons, gorilla issues are among the priority concerns for the Volcanoes Park. Disease transmission from humans to gorillas (which are susceptible to almost all human diseases) is a direct threat from tourism and an even greater indirect threat from the wastes left by humans collecting water, wood, bamboo, etc. in the park. Uncontrolled tourists can also damage highly fragile alpine habitats around the park's many attractive summits. Finally, the capture and sale of baby gorillas remains a constant threat. Though its incidence has been reduced through improved park security, the recent recapture of a gorilla from poachers underscores this threat.

**Table Priority threats to Volcanoes and Nyungwe NPs (PAB 2004).**

Priority	Threats to VNP	Threats to NNP
1	Poaching	Fire
2	Habitat degradation from wood and bamboo cutting, grazing	Poaching
3	Human-wildlife disease transmission	Invasive species
4	Stresses on gorillas from human presence (military, tourism research)	Wood, bamboo, and grass cutting
5	Habitat losses	Mining
6	Tourism impacts	Low appreciation of forest value by local people.
7	Gorilla trade	Lack of tree regeneration in disturbed areas
8	Feral dogs	Human disease transmission to wildlife
9	Poaching	Species loss (elephants, buffalo)

These threats reflect the collective experience and concerns of those most immediately responsible for park and wildlife monitoring and management: the personnel from ORTPN and conservation NGOs gathered at the Akagera workshop. An analysis of root causes behind these threats and barriers to their effective treatment is presented in a later section below.

The issue of the inclusion or exclusion of Akagera has a long history. Field level interventions for Akagera were not included in the original concept, and are not included in this brief.

Under the guidelines for BD1 we used project development to address the sustainability of the PA system. We continued to prioritise the Albertine Rift Forest Eco-Region (highest Global BD significance in Africa) as field sites to draw lessons for the PA system. This is brought out in Figure 2 in the Executive Summary, which illustrates how this project is addressing “catalyzing the sustainability of the PA systems of Rwanda”. Akagera has been funded by GTZ, and in addition to GTZ, there are three on-the ground GEF programmes working in the Akagera area. These are: UNEP-FAO on lower Kagera – OP1; WB on Lake Victoria Part 2 which includes the Kagera area, and the Nile Basin NTEAP. The WB wetland GEF Project addresses the wetland systems that flow from Kigali into the Akagera Buffer Zones. This project has been designed and will operate in close coordination with these programmes, but we did not include these within the described “system boundary” of the project. Fig 2 (Exec Summary) puts Akagera PARK “on the ground” outside our system boundary. BUT we link to the other interventions, we coordinate with them, and we provide a strategic framework for PA specific interventions to operate. We do not exclude Akagera NP completely – we include them in system planning, management planning, finance planning, training and capacity building – mainstream BD1 system activities.

### *Socio-Economic and Sustainable Development Context*

The opening paragraphs to this overall proposal describe Rwanda as having emerged from a decade of recovery from civil war. April 2005 is the eleventh anniversary of the genocide. Rwanda has emerged from the war. Infrastructure is rebuilt, security clearance is lifted, Gorilla tourists are equal to highest levels ever; there is a building boom. Donor support increases, and into development not restoration. The Rwanda UNDP Cooperation Co-operation Framework is explicit on this, the CCF in 2001 stated: “*As of mid 2001, however, the situation in Rwanda had evolved significantly beyond the emergency phase. However, it is important to maintain continuity between the two aspects of the programme {restoration and development} and flexibility in programming instruments*”. The CCF for 2002 – 6 goes on to say “*Within the context of this overall sustainable human development objective, the period of the second CCF will be marked by (a) a clear shift from emergency responses to developmentally- oriented initiatives, and (b) a shift to even greater emphasis on upstream policy support and advocacy/advisory initiatives*”.

We mention this history, and show how this has been a shift from recovery to investment in poverty land and human development issues such as HIV AIDS. Government has been relatively slow to prioritise environment as compared to infrastructure and institutional development, but it is increasingly happening: witness the increased subventions to ORTPN, strengthening the Ministry and increasing decentralisation of environmental governance. We note other developing GEF projects do not dwell on this history, and they treat Rwanda as any other developing country in an African context.

When we first developed this concept GEFSEC was very concerned at tourism ever playing a role in war-torn Rwanda. The tourism numbers and revenue figures show tourism is an important force for development. This change is quantified in the ProDoc Annex 1 on Sustainable Financing – tourist direct revenues have gone from 250,000\$ in 2001 to 2,200,000\$ in 2004

We have not shied away from the realities of Rwanda with high population densities, and considerable rural poverty. There is pressure on land but we also stress the positive side and show that government has been able to divert pressure from PAs, and found the political will to restore Gishwati catchments.

UNDP in Kigali, under the Resident Coordinator Office is playing a key role on overall donor – government coordination. We have an Aid Harmonization Coordination Unit and we lead the Development Partners Coordination Group (DPCG) which is a mandate we received from the GoR and in-country donors. The DPCG includes all sectors, and UNDP is conscious of the major interaction between the natural resource base and rural livelihoods. UNDP brings a wealth of experience into these processes,

from a large portfolio of rural initiatives in Rwanda from the Africa 2000 projects, and a significant involvement in all aspects of sustainable development (governance, poverty alleviation, policy and capacity building and environmental management).

At the National Scale UNDP draws its interventions from the UNDAF (UN Development Assistance Framework) and the UNDP CCF. Both documents support and feed into the Rwanda PRSP ( ) which was part funded by UNDP. The UNDAF has a specific goal “*Goal 2: Improved food security and increased income from the agricultural sector*” with specific inputs from UNDP, FAO, WFP, UNICEF. The Agriculture sector includes natural resource products.

The CCF includes environment as a cross-cutting issue: “Rwanda’s high population density in relation to the arable land area requires that particular attention be paid to environmental concerns in all rural development activities. Skills for incorporating environmental issues in the development process, and for environmental impact assessment, will be provided as appropriate” In real terms this has led to the UNDP funded Decentralisation and Environmental Management Programme (DEMP) of REMA (p 13 of brief), which addresses decentralised environmental governance. UNDP contributes to the District Community Fund (along with other donors). This fund provides support to AIG enterprise around the PAs; fund disbursement is based on the DEMP District Environmental Management Plans (which feature as a planning tool for buffer management in this document).

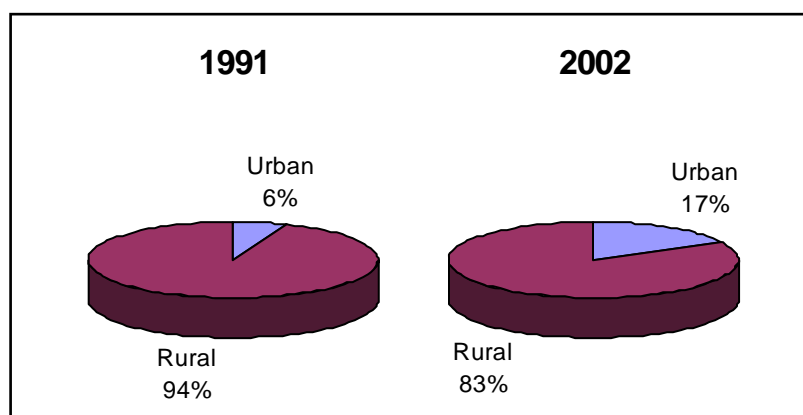
The Rwanda PRSP is the guiding development strategy at country level. The sectoral document for environment: “*Outline Program for Sustainable Environmental Management and Improved Living Conditions in Rwanda*” gives leadership.

This GEF project will be based in the Ministry, and the Ministry’s new Environmental Parastatal “REMA”. The project will further be guided by UNDP in their integrated Sustainable Development and Environment Programme. The project is therefore uniquely placed to take advantage of other initiatives and to provide a coordination role in the biodiversity / natural resource sector. The large steering committee process, strong stakeholder buy-in from government donors and civil society support this role.

With regard to the UNDAF, UNDP is coordinating the ongoing evaluation on UNDAF 1 (2002-2006) and the process of preparing the second UNDAF cycle. UNDP are part of several UNDAF thematic groups and are heading some, including that on cross-cutting environment. This project has been discussed in UNDAF deliberations and is seen as bridging the three main pillars of interest – environmental management from both the institutional (including financing) and field activity perspectives, governance of resources and capacity building for improved governance, and rural poverty alleviation.

The goal of the project is to ensure that the Protected Area Agencies (from Biodiversity and broader environmental perspectives) have capacity to engage more fully in these dialogues. The Environment Support Document from the Ministry of Lands and Environment and supported by UNDP is the entry point for such engagement. We see therefore two separate but interacting strands that pull this project into the broader sustainable development process in Rwanda. Firstly is the support role of UNDP and the coordination role of UNDP in donor process and coordination across the environment – development divide. Secondly is the institutional capacity building role of this BD1 (institutional sustainability) project. Outcome 1 at central level and Outcome 2 at decentralised level provide support for agencies to engage in coordination frameworks.

Rwanda's population density of nearly 350 per km<sup>2</sup> is the highest in continental Africa and it ranks among the world's ten poorest nations. Although the distribution of population is shifting to urban areas, the rural population continues to increase (see figure below). There is virtually no unsettled land outside of existing parks and forest reserves and 90% of the population continues to live from subsistence agriculture. Average farm size is barely 1 ha per family, with the median approaching 0.5 ha per family. Even that small area is usually further subdivided into several dispersed plots. In these circumstances, it is a misnomer to call Rwandans "farmers"; they are intensive gardeners.



**Figure: Change in population residing in urban and rural areas from 1991 to 2002**

Sixty percent of Rwandans live below the officially established poverty level, with some of the highest poverty rates in districts bordering the Volcanoes and Nyungwe parks. Landlessness is also concentrated to a high degree in these areas. In Gikongoro province, along Nyungwe's eastern border, 59% of families own less than 0.2 ha of farmland; in Cyangugu province to the west of Nyungwe, 37% have less than 0.2 ha. In Ruhengeri, which includes most of the Volcanoes park, the figure is a comparable 36%. In all of Rwanda, only Butare province has a higher rate of landlessness. Gikongoro also has the highest percentage of renters (19%), who are generally less likely to use soil and other conservation practices (Bush 2004). Still, it is notable that roughly 25% of all families living around the VNP and NNP plant and maintain small woodlots on their private parcels: a significantly higher percentage than for those living around comparable PAs in southwestern Uganda (Plumptre et al, 2004).

It is no surprise that people living in sectors bordering the forest PAs depend on the natural forest for at least some of their subsistence needs (water, wood, bamboo, honey, medicines). In their large-scale study of Albertine Rift communities, Plumptre et al (2004) found that small, but significant minorities of those living around the NNP (12%) and VNP (10%) admitted entering the park illegally to cut and collect wood, bamboo, poles, or bean stakes. In a smaller, but more detailed study of community relations around Nyungwe, (Masozera 2002) found that 22% of participants admitted to such illegal use. Comparable numbers (20%) report entering the VNP for water supplies: a practice tolerated by park authorities given the region's chronic shortages of surface and well water. Water access is further complicated by the fact that one-third of all rural water sources in Rwanda need rehabilitation, according to the national Poverty Reduction Strategy (PRSP 2001).

During the PDF-B phase of this project, participatory meetings were held with representatives from eight districts bordering the Volcanoes and Nyungwe PAs. These meetings confirmed the communities' perceived needs to exploit the forest for many products, especially water (VNP), wood and bamboo:

**Table.** Concerns / Needs expressed by representatives of local communities around Volcanoes and Nyungwe parks in participatory meetings (PDFB process 2004).

Priority	Communities Around VNP	Communities Around NNP
1	Need access to water in park	Need access to park resources (wood, bamboo)
2	Crop raiding	Crop raiding
3	Need access to park resources (wood, bamboo, grazing)	Isolation (few/poor roads)
4	ORTPN does not hire local people	Need cattle grazing or passage through Forest
5	ORTPN should share tourism revenues	Need to enter forest for bee-keeping
6	Need local income generating activity	Distrust of ORTPN
7	Buffer zone restrictions	Need employment
8	Inaccessibility (few/poor roads)	No electricity
9	Poaching	Mining ban (gold and coltan)

Other concerns identified include the lack of local employment opportunities and inaccessibility, as well as prohibitions on grazing and cattle passage through the forest to markets (NNP). Crop raiding was a very serious concern around both reserves. In the VNP, buffalo (43%), bushbuck (25%), and porcupine (12%) were the most commonly named culprits, whereas primates (vervet monkeys 67%, baboons 22%) headed the lists around Nyungwe (Plumptre *et al* 2004). The plantations of exotic pines and other species that cover nearly 85 km<sup>2</sup> around the NNP were an issue of particular concern for those neighboring communities. Historically managed by the national Direction of Forests, districts expressed a strong interest in future co-management of this important resource. Other suggestions including conversion of pine plantations to other tree species or tea, as well as agroforestry and silvopastoral combinations:

**Table. Community suggestions for Buffer Zone around Nyungwe NP (see Annex 10).**

1	Share management with local communities/associations/cooperatives
2	Convert pine to other tree species
3	Convert pine to communal tea
4	Give buffer to individuals to exploit
5	Permit grazing/farming within tree buffer

Despite perceived needs and conflicts, large majorities of Rwandans living near the VNP and NNP think that the protected forest benefits their communities. Most (>60%) cite water catchment and climate in this regard. Even around the gorilla tourism center of the VNP, though, only a small minority (<10%) believes that tourism benefits local communities. Large majorities around both PAs (58% NNP; 90% VNP) recognize tourism revenues as a benefit for Rwanda as a nation (Plumptre *et al* 2004).

Gorilla tourism started in 1979 to combat the continued expropriation of parkland for development in the VNP; the Nyungwe ecotourism program was initiated in 1986 for comparable reasons (Weber 1979, 1981; Weber and Vedder 1983, 2001). The strategy has largely succeeded. Through the 1980s, tourism revenues permitted ORTPN to be self-supporting. In 1989, nearly 7000 people paid to see the gorillas and more than 2900 visited Nyungwe: both records. This memory – and significant international support – sustained government interest and limited investment through the difficult 1990s, when foreign tourism dropped to near zero for several years. As a direct result of that investment and an improved internal security situation, Rwanda is again experiencing a tourism boom. This is fuelled by both reality and heightened expectations. The reality is that tourism is growing faster than any other sector of the Rwandan economy, driven by the flagship gorilla market. After the long drought of the war-torn '90s, gorilla visitation has increased from barely 1200 tourists in 2000 to 7417 in 2004, shattering the previous

record (Table 6). With visitors paying \$375 each for their gorilla visit, the VNP will likely earn almost \$3 million per year in direct entry fees in coming years. The “expectations” factor in the tourism equation is the government’s promotion of this sector as a primary factor, second only to agricultural exports, in the nation’s future economic growth. In this they are buoyed by an assessment that Rwanda can expect up to 70,000 foreign tourists per year by 2010, with most of these people visiting one or more national parks (MINICOM/OTF 2003; ORTPN 2004).

Insecurity has undermined tourism throughout the Albertine region across the past several decades: Uganda in the 1970s and early ‘80s; Rwanda in the 1990s; DRC most recently. It would not take much for the current instability in DRC and Burundi to dampen Rwanda’s tourism boom. Even in the best of times, however, Rwanda will have to work very hard to meet the demands of anticipated tourism expansion. Gorillas have a maximum carrying capacity of 32 visitors per day, or 11,680 per year. This maximum will soon be approached if current trends continue. Akagera attracted 16,476 visitors in 2004 and can accommodate more, but this is not a preferred destination for international tourists. Most current ANP visitors (87%) are Rwandan nationals, followed by resident expatriates. This is a very positive development in domestic tourism, but not one that brings in foreign revenue. ORTPN is looking to Nyungwe to attract the largest number of foreign tourists in coming years, based on a projection of 22,000 annual visitors by 2010 (ORTPN 2004). Nyungwe does in fact attract a high proportion of coveted international ecotourists (68% in 2004), who spend the most per day and tend to remain in country longer (MINICOM/OTF 2003). Recent visits by two of East Africa’s major tour operators (Abercrombie & Kent, and Ker & Downey) affirmed Nyungwe’s high attraction value for this target ecotourist group, as well as their interest in expanding their number of visits to the forest. However, this expected ten-fold increase over current levels will require major investments in lodging, expansion of attractions, and related services: investments which are not yet evident. If Nyungwe and Akagera are to capitalize on the charismatic attraction of gorillas to bring visitors to Rwanda, there is an immediate need for niche market assessments and timely development activities targeting identified markets. In this, Rwanda must also recognize that it faces competition from Uganda for comparable attractions – competition that barely existed when Rwanda dominated regional tourism in the 1980s.

**Table. Tourist visits to Rwandan parks: 2000-2004 (Source ORTPN).**

<i>Years</i>	<b>ANP Visitors</b>	<b>NNP Visitors</b>	<b>VNP Visitors</b>	<b>Total Tourists</b>
2000	1709	777	1313	<b>3799</b>
2001	3164	646	2155	<b>5965</b>
2002	3677	840	5575	<b>10092</b>
2003	7388	1785	7305	<b>16478</b>
2004	16476	1980	8542	<b>26998</b>
<b>TOTAL</b>	<b>31204</b>	<b>5807</b>	<b>24229</b>	<b>63,332</b>

### **Institutional Context and Policy Framework for Protected Areas**

Rwanda is making progress on multiple fronts with respect to improved PA Management. However greater coherence and coordination among a growing number of institutional actors is essential. The Ministry of Lands, Environment, Forests, Water and Mines (MINITERE) is the GOR entity mandated to coordinate, monitor and supervise all activities in the field of environment including biodiversity. Within MINITERE, the National Focal Point for the Convention on Biological Diversity has coordinated the preparation of the National Biodiversity Strategy and Action Plan (NBSAP) and two subsequent National Reports on CBD implementation. These activities represent Rwanda’s most comprehensive effort to document, understand, and address the totality of its biological resources, most of which are found in the three main PAs.

Under the National Environment Law now before parliament, MINITERE will also work closely with a new parastatal: the Rwanda Environmental Management Authority (REMA). Once this law is enacted, REMA will take on much of the oversight capacity for environment and biodiversity, with a projected staff of more than thirty, or roughly the same size as ORTPN. REMA will also provide the primary institutional linkage for GEF projects in Rwanda. As REMA assumes its full role, it is expected that the Direction of Environment will adjust its mandate in a complementary manner. The Direction of Forestry has recently been transferred from MINAGRI to MINITERE. A draft National Forestry Policy is now circulating that will clarify its role at a time of dynamic institutional and policy change. This is especially critical given the importance of forestry and reforestation activities in the zones adjacent to the two montane forest PAs.

Direct responsibility for the management of Rwanda's PAs is vested in the Rwandan Office of Tourism and National Parks (ORTPN). ORTPN has had several institutional homes over its 30-year existence, but is currently housed within the Ministry of Commerce (MINICOM). Under its recent restructuring, ORTPN is composed of two principal agencies, with shared support services. The Rwanda Wildlife Authority (RWA) is responsible for ORTPN's mandate to protect the nation's wild flora and fauna. This includes most aspects of in situ park management, including monitoring and planning. The Rwanda Tourism Authority (RTA) is a parallel operation charged with the development and implementation of policies and practices to enhance Rwanda's tourism profile and potential to generate revenue. The two agencies report to a single Executive Director. Each of the three national parks has a comparable management structure consisting of a warden; deputy wardens for conservation, tourism, and communities; and subordinate ranks of chiefs, guards, and guides.

In a study of institutional capacities for this project (Opio-Odongo 2004), ORTPN and MINITERE/REMA were evaluated with regard to the match between their institutional missions and mandates, and the objectives of this project. MINITERE / REMA was seen to have the broader mandate, covering biodiversity wherever it occurs; natural and human-modified environments; all forestry operations, including those in PA buffer zones; and water resources. With regard to biodiversity, MINITERE was seen intervening at the policy level, whereas ORTPN has a more practical management role within its PAs. ORTPN's mission and structure were considered the most directly relevant to PA management, including both wildlife protection and use through tourism. This assessment concluded that MINITERE should play the primary role in GEF project implementation, but that a close partnership with ORTPN is essential and that potential conflicts should be recognized and addressed.

The Ministry of Local Government (MINALOC) is responsible for Rwanda's decentralization process. This includes management of a Central Development Fund (CDF) to which donors are increasingly encouraged to contribute, and from which each of the country's 105 Districts is entitled to draw funds. Except for participation in this project's stakeholder design process, MINALOC has thus far not entered into any formal discussions with either ORTPN or MINITERE concerning potential impacts of development activities in the 16 districts bordering PAs (8 NNP, 5 VNP, 3 ANP).

The District is the basic unit of government and the primary engine for development, under Rwanda's policy of decentralization. Each district is required to complete a District Development Plan to qualify for CDF assistance. Donor organizations also increasingly use the DDPs to identify district partners and guide their expenditures. DDPs are now required to include District Environmental Plans, toward which an estimated 10% of budgets are to be applied. The recently initiated Decentralization and Environmental Management Project (DEMP) is intended to help advance this process. However, as of early 2005, very few districts have even requested money for environmental activities through the CDF. Around the VNP and NNP, some districts have entered into partnering arrangements with international and national NGOs to promote appropriate local development activities.

Rwanda has a significant NGO community with direct PA, biodiversity, and sustainable development interests. These are summarised in Annex 10. The Wildlife Conservation Society (WCS) has been in Rwanda the longest, starting with its role in design and implementation of the gorilla ecotourism program in the VNP in 1978-79. While providing support for gorilla and other wildlife surveys in the VNP, WCS currently concentrates its efforts on Nyungwe and is the executing agency for this GEF PDF B design activity. The International Gorilla Conservation Programme (IGCP) concentrates on gorilla protection efforts in the mountain forests of Rwanda, Uganda, and eastern Congo. IGCP has also provided direct technical assistance for ORTPN's restructuring process. The former Dian Fossey Gorilla Fund now consists of two distinct NGOs: DFGF-International, responsible for monitoring the Karisoke Research Centre gorillas and training; and DFGF-Europe, which concentrates on local wildlife clubs and community-based development activities. The Mountain Gorilla Veterinary Center (MGVC) works on health matters affecting the gorillas, other wildlife, and local human populations around the VNP. There are currently no NGOs targeting the conservation needs of the Akagera Park, though a small-scale (DED) initiative is working with local districts. Two Rwandan NGOs are starting to play a role in the national conservation arena. The Association pour la Conservation de la Nature au Rwanda (ACNR) has recently linked with Birdlife International to secure a GEF regional small grant to conduct assessments in four critical areas for bird and habitat conservation, including the Rugezi and Kamiranzovu wetlands. The Rwanda Wildlife Clubs is seeking to expand its base among school groups.

CARE is the principal international NGO in Rwanda with a rural development focus. Though its activities are currently concentrated around the VNP, CARE until recently had operations on the Cyangugu side of Nyungwe. A national NGO, HELPAGE, is expanding its operations in Rwanda. It has activities in PA border districts in Cyangugu, Kibuye and Ruhengeri, with a pending entry into Gikongoro. A small but growing number of local and regional NGOs operate around the PAs and the forest reserves of Mukura and Gishwati. These include AREDI, ARASSI, ASCOB&D, PAFOR, ARECO, and others. Most of these international, national, and local NGOs have formed partnerships of different kinds with the major international conservation NGOs to promote certain development activities within target local communities.

The private sector has not traditionally played an important role in resource management related to PAs. Even the major plantation forestry effort around Nyungwe was dominated by government and parastatal operations. This situation is rapidly changing. The Nyungwe buffer zone will not only be subject to new forms of co-management under revised forestry and decentralization policies, but private entrepreneurs and associations will be encouraged to bid for these management contracts. ASCOB&D, in Gatware District, has already made such a bid for a section of the buffer around northwestern Nyungwe. Tea plantations operate at several points around Nyungwe and their operations are likely to expand with new roads and popular support for tea cultivation (Masozera 2004). Recent studies of Nyungwe's ecotourism potential (Walpole/WCS 2004; Hitesh 2004) have also highlighted the potential for tea plantation tours and luxury eco-lodges on the tea-forest periphery. Discussions with private investors, such as the Rwanda Tea Trading Company, indicate strong interest in such partnerships. Another private investor has shown interest in the production and export of EU-certified organic honey from Rwanda's pesticide-free forests, in partnership with the USAID-supported ADAR project. At this time, the primary private involvement with PA conservation lies in the tourism sector. Numerous private agencies (Primate Safaris, Kiboko Tours, etc.) already operate in Rwanda; others (Volcanoes Safaris, Abercrombie & Kent, Ker and Downey) include Rwanda in their East African network. In anticipation of a rapid rise in foreign tourism, Rwanda has experienced a boom in hotel and lodge construction. This in turn has raised concerns about coordination of this activity to avoid geographic imbalances and quality control. Real and expected demand has also stimulated increased production of tourist market curios and artwork, though the Rwandan offer lags far behind those of East Africa.



Policy and Legislative Context. This is a time of dynamic change in Rwanda's policy environment. Many of these changes affect management practices in and around the nation's PAs, as well as ultimate responsibility for biodiversity conservation. The coincident development of multiple policies, however, creates gaps, overlaps, and potential conflicts. Laws specifically addressing wildlife and protected area management are particularly problematic.

The draft Law on the Protection and Management of the Environment establishes responsibility for compliance with international conventions such as Biodiversity, Climate Change, RAMSAR, and CITES within MINITERE. The same law creates REMA, but without specificity regarding its role in biodiversity or PA management. In fact, PAs receive scant reference in this legislation (Opio-Odongo/PAB 2004). In discussions with MINITERE staff, they perceive their role to be one of policy development and oversight, leaving most direct PA management responsibilities to ORTPN. Thus, responsibility for the National Strategy and Action Plan for the Conservation of Biodiversity (2003) remains with the Biodiversity Focal Point within MINITERE.

While the legislation establishing and modifying ORTPN is relatively clear, several policy areas require clarification. The role of communities in conservation is not even mentioned in ORTPN's enabling legislation, nor is the concept of revenue sharing with these communities. These two issues are addressed in the new draft Strategic Plan (ORTPN 2004), but mechanisms for their application remain to be developed. As for specific laws pertaining to the status of PAs and wildlife, the legal analysis conducted by this project (Mugemana/PAB 2004) found the existing system of laws to be "outdated, incomplete, and conflicting." ORTPN senior staff agree with this assessment.

According to current decentralization policy, Districts are responsible not only for their own development directions, but also for the protection of the environment. More to the point, the draft Environment Law states that District environmental committees will "collaborate" in the management of PAs within their borders. This policy could mesh with ORTPN's emerging policies for community conservation and revenue sharing; however, there is also potential for conflict if different visions of collaboration emerge.

A third piece in the local community puzzle can be found in the draft National Forestry Policy. This document is intended to bring the Rwandan forestry sector into the 21<sup>st</sup> century, so as to better address the nation's critical shortages of wood, fuelwood, and charcoal. The legislation as it now stands pertains to forests outside of PAs, noting only that the "Office in charge of conservation should make sure that necessary silvicultural activities are conducted." Since logging is illegal in national parks, it is assumed that this refers to areas such as the Nyungwe buffer zone. Management responsibility for this 8500 ha area of exotic trees, mostly pines, is currently the object of varying – and somewhat contentious – perspectives among local Districts, ORTPN, and the Direction of Forestry (DF). Much clearer is the DF's primary role in reforestation of the Gishwati and Mukura Forest Reserves, though responsibility for the wildlife remaining in those forests would appear to fall to ORTPN.

The tensions inherent in these emerging policies could be problematic; they could also help to clarify practical roles and responsibilities among ORTPN, REMA, DF, and Districts with regard to PA management in Rwanda. Key areas for attention are community conservation – specifically revenue sharing and the need to move from coercive to normative compliance with protection goals – and co-management opportunities in the Nyungwe buffer zone. A comprehensive Wildlife and Protected Areas Management Act could also eliminate much current confusion in the legal arena.

### **Baseline Course of Action**

The pressures working against these natural areas remain strong and place the survival of the country's protected areas, and the biological diversity that they contain, under considerable threat:

- Rwanda has the highest population density of any nation in Africa, is overwhelmingly agrarian, and ranks among the 10 poorest nations in the world;

- There is virtually no unsettled/unexploited land outside of existing parks and forest reserves; and refugees continue to return to Rwanda, requiring land for resettlement;
- 60% of Rwandans live below the established poverty level, and some of the highest poverty levels are found in districts bordering the Volcanoes NP and Nyungwe NP. Many people bordering the forest
- People depend on the natural forest for some survival needs (water, wood, bamboo, honey, medicines).

These threats are described in the socio-economic description and in Annex 3 on Threats Root Causes.

In the absence of GEF assistance, it is expected that the GOR would continue to invest resources to manage and conserve biodiversity to meet domestic development objectives. **Baseline level biodiversity management** would proceed with government allocations, revenue generated from tourism, and from donor support, primarily from the various NGOs that support conservation programs in the country. Most donor support in Rwanda still goes to poverty and governance issues, however. Less financial support is available to support the conservation of forest reserves at this time, although the GOR has borrowed \$13.5 million from the African Development Bank to support reforestation, including reforestation with native vegetation to rehabilitate important watersheds and forest reserves such as Gishwati, which was 95% deforested during the 1980s and 90s. GOR has taken an IDA credit (associated with a GEF grant for wetlands) for the Rural Sector Investment and Wetlands Management Programme. Both projects operate under the Ministry of Lands, Environment, Forests, Water, and Mines (MINITERE).

The GOR has vested responsibility for overall biodiversity conservation within the Ministry of Environment (MINITERE). This ministry has been significantly restructured and includes the Directions of Water, Land, Forestry, and Environment, in addition to the newly-created Rwandan Environment Management Authority (REMA). The Biodiversity Secretariat is located within the Direction of Environment and implements Rwanda's responsibilities as a signatory to the Convention on Biological Diversity. MINITERE's Direction of Forestry has piloted a new National Forestry Policy, which will provide new guidance to forestry and national forest management activities outside of PAs.

Baseline activities pay little attention to inter-institutional planning and collaboration – especially between ORTPN and MINITERE – and the environmental institutions with finance and planning Ministries, which will be needed to enhance biodiversity values. Nor do they focus on building sustainable systems for valuing and monitoring biodiversity values, beyond narrow tourism objectives.

In Rwanda today many economic development decisions emerge from the decentralized district development planning process. In 2000-2001, the GOR adopted a National Decentralization Policy, which is a key strategy in promoting national reconciliation, power sharing, and participatory development at the local level, providing districts with both management and fiscal authority. Local authorities, often with little knowledge or experience in environmental and conservation issues, are responsible for development planning. District Development Plans are required to include a section on environmental management. However, development planning at the local level usually ignores biodiversity conservation issues and often acts contrary to conservation interests in the name of poverty reduction. In the absence of GEF funding, districts located around areas of high biodiversity are unlikely to link their development objectives with the conservation objectives of protected areas located in their districts, or work with protected area managers to explore joint planning and investment possibilities. Many of the protected areas and buffer zone areas around them will continue to be degraded and global biodiversity values will continue to be lost unless targeted actions are taken to supplement the baseline.

Rwanda has embarked on a major program of decentralization over the past five years. Under this policy, primary responsibility for rural development activities is now vested in the country's 105 districts, with

oversight from the Ministry of Local Government (MINALOC). Each district can draw on a centralized Community Development Fund, supported by growing government and donor contributions. This first requires elaboration of District Development Plans, which must also include an Environment component. Such plans should incorporate official buffer zones as around Nyungwe, and the exotic forest plantations.

Under this project's PDF-B phase, key barriers to more efficient PA management have been identified, these barriers describe the baseline scenario:

- a) Financing for Conservation does not cover all needs, and is heavily dependent on donor funding.
  - Business Plan approaches to individual PAs and to Protected Area System not in place
  - Direct revenues inadequate for PA management, revenue-sharing, and capacity-building.
  - Current tourism strategy requires diversification to increase revenue flows
  - Ecological services undervalued, low government allocations, low visibility of PAs in PRSP
  - Alternative finance mechanisms (debt swaps, carbon, trust funds) are unexplored
- b) Institutional Capacity lacks skills and experience to coordinate PA Conservation at all levels.
  - Some policies and laws are out-of-date, incomplete, or in conflict
  - New policies/programmes are not reinforced by enhanced implementation capacity
  - Better communication/coordination are needed within central government nexus
  - PAs lack information and training needed for adaptive management
- c) Local communities need greater incentives to fully accept PA conservation objectives:
  - Communities have been alienated from PAs for long time, see no personal stake, there is conflict between short-term local resource needs and longer-term national benefits.
  - No legal access to forest PA resources exists for locals
  - No current revenue transfers from PAs to communities
  - Districts lack capacity to design/implement conservation and development activities

The current activity and budget scenarios (the Conservation Baseline – see Annex 1) will lead to some progress in conservation management.

*Baseline Costs.* Over the coming six-year project period, the total expenditures associated with the Baseline Scenario are estimated to be US\$13.0 million. These are listed in Annex A to the Executive Summary. They can be described as follows:

**1) Building enhanced staff capacity, at the central and district government levels to better manage forest PAs and surrounding human-occupied zones (US\$7.2 million)** This substantial baseline activity (averaged at 1.2m\$ per year), includes support for core activities and salaries and management costs within ORTPN and basic operations of Rwanda's three national parks. The baseline funding derives from direct government budgetary allocation as well as revenue earned from tourism that flows back into ORTPN operations and management. Increases in revenue flow reflect both an increase in tourist numbers over the past several years as well as an increase in the price of gorilla permits by 50% during the past year. The baseline also includes NGO contributions in support of ORTPN planning and management at a system level, most directed at headquarters, and linkages to tourism sector.

**2) Enabling policy and legal environment to support conservation. (US\$ 0.6 million).** Whilst there is some policy reform in decentralization and forest sector process; this is not directly aimed at the protected area institutions. Policy processes are financed through government and donor, including NGO, efforts.

**3) Local communities support for conservation (US\$ 2.8 million).** The baseline activities include funding for sustainable community projects that address poverty for people living in the areas of influence of protected areas. Some activities focus on direct resource management issues. Government allocations include funding from the country's Common Development Fund and some initial outlays from a recently established protected area revenue sharing program (based largely on gorilla revenues and park entry fees). The Common Development Fund is a newly established facility that directly funds district activities. The fund is capitalized through donors and with the government's poverty reduction funds.

**4) Protected Areas are managed for conservation (US\$2.4 million).** The baseline includes budgetary allocations from ORTPN for basic park management and monitoring functions, most of which is for staff support. Except in the case of a well-funded mountain gorilla monitoring programme, the research results provide little information on the state of biodiversity, and monitoring data are not systematically used to inform park management decisions.

## **PART II : Strategy**

### *Project Rationale and Policy Conformity*

The project takes a systems approach to building capacity at all necessary levels, from central to local, working with a broad array of government and NGO partners. The project will strengthen *in situ* management of two montane forest PAs, increase local participation with and benefits from PA management, and strengthen the central government's institutional capacity to finance, monitor, and manage all PAs. Lessons learnt will inform policy processes, management practices, and sustainable use initiatives within Rwanda and across the montane forest realm of the five-nation Albertine Rift ecoregion.

*Eligibility under CBD:* This proposal meets the requirements of the CBD: Article 6, General Measures for Conservation and Sustainable Use, through Outputs 2.1 – 2.3 and 3.1 – 3.8, promoting incentives for sustainable use; Article 7, Identification and Monitoring, through Outputs 1.7, 4.1, 4.5, and 4.6; Article 8, In Situ Conservation, by the suite of activities under Outputs 1 and 4, which address conservation at the overall system and individual site levels; and Article 10 on Sustainable Use Management is addressed through Output 3. The project is consistent with the decisions of the COP3/4/5 on exploring ways for the Convention to cooperate with the Intergovernmental Panel on Forests on matters relating to biological diversity and forest conservation. The Proposal is consistent with COP7 guidance on PAs (Feb 2004).]

*Eligibility for GEF financing:* This proposed Biodiversity Conservation in Rwanda's Mountain Forest System project is consistent with the objectives and GEF Operational Criteria of OP-3. The project satisfies the *First Strategic Priority of the Emerging Directions in the Biodiversity Focal Area: BD1 Catalyzing Sustainability of Protected Area Systems*. In line with the new guidance for BD1, the project has been designed using the following sequence of analyses:

- Description of the global biodiversity significance, and an analysis of threats to biodiversity;
- Articulation of the approach used to tackle these threats;
- Analysis of the barriers to implementing the chosen approach;
- Description of the logical objective and outcome tree to address these barriers.

### *Project Goal, Objective, Outcomes and Outputs*

This GEF project is designed primarily to overcome those barriers cited above – barriers which in turn limit the GOR's and its partners' ability to address underlying root causes, reduce threats, and satisfy local needs. To achieve this end, a series of desired Outcomes and supporting Outputs is proposed (see also Log-frame, Annex B1 to the Executive Summary).

**Project Objectives.** The Project Goal, Objective, 5 Outcomes and 28 related Outputs are outlined below:

<b>GOAL: Conservation status, environmental services and socio-economic values of Rwanda's Montane forest ecosystem enhanced and well being of the dependent communities improved sustainably</b>
<b>PROJECT OBJECTIVE:</b> Increased capacity in Protected Areas (PA) institutions leads to improved management effectiveness in the national PA network and improved partnerships between the different pa authorities and other stakeholders.
<b>Outcome 1:</b> Improved systemic capacity within institutions and key stakeholders at central, district and local levels provides the enabling framework for enhancing management effectiveness for natural resources in and around Protected Areas.
<b>Outcome 2:</b> Institutional capacities for PA management at local levels increased; with greater socio-economic benefit flows local communities increased, with reduced illegal use of protected area resources.
<b>Outcome 3:</b> Protected Area Management and conservation of biodiversity at forest parks is expanded and reinforced through knowledge-based adaptive management practices and field demonstration.
<b>Outcome 4:</b> Project effectively managed, monitored, evaluated and reported.

<b>Outcome 1: Institutions and key stakeholders at central, district and local levels have capacity and resources to manage and conserve natural resources in and around Protected Areas</b>
<p>Output 1.1 A conservation financing plan developed and implemented to improve financial security and options for protected areas.</p> <p><i>This is the major output addressing the financial sustainability barrier. It will result in identification of alternative financing options, including taxes (tourist and resource users), carbon funds, debt swaps, private sector linkages, offsets, and expanded tourism revenue streams. The most promising of these should provide a broader, more sustainable base of support for biodiversity and PA conservation. Business plans will be implemented to reflect this funding.</i></p> <p>Output 1.2 Staff of MINITERE, ORTPN and other partner/support agencies trained in key aspects /technical skills of protected area management</p> <p><i>Institutional capacity begins with staff, so this will be a major area of project activity. To address this barrier, a diverse suite of training options – from advanced degrees, short courses, study tours, in-the-field and on-the-job – will be developed and acted upon (with cofinancing, where possible) to expand the skill base of targeted ORTPN, REMA, and Forestry personnel (see below for districts). New proposals for funding/partnerships produced by trained staff.</i></p> <p>Output 1.3 ORTPN and MINITERE/REMA update/produce strategic plans that reflect biodiversity conservation and community participation in forest resources/protected area management</p> <p><i>Project will help ORTPN staff incorporate new knowledge to adapt 5-year Plan to changing conditions, especially with regard to an expanded view of biodiversity and community based conservation. Assistance to MINITERE will concentrate on REMA developing a strategic plan and Forestry adopting new community-based practices.</i></p> <p>Output 1.4 District Development Plans updated to reflect biodiversity conservation and community participation in forest resources management</p>

*Most districts are now producing DDPs in accord with current decentralization policy. GEF support will facilitate inclusion of required (but generally ignored) environmental components (10%) of the DDP, through training and assistance to PA border districts. Community involvement through associations / cooperatives in buffer zone co-management activities (tree and bamboo planting, NTFPs) will be a priority activity. By EOP, foresters and target associations trained in all PA border districts; cooperating districts submitting revenue sharing, CFM, and other proposals.*

Output 1.5 Effective coordination and information exchange structures developed that promote cross-sectoral information sharing and synergies among stakeholders

*There is currently little information exchange between among GOR institutions re PA/Biodiversity management; none with respect to biodiversity-finance linkages. Nor is there any forum for GOR-NGO exchanges and coordination of activities. Project will facilitate creation and reinforcement of these communication mechanisms.*

Output 1.6 Political will and support for Rwanda's Protected Area System is increased and reflected in PRSP and other key documents

*References to biodiversity and PA interests will increase in national Poverty Reduction Strategy Plan, Millennium Development Goals, Medium Term Expenditure Framework, and other GOR documents as a result of project activities/influence.*

Output 1.7 An information management system developed/used in the Protected Area management System

*Geographic Information Systems (GIS) are increasingly used to store, analyse, and manipulate information in Rwanda. However, there is no established format, no agreed-upon protocol for data sharing, no central GIS storage site, and no upper level capacity to manage these data sets among Rwandan personnel. This project will address this set of related issues in collaboration with REMA, ORTPN, UNR, and key NGOs, which now provide most GIS functions.*

Output 1.8 National and District level policies and legislation harmonised to support biodiversity conservation

*Forestry policies and practices concerning PA buffer zones will be brought into line with decentralization policies that call for co-management with districts. MOUs with community associations/cooperatives will be developed, implemented, and monitored in an adaptive manner.*

Output 1.9 A comprehensive National Law on Wildlife and Protected Areas developed and adopted

*The current collection of outdated, incomplete, and conflicting laws will be replaced by a comprehensive law addressing biodiversity, wildlife, and Protected Area needs. This will include reference to community-based conservation, revenue sharing, in addition to recording accurate PA border coordinates.*

**Outcome 2: Institutional capacities for PA management at local levels enhanced; with greater socio-economic benefit flows local communities, leading to reduced illegal use of protected area resources.**

Output 2.1 Collaborative Forest Management plans developed building on best practices from the region

*Once policies are clarified, CFM lessons will be collected, assessed and used to develop MOUs and management plans. Study tours to Bwindi-Impenetrable, Mgahinga, and other Ugandan or East African PAs will provide practical recent information and experience.*

Output 2.2 CFM plans piloted in selected communities

*Cooperating districts/associations/cooperatives will be identified based on established transparent criteria and relevant training provided. VNP plans will target tree and bamboo planting in newly created buffer zone. Nyungwe buffer zone activities will include harvesting of existing pine plantations and determination of priority species for replanting among alternative trees, bamboo, or tea. Value-adding actions beyond*

<p><i>harvesting will be explored. By EOP, at least seven functioning CFMPs.</i></p>
<p><b>Output 2.3 Sustainable income generating/value adding activities developed and piloted</b></p> <p><i>Besides CFMPs (above) and community-based ecotourism (3.6 below), the project will seek to develop other revenue- and employment-generating activities. These include organic honey production for export markets and artisinal production of wood and bamboo products. Increased employment for burned area restoration and trail building/maintenance will also be tested.</i></p>
<p><b>Output 2.4 Water/Energy supply project surrounding Volcanoes NP initiated/developed (co-financing)</b></p> <p><i>The primary need of communities around the VNP is water for drinking and household use. Gorilla disease threat is also exacerbated by human waste associated with in-park water gathering activities by thousands of people. Project will work with CARE and local partners with experience in this realm to extend network of available water sources and/or cisterns. Assessment of a high-potential wind energy site on eastern edge of VNP could lead to development (with co-finance) of energy source to drive water system, and/or support local business development</i></p>
<p><b>Output 2.5 Micro-Hydro-electric supply project in Districts surrounding Nyungwe NP initiated - co-finance</b></p> <p><i>It is recognized that most montane forests have great value for their year-round water resources. Yet local communities rarely see this potential realized in a way that benefits them. Nyungwe is estimated to have a 6 rivers with significant hydroelectric production potential: perhaps as much as 5% of Rwanda's current production. Micro-hydro technologies exist to tap this potential in an ecologically sound manner. This project will help to link high potential sources with communities where this energy could support local enterprises, including sawmills, tea factories and eco-lodges, as well as schools and clinics. Private and public sector co-investment will be required. .</i></p>
<p><b>Output 2.6 Barriers to community tourism reduced in selected areas</b></p> <p><i>Training and support will be provided to pilot at least three Community Ecotourism initiatives in an effort to disperse tourism development and benefits. Two of these will be around in Nyungwe, where excellent opportunities exist to attract visitors for chimpanzee viewing, bird watching, and nature exploration. Cultural tourism has been suggested for the VNP, though this sensitive activity requires further study and discussion. Additional investments will be made in education centers around each PA, at locations selected to disperse tourists and serve currently disadvantaged communities.</i></p>
<p><b>Output 2.7 Communities provided with skills to enable them to participate in improved natural resources management; especially planning and implementation of co-management of forest resources</b></p> <p><i>None of the above will be sustained beyond the EOP unless this set of activities is linked with a well-conceived and implemented training program. The objective of this capacity building component is to provide key members of collaborating communities/associations/cooperatives with the skill sets needed to conceive, seek funding for, implement, and maintain for the long-term whatever activities they engage in: wood harvesting, bamboo working, ecotourism, water source development, honey exporting, or other.</i></p>
<p><b>Output 2.8 Communities benefit from ORTPN PA revenue sharing programme</b></p> <p><i>As of early 2005, ORTPN has adopted a policy of sharing a yet-undetermined proportion of its PA tourism revenues with local districts. GEF funds and technical assistance will be provided to help districts develop more and better proposals for submission to ORTPN, as well as related skills per 3.7 above. Project staff will also work with districts and ORTPN to improve selection criteria and revenue dispersal methods. Expansion of this activity is seen as a top priority to address long-standing issues of local alienation and perceived lack of benefits from PAs.</i></p>
<p><b>Outcome 3: Protected Area Management and Conservation of biodiversity at forest parks is expanded and reinforced through knowledge-based adaptive management practices and filed</b></p>

<b>demonstration.</b>
<p>Output 3.1 Adaptive park management plans for Protected Area System updated through regular incorporation of research and monitoring data</p> <p><i>Stakeholders identified applied research and monitoring priorities during the PDF B phase of this project. By early 2005, draft management plans were developed by each park. Protocols need to be developed to link R&amp;M activities with these management plans and systems established so that information gathered is entered, analyzed, and acted upon to improve PA management.</i></p>
<p>Output 3.2 Adaptive park management plans implemented in Nyungwe National Park</p> <p><i>Key species, habitats, and indicators (disturbance, recovery) identified; RBM and other data collection systems designed to capture needed information; and communication pathways established to allow information to move from field to managers and decision-makers. Tourism use/attitudes and financial factors also need to be added to adaptive management portfolio.</i></p>
<p>Output 3.3. Adaptive park management plans implemented in Volcano National Park</p> <p><i>Per 4.2 above, with particular need to move beyond the past focus on gorillas.</i></p>
<p>Output 3.4 Effective methods of ecosystem restoration determined and piloted</p> <p><i>Roughly 12% of the Nyungwe forest has burned. Three years of restoration trials have demonstrated that manually clearing of post-fire fern concentrations can significantly increase the number, diversity, and rate of natural tree species recovery. GEF funding will permit much wider application of this restoration system, which also provides important local employment opportunities in line with the GOR's emphasis on HIMO (high manual labor input) projects. The role of elephants/buffalo in controlling certain weedy species, and their potential for reintroduction, will also be examined.</i></p>
<p>Output 3.5 Protected area management authorities implementing a monitoring system for biodiversity, key indicator species and environmental services</p> <p><i>Per 4.1 above, with linkages to central ORTPN office practices. This requires improved local GIS capabilities (personnel, hardware, software) and greatly improved communications systems from field (improved rechargeable GPS and radios), to PA and Kigali HQ (phone, internet).</i></p>

**Note: Outcome 4 is about project management:**

<b>Outcome 4: Project effectively managed, monitored, evaluated and reported</b>
Output 4.1 Project management systems established and maintained, with adaptive management process
Output 4.2 Project strategic and annual work planning completed
Output 4.3 Project monitored and evaluated; lessons learnt integrated into adaptive management processes
Output 4.4 Project reports produced, reviewed and disseminated
Output 4.5 Project results and lessons disseminated widely (in country – more District involvement and into Albertine Rift Programme and the East African Community) seeking impact through replication

Threats are seen at two levels: the first level includes the barriers (institutional, capacity, awareness etc) which prevent successful mitigation of threats. The second level includes the methodologies to overcome specific threats (in time and space) to specific biodiversity resources.



The first set of mitigation strategies is detailed in the project document, building greater capacity, awareness, linkage, governance mechanisms, developing strategic frameworks etc.

The second set of lessons is not described in so much detail in the document, but has been described in partner experiences through for example the work of CARE and HELPAGE, Africa 2000 and the gorilla conservation agencies. There is a great deal of field experience in threat mitigation through conflict resolution, empowerment, collaborative resource management agreements, sustainable resource use regimes etc. This project works with partner agencies (government, civil society academia and donors) to increase the uptake of successful site specific methodologies. In some cases that can be relatively easy, through for example brokered water supply agreements (PDV, seen as a barrier by both sides).

The project commissioned considerable levels of enterprise analysis.

The first level was stakeholder based, analyzing the suite of development interventions for AIG by the wide range of partners, and the lessons which guide uptake and success.

The second level was around the specific case of Nyungwe which has considerable area of plantation (mostly exotic) as buffer around the Park (developed by donors {eg Swiss} in the 1970s. We now have reasonably mature un-thinned plantations with little management or utilization. There is great potential for cooperative community sawmills for timber and fuelwood and rural energy supply. The new legal frameworks allow JFM agreements (WCS REPORT August 2004 Economic alternatives in the Nyungwe Buffer Zone).

More conventionally, a second report (WCS 2004 October – Review of Socio-economic issues around PAs) looked at the range of enabling requirements for successful enterprise).

The third level was a larger household analysis of issues around both Pas, with support from PDF B and other agencies (Plumptre et al 2004). See some output maps in Annex in the Prodoc) This looked at needs and options to fulfill these needs.

But, again we saw the role of this project as fixing the institutional barriers to allowing successful uptake of AIG enterprise. We ascertained that there was a suite of enterprise options, with site specific opportunities for success. We did examine institutional needs for adoption (markets, empowerment etc). We do believe that the project can provide capacity to ensure an enabling environment. NO we do not believe that this is a HIGH risk assessment

### *Project Indicators, Risks and Assumptions*

Indicators here are treated at two levels: first indicators of sustainable Protected Area Systems, secondly – the gains in biodiversity impact ensuing from that improved institutional sustainability.

The main *system sustainability indicators* for this project are as follows:

- Funding for Protected Area management increased, & is less dependent on overseas investment.
- Alternative financing sources incorporated in business plans and serving to expand financial foundation for PA management
- Business plans for the PA system and key PAs, in place which directs overall management.
- District development plans include specific pro-biodiversity strategies, and are implemented.
- PA system staff with capacity to develop and implement broader business plan models.
- Wildlife law produced, approved and applied to improved PA and wildlife management.

- Protected Area Management Plans in place with adaptive management systems incorporating lessons from M and E process.

The main *impact indicators for biodiversity as a consequence of this project* are as follows (see expanded list and details in LogFrame (Annex B1 to Executive Summary):

- Improved METT scores for the two montane Protected Areas.
- Zero habitat loss from forest conversion/encroachment in NNP and VNP
- Fire incidence and extent reduced in NNP, and regeneration effectively reclaiming burned areas.
- Population targets established and met for selected indicator species in Nyungwe and Volcanoes.

**Key Risks.** The following risks/assumptions and risk mitigation measures have been identified:

<b>Risk</b>	<b>Rate</b>	<b>Risk Mitigation Measure</b>
Competing priorities reduce government commitment to biodiversity conservation.	M/S	The project will build political will and support for the project but more importantly for improved management of Rwanda's Protected Area System (output 1.6). In addition, the project will facilitate a process of review and amendment of policies and laws to ensure that conservation of biodiversity is enshrined in the national law and reflected in the PRSP (outcome 2)
Ineffective decentralization of natural resources management, leads to marginalized support for conservation	S	New approaches for co-management with districts / communities will be developed. The DEMP will provide a model for natural resources management at district level (output 3.1, 3.2 and 3.3). In addition, the project will assist the Direction of Forestry to develop and promote a national forest policy that complements decentralisation policy (output 1.4, 2.1 and 2.3). Collaborative forest management will complement the decentralisation policy. Strong lessons from other incentive based systems and local governance (eg Uganda's LC1 system will be used.
External pressures on national parks and forest reserves do not significantly increase.	S/M	The project will work with communities around the park to implement alternative income generating activities and collaborative management of selected resources. This will build political support for the protected areas ensuring the political system does not yield to pressure to de-gazette the park. The project will improve the productivity of resources outside parks and improve household incomes, reducing immediate pressure from local communities (outcome 3 and outputs 1.6)
Reduction in current support and willingness to improve biodiversity conservation	N	The participatory nature of the project and improvement in revenue flows will ensure that interest is maintained (output 1.1 and outcome 3 and 4)
ORTPN's focus on tourism may weaken biodiversity conservation objectives OK, where do we see discussion of this, engagement with it?	N	Monitoring a broad set of biodiversity indicators will expand attention beyond gorillas (outcome 4). Better training for ORTPN and REMA staff will assure attention to non-tourism values of PAs
Failure to reach tourism projections impacts ability to fund PA management. Again, we need a	N	The development of a clear business plan for ORTPN will provide GOR a roadmap towards financial sustainability for many of ORTPN's functions, based on increased diversification of revenues (output 1.1, 4.1, 4.3).

conceptual shift, from sites to capacity		
Irreconcilable conflicts of interest over resource use inhibit collaboration to improve conservation	M/N	Participatory design process minimizes this risk and participatory, transparent execution will reduce conflicts. Draft forest policy submitted to cabinet will provide reconciliation mechanisms and framework for private/public/community partnership in Nyungwe buffer zone. (Output 1.3, 1.4, 2.3, outcome 3)
Lack of appreciation of economic value of PAs may lead to pressures to de-gazette part of them	M/N	The economic value of Rwanda's PAs to the nation will be shown to be higher than currently assessed and this information will be embodied in national financial calculations and budget allocations output 1.1, 4.5)
Limited technical and institutional capacity for modern conservation practice in and out the PAs	M/S	The capacity building activities will pay particular attention to the skills needed for effective management of Rwanda's protected areas (outcome 1, outcome 4), and to ensure that skill sets remain in the broader PA sector.
Sectoral ministries fail to incorporate biodiversity in sectoral plans/ programmes	M/S	The project will promote inter-departmental collaboration and information exchange (outputs 1.5, 1.6)
Regional insecurity may prevent work in some areas	M/S	Increased community recognition of PA values will promote support for conservation during times of disturbance (outcome 3)
<b>Overall Risk Rating</b>	<b>M/S</b>	

Risk rating: H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)  
Risks refer to the possibility that assumptions defined in the logical framework may not hold.

### *Country Ownership: Country Eligibility and Country Drivenness*

The Biodiversity Secretariat within MINITERE has produced an approved National Biodiversity Strategic Plan for Rwanda (NBSP-R) (April 2003); ORTPN has nearly completed its restructuring and strategic planning process; an organic National Environmental Law on the Environment, establishing the Rwanda Environment Management Authority, is before the Parliament; and the law creating the new Nyungwe National Park has been approved by Parliament. The core objectives of this project respond to priority needs identified in the NBSP-R and in ORTPN's *Strategic Plan: 2004-2008* (October 2004). Rwanda's Poverty Reduction Strategy (PRS Progress Report, June 2003) specifically identifies forestry, energy production, and decentralization within its sectoral strategies, while citing environment and capacity-building as cross-cutting priorities. GOR has identified tourism as a primary sector for economic growth and development, with a proposed tripling of ORTPN's budget for 2005. Government policy in the sphere of civil governance has focused on decentralization with important implications for sectors and districts around PAs and direct linkages with ORTPN's new revenue-sharing policy. The most recent Millenium Development Report stated that Rwanda was not spending enough on its environment sector.

### *Linkages with the UNDP Country Programme*

The project supports GOR PRSP goals of economic development and poverty reduction through support to the environment and PA system that forms the base of Rwanda's tourism sector. The project supports several key goals and objectives of the National Biodiversity Strategy and priority needs identified in ORTPN's *Strategic Plan: 2004-2008*. It has been developed following the Rwanda's Poverty Reduction Strategy (PRS Progress Report, June 2003) which identifies forestry, energy production, decentralization, and capacity building as priorities. All of these processes are supported in part via UNDP Country Office in Rwanda. The project supports UNDP's Country Cooperation Framework in the areas of good

governance, decentralisation, public accountability, enhanced environmental protection and the sustainable management of natural resources. The new Small Grants Programme offers further areas of support and linkage.

UNDP in Kigali, under the Resident Coordinator Office is playing a key role on overall donor – government coordination. We have an Aid Harmonization Coordination Unit and we lead the Development Partners Coordination Group (DPCG) which is a mandate we received from the GoR and in-country donors. The DPCG includes all sectors, and UNDP is conscious of the major interaction between the natural resource base and rural livelihoods. UNDP brings a wealth of experience into these processes, from a large portfolio of rural initiatives in Rwanda from the Africa 2000 projects, and a significant involvement in all aspects of sustainable development (governance, poverty alleviation, policy and capacity building and environmental management).

At the National Scale UNDP draws its interventions from the UNDAF (UN Development Assistance Framework) and the UNDP CCF. Both documents support and feed into the Rwanda PRSP ( ) which was part funded by UNDP. The UNDAF has a specific goal “*Goal 2: Improved food security and increased income from the agricultural sector*” with specific inputs from UNDP, FAO, WFP, UNICEF. The Agriculture sector includes natural resource products.

The CCF includes environment as a cross-cutting issue: “Rwanda’s high population density in relation to the arable land area requires that particular attention be paid to environmental concerns in all rural development activities. Skills for incorporating environmental issues in the development process, and for environmental impact assessment, will be provided as appropriate” In real terms this has led to the UNDP funded Decentralisation and Environmental Management Programme (DEMP) of REMA (p 13 of brief), which addresses decentralised environmental governance. UNDP contributes to the District Community Fund (along with other donors). This fund provides support to AIG enterprise around the PAs; fund disbursement is based on the DEMP District Environmental Management Plans (which feature as a planning tool for buffer management in this document).

The Rwanda PRSP is the guiding development strategy, the sectoral document for environment: “*Outline Program for Sustainable Environmental Management and Improved Living Conditions in Rwanda*” gives leadership.

This project is based in the Ministry and the Ministry’s new Environmental Parastatal “REMA” and is guided by UNDP in their integrated Sustainable Development and Environment Programme. The project is therefore uniquely placed to take advantage of other initiatives and to provide a coordination role in the biodiversity / natural resource sector. The large steering committee process, strong stakeholder buy-in from government donors and civil society support this role.

With regard to the UNDAF, UNDP is coordinating the ongoing evaluation on UNDAF 1 (2002-2006) and the process of preparing the second UNDAF cycle. UNDP are part of several UNDAF thematic groups and are heading some, including that on cross-cutting environment. This project has been discussed in UNDAF deliberations and is seen as bridging the three main pillars of interest – environmental management from both the institutional (including financing) and field activity perspectives, governance of resources and capacity building for improved governance, and rural poverty alleviation.

The goal of the project is to ensure that the Protected Area Agencies (from Biodiversity and broader environmental perspectives) have capacity to engage more fully in these dialogues. The Environment Support Document from the Ministry of Lands and Environment and supported by UNDP is the entry point for such engagement.

We see therefore two separate but interacting strands that pull this project into the broader sustainable development process in Rwanda. Firstly is the support role of UNDP and the coordination role of UNDP in donor process and coordination across the environment – development divide. Secondly is the institutional capacity building role of this BD1 (institutional sustainability) project. Outcome 1 at central level and Outcome 2 at decentralised level provide support for agencies to engage in coordination frameworks.

### *Linkages with UNDP/GEF Financed Projects*

UNDP-GEF has a number of Protected Area Systems Projects in development / recent submission addressing BD1. These are for Rwanda, Namibia, Zambia, Uganda (Albert Rift) and South Africa (Wild Coast), and Ethiopia is under preparation. All of these developments have benefited from learning interchange and experience. As a result templates and methodologies have merged somewhat, seeking best practice as approved by GEF Reviews and approvals. Specific areas of learning have included: sustainable financing, institutional assessment and capacity, linkages from field piloting to institutional capacity, indicators and M and E frameworks, threat / barrier assessments.

It is anticipated that these learning experiences will continue through project implementation.

### *Linkages to Other GEF Financed Projects in Rwanda and the Region*

UNDP has coordinated closely with the World Bank to ensure complementarity between this project and the Bank Rural Sector Support Programme / Critical Ecosystems {wetlands} project. The wetlands project was consulted and its objectives for wetlands conservation taken into account during the PDF B process. The project also intends to collaborate with the Association pour la Conservation de la Nature au Rwanda (ACNR) and Birdlife International on their recently approved PDF B process, for improved bird habitat conservation in and around PAs. The project, both directly and through REMA will work with other developing GEF programmes for mini-hydel (UNDP) and for Lower Kagera Valley (UNEP) and the Lake Victoria processes which will focus on the Kagera (WB) and the Nile Basin Initiative (WB / UNDP).

### *Sustainability*

Sustainability is a central consideration within this project and is dependent on instilling the effective capacity to manage Rwanda's PAs in a systematic manner. *Financial sustainability* begins with a comprehensive analysis of potential funding streams to get past Rwanda's current overdependence on tourism, and particularly tourism based on the mountain gorilla in one PA. Tapping these streams -- and sustaining their output -- requires personnel with a broad vision and enhanced technical skill set. These more diverse sources will provide a stable foundation for conservation financing (Output 1.1), wider recognition of PA values and benefits across GOR ministries (1.5) and better long-range business planning by ORTPN (1.2). The project sees greater financial sustainability at the local community level as an important element in *social sustainability*. Demonstrating that employment, revenue, and other benefits come from the natural forest environment (outcome 2) is also critical, as is providing the training for local personnel to manage local enterprises catalyzed by the project. Ultimately, however, government institutions and their personnel are likely to retain greater control over the fate of the forest than that held by local communities. It is these institutions through their policies, laws, and management decisions that have acted in the past to both protect PAs and permit their clearing and degradation.

The project therefore targets *institutional sustainability* through a suite of activities under Outcomes 1 and 2. Outcome 1 improves capacity of central government personnel within key institutions responsible for the management of PAs, biodiversity, forests, and water to assure effective management after the project

ends. Outcome 2 builds capacity and partnerships based on real incentives at local levels. Outcome 3 targets improvements in adaptive management capacity at the Nyungwe and Volcanoes parks, including updated and implemented information-based management plans. The capacity/training components have broader potential impacts through the Rwandan practice of rotating PA personnel among all three parks.

### *Replicability*

Rwanda has long been a leader and creative force in conservation across the Albertine Region and beyond. The initial Mountain Gorilla Project (1979-1988) in the VNP provided the model for comparable activities in Congo and Uganda, evolved into the current IGCP, and was cited worldwide as an early example of ecotourism success and attention to local human needs. The Nyungwe Forest Conservation Project (PCFN) expanded on this model to develop a broader set of forest-and nature-based ecotourism attractions in conjunction with appropriate community development activities. PCFN staff then organized and hosted invitees from four neighboring countries to discuss common concerns and progress at the first International Workshop for the Conservation and Management of Afromontane Forests in 1989 (WCS/ORTPN 1989). In the 1990s, however, Rwanda's descent into civil war, genocide, and instability effectively removed it from any leadership role. This GEF project has the potential to not only help restore Rwandan capacity, but to once again generate models for replication in surrounding nations.

The Albertine Rift planning process, in which Rwanda is an active participant, provides an excellent forum for active exchange of information and experience in this regard. The Northern Albertine Forest GEF (Uganda) could benefit from experiences in Nyungwe, and vice versa. Burundi is moving toward the restoration of civil society within its borders and has approached Rwandan government and NGO counterparts for advice in the conservation sector. A comparable restoration of order in eastern Congo would permit similar exchanges, (and lessons on sustainable gorilla tourism) while also reducing the insecurity in the region. Beyond east-central Africa, montane forest environments worldwide are primary conservation targets due to their high threatened status and high biological values. For this reason, demonstrations of conservation success – or even well-documented failures – could help to inform comparable efforts from Ethiopia to Tanzania's Eastern Arc. This project will assure that such relevant information is widely disseminated through participation in a variety of regional and international forums, as well as through appropriate publications. Annex 7 presents a replication strategy.

Rwanda has a strict staff rotation policy, from senior staff and juniors. This is built into ORTPN for Protected Areas. Staff rotate every 5 years or so, and this is staggered so this is a continuous process. This means that automatically a course for Rangers from Nyungwe would eventually feed into Akagera. BUT it also means that staff from Nyungwe may be swapped with Akagera, so Nyungwe could lose trained personnel in weeks. The answer was to have consolidated training across ALL 3 Pas, so staff have competencies throughout. Further staff from Akagera coming into training in the other PAs would participate in field experiences and so take back real field examples into Akagera. The same goes at higher level training in M and E for example amongst wardens and planners.

More detail around the exchange – replication process will be built into specific actions and budget lines by CEO endorsement.

### **PART III : Management Arrangements : Execution and Implementation Arrangement**

The Ministry of Water, Lands, Forests, and Environment (MINITERE) will execute the project through the Rwanda Environmental Management Authority (REMA). GOR will execute the project following

UNDP guidelines for nationally executed projects. MINITERE will be accountable to UNDP for the disbursement of funds and the achievement of the project goals, according to the approved workplan. A National Project Steering Committee (NPSC) will be formed, chaired by the MINITERE. The NPSC will be comprised of REMA, MINITERE, ORTPN, MINICOM, MINALOC, MINICOFIN, MININFRA, UNR, selected Districts, NGO representatives, civil society, and UNDP. The NPSC will perform two main tasks; firstly ensure that the project is implemented according to approved plans and budgets and delivers satisfactory results and impacts from a technical point of view; secondly to ensure good coordination and flow of information between the various ministries, institutions and donor projects, so as to optimize use of human and financial resources. The NPSC will review workplans and activities and budgets to be implemented. A Project Management Unit (PMU) will be established. REMA/MINITERE, as Executing Agency, will provide a National Project Coordinator. A Project Inception Process will finalise detailed arrangements on start-up, processes will be approved by the Steering Committee assessing the initial Inception Report, prepared with full stakeholder agreement.

## **PART IV : Monitoring and Evaluation Plan and Budget**

Monitoring and Evaluation (M&E) will provide stakeholders and partners with information to measure progress, determine whether expected impacts have been achieved, and to provide timely feedback in order to ensure that problems are identified early in implementation and that appropriate actions are taken. Monitoring will be an integral activity of all objectives and will assess the project's effectiveness in protecting biodiversity; evaluate the benefits accruing to communities and other beneficiaries; appraise the underlying causes of project outcomes (positive or negative); and track the level and quality of public participation in conservation activities. The project will be implemented through an adaptive framework that feeds the findings of M & E into operational planning, thus enabling management strategies and activities to be adjusted as necessary. A number of impact and progress indicators have been selected (see Log-frame analysis in Annex 2A) at the goal, objective, and output levels. The project M & E includes 2 outside evaluations, 3 internal evaluations, and annual Tracking Tool assessments.

Evaluation: This project will be subject to program evaluation and financial auditing in accordance with the policies and procedures established for this purpose by UNDP/GEF, including an independent Mid-Term Review and Terminal Review. The organization, TOR and timing of the evaluations will be decided upon between UNDP and the National Project Steering Committee.

Lessons Learned: A summary of Lessons Learned during the PDF-B process and from other regional projects, and how these are incorporated into project design, is provided in Annex 6.

### **FINANCIAL MODALITIES: BUDGET BY OUTPUT**

Project Outcomes	Amount (US\$)		Total (US\$)
	GEF	Co-finance	
1. Capacity and resources of institutions and stakeholders	1,300,000	1,080,000	2,380,000
2. Local economic benefits	1,800,000	3,350,000	5,150,000
3. Protected Areas biodiversity	1,400,000	3,100,000	4,500,000
4. Project management and overhead	950,000	450,000	1,400,000
<b>Grand Total Full Project</b>	<b>5,450,000</b>	<b>7,980,000</b>	<b>13,430,000</b>

### **CO-FINANCING**

Co-financing Sources **				
Co-financier source	Classification	Type	US\$	Status, Letter in Annex
ORTPN	Government	In-kind	550,000	Committed

REMA/MINITERE/DOF	Government	In-kind	330,000	Committed
HELPAGE	NGO	Grant	2,500,000	Committed
CARE	NGO	Grant	300,000	Committed
IGCP	NGO	Grant	1,500,000	Committed
WCS	NGO	Grant	500,000	Committed
MGVP	NGO	Grant	500,000	Committed
DFGF-I	NGO	Grant	1,200,000	Committed
DFGF-E	NGO	Grant	600,000	Committed
<b>Sub-Total Co-financing US \$ 7,980,000</b>				

\*\* This project takes a conservative view of co-financing and the system boundary. We note ORTPN co-finance letter says 750,000\$ pa over 6 years, which is 4.5 million \$. A large part of this is baseline; we estimate some 500,000\$ is co-finance to new PA System Management Processes over the project period. Similarly, NGOs are basing their committed co-finance around their 2004/5 financial year investment figures. Eg: MGVP (the veterinary programme) estimate > 190,000\$ pa for 6 years – we scale that down to 500,000\$, as the financial climate for NGOs is uncertain. Again for Dianne Fossy – we reduce 325,000 pa for 6 years to 200,000\$ pa. We believe this is prudent, and IF MORE co-finance does take place, then this can be easily captured in the annual PIR processes, reporting back to Council. The amounts given here therefore, differ from the letters attached.

UNDP has considerable investment into the sustainable development baseline and into production forest protected areas –inputs which are not treated as co-finance here.

UNDP provides considerable support into the overall PA system (see Fig 2 of Exec Summ), where UNDP-NORAD funds the restoration of Gishwati FR. This was seen as outside the specific *Biodiversity* set of PAs and is not included as direct co-finance. The UNDP managed Africa 2000 Programme has prioritised the funding of communities adjacent to Protected Areas for small development grants. Further detail on UNDP coordination role and how this project links to sustainable development are given in earlier sections. Details of UNDP co-finance are:

- i) The Africa 2000 project annual budget is 200,000 USD depending on selected projects.
- ii) The DEMP is funded by the Netherlands for 2,914,175\$ UNDP: 710,825\$USD and SIDA 50,000\$. UNDP's role is overall project management, technical assistance and M&E.
- iii) NORAD is funding socio-economic reintegration of displaced people from the Gishwati forest. The project is implemented around the Gishwati forest in Gisenyi Province in 5 Districts and the NORAD component and a Japanese Trust Fund component is for Solar Energy, potable water, feeder roads, promotion of ecological briquette and improved cooking stoves. This support totals 2.5 million\$ (400,000\$ UNDP) and is meant for 3500 households.
- iv) The UNDP Poverty – Environment Initiative programme started with mapping the relationship between Poverty and Environment, (funded by UNDP for 60,000\$). The report is ready, and leads to a new initiative on PEI mainstreaming environment – poverty, with 50,000\$ start-up funding and this links to a joint implementation with UNEP-UNDP under the new inter-agency MOU.

This total some 1,400,000\$ at present, with the new CCF under preparation. This is largely sustainable development finance, and not easy to break down into how much goes specifically to target districts.



## **SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT**

### **PART 1: Incremental Cost Analysis**

*“Refer to Annex A of the Executive Summary”*

### **PART II Logical Framework Analysis (See below)**

## **SECTION III : Total Budget and Work-Plan**

*“Details follow at time of CEO Endorsement”*

## Annex B: Logical Framework and Objectively Verifiable Impact Indicators

Project Strategy	<u>Objectively verifiable indicators</u>				
Goal	The sustainable management of natural resources protects biodiversity while contributing to economic and social development of all segments of society.				
	Indicator	<u>Baseline</u>	<u>Target</u>	Sources of verification	Risks and Assumptions
<b>Objective of the project</b> <b>Increased management effectiveness in the national PA network and improved partnerships, between the different PA authorities and other stakeholders provides improved conservation of biodiversity from human induced threats</b>	<ul style="list-style-type: none"> <li>At EOP there will be improved METT scores for both montane parks.</li> </ul>	Nyungwe = 54.3 PdV = 55.5	All relevant questions show improved scores, and total to > 80	MTR and T Review	<ul style="list-style-type: none"> <li>External pressures on national parks do not increase significantly.</li> <li>Political stability and law and order in region is maintained, so no events to reduce tourist visitation.</li> <li>The overall macro-economic climate remains conducive to development</li> </ul> <p>NOTE that tourism revenues are gross figures into Rwanda, not earnings into ORTPN</p>
	<ul style="list-style-type: none"> <li>ORTPN with approved business plan in place and functioning.</li> </ul>	No overall Bus Plan	Bus Plan in place	Govt Reports, and actual plan	
	<ul style="list-style-type: none"> <li>Business plan and other financial processes leads to increased tourism revenues to PAs.</li> </ul>	Baseline (2004) tourism revenue was 16 mill USD (see annex 1 of Brief)	50% of govt target of 100 mill USD (ie= 50 mill USD) of tourism revenue	Financial records from Govt	
	<ul style="list-style-type: none"> <li>District Dev Plans have positive strategies for biodiversity conservation with stakeholder partnerships.</li> </ul>	No districts with such plans	At least half of 14 target districts have stakeholder MOUs, at least 10 have BD issues in Dist Dev Plans		
	<ul style="list-style-type: none"> <li>There is no loss of forest cover in the two focal NPs</li> </ul>	Baseline forest cover maps from GIS work	No change in cover	Inputs to GIS monitoring system	

<p><b>Outcome 1</b>  <b>Institutions and key stakeholders at central, district and local levels have capacity to manage and conserve natural resources in and around Protected Areas.</b></p>	<ul style="list-style-type: none"> <li>• The Wildlife and National Parks Legislation is enacted, providing a legal framework for increasing management effectiveness and reducing resource conflict.</li> <li>• At EOP, the budget amount appropriated and raised for PA management from national sources will have increased by 100%.</li> <li>• Expanded range of training opportunities for agency staff is used for skill enhancement.</li> <li>• Intergovernmental linkage &amp; coordination in place via MoU / agreements, at central and to district levels.</li> </ul>	<p>Need for Legislation is agreed.</p> <p>The current available national budget for PA management is US\$ 4million.</p> <p>No training plans in place.</p> <p>No detailed agreements in place</p>	<p>Full Act with subsidiary legislation in place and under implementation</p> <p>EOP: 100% Increase recorded with % from national sources doubled.</p> <p>Training plan in place linked to institution M &amp; E. And &gt; 50% of relevant staff involved in at least 1 training.</p> <p>At least three central and three district agreements in place and functioning with M and E processes</p>		<p>Institutional mandates remain constant</p> <p>District decentralisation process remains on course.</p> <p>Tourism flows remain strong.</p>
---	---	---	---	--	---



<p><b>Outcome 3:</b></p> <p><b>Protected Area management and conservation of biodiversity in forest parks is expanded and reinforced through knowledge based adaptive management practices and field demonstration.</b></p>	<ul style="list-style-type: none"> <li>• Management effectiveness index of both site PAs increased.</li> <li>• Functioning knowledge management system institutionalized and is accessible to partners.</li> <li>• Monitoring system and applied research designed &amp; used to monitor key conservation management indicators (including biological, threats indices, tourism impacts, resource management and community-related activity)</li> <li>• Park management plans for Nyungwe and Volcanoes adapted &amp; updated.</li> <li>• Park business plans are developed, &amp; implemented.</li> <li>• Increased levels of collaboration between conservation partners leads to greater sharing lessons and synergy.</li> </ul>	<p>Initial scores (see the Brief)</p> <p>No such system</p> <p>No integrated system</p> <p>No detailed Mgmt Plans.</p> <p>No NP business plans</p> <p>Ad-hoc Partner meetings, not led by Govt process.</p>	<p>Scores show increase on all management topics</p> <p>A system in place. And has fed information into planning decisions &gt;3 times per park</p> <p>M and E data are available through TRA, impact assessments, and feed into management process, &gt;3 times per park</p> <p>Management Plans exist updated &gt;once</p> <p>Park business plans exist &amp; used</p> <p>Govt led interaction mechanism in place and functioning</p>	<p>METT scores by MTR and TR.</p> <p>Project reports, PIR etc, ORTPN reports.</p> <p>Management plan processes and revisions.</p> <p>Business plans available.</p> <p>Greater synergies and linkages, eg shared programmes documents</p>	<p>Protected Areas do not have major external / internal shocks.</p> <p>Institutions retain similar mandates.</p>
<p><b>Outcome 4:</b></p> <p><b>Project effectively managed, with strong learning, evaluation, adaptive mgmt and dissemination components in place.</b></p>	<p>Reports on time, Funding flows with no delays Conservation publications Lessons learned published Web-site in place and used Learning events for staff Study tours for partners implemented.</p> <p>Albertine Rift Programme and EAC aware of Project impacts</p>	<p>To be set up with incoming PIU</p> <p>Information flow on set-up</p>	<p>To be detailed in the Inception Report</p> <p>Annual reporting</p>	<p>Quarterly reports through UNDP Steering Committees</p> <p>PIR to GEF and UNDP HQ</p> <p>Publications</p>	<p>Project support from institutions is maintained.</p>



## ***ANNEX 1. FINANCING STRATEGY***

### **Sustainable Financing in the Context of Rwanda's Protected Areas<sup>5</sup>**

Over the past several years, Rwanda has taken important strides to improve the management of its protected areas, and to utilize tourism as a way to generate the revenue to finance them. The Government of Rwanda hopes to increase tourism numbers dramatically over the next decade with a goal of earning \$100 million from 70,000 tourists by 2010. In the drive for increased tourism revenue the protected areas will serve as magnets and play the primary role in attracting tourists and creating revenue for the country as well as for the national park authority (ORTPN 2004). Today tourism represents the primary source of revenue available to finance park operations. However growth in tourism revenue directly benefiting protected areas faces a constraint – the number of gorilla permits available on a daily basis.

Gorilla tourism attracts most of the international tourists currently visiting Rwanda. On any given day, up to 34 – 36 tourists can visit gorillas in the Volcanoes National Park (VNP) with each tourist paying \$375.00 for the one-hour encounter. ORTPN hopes to diversify attractions at VNP and create new attractions at Nyungwe National Park (NNP) to tempt tourists to extend their visit time in Rwanda and naturally increase their spending on nature-based activities. Success in this area will require infrastructure investment, greater private sector participation, peace and security in the region, and a solid marketing program. Much the same strategy will be applied to Akagera National Park (ANP), albeit with a different market focus. Akagera continues to attract tourists, but in contrast to the other two national parks, most of the tourists visiting Akagera are nationals, who seek the quiet and open landscapes of the park for weekend getaways. The result is higher visitation numbers to ANP, but lower overall revenue.

At the same time that ORTPN is growing its tourism product, it recognizes the risk of focusing solely on one source of revenue, tourism, and on basically one product, gorilla tourism. ORTPN needs to use gorilla tourism to expand its tourism base and to develop new and more diverse revenue sources to ensure its long-term sustainability. This report focuses on ORTPN's current revenue profile and assesses financial instruments that could be employed for revenue generation over the next five to ten years as part of a broad and comprehensive ORTPN business planning effort.

#### **Current Financial Mechanisms**

ORTPN is a parastatal organization. This status provides ORTPN with fiscal autonomy, allowing it to retain its earnings and invest its resources to meet mission goals. The board of ORTPN approves an annual budget for the protected area system and manages the annual expenditures without further government approval. Operationally ORTPN submits a budget annually to government through the Ministry of Commerce (MINICOM). The final budget allocation is determined by the Budget Office, which makes a broad allocation to the Ministry based on initial requests. Then, after internal negotiations among the various organizations and departments at the ministerial level, MINICOM sets the final budgets.

---

<sup>5</sup> Adapted from "Sustainable Financing in the Context of Rwanda's Protected Areas," PAB report (Victurine 2004).

Practically speaking, ORTPN enjoys three primary sources of revenue: government subvention through the budgeting process, tourism receipts from visitor fees and permits, and direct support from NGOs. Much of the NGO support is destined for specific parks and field activities. ORTPN does earn other income, but the amounts are small compared to its primary sources. Figure 1.1 shows the sources of revenue for ORTPN since 2001, while Figure 1.2 demonstrates the current gap between ORTPN budget projections and revenue sources.

Figure 1.1. ORTPN Sources of Revenue 2001- 2005

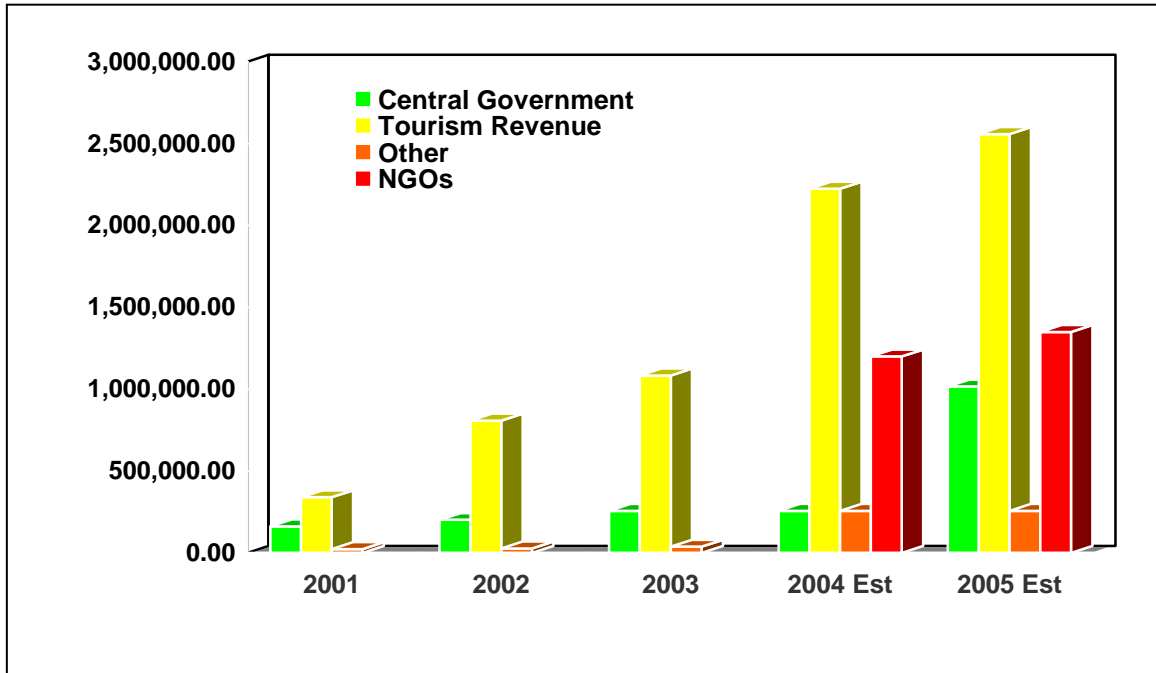
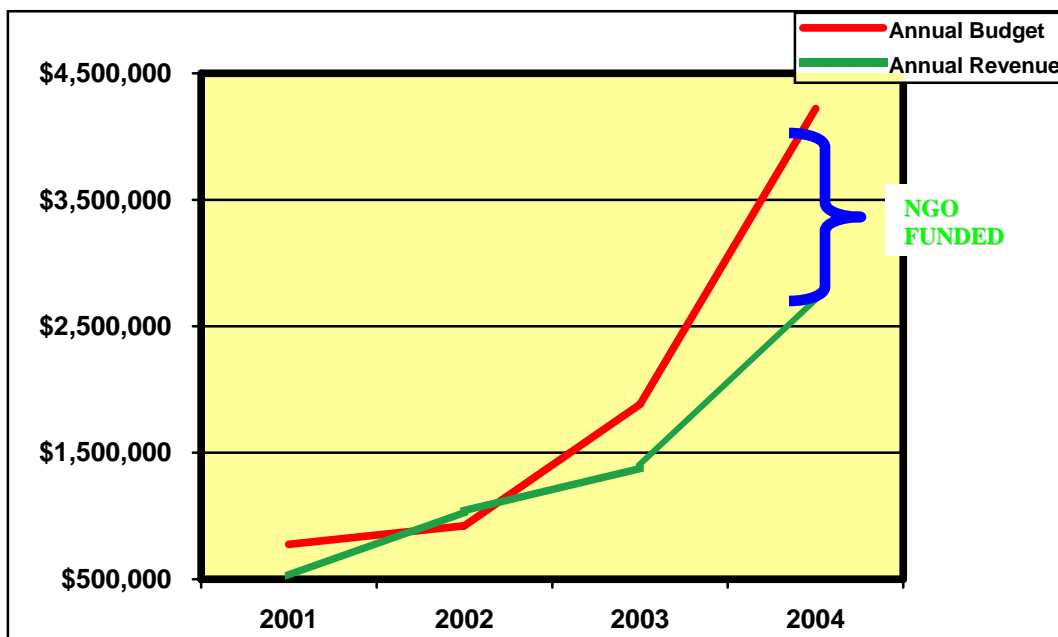


Figure 1.2. ORTPN Annual Budget versus Revenue : The Resource Gap





### ***Government Contributions***

Over the past several years, the Government has provided ORTPN with a fixed funding allocation. In 2003 and 2004 the Government provided ORTPN with FrRW 151 million and 156 million respectively, representing 14% and 6% of the total budget for each of those years. Since 2001 the percentage of the ORTPN budget supported by government has declined steadily. The budget picture looks different in 2005 with the Budget Office and MINICOM committing approximately FrRW 600 million to ORTPN, a 285% increase over the 2004 budget allocation and approximately 20% of the 2005 ORTPN budget. This significant increase brings the Government contribution in line with the percentages provided in 2001 and 2002. The positive change attests to the importance that the Government now places on tourism development as an important economic driver in the country and the critical role that ORTPN will play in the realization of tourism goals. ORTPN hopes that it will continue to receive a strong commitment from government in the future.

Even with the positive news about increased government contributions to ORTPN, the organization remains responsible for generating nearly 80% of its \$4.5 - \$5 million annual operating budget and generating sources of funds to support new investments. Historically ORTPN has covered the non-government funded budget with its own revenue (mostly from tourism) and from grants for field support provided by a variety of NGOs working in the country.

The amount of Government contribution discussed above takes into account the direct budgetary allocation to ORTPN. In addition to the above-mentioned funds, the Rwandan Government expends part of its military budget to support the security of tourists and researchers in Volcanoes National Park, and to a lesser extent Nyungwe. Each tourist group and each research visit to the gorillas receive a military escort, as part of the Government commitment to assure the security of foreigners visiting and working in Rwanda. Although the cost of this security does not figure in ORTPN budgets, it does represent an important financial contribution to ORTPN operations and revenue generating potential. Actual budget figures for this service have not been obtained.

### ***Grants and Fundraising***

ORTPN receives support from a variety of non-governmental organizations that collaborate with ORTPN to support management of its protected areas. Many of the organizations support park-specific activities as well as broader regional conservation efforts aimed at transboundary conservation. NGO budgets vary from year to year and the organizations actively seek new funding to develop programs that respond to urgent conservation needs. Current estimates of NGO support to ORTPN range between \$1.2 and \$1.5 million per annum which fund specific interventions in the country, as well as cover NGO overhead and operational costs. Many of the NGOs indicate their desire to increase the amount available for Rwanda and will continue their fundraising efforts on behalf of Rwandan conservation objectives.

### ***ORTPN Revenue Generation***

ORTPN raises its own resources mostly from tourism. In 2004 ORPTN expects to earn between \$15,000 and \$20,000 from investing money not required for operations in short to medium-term treasury bills. Earnings from merchandising are well below what might be expected. This lack of earning power stems from ORTPN's lack of product; goods are not available at sales outlets and the quality of merchandise is inconsistent. ORTPN expects to earn no more than an

estimated \$10,000 in 2004 from sales, even though its tourist numbers have increased dramatically over the past two years. Too many of these visitors are unable to find and purchase goods and souvenirs of acceptable quality.. ORTPN does recognize the need to increase and improve product as well as develop its brand.

Revenue from park entrance fees, gorilla

permits, and visitation to other park attractions represents the majority of the resources earned by ORTPN. The total earnings for 2004 are estimated at \$2.6 million, with most coming from Volcanoes National Park. ORTPN raised the cost of gorilla permits to \$350.00 (\$375.00 for the permit and entry fee) in order to capture more of the rent generated from the demand to visit mountain gorillas. Even with the price increase, tourist numbers have increased. In 2004, preliminary numbers indicate that gorilla visitation nearly reached

the 7500 mark: surpassing the previous record from 1989 by almost 600. The success of the mountain gorilla tourism program in light of the price increase convinced Uganda to increase its fees in August 2004 to be on par with Rwanda. Gorilla tourism drives international tourism in Rwanda, and Volcanoes National Park accounts for 93% of the revenue earned by the national parks. Figure 1.3 shows the breakdown of revenue earnings per park.

#### **ORTPN Sustainable Financing Options/Possibilities**

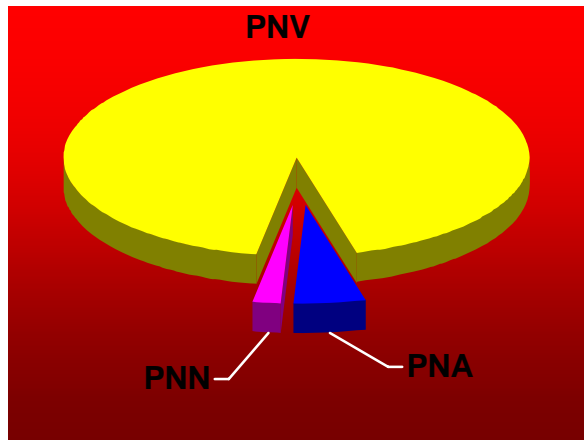
Financial arrangements are a means of generating revenue or securing income through grants, debt, and/or equity investments for the purpose of providing funding to support the organization's mission. ORTPN already employs a variety of instruments to generate income and there are some potential new revenue sources including new sources of public funding (government), alternative fundraising options, and adoption of revenue generating financial instruments

This section explores the financial instruments that can contribute both directly and indirectly to the revenue that ORTPN can generate to support its mission. Some of these options could be implemented through the support provided by UNDP GEF funds.

#### **Public**

Government already includes ORTPN in its budgeting, and the proposed increase for 2005 reflects growing recognition of nature-based ecotourism's potential to generate revenue. Two untapped public-funding sources also exist: the Poverty Reduction Strategy Program (PRSP) and the Common Development Fund (CDF). The linkage between PRSP, conservation, and natural resource management is underemphasized but becoming more apparent to policy makers. As an example, the Government of Rwanda recently initiated a reforestation program to rehabilitate a watershed, which will subsequently reduce erosion and increase water quantity in reservoirs used to generate electricity. The CDF has the mandate to manage all national and external finances meant to contribute to the socio-economic development of decentralized entities in Rwanda. CDF represents an important source of funds, although not directly for ORTPN, for district

**Figure 1.3. Percentage revenue by park**



development. The potential exists for CDF to contribute resources to community conservation priorities in those districts bordering protected areas.

#### **Revenue generating financial instruments**

Increasing the diversity of tourism products remains a key facet of ORTPN's plans to increase revenue-generation. ORTPN has ambitious plans to expand tourism-revenue by increasing annual visitation to Rwanda from 10,000 to 70,000 over 5 years. Success of this strategy will depend largely on diversifying tourism products beyond the overwhelming predominance of gorilla tourism as a revenue source. Other sources include increasing tourism in the remaining parks and from business and conference centers. A particular emphasis will be directed toward securing investment partnerships between government and the private sector to develop new attractions and accommodations for NNP. To sustainably increase visitation rates to NNP, ensuring quality of service is a critical issue. Reasonable pricing must be utilized according to visitor expectations and quality of attractions and services; i.e., the gorilla model of nearly price-inelastic demand is probably not applicable in Nyungwe.

Community tourism has not been developed in Rwanda and it does not enjoy priority status within ORTPN, which is focusing on high-end tourism. However, budget tourists will continue to visit Rwanda and will seek out the lower cost and cultural connections offered by community tourism facilities. There is a need to build the capacity of local entrepreneurs and community organizations to provide clean and appropriate accommodation and services. Cyamudongo chimp-viewing and nature hiking offers an excellent example where a community tourism venture could benefit both the NNP and local community.

Merchandising is at a nascent stage, with no or limited products for sale at national parks. Tourists want to purchase good quality merchandise after their gorilla and primate experiences and will spend money on souvenirs – if they are available. Contracting a designer with a good understanding of the market to assist in design and brand development may be an excellent investment and will help ORTPN develop its brand and product line.

#### **Debt swaps**

Rwanda is now nearing the completion point for its existing debt reduction negotiations under HIPC with satisfaction of conditions reached by the end of 2004. With this, Rwanda will receive 90% forgiveness of its debt. Some of the debt remaining after reaching the completion point could be eligible for a debt swap and those funds could be used to support conservation or to create a conservation trust fund. Working with the Ministry of Finance to explore possible debt swap arrangements should form part of ORTPN's overall conservation finance strategy.

#### **Ecosystem services**

Protected areas provide a variety of ecological services, many of which provide important benefits to human populations. Two important services with the potential to generate revenue and provide conservation benefits include, 1) hydrological services from watershed protection, and 2) carbon sequestration. MINITERE and MINICOFIN should work together to increase understanding of the role that ecological services play in the country's development. Water resources are extremely important in Rwanda and its protected areas provide a disproportionate share of year-round water stocks. A study could evaluate PA water values and the potential to rehabilitate small-scale water systems. In addition, the study could evaluate a fee system, particularly for large users (examples: hotels, tea estates, rice estates), to contribute to conservation of the resources. The growing demand for electricity and the significant water flows from NNP may offer the option to develop micro-hydroelectric projects.

Carbon is another potential source of revenue for national park protection. Most carbon projects provide funding for reforestation and afforestation. Such projects may be developed in buffer zones and community areas around NNP, Gishwati, and possibly VNP. In terms of market value, the current price of carbon ranges from \$2 to \$5 per ton. Table 1.1 is adapted from previous studies to display potential market values. If ORTPN and its collaborators are able to find partners willing to purchase the carbon sequestered in Rwanda, there is a chance to earn sufficient income to make an important contribution to protected area management.

**Table 1.1. Value of Carbon in VNP and NNP**

	VNP	NNP	Total
Area (Ha)	18,000	102,000	120,000
Carbon rate (mt/ha)	125	125	
Quantity of carbon sequestered	2,250,000	12,750,000	15,000,000
Value per mt (\$)	5	5	5
Total Value (\$)	11,250,000	63,750,000	75,000,000
Annual Value/mt	0.2	0.2	-
Total Annual Value (NPV, \$)	112,500	637,500	750,000

### **Conclusions**

ORTPN has enjoyed considerable success in improving its financing for protected areas. Government contributions should increase in 2005 and hopefully the level of government support will continue into the future. In addition, the Government has made a significant commitment to improve the tourist product and increase visitation to Rwanda. Those efforts, along with the likely continued demand for gorilla permits, bodes well for ORTPN's revenue generating efforts. Meeting ambitious tourism targets, however, will greatly depend on improving accommodation options at Nyungwe Park, diversifying attractions, and pricing products to increase local and regional tourism, as well as international visitation.

ORTPN continues to enjoy the support of its NGO partners who are committed to raising resources to support conservation. However even with growing tourism and the efforts of its partners to provide financial support, ORTPN faces serious conservation challenges. It needs to explore how best to diversify its funding, increase its investments, and manage its income to assure the realization of conservation objectives. The following discussion outlines priority actions for ORTPN and Government.

### ***Business Planning***

Building capacity to develop and implement business plans will aid ORTPN in overall protected area management (including identification of sources of revenue). It is a high priority for the near and medium term future. Development of business planning capacity and guidance in implementing business plans represents the first step in ORTPN's sustainable finance efforts. Developing effective business plans allows ORTPN to set its priorities, know its costs, and assess a range of options to best meet objectives both at a site as well as a network level. Business plans can also help increase management efficiency, ensuring that resources and investments target the highest priority and most feasible activities for conservation. By developing business plans early in the implementation stage of the GEF project, ORTPN and partners can further develop realistic revenue generation options. With GEF support in this area,

ORTPN can establish a business planning process that will aid its efforts to secure adequate funding to realize its strategic objectives.

Development of the business planning module (final template, staff training, development of plans for all the parks and the headquarters, and creation of a business planning unit) should occur in year one of the project. The program will require six months to develop the first plan and complete the training. After approval of the first business plan by ORTPN, a selected team that will become a business planning unit within ORTPN will work on completing the remaining plans.

#### *Development of New Financial Instruments for Conservation*

GEF offers the opportunity to develop new financial instruments that can contribute to the financial sustainability of PAs and even address issues of community livelihoods. Important issues are:

- *Poverty Alleviation.* ORTPN and partners should explore opportunities for linkages between conservation and poverty alleviation through the Ministry of Finance and the Decentralization Process. Of particular importance will be development of collaborative planning and programming mechanisms with district leaders and the Common Development Fund. There is a possible strong linkage with ORTPN's revenue sharing program as well. Moreover, the link between ecosystem service payments and poverty reduction could become very important and demonstrate a direct conservation benefit to poverty alleviation. Building capacity at the district level to include conservation issues into the development process is a high priority. In this way conservation and economic development can be more closely linked and solutions found that address both conservation and livelihood needs in a sustainable approach to local and regional development. Building conservation and environmental programming into the PRSP will also aid any future negotiations with Paris Club countries for debt for nature swaps.
- *Community Conservation.* Given the socio-economic conditions in Rwanda, protected area conservation is closely linked to community issues and community management of natural resources. Helping ensure that resources and investments flow to community projects that provide a long-term conservation benefit will be a high priority for ORTPN, MINITERE, and partners. By expanding its base of collaboration, ORTPN could foster direct funding from CDF and other organizations (microfinance, grants) to support programs that will contribute to conservation in priority areas. In addition, the protected areas and buffer zones can supply direct and indirect benefits to communities and would be eligible for funding from CDF and other organizations. ORTPN needs to explore how best to manage buffer zones in a way that balances conservation and local economic needs and work to ensure that projects supported in these areas are consistent with the conservation/development balance.

*The development of community tourism offers the potential to gain community support for conservation and increase money flows to rural areas. An ORTPN policy to focus primarily on high-end tourism should not preclude some support for an option that may yield both positive economic and conservation benefits at a community scale. Highest priorities include support for capacity building, development of a community tourism training*

*program, and establishment of a funding mechanism to finance community-level investments (campgrounds, bandas, etc.). In developing the training program and financing mechanisms, Rwanda can draw lessons learned from the experience with the Uganda Community Tourism Association (UCOTA) and the training and programs designed for its members.*

- *Private Sector Collaboration.* As part of any sustainable financing initiative, ORTPN will need to develop strategies and mechanisms for working with the private sector that lead to revenue opportunities and ensure that ORTPN satisfies its own financial and conservation mission interests. This is true for policies related to tourism and tourism development in protected areas and for new initiatives (e.g. ecological services). ORTPN needs to develop appropriate policies and contracting procedures for tourism accommodation to ensure the provision of a high quality product that can provide ORTPN with revenue. ORTPN also has the possibility to enter into property-based transactions both for rental income and concession-related income. Those opportunities should be developed within a reasonably short time frame. ORTPN will require some technical assistance to develop its contracting procedures and to property management mechanisms. It can also draw from examples Kenya, Tanzania, and Uganda.
- *Ecological Service Valuation and Payments.* The market potential and value of ecosystem services is not well understood. Equally uncertain is the potential for developing viable investments. Feasibility studies for both water and carbon ecosystem services with follow-up actions are recommended as part of GEF funding. In addition, raising awareness about the value of ecosystem services provided by forests is an important first step. Production and wide distribution of a high quality film about those services is recommended. Exploring partnerships with local businesses (water bottlers and the brewery) to promote forest and watershed protection may offer a possibility for local fundraising. Once options are understood, developing pilot projects to utilize ecological services to generate funds for conservation is the next step.
- *Fiscal Instruments.* Opportunities exist to raise revenue for conservation through taxes and levies. Part of the overall process of developing revenue sources in support of conservation will require active collaboration with MINITERE and the Ministry of Finance. Identification of potential options can be identified as part of the ORTPN business planning process during the early stages of project implementation.

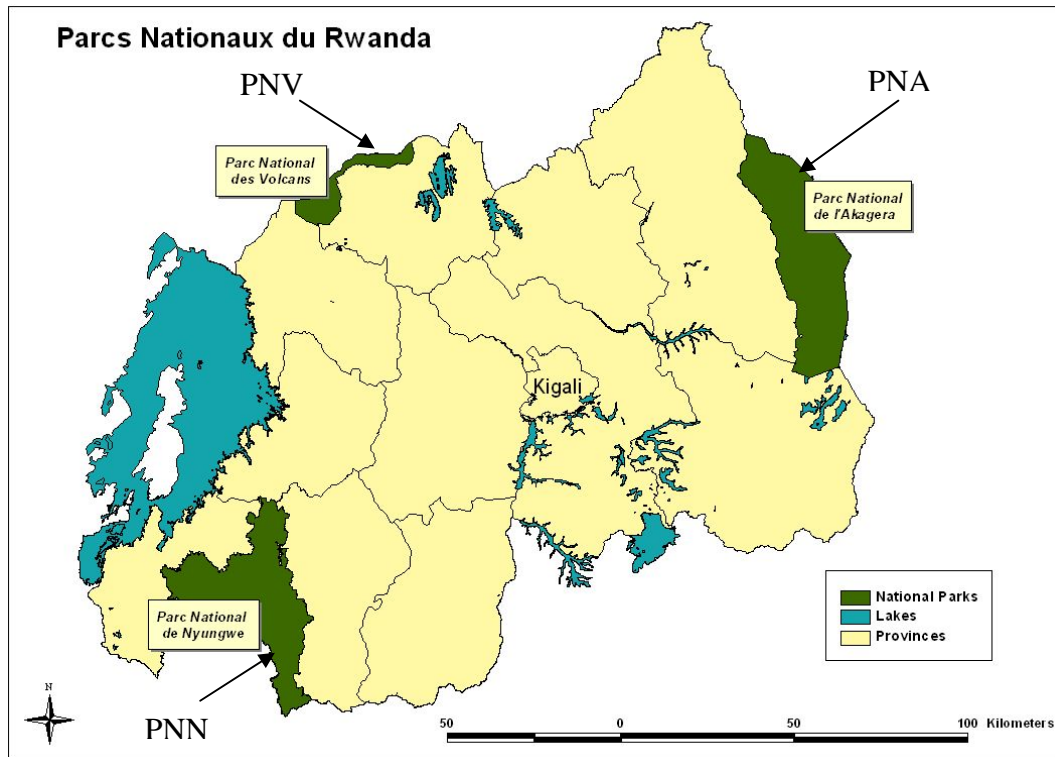
## ***ANNEX 2. MAPS***

Map 1. Orientation of Rwanda's Protected Areas in context of the Central Albertine Rift Ecoregion.

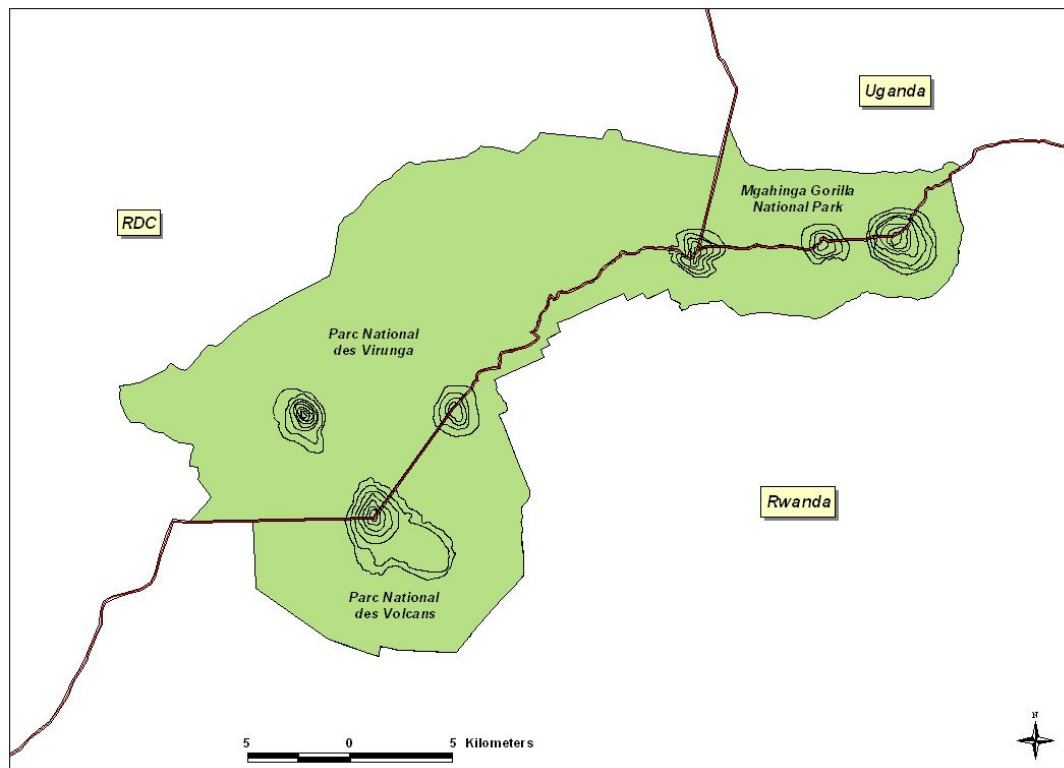




Map 2. Location of Rwanda's National Parks.

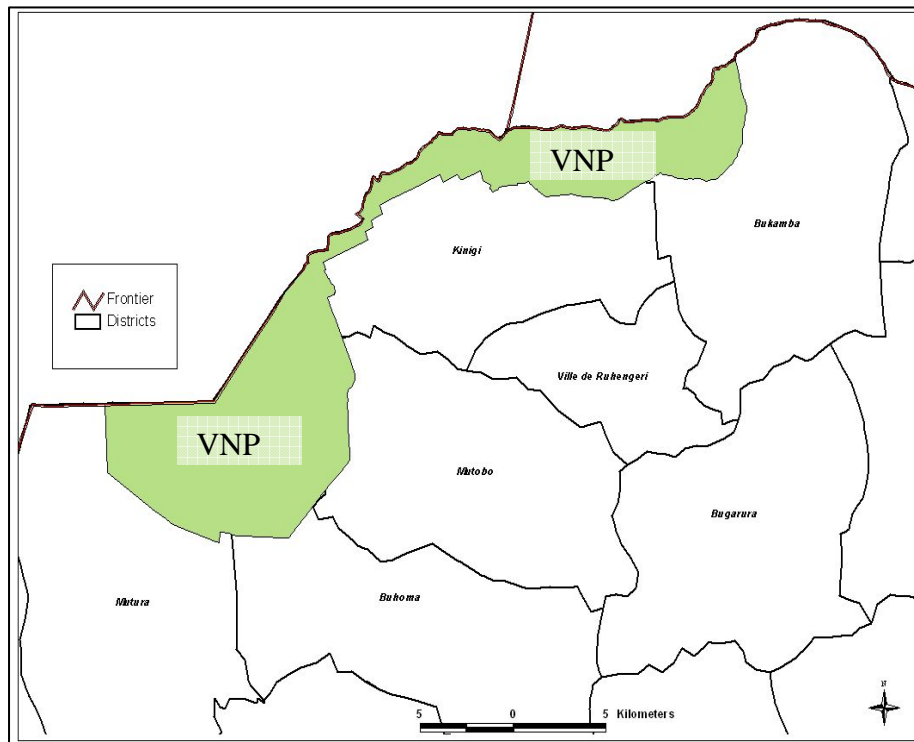


Map 3. Volcanoes National Park in context of the Virunga Massif.

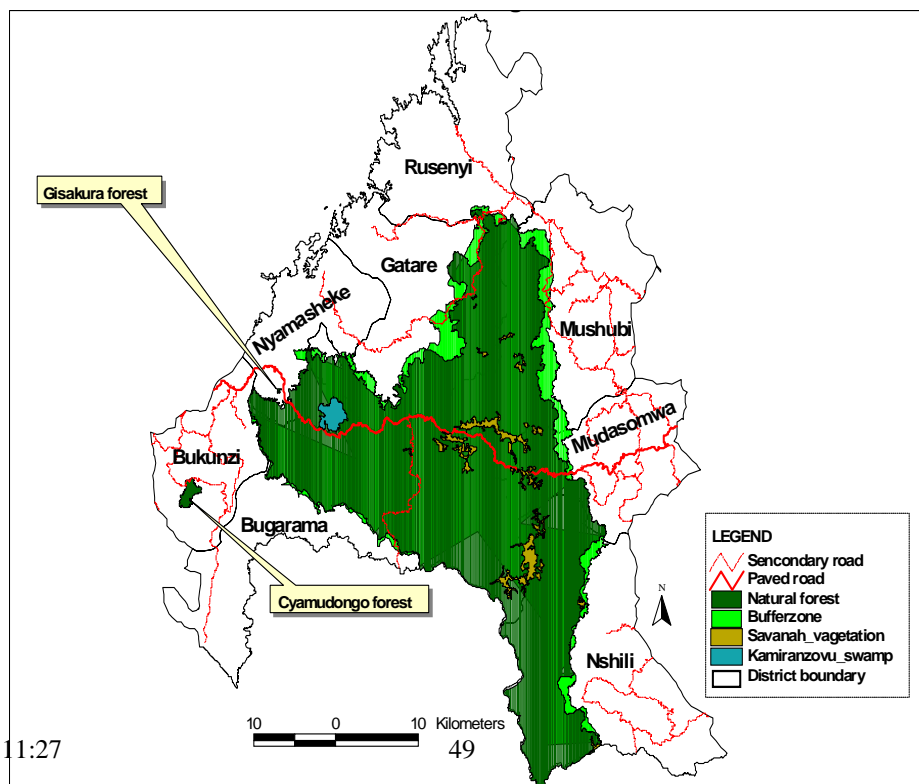




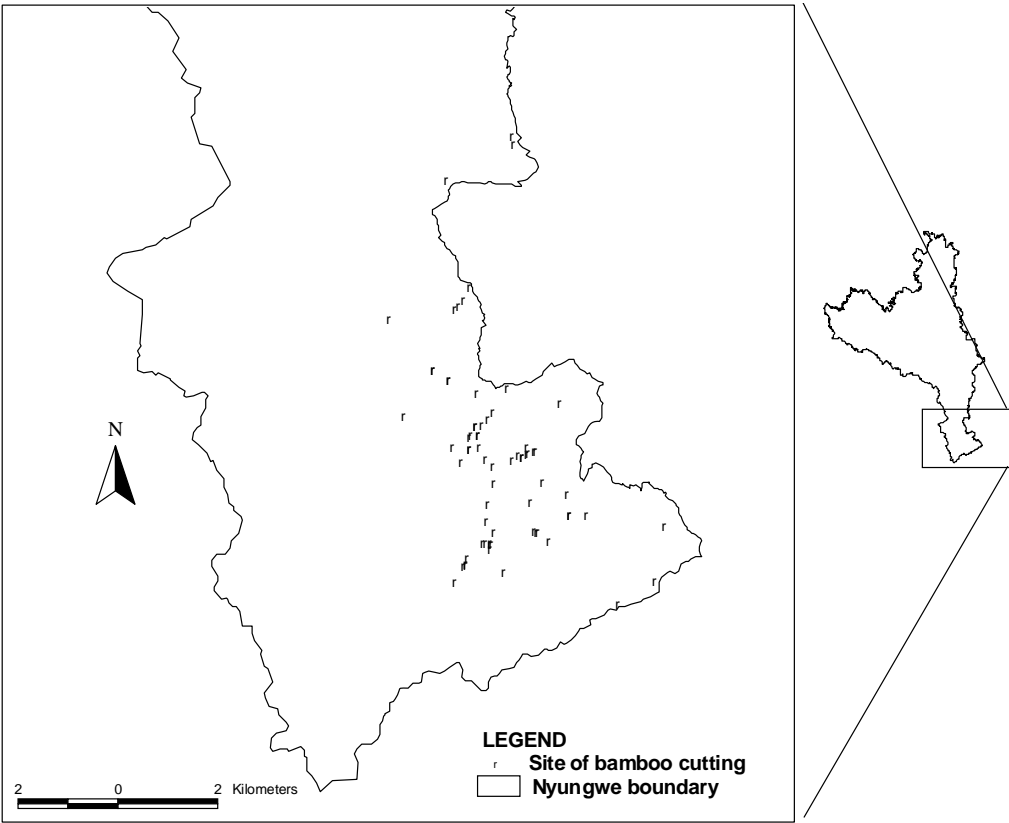
Map 4. Volcanoes National Park and its adjacent districts in Rwanda.



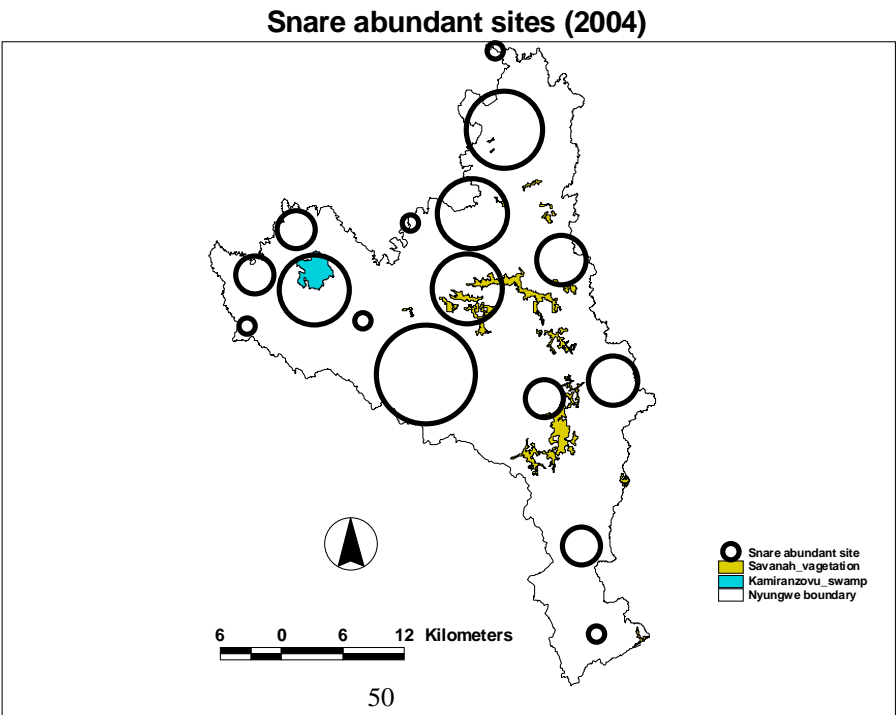
Map 5. Nyungwe National Park and its adjacent districts in Rwanda.



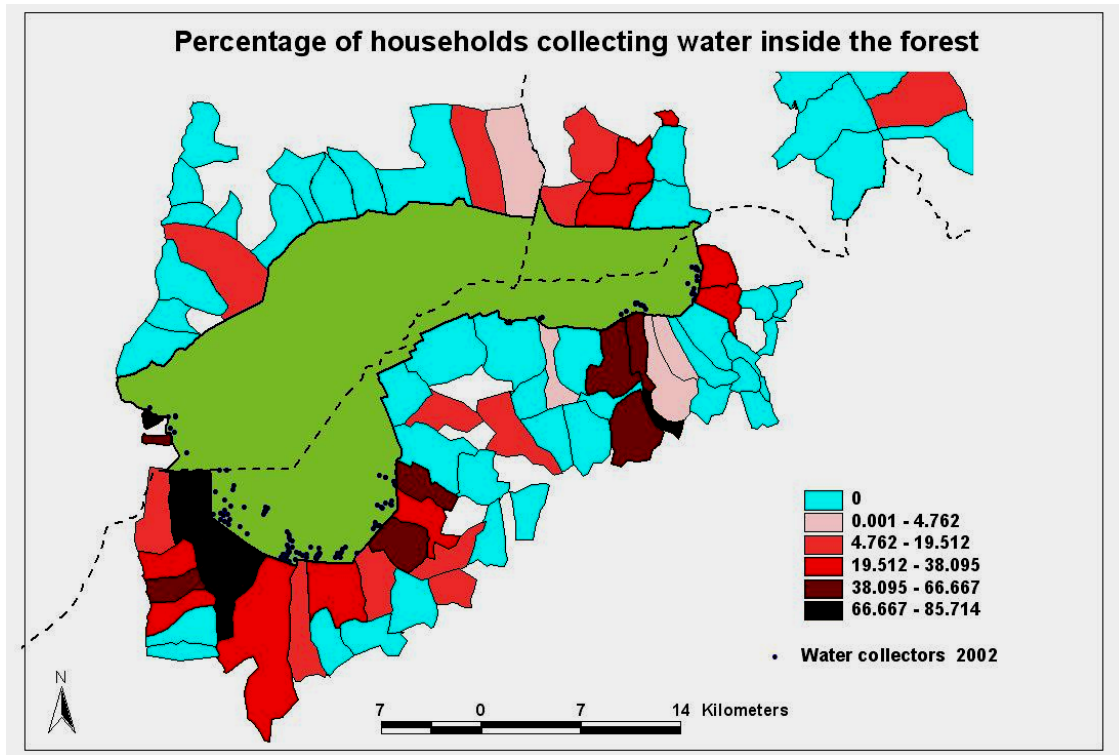
Map 6. Sites of bamboo cutting observed in Nyungwe National Park.



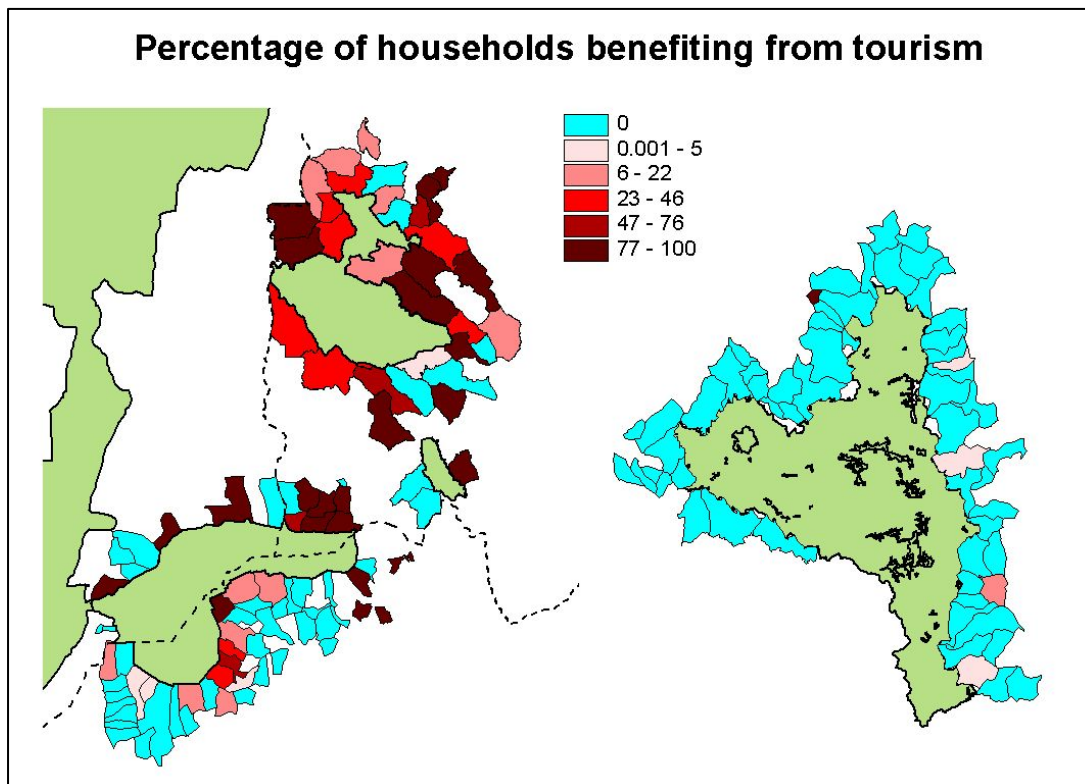
Map 7. Relative abundance of snares encountered in Nyungwe National Park (larger circles represent higher snare densities).  
(larger circles represent areas of higher snare density).



Map 8. The percentage of households collecting water from inside Volcanoes National Park and the Virunga Massif (A. Plumptre, 2002).



Map 9. Percentage of households benefiting from tourism near Protected Areas of the Central Albertine Rift (A. Plumptre, 2002).



### Annex 3. Threats & Root Causes, Barriers and Interventions Table

Biological Impact	Root causes	Key barriers affecting management	Solutions: Interventions from Project “Barrier Removal Activities”	Baseline Activities
<b>Threats to the biodiversity of forest protected areas</b>				
<b>1 Over-extraction of forest resources</b>				
<p>a. Over-harvesting of wood for poles, fuel and crafts leads to: forest productivity loss and change in ecosystem dynamics, as well as disturbance and increased fires.</p> <p>c. Poaching of fauna (primates and duiker) and flora species (varied – for medicines, for food and bamboo for crafts)</p>	<p>Lack of alternative fuel resources;</p> <p>Cultural resistance in using alternatives;</p> <p>Forest goods not priced – free resource;</p> <p>Demand for building material grows, but buffer plantations not used.</p>	<p><b><u>Barrier: Institutional capacity</u></b> Weak capacity of protected area management authorities to patrol and enforce, as well as to mediate co-management, enforce agreements, monitor.</p> <p>Weak, old sectoral legislation does not allow effective regulation of resources</p> <p>Weak community structures; Weak collaboration between relevant agencies.</p> <p>Weak capacity of the districts to pursue natural resource conservation as part of the District Development Plans</p> <p><b><u>Barrier: Systemic capacity</u></b></p> <p>Lack of appropriate tools for communication (use of local radio, etc); Materials not in the local languages in user-friendly ways.</p> <p>Weak collaboration for development and implementation of environmental education programs for local communities;</p> <p><b><u>Barrier: Knowledge barriers</u></b> Knowledge barriers regarding parameters for sustainable use (off take thresholds, inter-specific impacts etc) and restoration/rehabilitation;</p>	<p><b><u>Barrier removal: Institutional strengthening</u></b> Strengthen capacity within the ORTPN HQ processes and the PA management to manage the forest parks and negotiate and implement co-management agreements with districts and communities (<b>Output 1.1 – 1.2, 1.7, 3.</b>);</p> <p>New Wildlife and National Parks Act (<b>1.8,1.9</b>) Strengthen capacity of local institutions to participate in co-management arrangements. ( <b>2.1 - 3, 3.1.</b>);</p> <p>Design a comprehensive monitoring and evaluation system that feeds into adaptive management processes into PAs and to knowledge management. ( <b>1.7, 3.1-3.4.</b>);</p> <p>Strengthen district government within regions to integrate natural resource conservation into the District Plans, and seek funding for plans (<b>Output 1.4.</b>);</p> <p><b><u>Barrier removal: Systemic capacity</u></b></p> <p>Management arrangements codified in specific plans and strategies and implemented for each protected area; (<b>Output 3.1-3.5</b>);</p> <p>Communication strategy developed and materials translated in all local languages (<b>Output 2.1, 2.7</b>);</p> <p><b><u>Barrier removal: Sustainable use</u></b> Sustainable use policy developed (<b>Output 3.1</b>)</p> <p>Micro-enterprises based on sustainable use of wild resources established (<b>Output 2.3 – 2.5</b>);</p>	<p>SDF and land-use management systems developed and strengthened;</p> <p>Review and implementation of gazetted Wild Coast Tourism Policy;</p> <p>Review of the participatory forest management agreements;</p> <p>Transfer of smaller forest plots and woodlots from DWAF to the province;</p> <p>Negotiation for the devolution of indigenous forests from DWAF to Eastern Cape Parks Board (staff, assets, processes, etc);</p> <p>Community woodlots;</p> <p>Salaries and emoluments for PA staff</p> <p>Working for Water Program;</p> <p>Expanded Public Works Program;</p> <p>Working for the Coast;</p> <p>Provincial Growth and Development Plan - Rural sustainable development program</p>

Biological Impact	Root causes	Key barriers affecting management	Solutions: Interventions from Project “Barrier Removal Activities”	Baseline Activities
<b>2 Habitat Degradation</b>				
<p>a. Burning (to accelerate re-growth) leads to: change in species composition and loss of productivity;</p> <p>b. Invasive alien plant species; (bracken) results in: altered hydrology; smothered priority vegetation types; increased fire intensity and frequency;</p> <p>c. Land clearing for agriculture, settlements and commercial forestry leading to fragmentation and habitat loss;</p>	<p>Burning is a frequent activity in the PAs, resulting from perceived optimum strategies of communities wanting honey and resources.</p> <p>Land degradation – (much through fire), provides habitat for colonization with non native species.</p> <p>Forest lands and wetlands more fertile than denuded old land; cheaper to use forest lands than purchasing fertilizers;</p> <p>Population pressure for new land can result in lands allocated for settlements with political support;</p>	<p><b><u>Barrier: Institutional capacity</u></b> Unclear agencies’ mandates and weak cooperation apparatus means any conservation/ land management efforts are unfocused;</p> <p>Limited collaboration between relevant agencies.</p> <p><b><u>Barrier: Systemic capacity</u></b> Regulatory framework and incentives to enlist landholder/community support for IAS clearance on private/communal lands is weak;</p> <p>Weak understanding of the local communities and general public of biodiversity, threats and benefits;</p>	<p><b><u>Barrier removal: Institutional strengthening</u></b> (Output 1.1. – 1.2. and 3.1.);</p> <p>Strengthen capacity of local institutions to participate in co-management arrangements. (Output 2.1 -3);</p> <p>Strengthen District capacity to integrate resource conservation into the DDP (1.4.);</p> <p><b><u>Barrier removal: PA Management Tools</u></b> Active management interventions: alien control, fire management requirements, rehabilitation of indigenous forests (3.1- 3.5.);</p>	

## **ANNEX 4: STAKEHOLDER INVOLVEMENT PLAN**

### **Stakeholder Involvement in Project Development**

The Protected Areas Biodiversity (PAB) project has been implemented with a high degree of stakeholder participation and input. Formal activities have included two Stakeholder Workshops (Inception and Final), eight project design workshops, four Steering Committee meetings, three Provincial meetings, more than 20 district gatherings, 11 formal assessment debriefings, and dozens of consultancy-focused meetings. In addition, PAB staff have participated in more than a dozen workshops hosted by partners. Finally, there have been innumerable bilateral discussions with Government, Donor, NGO, and Private Sector partners over the past year. These stakeholder contributions have profoundly informed and influenced the development of this Full GEF proposal (See also Annex 2, PDF B Activities).

The following tables identify stakeholders with known interests in the implementation of this GEF project. They are subdivided into general categories (government, NGO, etc.) and characterized as to their mandates, interests, and influences, as well as the project's potential impacts and mitigation activities. If this proposal is funded, these stakeholders will form the primary pool of collaborating partners for what is designed as a highly decentralized, collaborative, and transparent project management structure. For more on this structure see the Project Brief and Annex 5, Monitoring and Evaluation Framework.

### **Stakeholder Involvement in Project Implementation**

The same principles of participatory stakeholder involvement will carry over into the project Implementation phase. This participatory process is facilitated by the major role of the NGO consortium in co-finance, and enabled by their inclusion in the National Project Steering Committee.

There is recent emphasis on participatory process in Rwanda – via their Decentralisation Act. Implementation is guided through the DEMP process (assisted by UNDP). Government to District Government to Civil Society to House-Hold Representation linkages are clear components of this enabling environment.

The table that follows addresses both PAST stakeholder involvement in the project development process and FUTURE participation in the implementation process.

## Summary of Stakeholders' Roles, Interests, Influences, Potential Impacts and Mitigation

Stakeholders	Mandate/current role in Biodiversity and Protected Area management	Interests in the project	Influence on project	Potential impacts of project on stakeholder	Mitigation of impacts
<b>1. Government</b>					
MINITERE	GOR Biodiversity Focal Point; institutional home of REMA, Departments of Forestry, Water, and Environment; formulates policies/laws for conservation of environment and natural resources; monitors implementation	Project aligns with, and promotes MINITERE policies at multiple levels; MINITERE is GEF focal point; institutional home for direct collaboration with REMA, DoF, DoW, and DoE	Project focal point; responsible for oversight/implementation of key project components; Participation on Steering and Technical Advisory Committees	Project will require technical and human resources; Project will require greater contact and communication with other partners; Potential to highlight existing contradictions, gaps, conflicts in biodiversity/PA management among government bodies	Project will provide training and increase capacity to support PA/biodiversity conservation; Improve coordination, communication; harmonise policies/laws
MINICOM	Develop and monitor programs aimed at promoting growth of national industries, handicraft, cooperatives, and tourism.	Project aligns with, and promotes policies re PA and ecotourism management; Project creates opportunities for implementation and expansion of policies re revenue sharing, community conservation, and diversification of tourism attractions; Project provides TA for improved Conservation Finance	Responsible for multiple project components related to PA management; participation on Steering and Technical Advisory Committees	Project will demand increased staff involvement; potential tension over overlapping mandates for PA management and conservation between government bodies	Project will provide training and improved systems for conservation finance, business planning, management of PAs; improved coordination, communication among GOR ministries/departments
MINALOC	Develop and monitor decentralization policy and program	Project promotes the decentralization of natural resource management and provides opportunity for capacity building of districts	Existing law and policy will act as a legal framework for project activities; need to link with Forestry and Environment policies/practices; Participation in Steering Committee and TAC	Project will need staff time for policy harmonization;	Project will facilitate coordination and information exchange at central level

Stakeholders	Mandate/current role in Biodiversity and Protected Area management	Interests in the project	Influence on project	Potential impacts of project on stakeholder	Mitigation of impacts
DISTRICTS	Coordination of all local development, environment protection, and co-management of PA buffer resources	Project promotes decentralization of resource management; opportunity for capacity building of districts	Districts oversee/approve buffer and other PA-related activities; associations and cooperatives usually district-based	Project will draw on technical and human resources at District level	Capacity building and direct support for environment and biodiversity elements in DDPs and co-management of buffer zones
<b>2. Environment and Conservation Agencies</b>					
REMA	National responsibility for environmental policies and implementation; Biodiversity Focal Point	Project directly aligns with mission; strengthens capacities of new institution; links with other GOR and NGO partners biodiversity	Provides National Director for Project; responsible for key project components; participates in Steering and Technical Advisory Committees	Draws on technical and human resources; could narrow environment focus to biodiversity and PAs; potential conflicts over mandate re PAs	Training and capacity building provided; improved information systems established; improved communication and cooperative structures established re PAs and biodiversity
ORTPN	Promote tourism, conservation, and management of national parks including monitoring of PA use impacts	Project directly aligns with mission; Potential recipient of funding for training, improved systems	Direct responsibility for key project components; Deputy National Director; participation on Steering and Technical Advisory Committees	Project will require significant staff participation, increased responsibilities; potential conflicts re mandate for biodiversity conservation, buffer zone management	Project will provide training, TA to expand capacities in sustainable conservation finance, biodiversity monitoring, information management; improved communication and coordination with GOR/NGO partners
<b>3. Bilateral and Multilateral Donors</b>	Support government priorities for poverty alleviation, good governance, and sustainable development; support implementation of ratified environmental conventions	Project directly aligns with mission; Provision of project funds	Provision of funds to NGO project partners; complementary project implementation; possible cofinancing for training	Project will attempt to attract financing to partners, PAs, and PA border communities, or to complementary activities	Improved communication among donors, project and partners; increased awareness of linkages between PAs, biodiversity, and development agendas
<b>4. National and International NGOs</b>					



Stakeholders	Mandate/current role in Biodiversity and Protected Area management	Interests in the project	Influence on project	Potential impacts of project on stakeholder	Mitigation of impacts
<u>International conservation NGOs</u> CARE Int'l DFGF-I DFGF-E IGCP MGVP WCS	Support GOR efforts to improve PA management; sustainable development in PA border rural communities	Project directly aligns with missions; provides funds for expanded activities; Project promotes improved information flow and cooperation; project expands GOR contacts beyond ORTPN	Partners responsible for key project components; Participation on Steering Committee	Project will require greater capacity to deliver expanded set of effective services; project will impact on human and financial resources	Project will help support expanded capacity to deliver services; project will promote information exchange and cooperation between NGO community and GOR institutions; project will reduce ORTPN demand for NGO support
<u>Local NGOs/CBOs</u> HELPA ADAR ACNR ARECO Rwanda Nziza AREDI ASCOB&D ARASSI	Implementation of PA border resource use activities; environmental awareness and education; community capacity building for development	Project directly aligns with or complements missions; project will provide support to conservation and community development activities	Responsible for key project components;  Participation in Steering Committee	Project will stretch capacity to deliver efficient and effective services; risk of lower quality performance; potential conflicts between conservation and development interests	Project will provide some direct support and significant training to increase local capacities to sustain management interventions during and beyond Project; Project will seek to attract additional support from other partners and potential donors
<b>5. Higher Education</b>					
UNR, KIST, ISAR, IRST	Source of knowledge re biodiversity, social science, resource use, information systems; institutional homes for most Rwandan scientists and students	Research and student training opportunities; information systems design and support; contributions to resource co-management regimes; possible direct support	Important, through participation in project workshops, stakeholder meetings	Increased demand for time in project design, implementation, and student oversight; transition to applied world of conservation; expectations surpass opportunities	Project can provide direct support, training; opportunities for sustainable employment created by project
<b>6. Private Sector</b>					
Tourism and accommodation companies;	Promote tourism and ecotourism; generate profits and employment in	Project directly aligns with ecotourism mission; Project will help identify	Moderate influence through pressure to develop sites and	Project and partners will exert pressure to enforce ecotourism standards	Project will help develop appropriate tourism attractions and increase PA

<b>Stakeholders</b>	<b>Mandate/current role in Biodiversity and Protected Area management</b>	<b>Interests in the project</b>	<b>Influence on project</b>	<b>Potential impacts of project on stakeholder</b>	<b>Mitigation of impacts</b>
Tea plantations	PA border regions	improved/expanded tourism opportunities; potential linkages with tea operators re tourism & energy provision	increase tourist numbers; interest in tea expansion, but not within PAs	and limit impacts	capacity for tourism management

## **ANNEX 5: Monitoring and Evaluation Plan**

### ***M&E Plan and Budget for Strengthening Biodiversity Conservation Capacity in the Protected Area System of Rwanda***

**MONITORING IS A CRITICAL TOOL FOR TRACKING PROJECT PERFORMANCE AND MEASURING IMPACT. THIS PROJECT WILL BE IMPLEMENTED THROUGH AN ADAPTIVE FRAMEWORK WHICH FEEDS THE FINDINGS OF MONITORING INTO OPERATIONAL PLANNING, ENABLING MANAGEMENT STRATEGIES TO BE MODIFIED TO REFLECT THE EVOLVING SITUATION. THE M&E SYSTEM WILL PROVIDE TIMELY AND ACCURATE INFORMATION FOR DECISION-MAKING, GENERATE A SHARED UNDERSTANDING OF THE PROJECT CONTEXT AMONGST STAKEHOLDERS, AND SUPPORT ADAPTIVE MANAGEMENT. PROJECT STAKEHOLDERS WILL THEREFORE COLLECT AND ANALYSE INFORMATION REGULARLY. IN ADDITION TO TRACKING PERFORMANCE, THEY WILL IDENTIFY REAL OR POTENTIAL OBSTACLES LIKELY TO AFFECT SUCCESS OF THE PROJECT AS EARLY AS POSSIBLE AND IDENTIFY PROMISING REPLICABLE INTERVENTIONS. AUGMENTED BY FINANCIAL AUDITING AND EXTERNAL REVIEWS, MONITORING WILL PROMOTE ACCOUNTABILITY, TRANSPARENCY, CREDIBILITY AND PUBLIC CONFIDENCE IN THE PROJECT.**

The Logical Framework Analysis in Annex B1 provides performance and impact indicators, means of verification and assumptions. These form the basis of the Monitoring and Evaluation Plan described below. The Monitoring and Evaluation Plan will be presented and finalized at the GEF Project's Inception workshop following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities. The report has four sections. Section one describes the project governance structures and their responsibility in monitoring. Section two describes the various monitoring and reporting mechanisms. Section three describes evaluation and section four briefly describes learning and learning events.

#### **Project governance structures and their roles in monitoring**

##### ***a) Responsible agencies/offices***

The following agencies and offices will be involved in monitoring, evaluating or reporting.

##### ***National Project Steering committee (PSC)***

The PSC will be comprised of representatives from REMA, MINITERE, ORTPN, MINICOM, MINALOC, MINICOFIN, MININFRA, UNR, ISAR, selected Districts, NGOs, civil society, and UNDP. The body will have the highest policy-level responsibility for oversight, guidance and monitoring. It will therefore ensure that the project is implemented according to approved plans and budgets and delivers satisfactory results and impacts from a technical point of view. In addition, it will ensure effective and efficient coordination and flow of information between the various ministries, institutions and donor projects, so as to optimize use of human and financial resources. Guiding the project from a programmatic perspective, the body will ensure full integration of project outputs and outcomes into policies and plans of parent organisations. Finally, it will review workplans and activities and budgets to be implemented, and address problems and constraints, proposing appropriate solutions. The PMU will provide secretarial services to the PSC

### *Technical Advisory Group (TAG)*

A technical advisory group (TAG) comprising individuals from key government and civil society will provide technical back-up on the latest thinking on strategies, policies, tools and models for integrating finance, tourism, socio-economics, and protected area management. The primary role of the group is to ensure that PMU receives support in the latest techniques. In this regard the group will review proposed methodologies for studies, thematic and technical reports. The TAG will meet at least twice a year.

### *Ministry of Lands, Environment, Forestry, Water and Mines (MINITERE)*

The Ministry of Lands, Environment, Forestry, Water, and Mines (MINITERE) will execute the project through the Rwanda Environmental Management Authority (REMA). As the executing agency for the project, MINITERE will provide a Project Director who will link the field project activities to national level policies and issues. MINITERE will also monitor project execution, ensuring compliance with UNDP guidelines for nationally executed projects. It will therefore be accountable to UNDP for the disbursement of funds and the achievement of the project goals, according to the approved workplan. MINITERE will work closely with the Rwandan Office of Tourism and National Parks (ORTPN) as the primary partner for PA management.

### UNDP Country Office (CO) and UNDP/GEF Regional Coordinator (RC)

The UNDP CO will monitor implementation progress through quarterly and annual meetings with the project proponent. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. The RC will monitor the project through the APR (Annual Project Report), through communications with the UNDP CO, and site visits. The RTC act as the principle conduit between UNDP Rwanda, UNDP/GEF New York, and GEF.

### *Project Management Unit (PMU)*

A PMU will be identified/recruited by MINITERE to coordinate day-to-day project management and monitoring. PMU staff will work with the Steering Committee to identify partners, establish MOUs, and develop workplans and budgets. It will coordinate inputs from all other stakeholders and monitor project implementation, impacts, and lessons learned. The PMU will develop a detailed schedule of project reviews and meetings, in consultation with project implementation partners and stakeholder representatives. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, and (ii) project related Monitoring and Evaluation activities. The PMU will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

### ***b) Monitoring and reporting mechanisms : Project Inception Workshop and Report***

A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs).

The Inception Workshop will provide an opportunity for stakeholders to understand the project and its contexts and therefore take ownership of the project's goals and objectives. The Terms of Reference for project staff and governance structures will be discussed, clarifying each party's responsibilities.

In particular, the stakeholders will review the logframe and if need be, refine outputs, indicators, means of verification as well as update risks and assumptions. In the process, they will assist the project team to finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner

consistent with the expected outcomes for the project. The stakeholders will also agree on tentative dates for the Annual Project Implementation Reviews (PIRs), Tripartite Review Meetings, and mid-term and final evaluations.

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation. The Work Plan will include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include a detailed budget for the year.

The Inception Report will contain updates on institutional roles, responsibilities, coordinating actions and feedback mechanisms as well as an update on external conditions that may effect project implementation. The UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the report before it is circulated to project counterparts who will have a month to respond with comments or queries.

### *Periodic Monitoring and Reports*

PMU will facilitate stakeholders to identify key monitoring events (Annex B2-1) and develop a detailed monitoring action-plan, clearly identifying information to be collected on each indicator and the frequency and responsibility of collecting the information. The action plan will also outline the system of managing monitoring information. The plan will be used in conjunction with annual work plans to determine:

- ◆ whether implementation is on track;
- ◆ whether outputs are being produced within time and budget;
- ◆ what works well (and why) as well as what doesn't work well (and why)
- ◆ if stakeholder participation is on track
- ◆ what needs to be adjusted to ensure effective and efficient project execution.

The project will actively seek linkages with national, regional, and international academic institutions and explore the possibility of using graduate research to measure impacts. The project will also provide retainers with relevant institutions for specialized studies, e.g., vegetation cover analysis of satellite imagery, or populations of key species through inventories or through specific studies that are to form part of the project's activities.

Progress will be reported in quarterly and annual reports prepared in accordance with UNDP/GEF and MINITERE guidelines. Additional reporting will be captured in Tripartite Review Reports and thematic/technical reports. The project Steering Committee, in conjunction with project staff, UNDP, UNDP-GEF, or other Implementing Partners, will identify themes requiring in depth technical analysis and reporting. This might relate to lessons learnt, specific oversight in key areas, or troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. The project staff will then facilitate the preparation of the specific thematic and/or technical reports. These reports will form a large part of reporting on impacts.

### ***c) Independent Evaluation***

The project will have at least two independent external evaluations (mid-term and final evaluations).

#### **Mid-term Evaluation**

An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. It will focus on the effectiveness, efficiency and timeliness of project implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed.. It will also highlight issues requiring decisions and actions, and will present initial

lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided in consultation with the key stakeholders. The Terms of Reference for the evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

#### *Final Evaluation*

An independent Final Evaluation will take place three months before the terminal tripartite review meeting. The final evaluation will focus on impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation will also provide recommendations for follow-up activities. The Terms of Reference for the evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

#### **Audit**

The PMU will provide the Resident Representative with certified periodic financial statements, including an annual audit of the financial statements relating to the status of UNDP (including GEF) funds, according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by a legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

#### ***d) Learning and Knowledge Sharing***

Results from the project will be disseminated within and beyond the project intervention area through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks organized for Senior Personnel working on projects that share common characteristics. Networks include Integrated Ecosystem Management, eco-tourism, co-management, etc.

The project will identify and participate in relevant and appropriate scientific, policy-based networks and discussion groups, deemed beneficial to learning and/or disseminating lessons, within the Albertine Rift region and beyond.

At each annual planning meeting, the project will facilitate stakeholders to reflect on lessons learned during the year. In addition, the project will identify areas of action research, such as collaborative management. Several projects have tested the concept of collaborative management in the region and produced models. The project will test the applicability of such models in the Rwanda Protected Area System. In the process, it will generate, analyse, collate and share lessons on several aspects of co-management in a PA system.

TABLE 1 Summary of M and E Events

M&E activity	Responsible Parties	Budget US \$ Not staff time	Time frame
Inception Workshop	Project Coordinator UNDP CO & UNDP GEF		Within first two months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following IW
Develop a detailed plan of action for monitoring (establishing what info to collect at what frequency, identifying responsible stakeholder to collect info,	PMU and stakeholders		Within the first three months

determining type of info management system to be used)			
Assess if project team has skills required to oversee monitoring	Project team		Within first three months
Conduct M&E training for project team and relevant stakeholders	UNDP CO UNDP GEF Project team	Cost of a two day workshop	Within the first six months
Establish/determine baselines available for monitoring	Project Team UNDP CO	Within activities	Start, mid and end of project
Collect monitoring data	Project team to coordinate and oversee assessments and other data collection	To be determined as part of annual work planning	Throughout the project
Measure Means of Verification for Project Progress and Performance (measured on an annual basis)	Oversight by Project GEF Technical Advisor and Project Coordinator Measurements by regional field officers and local IAs	To be determined as part of the Annual Work Plan preparation. Indicative cost 20,000\$	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
TPR and TPR report	Government Counterparts UNDP CO Project team UNDP-GEF Regional Coordinating Unit	None	Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	Project team		TBD by Project and UNDP CO
Thematic/Technical reports	Project team Consultants researchers		TBD by Project and UNDP-CO
Mid-term External Evaluation	Project team UNDP- CO UNDP-GEF External Consultants (i.e. evaluation team)	20,000	At the mid-point of project implementation.
Final External Evaluation	Project team, UNDP-CO UNDP-GEF External Consultants (i.e. evaluation team)	20,000	At the end of project implementation
Lessons learned	Project team UNDP-GEF RC for documenting best practices, etc)	15,000 (average 3,000 per year)	Yearly
Audit	UNDP-CO	5,000 (average	Yearly

	Project team	\$1000 per year)	
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	UNDP Country Office UNDP-GEF Regional Coordinating Unit (as needed), Government representatives	15,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST Excluding project team staff time and UNDP staff-time		US\$ 250,000	



## **TRACKING TOOL Section One: Project General Information**

**1. Project name:**

**Strengthening Biodiversity Conservation Capacity in the Forest Protected Area System of Rwanda**

**2. Country:** Rwanda

National Project: ☒ Regional Project: ☐ Global Project: ☐

**3. NAME OF REVIEWERS COMPLETING TRACKING TOOL AND COMPLETION DATES:**

	<b>Name</b>	<b>Title</b>	<b>Agency</b>
<b>Work Program Inclusion</b>	<b>Several NGO/Govt. Lead was Dr M Masozera</b>	<b>Country Director</b>	<b>Wildlife Conservation Society - Rwanda</b>
<b>Project Mid-term</b>			
<b>Final Evaluation</b>			

**4. Funding information**

GEF support: 5,747,000\$

Co-financing: 7,980,000\$

Total Funding: 13,727,000\$

**5. Project duration:** *Planned 6 years* *Actual* \_\_\_\_\_ years

**6. a. GEF Agency:** ☐ UNDP

**6. b. Lead Project Executing Agency (ies):** Govt. of Rwanda (REMA) & WCS an INGO

**7. GEF Operational Program:**

☐ forests (OP 3) and ☐ mountains (OP 4) and SP BD1

**8. Project Summary (one paragraph):**

Conservation in Rwanda views conservation of its montane forests as a priority concern. The Volcanoes National Park and the newly created Nyungwe National Park are recognized sites of global importance for their biodiversity and endemism values: both among the highest within the biologically rich Albertine Rift ecoregion. These parks are also seen as primary sources of tourism revenue and ecological services, such as water catchment, water supply, erosion control, and hydroelectric development potential. This forest estate remains under threat from the land and resource needs of a still-growing human population that occupies the rural landscape at average densities of 345 per km<sup>2</sup>. These pressures have resulted in past habitat losses and degradation, as well as local species extinctions. To combat these problems the GOR, with support from international NGOs, has invested in rehabilitation of park infrastructures, restructuring of the national park service (ORTPN), and preliminary strategic planning. This GEF Proposal seeks additional resources to enhance this baseline capacity to effectively manage Rwanda's montane forests and thereby assure the long-term maintenance of their biodiversity, ecological functions, environmental services, and economic benefits. Proposed investments target the sustainability of the entire PA system, with particular attention to three key areas: 1) central government policies and laws, staff capacities, and collaborative frameworks; 2) local district

capacity to plan, co-manage, and benefit from appropriate development activities on PA-adjacent lands; and 3) PA adaptive management capacity to assure long-term biodiversity values through applied research, monitoring, and evaluation. This proposal builds on extensive national and regional experience and responds to Strategic Priority BP1 and Operational Programs OP3 and OP4 of the GEF.

#### **9. Project Development Objective:**

Conservation status, environmental services and socio-economic values of Rwanda's Montane Forest Ecosystem enhanced and well being of the dependent communities improved sustainably

#### **10. Project Purpose/Immediate Objective:**

Increased capacity in Protected Areas (PA) institutions leads to improved management effectiveness in the national PA network and improved partnerships between the different PA authorities and other stakeholders.

#### **11. Expected Outcomes (GEF-related):**

**Outcome 1:** Improved systemic capacity within institutions and key stakeholders at central, district and local levels provides the enabling framework for enhancing management effectiveness for natural resources in and around Protected Areas.

**Outcome 2:** Institutional capacities for PA management at local levels increased; with greater socio-economic benefit flows local communities increased, with reduced illegal use of protected area resources.

**Outcome 3:** Protected Area Management and conservation of biodiversity at forest parks is expanded and reinforced through knowledge-based adaptive management practices and field demonstration.

**Outcome 4:** Project effectively managed, monitored, evaluated and reported.

#### **12. Types of Protected Area Activities Supported:**

12. a. Please select all activities that are being supported through the project.

☒ Enabling Environment (please check each activity below)

☒ Policy, legislation, regulation

☒ Capacity building

Capacity building budget: Estimate 50% of Outcomes 1 and 2 = 1.55 million \$

**(NOTE BUDGET LINES WILL BE IN OPERATIONAL PRODOC at time of CEO Endorsement)**

Comments on Capacity Building: Please note if capacity building is geared towards indigenous and local communities: Capacity follows guidance from SP BD1 best practice. The projects develop capacity within the overall **PROTECTED AREA INSTITUTIONAL PARTNERSHIP**. The partnership includes central and local government, and their linkages to civil society and communities.

☒ Education and awareness raising

☒ Institutional arrangements

☒ Finance and incentives

☒ Replication and scaling up

☒ Management practices related to status of biodiversity

12. b. Is carbon sequestration an objective of the project   X   No

### **13. Project Replication Strategy**

13. a. Does the project specify budget, activities, and outputs for implementing the replication strategy? Yes   X   No       

13. b. For all projects, please complete box below. An example is provided.

Replication Quantification Measure	Replication Target Foreseen at project start	Achievement at Mid-term Evaluation	Achievement at Final Evaluation of Project

### **14. Scope and Scale of Project:**

14a. The project is working in:

- a single protected area  
  X   multiple protected areas  
  X   national protected area system

14b. The level of the intervention is:

  X   regional,   X   national,   X   sub-national (ie the PAs in their district setting)

### **GLOBAL SIGNIFICANCE TARGETS**

Targets and Timeframe Project Coverage			Foreseen at project start	Achievement at Mid-term E	Achievement at Final Evaluation of Project					
Extent in hectares of protected areas targeted by the project			117,300 ha of forest NP							
Name of Protected Area	Is this a new PA?	Area in Ha	Global designation or priority lists.		IUCN Category for each Protected Area					
					I	II	III	IV	V	VI
Nyungwe NP	No	101300	IBA, WWF 200	NP		X				
Parc des Volcans	No	16000	IBA, Man & Biosphere, WWF 200	NP		X				
Akagera NP	No	90000	IBA (potential RAMSAR site)	NP		X				

### Reporting Progress at Protected Area Sites: METT Data Sheets

Name of protected area	Nyungwe Forest Reserve.		
Location of protected area (country and if possible map reference)	SW of Rwanda		
Date of establishment (distinguish between agreed and gazetted*)	Proposal before Parliament for National Park status	Gazetted: 1933	
Ownership details (i.e. owner, tenure rights etc)	Government		
Management Authority	ORTPN		
Size of protected area (ha)	1013 km <sup>2</sup>		
Number of staff	Permanent : 103	Temporary: 50	
Budget	250,000,000 Frw		
Designations (IUCN category, World Heritage, Ramsar etc)	Category II		
Reasons for designation	Biodiversity conservation		
Brief details of other relevant projects in PA	Nyungwe Forest conservation project funded by WCS		
List the two primary protected area objectives			
Objective 1	Biodiversity conservation		
Objective 2	Ecotourism development		
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1	Fire		
Threat 2	Poaching		
List top two critical management activities			
Activity 1	Law enforcement		
Activity 2	Tourism development		

Date assessment carried out: \_19/11/04\_\_\_\_\_

Name/s of assessor: Ian Munanura, Bizimungu Francois, Rugarinyange Louis, Mathias Gatabazi, Roger, \_Michel Masozera

Issue	Criteria	Score	Comments	Next steps
1. Legal status	The protected area is not gazetted		The draft law creating Nyungwe National is in the parliament for decision	Lobby
Does the protected area have legal status?	The government has agreed that the protected area should be gazetted but the process has not yet begun			
	The protected area is in the process of being gazetted but the process is still incomplete	2		
Context	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)			
2. Protected area regulations	There are no mechanisms for controlling inappropriate land use and activities in the protected area		Lack of updated bye laws	Update the laws, legislation
Are inappropriate land uses and activities (e.g. poaching) controlled?	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively			
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2		
Context	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented			
3. Law enforcement	The staff have no effective capacity/resources to enforce protected area legislation and regulations		There is a need for capacity building and resources (human resources and equipments) The forest is too large to be controlled by a small number of rangers	Building capacity within ORTPN as well as providing equipments Strengthen the partnership with local authorities and the judicial system
Can staff enforce protected area rules well enough?	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)			
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2		
Context	The staff have excellent capacity/resources to enforce protected area legislation and regulations			
4. Protected area objectives	No firm objectives have been agreed for the protected area		The management plan is under development No sufficient funds to implement all the activities	Update the management plan and make available necessary resources for implementation of activities
Have objectives been agreed?	The protected area has agreed objectives, but is not managed according to these objectives			
Planning	The protected area has agreed objectives, but these are partially implemented	2		
	The protected area has agreed objectives and managed to these objectives			
5. Protected area design	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible			

Issue	Criteria	Score	Comments	Next steps
Does the protected area need enlarging, corridors etc to meet its objectives? <i>Planning</i>	Inadequacies in design mean that achievement of major objectives are constrained to some extent		NA	There is no free land left outside the protected area
	Design is not significantly constraining achievement of major objectives, but could be improved			
	Reserve design features are particularly aiding achievement of major objectives of the protected area			
6. Protected area boundary demarcation  Is the boundary known and demarcated?  <i>Context</i>	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users		The ownership of the buffer zone is not clear	Development of co-management mechanisms for the management of Nyungwe buffer zone
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users			
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated			
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		
7. Management plan  Is there a management plan and is it being implemented?  <i>Planning</i>	There is no management plan for the protected area		The management plan is under preparation	Update the management plan Make available necessary resources for the implementation
	A management plan is being prepared or has been prepared but is not being implemented	1		
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems			
	An approved management plan exists and is being implemented			
8. Regular work plan  Is there an annual work plan?  <i>Planning/Outputs</i>	No regular work plan exists		Due to a huge bureaucratic system funds are not made available to field staff on time for implementation of activities	Put in place a management system that allows the finance department to be efficient
	A regular work plan exists but activities are not monitored against the plan's targets			
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2		
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed			
9. Resource inventory  Do you have enough information to manage the area?	There is little or no information available on the critical habitats, species and cultural values of the protected area		General biodiversity surveys and inventories have been carried out, but not baselines for major species or Kamiranzovu wetland	Up date the biodiversity surveys, Inventories Conduct studies on distributions and abundance of primates
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1		
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained			

Issue	Criteria	Score	Comments	Next steps
<i>Context</i>	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained			
10. Research	There is no survey or research work taking place in the protected area		Not all relevant management needs are covered	Implementation of research plan based on identified threats and needs
Is there a programme of management-orientated survey and research work?	There is some <i>ad hoc</i> survey and research work			
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs			
<i>Inputs</i>				
11. Resource management	Requirements for active management of critical ecosystems, species and cultural values have not been assessed		Limited capacity (expertise) and funds	Building capacity (through training) within ORTPN as well as providing equipments
Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed			
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2		
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed			
<i>Process</i>				
12. Staff numbers	There are no staff		The forest is too large for a limited number of staff (rangers)	Increase the number of field staff
Are there enough people employed to manage the protected area?	Staff numbers are inadequate for critical management activities			
	Staff numbers are below optimum level for critical management activities	2		
	Staff numbers are adequate for the management needs of the site			
<i>Inputs</i>				
13. Personnel management	Problems with personnel management constrain the achievement of major management objectives		Bureaucracy Inadequate skills in personnel management	Building capacity within ORTPN through training
Are the staff managed well enough?	Problems with personnel management partially constrain the achievement of major management objectives			
	Personnel management is adequate to the achievement of major management objectives but could be improved	2		
	Personnel management is excellent and aids the achievement major management objectives			
<i>Process</i>				
14. Staff training	Staff are untrained			Develop and implement a
Is there enough training	Staff training and skills are low relative to the needs of the protected area			

Issue	Criteria	Score	Comments	Next steps
for staff?	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2	New staff in a new structure	training program for ORTPN staff
<i>Inputs/Process</i>	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs			
15. Current budget	There is no budget for the protected area		Unreliable government handout Centralized finances (process)	Develop a business plan Develop a financial system for ORTPN
Is the current budget sufficient?	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage			
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		
	The available budget is sufficient and meets the full management needs of the protected area			
<i>Inputs</i>				
16. Security of budget	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding		The salary is guaranteed but other initiatives are funded by NGOs partner	
Is the budget secure?	There is very little secure budget and the protected area could not function adequately without outside funding			
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2		
	There is a secure budget for the protected area and its management needs on a multi-year cycle			
<i>Inputs</i>				
17. Management of budget	Budget management is poor and significantly undermines effectiveness		The budget management is centralized at ORTPN HQ	Develop a budget management system
Is the budget managed to meet critical management needs?	Budget management is poor and constrains effectiveness			
	Budget management is adequate but could be improved	2		
	Budget management is excellent and aids effectiveness			
<i>Process</i>				
18. Equipment	There is little or no equipment and facilities		The basic equipment is maintained but the park management needs more equipment such as printer, computer and photocopy machine, communication system	Provide some equipment to the park management
Is equipment adequately maintained?	There is some equipment and facilities but these are wholly inadequate			
	There is equipment and facilities, but still some major gaps that constrain management	2		
	There is adequate equipment and facilities			
<i>Process</i>				



Issue	Criteria	Score	Comments	Next steps
19. Maintenance of equipment	There is little or no maintenance of equipment and facilities		<p>The financial system is centralized. As a result funds are not available on time.</p> <p>The tender process is too long.</p>	Give more responsibility and power to park chief warden
Is equipment adequately maintained?	There is some <i>ad hoc</i> maintenance of equipment and facilities			
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	Equipment and facilities are well maintained			
<i>Process</i>				
20. Education and awareness programme	There is no education and awareness programme		Limited skills and funding	Develop a training program for community conservation wardens
Is there a planned education programme?	There is a limited and <i>ad hoc</i> education and awareness programme, but no overall planning for this			
	There is a planned education and awareness programme but there are still serious gaps	2		
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area			
<i>Process</i>				
21. State and commercial neighbours	There is no contact between managers and neighbouring official or corporate land users		Tea plantations are the only private/corporate neighbors of the PA	
Is there co-operation with adjacent land users?	There is limited contact between managers and neighbouring official or corporate land users	1		
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation			
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management			
<i>Process</i>				
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0	Batwa are highly marginalised as many other rural communities. Batwa have not lived in Nyungwe since 1930s.	Continue to develop partnerships with communities around the PA
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions			
	Indigenous and traditional peoples directly contribute to some decisions relating to management			
	Indigenous and traditional peoples directly participate in making decisions relating to management			
<i>Process</i>				
23. Local communities	Local communities have no input into decisions relating to the management of the protected area		Local leader and conservation committees are involved but not the entire community	Develop a partnership with local communities
Do local communities resident or near the protected area have input to management	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Local communities directly contribute to some decisions relating to management			

Issue	Criteria	Score	Comments	Next steps
decisions? <i>Process</i>	Local communities directly participate in making decisions relating to management			
Additional points ✓	There is open communication and trust between local stakeholders and protected area managers		Surveys show little negative feelings	
<i>Outputs</i>	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented			
24. Visitor facilities	There are no visitor facilities and services		There exist some basic infrastructures for More needs to be done to meet tourists expectations	Develop/establish a visitor's information center at KITABI
Are visitor facilities (for tourists, pilgrims etc) good enough?	Visitor facilities and services are inappropriate for current levels of visitation or are under construction			
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2		
	Visitor facilities and services are excellent for current levels of visitation			
<i>Outputs</i>				
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area		Tour operators are profit oriented, They do not money invest back into park management.	Develop a MOU for partnership with tour operators
Do commercial tour operators contribute to protected area management?	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1		
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values			
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts			
<i>Process</i>				
26. Fees	Although fees are theoretically applied, they are not collected		The fee for visiting the park support this protected areas but it is not enough to support the cost of conservation	Diversify tourism attractions in order to attract many tourists
If fees (tourism, fines) are applied, do they help protected area management?	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs			
	The fee is collected, but is disbursed to the local authority rather than the protected area			
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3		
<i>Outputs</i>				
27. Condition assessment	Important biodiversity, ecological and cultural values are being severely degraded		Fire, mining have had an impact on the forest; elephants and buffalo extinct	Reinforce the protection, Develop a fire management plan Develop community based enterprises to provide alternative livelihoods
Is the protected area being managed consistent to its objectives?	Some biodiversity, ecological and cultural values are being severely degraded			
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2		
	Biodiversity, ecological and cultural values are predominantly intact			
<i>Outcomes</i>				

Issue	Criteria	Score	Comments	Next steps
Additional points <i>Outputs</i>	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	0	There is a pilot project aiming at restoring the burned area in Nyungwe	Extend the project to the entire forest
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives		The forest is too big with limited number of rangers. As a result, control of access has been difficult.	Develop a partnership with local communities
Are the available management mechanisms working to control access or use?	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives			
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives			
<i>Outcomes</i>				
29. Economic benefit assessment	The existence of the protected area has reduced the options for economic development of the local communities		Limited park revenues High density of population around the park.	Develop a revenue sharing program Diversify tourism attractions
Is the protected area providing economic benefits to local communities?	The existence of the protected area has neither damaged nor benefited the local economy			
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)			
<i>Outcomes</i>				
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area		Monitoring data collected are not analysed regularly	Analyze monitoring data on regular basis and use in adaptive management
	There is some <i>ad hoc</i> monitoring and evaluation, but no overall strategy and/or no regular collection of results	1.5		
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management			
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management			
<i>Planning/Process</i>				
<b>TOTAL SCORE</b>		52.5		
		54.3 = adapted for 29 questions		

### Reporting Progress at Protected Area Sites: Data Sheet

Name of protected area	Volcanoes National Park		
Location of protected area (country and if possible map reference)	N of Rwanda		
Date of establishment (distinguish between agreed and gazetted*)		Gazetted: 1925, 1929	
Ownership details (i.e. owner, tenure rights etc)	Government		
Management Authority	ORTPN		
Size of protected area (ha)	160 km <sup>2</sup>		
Number of staff	87		
Budget	250,000,000 Fw		
Designations (IUCN category, World Heritage, Ramsar etc)	Category II		
Reasons for designation	Biodiversity conservation, protection of mountain gorillas		
Brief details of other relevant projects in PA	IGCP, DFGF-I, DFGF-E, Mountain Gorilla Veterinary Project		
List the two primary protected area objectives			
Objective 1	Mountain gorilla conservation and its habitat		
Objective 2	Tourism development		
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1	Poaching		
Threat 2	Bamboo cutting		
List top two critical management activities			
Activity 1	Ecotourism development		
Activity 2	Law enforcement		

Date assessment carried out: \_\_\_\_5/11/04\_\_\_\_

Name/s of assessor: Rurangirwa Justin, Edwin, Prosper Uwingeli, Charles, CC warden, Michel Masozera\_

Issue	Criteria	Score	Comments	Next steps
1. Legal status	The protected area is not gazetted		The protected area has been gazetted in 1925	
Does the protected area have legal status?	The government has agreed that the protected area should be gazetted but the process has not yet begun			
Context	The protected area is in the process of being gazetted but the process is still incomplete			
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3		
2. Protected area regulations	There are no mechanisms for controlling inappropriate land use and activities in the protected area		Lack of updated bye laws	Update the laws, legislation
Are inappropriate land uses and activities (e.g. poaching) controlled?	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively			
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2		
Context	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented			
3. Law enforcement	The staff have no effective capacity/resources to enforce protected area legislation and regulations		There is a need for capacity building and resources (human resources and equipments)	Building capacity within ORTPN as well as providing equipments Strengthen the partnership with local authorities and the judicial system
Can staff enforce protected area rules well enough?	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)			
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2		
Context	The staff have excellent capacity/resources to enforce protected area legislation and regulations			
5. Protected area objectives	No firm objectives have been agreed for the protected area		The management plan is under development No sufficient funds to implement all the activities	Update the management plan and make available necessary resources for implementation of activities
Have objectives been agreed?	The protected area has agreed objectives, but is not managed according to these objectives			
	The protected area has agreed objectives, but these are only partially implemented	2		
Planning	The protected area has agreed objectives and is managed to meet these objectives			
5. Protected area design	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible			

Issue	Criteria	Score	Comments	Next steps
Does the protected area need enlarging, corridors etc to meet its objectives?  <i>Planning</i>	Inadequacies in design mean that achievement of major objectives are constrained to some extent		The protected area is too small but there is no free land left outside the protected area to create a corridor or to enlarge the park	
	Design is not significantly constraining achievement of major objectives, but could be improved	2		
	Reserve design features are particularly aiding achievement of major objectives of the protected area			
6. Protected area boundary demarcation  Is the boundary known and demarcated?  <i>Context</i>	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users		The 1925 boundary of the park have changed due to the encroachment by local communities	Update/Clear demarcation of park boundaries
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users			
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2		
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated			
7. Management plan  Is there a management plan and is it being implemented?  <i>Planning</i>	There is no management plan for the protected area		The management plan is under preparation	Update the management plan Make available necessary resources for the implementation
	A management plan is being prepared or has been prepared but is not being implemented	1		
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems			
	An approved management plan exists and is being implemented			
Additional points  ✓  <i>Planning</i> ✓	The planning process allows adequate opportunity for key stakeholders to influence the management plan			
	There is an established schedule and process for periodic review and updating of the management plan			
	The results of monitoring, research and evaluation are routinely incorporated into planning			
8. Regular work plan  Is there an annual work plan?	No regular work plan exists		Due to a huge bureaucratic system funds	Put in place a management
	A regular work plan exists but activities are not monitored against the plan's targets			
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2		

Issue	Criteria	Score	Comments	Next steps
<i>Planning/Outputs</i>	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed		are not made available to field staff on time for implementation of activities	system that allows the finance department to be efficient
9. Resource inventory	There is little or no information available on the critical habitats, species and cultural values of the protected area		General biodiversity surveys and inventories have been carried out but most emphasis has been put on gorillas	Up date the biodiversity surveys, Inventories Conduct studies on distributions and abundance of other species such as elephants, buffalo and plants
Do you have enough information to manage the area?	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1		
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained			
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained			
<i>Context</i>				
10. Research	There is no survey or research work taking place in the protected area		Not all relevant management needs are covered. Much focus on gorilla behavior	Implementation of research plan Based on identified needs and threats
Is there a programme of management-orientated survey and research work?	There is some <i>ad hoc</i> survey and research work			
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs			
<i>Inputs</i>				
11. Resource management	Requirements for active management of critical ecosystems, species and cultural values have not been assessed		Limited capacity (expertise) and funds	Building capacity (through training) within ORTPN as well as providing equipments
Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed			
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2		
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed			
<i>Process</i>				
12. Staff numbers	There are no staff		The transboundary nature of the park makes it difficult to control access	Strengthen the regional transboundary collaboration
Are there enough people employed to manage the protected area?	Staff numbers are inadequate for critical management activities			
	Staff numbers are below optimum level for critical management activities	2		
	Staff numbers are adequate for the management needs of the site			
<i>Inputs</i>				
13. Personnel management	Problems with personnel management constrain the achievement of major management objectives			

Issue	Criteria	Score	Comments	Next steps
Are the staff managed well enough?  <i>Process</i>	Problems with personnel management partially constrain the achievement of major management objectives		Bureaucracy Inadequate skills in personnel management	Building capacity within ORTPN through training
	Personnel management is adequate to the achievement of major management objectives but could be improved	2		
	Personnel management is excellent and aids the achievement major management objectives			
14. Staff training	Staff are untrained		New staff in a new structure	Develop and implement a training program for ORTPN staff
Is there enough training for staff?	Staff training and skills are low relative to the needs of the protected area			
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2		
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs			
<i>Inputs/Process</i>				
15. Current budget	There is no budget for the protected area		Unreliable government handout Centralized finances (process)	Develop a business plan Develop a financial system for ORTPN
Is the current budget sufficient?	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage			
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		
	The available budget is sufficient and meets the full management needs of the protected area			
<i>Inputs</i>				
16. Security of budget	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding		The salary is guaranteed but other initiatives are funded by NGOs partner	
Is the budget secure?	There is very little secure budget and the protected area could not function adequately without outside funding	1		
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding			
	There is a secure budget for the protected area and its management needs on a multi-year cycle			
<i>Inputs</i>				
17. Management of budget	Budget management is poor and significantly undermines effectiveness		The budget management is centralized at ORTPN HQ	Develop a budget management system
Is the budget managed to meet critical	Budget management is poor and constrains effectiveness			
	Budget management is adequate but could be improved	2		



Issue	Criteria	Score	Comments	Next steps
management needs? <i>Process</i>	Budget management is excellent and aids effectiveness			
18. Equipment	There is little or no equipment and facilities		The basic equipment is maintained but the park management needs more equipment such as printer, computer and photocopy machine, communication system	Provide some equipment to the park management
Is equipment adequately maintained?	There is some equipment and facilities but these are wholly inadequate			
<i>Process</i>	There is equipment and facilities, but still some major gaps that constrain management	2		
	There is adequate equipment and facilities			
19. Maintenance of equipment	There is little or no maintenance of equipment and facilities		The financial system is centralized. As a result funds are not available on time.  The tender process is too long.	Give more responsibility and power to park chief warden
Is equipment adequately maintained?	There is some <i>ad hoc</i> maintenance of equipment and facilities			
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	Equipment and facilities are well maintained			
<i>Process</i>				
20. Education and awareness programme	There is no education and awareness programme		Gaps exist due to limited capacity of Community conservation officers and funds	Develop a training program for community conservation wardens
Is there a planned education programme?	There is a limited and <i>ad hoc</i> education and awareness programme, but no overall planning for this			
<i>Process</i>	There is a planned education and awareness programme but there are still serious gaps	2		
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area			
21. State and commercial neighbours	There is no contact between managers and neighbouring official or corporate land users		There is contact with tour operators but this is limited to permit sales	Develop formal protocols for partnership
Is there co-operation with adjacent land users?	There is limited contact between managers and neighbouring official or corporate land users			
<i>Process</i>	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2		
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management			
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0	Batwa are highly marginalised, but have not lived in park since 1920s.	Develop a partnership with communities around the PA

Issue	Criteria	Score	Comments	Next steps
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? <i>Process</i>	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions			
	Indigenous and traditional peoples directly contribute to some decisions relating to management			
	Indigenous and traditional peoples directly participate in making decisions relating to management			
23. Local communities	Local communities have no input into decisions relating to the management of the protected area		Local leader and conservation committees are involved but not the entire community	Develop a partnership with local communities
Do local communities resident or near the protected area have input to management decisions? <i>Process</i>	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Local communities directly contribute to some decisions relating to management			
	Local communities directly participate in making decisions relating to management			
Additional points <i>Outputs</i>	There is open communication and trust between local stakeholders and protected area managers			
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented			
24. Visitor facilities	There are no visitor facilities and services		There exist some basic infrastructures for tourist but more needs to be done to meet tourists expectations	Develop/establish a visitor's information center at KITABI
Are visitor facilities (for tourists, pilgrims etc) good enough? <i>Outputs</i>	Visitor facilities and services are inappropriate for current levels of visitation or are under construction			
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2		
	Visitor facilities and services are excellent for current levels of visitation			
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area		Tour operators are profit oriented, They do not money invest back into park management.	Develop a MOU for partnership with tour operators
Do commercial tour operators contribute to protected area management? <i>Process</i>	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters			
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts			
26. Fees	Although fees are theoretically applied, they are not collected		The fee for visiting the park support this protected area but it is not enough to	Diversify tourism attractions in order to attract many tourists
If fees (tourism, fines) are applied, do they	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs			

Issue	Criteria	Score	Comments	Next steps
help protected area management?	The fee is collected, but is disbursed to the local authority rather than the protected area		support the cost of conservation of Rwanda's other protected areas	Diversify tourism attractions outside PAs
<i>Outputs</i>	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3		
27. Condition assessment	Important biodiversity, ecological and cultural values are being severely degraded		War has had an impact on the park	Reinforce the protection and regional collaboration,
Is the protected area being managed consistent to its objectives?	Some biodiversity, ecological and cultural values are being severely degraded			
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2		
	Biodiversity, ecological and cultural values are predominantly intact			
<i>Outcomes</i>				
Additional points	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone			
<i>Outputs</i>				
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives		The transboundary nature of the park. As a result, control of access has been difficult.	Develop a partnership with local communities and regional collaboration
Are the available management mechanisms working to control access or use?	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives			
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives			
<i>Outcomes</i>				
29. Economic benefit assessment	The existence of the protected area has reduced the options for economic development of the local communities		Given the density of population around the VNP, the economic impact of tourism to communities is still low.	Develop a revenue sharing program Diversify tourism attractions
Is the protected area providing economic benefits to local communities?	The existence of the protected area has neither damaged nor benefited the local economy			
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)			
<i>Outcomes</i>				
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area		Monitoring data collected are not analysed regularly	Analyze monitoring data on regular basis and use in adaptive management
	There is some <i>ad hoc</i> monitoring and evaluation, but no overall strategy and/or no regular collection of results	1.5		

Issue	Criteria	Score	Comments	Next steps
Planning/Process	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management			
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management			
TOTAL SCORE		55.5		

## ANNEX 6: Lessons Learned

Rwanda in the 1980s was an exporter of knowledge and experience concerning the conservation and management of montane forest protected areas and species. The Mountain Gorilla Project, begun in the VNP in 1979, served as a model for first DRC and then Uganda. The Nyungwe Forest Conservation Project (1985) next provided an example of protection mixed with multiple use in the context of a National Forest Reserve. Even the disastrous experience of deforestation in the Gishwati Forest Reserve served as a warning to others of development gone awry. It was no accident that Rwanda hosted the first-ever regional workshop on Afromontane Forest Conservation in 1989; nor that it received some of the first Biodiversity grants from international agencies. The 1990s, however, brought Rwanda into a dark period of civil war and genocide. In 2005, with civil order re-established, Rwanda must now learn from its own past and the experience of other nations who have moved forward and learned important lessons in montane forest conservation. The PDF-B phase of this project captured these lessons.

*The Past.* Rwanda's past still offers a richly relevant vein of conservation experience in several domains: ecotourism, community-based conservation, and the role of international NGOs. First, it is clear that mountain gorillas serve as an extremely effective flagship and a powerful engine for revenue-generation. Through the late 1980s, gorilla revenues alone funded virtually all of ORTPN's operations in the VNP, ANP, and Nyungwe. The collapse of all tourism in the 1990s, however, showed the weakness of this single source and highlighted the need for a broader foundation of financial support in the future. Second, Rwanda benefited from some of the earliest applied socio-economic research, landscape-scale analyses, and resulting recommendations for addressing local community needs and concerns (Weber 1981, 1987a,b). Despite some localized successes, however, the former government never agreed to any sharing of its considerable tourism revenues with PA border populations. The result was an unfortunate continuation of local alienation from the nation's parks that remains to be addressed. Finally, Rwanda has learned some important lessons about its international NGO partners. These INGOs helped to conceive, initiate, and fund major conservation initiatives in better times. They then maintained their presence and support throughout the worst times of the 1990s: IGCP/DFGF/MGVP in the VNP, and WCS in Nyungwe. It is not entirely coincidental that the Akagera NP, where no partner remained, lost more than half of its protected area during that time. Or that the Gishwati Forest Reserve suffered over 90% deforestation. INGOs also provided critical technical advice to ORTPN, when that office had virtually no staff. That this dependency largely continues to this day, however, is an indication of the need for far greater investment in the capacity of Rwandan personnel and institutions to monitor and manage their PAs.

There are particular lessons concerning conservation in times of conflict that no one hopes will ever again be needed in Rwanda. Yet instability and warfare continue to reverberate in neighbouring regions of DRC and Burundi, with potential implications for both tourism and PA management in Rwanda. It is therefore worth recalling several key points from past experience, as compiled by Andy Plumptre (2003b).

- National staff were the key to maintaining a conservation presence in 1994 when expatriate staff were evacuated. Junior personnel were especially critical in this regard, as senior national staff were often targets themselves. Training for all national staff and promotion to positions of responsibility is thus critical.
- Long-term NGO commitment not only helped secure park protection, but also reassured local/national staff that projects – and employment -- would return once conditions improved.
- Dozens of NGO and park employees were killed in Rwanda and DRC in the 1990s. Providing for their families, assuring the safety of survivors, and – when necessary – evacuating staff to safe areas or other countries were all cited as contributing to positive staff attitudes.

- Quality communication systems were essential to keep PA operations going. When these systems did not exist, or failed, patrols and other field operations were generally deemed too dangerous and abandoned.
- Support for conservation objectives was a critical factor in determining whether local populations invaded PAs to hunt, harvest, and clear fields. This support, in turn, was largely dependent on whether these communities saw appreciable benefits from PA protection in better times.

Again, it is no one's expectation that conditions of civil unrest will return to Rwanda. Attention to these hard-learned lessons will also improve prospects for effective conservation in times of peace.

*Partners.* One extremely important role of NGOs and other partners is to bring a broader set of experiences to inform and improve conservation in Rwanda. Most of these partners operate transboundary, regional, and/or global programs, from which they can draw on a rich array of lessons. The conservation INGOs in Rwanda all have projects in comparable montane forest areas of Uganda and DRC; a few operate more widely across Africa and beyond. CARE has comparably broad experience, though it tends to concentrate on the conservation-development interface in settled areas around PAs. These NGOs have learned many lessons that they share within their own groups and, to a certain degree, with others. At this time, most sharing focuses on self-reported successes. Greater reporting of failures and problems encountered would make this considerable collective experience of greater value.

The Albertine Rift Planning Framework brings together multiple partners with shared interests in PAs on either side of the Great Lakes, or Albertine, Rift in Rwanda, Uganda, DRC, Tanzania, and Burundi. One set of lessons learned from this partnership concerns the region's high biodiversity values. These were known to be high, but a thorough comparative study revealed the Albertine Rift to rank as Africa's top ecoregion for vertebrate diversity and its most important ecoregion for endemic wildlife (Plumptre *et al*, 2003). Among the Albertine sites studied, Nyungwe and the Virunga Volcanoes consistently ranked at or near the top in diversity, thus highlighting their global conservation importance. A second Albertine Rift assessment looked at socio-economic factors affecting conservation in and around some of the region's most important forest PAs (Plumptre *et al*, 2004). This study contains much information of direct relevance to conservation planners and managers, including potential pitfalls along the road to improved community/PA relations. One notable finding concerns local attitudes surround the Bwindi/Impenetrable Forest National Park in Uganda. There, despite a decade of considerable investment in ICD activities and locally recognized benefits from tourism, negative attitudes and impacts have not greatly changed. There are several possible reasons for this situation, including raised expectations and increased opportunities to criticize, but this counter-intuitive finding requires further attention in Rwanda.

*Consultants.* The PDF-B phase of this project has brought many consultants to help understand current conditions and to improve the Full GEF proposal design. In the process, most of these consultants have shared their experiences in other countries with Rwandan partners, stakeholders, and decision-makers (see also Annex 2). Joseph Opio-Odongo (2004) contributed perspectives gained from his extensive UNDP-Africa experience with institutional issues related to biodiversity conservation. Lessons learned from several East African countries were especially helpful with regard to split responsibilities of the kind found in Rwanda between ORTPN and MINITERE. Several points of potential inter-ministerial conflict were reinforced by a subsequent study tour (see below). The Conservation Finance assessment by Ray Victorine (2004), with contributions from Yakobo Moyinni, (see Annex 1) drew on a comparable breadth of experience in Africa and beyond to inform recommendations for an expanded set of revenue streams to support future PA management in Rwanda. Will Banham's Capacity Building and Training Needs assessment (2005) built on his knowledge from earlier work at the Mweka Wildlife College and across East Africa. The Nyungwe Buffer Zone study not only benefited from the broad regional experience with exotic plantation management of Jean-Remy Makana and Jefferson Hall (2004), but also captured nearly-lost knowledge of former GOR forestry staff who first planted the Nyungwe buffer 15-25 years ago. This

assessment led to contacts and on-going consultations with ISAR and ICRAF, concerning their respective experiences with bamboo cultivation outside of PAs. In the realm of GIS, an important lesson from other countries informed the issue of data sharing. In this instance, it was noted that a protocol outlining rights and responsibilities is first required before partners can share data and shape files with some confidence that their work will retain its original integrity and that any intellectual rights will be respected (Forrest 2004). Finally, ORTPN's parallel restructuring and strategic planning processes have greatly benefited from regional experience, especially in Uganda, with many lessons shared by the director of the Uganda Wildlife Authority (UWA), Dr. Arthur Mugisha (ORTPN 2004).

*Study Tour.* Uganda's combination of comparable biodiversity values, socio-economic context, montane forest PA system, and management structures made it the most promising site for a study tour under the PDF-B. Eight individuals participated in this tour in October 2004. Originally intended to include both REMA and ORTPN staff, delays in official authorization and hiring of new REMA staff limited their participation. With a predominance of ORTPN personnel, primary attention was given to UWA. One important lesson was that UWA currently benefits from a \$32 million World Bank credit through the Protected Areas Management System in Uganda (PAMSU) project, which helps to fund many infrastructure and operational costs. With regard to income, however, it was learned that UWA is nearly as dependent on mountain gorilla tourism (90% of annual revenues) as is ORTPN (95%). Uganda is well ahead of Rwanda in its CBC/ICDP efforts, and has demonstrated some success in this realm. Tourism remains the primary engine for local development, with most benefits concentrated in communities around visitor entry points, or "poles."

Uganda's National Environmental Management Authority (NEMA) is a parastatal with more than a decade of operational experience, much of it of direct relevance to the newly-created REMA. Lessons brought back from the PDF-B study tour include the fact that NEMA has less biodiversity responsibilities of the kind attributed to REMA/MINITERE in Rwanda. It does assist UWA in performing environmental impact assessments related to development activities within PAs. In this, NEMA draws on its professional staff of more than 40 as well as private sector consultants. Among the latter are a growing number of trained resource economists – of which Rwanda has none. Other lessons for consideration include the fact that NEMA has persistent problems funding its operations and continues to depend on outside subsidies. In addition, it encounters recurrent conflicts with the Ministry of Environment over certain matters, where responsibility has not been clearly defined and/or agreed upon.

There is much that Rwanda can learn from the experience of neighbouring countries and their institutions. If it does so in a timely and efficient manner, the country can regain much of the ground it lost during the 1990s. If it can avoid known pitfalls and problems in the process, Rwanda can once again emerge as a leader in montane forest management, ecotourism, and community aspects of conservation. This GEF proposal is intended to help promote such adaptive learning and produce new lessons learned. If successful, the project should inform comparable initiatives across the Albertine region and beyond in years to come.

## ANNEX 7: REPLICATION STRATEGY AND OVERALL REPLICATION PLAN

The Project has been designed based on a detailed identification and analysis of barriers to effective management of the protected areas in Rwanda. However at a higher systemic level the project addresses institutional processes for the overall system of Protected Areas – including those Pas addressing biodiversity and those addressing ecological service functions such as watershed protection. Broader issues include financing and capacity.

Rwanda in the past provided lessons on PA management, but the genocide stopped such leadership. Since then however Rwanda has been a key partner in trans-boundary PA management – around the Virunga volcanoes, and has developed cutting edge transboundary modalities with MOU agreements between countries, between conservation agencies and between donors (several donors form the basis of the International Gorilla Conservation Programme – which is a co-financier partner in this project).

Enabling replication will form an important component of the full project. This will ensure lessons learnt and best practice are actively disseminated to inform conservation initiatives focusing on co-management models on communal lands throughout the Albertine Rift area and broadly in the region.

Rwanda has been a key partner in the Albertine Rift Conservation Programme (MacArthur support and other organisations) covering Rwanda Burundi DRC Uganda and Tanzania. The ongoing meetings of the AR Programme (setting up regional strategies and M and E processes offer an important vehicle for replication).

Specific Replication Strategies include:

Strategy	Anticipated replication strategy
<b>Inside Rwanda</b>	<ol style="list-style-type: none"> <li>1) Activities piloted in Forest PAs can be replicated in Akagera NP (savanna system). This is facilitated by the rotation of PA staff, as laid down by ORTPN policies, and the participation of Akagera leadership in capacity building processes.</li> <li>2) District partnerships will be piloted in 7 initial districts, offering scope for learning between these Districts, and then from these Districts to the others (14) around the two Forest PAs.</li> <li>3) Greater partnership between conservation and development partners will allow greater synergy and so the scaling up of interventions.</li> </ol>
<b>Outside Rwanda</b>	<ol style="list-style-type: none"> <li>1) Project partners have a track-record of publishing in the international conservation literature and participation on conservation fora. This is encouraged in this project with real participation of national staff.</li> <li>2) Rwanda as a member of the Albertine Rift Conservation Programme attends 6 monthly meetings sharing lessons and experiences between countries and between Pas in the Albertine Rift Forest area. Albertine Rift Programme has a strong dissemination literature.</li> <li>3) Rwanda as a new member of the East African Community, participates on the Environmental and Wildlife Task Forces sharing experiences and developing an East African code of knowledge and best practice.</li> <li>4) This applies to eastern Africa participatory training courses such as those on ICD and PFM, pioneered in Tanzania via earlier GEF projects.</li> </ol>
<b>Combined</b>	The detailed activity and budget lines in the Operational Prodoc will ensure that this strategy is put into practice and evaluated as to progress. See Log-frame Indicators.



**ANNEX 8: LETTERS OF Endorsement and Co-Finance.**

*“See Separate File of All Letters”*

## ANNEX 9: Summary of Outcomes of PDF B Activities

PDF B activities	Objectives	Outputs and achievements
1. Inception Workshop Kigali 18 <sup>th</sup> May 2004	<ul style="list-style-type: none"> <li>To introduce to stakeholders the objectives of the Protected Areas Biodiversity (PDF B) ;</li> <li>To learn and understand the expectations and concerns of stakeholders</li> </ul>	Broad stakeholder attendance; presentation of objectives; discussion of information needs and partner roles; recognition of activities already completed or in progress (e.g., ORTPN Strategic Plan and SWOT; Albertine Rift Socio-economic Survey)
2. Steering Committee	<ul style="list-style-type: none"> <li>Review consultancy topics; develop terms of reference; review and approve study reports.</li> </ul>	All required studies/assessments conducted by either project (see below) or partners. Members of the steering committee have attended all study briefings and actively reviewed draft submissions.
3. Consultancy Studies/Assessments	<p><b>Institutional analysis:</b></p> <ul style="list-style-type: none"> <li>Assess the functions and responsibilities of different ministries and government agencies involved in the management of Rwanda's protected areas and contiguous human-occupied zones.</li> </ul> <p><b>Legal analysis:</b></p> <ul style="list-style-type: none"> <li>Assessment of laws and legislation affecting Rwandan protected areas, wildlife and biodiversity within them, and the relationship between PAs and surrounding human communities.</li> <li>Review of existing laws and legislation pertinent to improved protected area management policies and practices</li> </ul>	<p><b>Key recommendations from Institutional and Legal Assessments:</b></p> <ul style="list-style-type: none"> <li>Rwanda needs a comprehensive Wildlife and Protected Areas Law.</li> <li>Other laws and policies are adequate, but need some harmonisation (Decentralization and Forestry).</li> <li>Government institutions at central and local levels in Rwanda have improved capacity but still fall short of mandate to effectively implement conservation policies and laws re PAs and biodiversity.</li> <li>Weak coordination and networking exist among the institutions in planning and management of PA natural resources.</li> <li>Operational linkages between local governments, central government and other stakeholders are lacking.</li> <li>Creation of REMA will complement ORTPN mandate, with REMA focus on policy and ORTPN on PA management. Potential conflicts if roles not clarified and communication channels kept open.</li> </ul>
	<p><b>Nyungwe Buffer zone assessment:</b></p> <ul style="list-style-type: none"> <li>Assessment of the potential social and economic importance of buffer zone plantations to the communities surrounding the park</li> <li>Analysis and identification of critical gaps/needs in current management practices and policies.</li> </ul>	<p><b>Key recommendations from the buffer zone study:</b></p> <ul style="list-style-type: none"> <li>Creation of buffer zone management commission that includes key partners;</li> <li>Clarify co-management opportunities/responsibilities; establish MOU protocol;</li> <li>Build capacity of district foresters to assist development of co-management plans;</li> <li>Assess and determine alternative use options;</li> <li>Train and support sawmill cooperatives/associations ;</li> <li>Develop bamboo in Nshili buffer zone with user association/s.</li> </ul>
	<p><b>Socioeconomic assessment:</b></p> <ul style="list-style-type: none"> <li>An assessment of the social and economic importance of PAs to surrounding communities and the existing relationship</li> </ul>	<p><b>Key recommendations from the socioeconomic assessment:</b></p> <p>The most important conclusion is that while PA border communities recognize national tourism benefits, they do not perceive significant benefits for themselves. Therefore, some tangible increase in revenue/benefit sharing is required to reduce the feeling of alienation by</p>

	<p>between them, including economic impacts to surrounding communities of PA revenue sharing, PA and buffer zone use</p> <ul style="list-style-type: none"> <li>An assessment of economic benefits, opportunities and constraints of PA resource exploitation by local communities and recommendations for a sustainable economic development of several value chains of employment and income generation activities (e.g., medicinal plant gathering, wood and water collection, hunting/fishing).</li> </ul>	<p>local communities and fill the shortfall in local household incomes through:</p> <ul style="list-style-type: none"> <li>Improve food security</li> <li>Develop income generating activities</li> <li>Improve integration of markets and add market value</li> <li>Supply water to communities around Virunga Volcanoes</li> </ul> <p>This study also quantified certain values of forest conservation and certain costs of forest removal, particularly the case of Gishwati deforestation and downstream effects on hydroelectric and potable water production. Key findings include:</p> <ul style="list-style-type: none"> <li>Minimum water values of NNP and PNK potable water sources = US\$ 2.8 Million per year</li> <li>Lost hydroelectric production at Electrogaz Gihira/Gisenyi complex from sedimentation in Sebeya River due to Gishwati deforestation = US\$ 2.5 Million over the past decade</li> <li>Lost potable water production from Sebeya sedimentation = \$120,000/year</li> </ul>
	<p><b>Socioeconomic Study (2)</b> Originally intended as part of this PDF B, this major survey of 3907 households was conducted as a parallel complementary activity by WCS, IGCP, and CARE.</p>	<p><b>See Plumptre, et al, 2004. <i>The socio-economic status of people living near Protected Areas in the central Albertine Rift</i>.</b> Major conclusions:</p> <ul style="list-style-type: none"> <li>All local populations use some PA forest products illegally</li> <li>Tourism benefits are perceived nationally, not locally</li> <li>Increased community benefits, even if acknowledged, will not necessarily reduce negative attitudes toward PAs</li> <li>Increased community benefits can reduce negative impacts</li> </ul>
	<p><b>Sustainable financing assessment:</b></p> <ul style="list-style-type: none"> <li>Assess potential sources of revenue and identify financial arrangements that directly support protected area management and biodiversity conservation objectives</li> <li>Analyze how community investments aimed at improving community livelihoods might be linked to wildlife and natural resource protection and leveraged to yield support for conservation</li> </ul>	<p><b>Key recommendations from the Sustainable Finance assessment:</b></p> <ul style="list-style-type: none"> <li>Current dependency on gorilla tourism provides unstable and inadequate foundation for PA management needs in Rwanda</li> <li>Explore diversified PA funding options: water and electricity user taxes, tourist hotel occupation fees, carbon sequestration, debt swaps, and expanded tourism revenue.</li> <li>Nyungwe NP offers greatest potential to expand international ecotourism revenues: need improved accommodation options at NNP, diversified attractions, and improved products</li> <li>Develop business planning capacity in implementing business plans</li> <li>ORTPN and partners should explore opportunities for linkages between conservation and poverty alleviation through the Ministry of Finance and the Decentralization Process</li> <li>Build capacity at the district level to include conservation issues.</li> <li>Develop strategies and mechanisms for working with the private sector that lead to revenue opportunities and ensure that ORTPN satisfies its own financial and conservation mission interests</li> </ul>
	<p><b>Training needs assessment:</b> Determination of critical gaps and needs in</p>	<p><b>Key recommendations from the Training Needs/Capacity Building study:</b></p> <ul style="list-style-type: none"> <li>ORTPN restructuring has added staff and increased overall competence, but</li> </ul>

	ORTPN's PA management capacity, as well as the capacity of MINITERE to implement its biodiversity and forestry mandates	<p>dependency on NGO/expatriate expertise still great</p> <ul style="list-style-type: none"> <li>• Formal training needed at the Certificate, Diploma, Advanced Diploma, PG Diploma and MSc levels covering biodiversity conservation, protected area management, tourism, and public administration within ORTPN</li> <li>• Formal training in Forestry at the Diploma and BSc level for the forestry department staff; district level field courses</li> <li>• Short courses and study tours within MINITERE and ORTPN</li> <li>• REMA needs training needs assessment once most staff are in place</li> </ul>
	<p><b>GIS capacity needs assessment:</b> Assess Rwanda's GIS capacity at several levels: central government (MINITERE and ORTPN), university, NGO, and at PA field sites (Nyungwe and Volcanoes)</p>	<p><b>Key recommendations from the study:</b></p> <ul style="list-style-type: none"> <li>• Improve the capabilities of protected area staff and researchers to enter, treat and analyse data; generate useful GIS products</li> <li>• Improve the hardware and software available to PA managers and researchers at both the protected areas and headquarters levels</li> <li>• Improve the efficiency by which widely needed datasets are produced, retained, acquired, and shared</li> <li>• Develop a protocol/framework for GIS data/information sharing at national level</li> <li>• Determine most efficient system for GIS coordination nationally.</li> </ul>
	<p><b>Akagera assessment (2 parts):</b></p> <ul style="list-style-type: none"> <li>• Assessment of major management concerns and potential remedies related to buffer zone management, including user rights, restitution for crop damage and livestock predation, indemnities for illegal park/buffer use, fencing, disease transmission, tourism</li> <li>• Analysis of the implications of the national policy on decentralization for protected area management, with specific attention to local community use options of the buffer zone</li> </ul>	<p><b>Key recommendations from the study:</b> The overall conclusion of the buffer zone assessment was that the detailed questions being asked cannot be answered until some more fundamental actions are taken. Findings/recommendations include:</p> <ul style="list-style-type: none"> <li>• The boundaries of the buffer zone and economic development zone need to be clearly demarcated, with attention to habitat/ecological factors</li> <li>• Communities around the Akagera National Park should be involved in the boundary demarcation process</li> <li>• There is a need for more consultations in order to define the limits and management objectives of the buffer zone and economic development areas</li> <li>• In ANP and Umutara Province priority diseases linked to wildlife -- and, therefore of importance at the buffer/boundary interface -- include trypanosomiasis, tuberculosis, FMD, anthrax and rabies</li> </ul>
	<p><b>Gishwati assessment:</b> Identification of threats, biodiversity (plants and animals), and conservation value of this small relict forests as well as its conservation status</p>	<p><b>Key findings and recommendations:</b></p> <ul style="list-style-type: none"> <li>• In spite of the massive (97%) deforestation over the past 20 years in Gishwati Forest Reserve, 7 km<sup>2</sup> of montane forest remain.</li> <li>• This area supports 4 types of primates (Chimpanzees, Golden monkeys, Blue monkeys and Mountain monkeys) and 84 bird species. 58 species of trees and shrubs have been identified.</li> <li>• Major threats are: any further encroachment, bamboo cutting, tree felling, firewood collection, agriculture and cattle grazing</li> </ul>

		<ul style="list-style-type: none"> <li>The degree of disturbance and transformation that the site has incurred suggests an absolute need for strict protection in the short term.</li> <li>Ecotourism should be developed to support protection and generate local community benefits; take advantage of Gisenyi proximity</li> </ul>
	<p>Priority Research and Information Needs Assessment: Bring relevant stakeholders together for a two-day workshop to identify priority research/monitoring/information needed to address PA threats and management requirements</p>	<p>Key recommendations from the workshop:</p> <ul style="list-style-type: none"> <li>Key threats to Rwanda's protected areas identified; linked with applied research and monitoring needed to gather priority information</li> <li>Key threats identified are: poaching, fire, bamboo cutting, human - wildlife disease transmission, invasive species, mining, low appreciation of forest values by local populations, habitat losses, and lack of tree regeneration in disturbed areas.</li> </ul>
	<p>Study tour for ORTPN Staff to Uganda:</p> <ul style="list-style-type: none"> <li>To learn from Uganda's experience in the area of natural resources management,</li> <li>To learn how different institutions collaborate in area of natural resources management, looking at the institutional arrangements, legislation, policies and strategies</li> <li>To learn how policies and strategies are implemented, community conservation/tourism in PAs</li> </ul>	<p>Key lessons from the study tour:</p> <ul style="list-style-type: none"> <li>Uganda Wildlife Authority (UWA) has put considerable effort into capacity building after restructuring</li> <li>UWA is well advanced in terms of policy development; each department has clear guidelines on its objectives and strategies</li> <li>UWA benefits from \$32 million PAMSU credit to cover costs, debt is incurred</li> <li>90% of UWA revenue comes from gorilla tourism;</li> <li>UWA collaborates with NEMA in the area of Environmental Impact Assessment (EIA); resource economists are hired from the private sector</li> <li>NEMA cannot cover its operating costs and encounters some conflicts with Ministry of Environment over unclear responsibilities</li> </ul>
	<p>Participatory community workshops: Identification of community conservation issues/needs around the NNP and VNP to be addressed in the full GEF project</p>	<ul style="list-style-type: none"> <li>Participatory workshops held with 8 districts around NNP and VNP</li> <li>Key issues raised re PAs: access to park resources (water, bamboo, honey collection, grazing), crop raiding, lack of ORTPN revenue sharing, lack of PA-related employment, lack of other revenue-generating activities, and distance from markets</li> <li>Suggestions concerning Nyungwe buffer zone: share benefits of tree plantation exploitation through co-management arrangements with communities/cooperatives, consider alternatives to pine (native trees, bamboo, tea), permit intercropping/grazing, indemnify displaced families</li> </ul>
4. District and province level consultations	<ul style="list-style-type: none"> <li>To engage in broader stakeholder consultation re PAB project objectives</li> <li>To ensure grass roots participation in the GEF</li> </ul>	Total of 3 province meetings and 13 district level consultation meetings were conducted
5. Final Stakeholders Workshop, January 17th, 04	Presentation of the evolution of the PDF B; proposed Objectives, Outcomes, and Outputs for the Full GEF proposal; and participatory identification of key performance indicators	75 stakeholders attended the workshop in Kigali and participated actively. Breakout groups identified and discussed numerous indicators related to project performance at the central, district, and PA levels. The Workshop received considerable national media coverage in the press, radio, and television
6. Full GEF Project	Produce a proposal for Full GEF project	Full Project proposal produced and submitted to GOR and UNDP, 4 February 2005

## **Annex 10: Analysis of Alternative Income Generation and Improved Livelihood Options for Communities Around Rwanda Forest Protected Areas.**

This Annex summarises the results of specific studies commissioned during the PDFB Process:

- 1) WCS 2004. Review of Socio Economic Analysis and Ecosystem values of PAs in Rwanda. Wildlife Conservation Society, Kigali
- 2) WCS 2004. Economic Alternatives in the Nyungwe Buffer zone. Wildlife Conservation Society of Minterre, Kigali.
- 3) Plumptre, A. (et al). 2004. The socio-economic analysis status of people living near Protected Areas in the central Albertine Rift. WCS Albertine Rift Reports, 127 pages.

This annex integrates the outputs of a partnership workshop from community/conservation NGO partners (hosted by WCS Rwanda as part of this PDF process. The workshop's purpose was to ensure that there were a suite of AIG/development options that were being used, tested and piloted in the areas around both Nyungwe and Parc des Volcans.

These findings were integrated with growing guidance from UNDP-GEF and other development partners on the critical criteria that are necessary for successful community business enterprise around biodiversity "hotspots" and PAs. Major sources include:

- Bovarnick, A. 2003: Local Business for Global Biodiversity Conservation. UNDP. New York
- UNDP-GEF: Conserving Biodiversity and Sustaining Livelihoods. Lessons learned Brochure. UNDP, New York.
- MacShane, T and Wells, M. 2004. Getting Biodiversity Projects to Work. IUCN/WWF. Switzerland.
- Hughes R, and Flintan. F. 2001. Integrating Conservation and Development Experience. A review and Bibliography of the ICD Literature. IIED, London

This Annex is in 3 parts.

- 1) A Listing of Ongoing Business Enterprise in Rwanda, via partners
- 2) An Analysis of Constraints to Effective Enterprises
- 3) A Summary of the Nyungwe Buffer Zone Issues

### **1) Ongoing AIG / Community Livelihood Enterprise around Rwanda PAs.**

<b>No</b>	<b>Enterprise</b>	<b>Details</b>
1	Ecotourism	Guides, Guide Training, Local Hostels, Cultural Tourism
2	Water Enterprise	Supporting clean water sources from PA: Springs, seepages, shrews, boreholes
3	Improved Agriculture	ICRAF Agroforestry, Eco-agriculture, agriculture product marketing, local produce small scale preparation.
4	Honey/Bee Products	Community cooperation, product marketing, local produce small scale preparation
5	Handicrafts	Based on bamboo, palms, reeds. Marketing and upgrade of skills
6	Medicinal Plants.	Collection, preparation, sale and marketing.
7	Local nurseries	Wood lots, fuel, timber, food, trees
8	Stall Feeding	Improved livestock husbandry

## 2) Review of socio economic analysis and ecosystems values of PAs in Rwanda

### Summary

Natural forests are an important buffer in the livelihoods of many local people. Forests can provide food and other goods for sale at periods when other resources are scarce in rural people's lives. Evidence from a recent study (Masozera, 2004) depicts a series of factors that influence people's dependency such as proximity to forest, access to markets, average age of household etc. Such dependency on forests means that if conservation policies reduce use by or exclude local people from forests there will be serious implications on their livelihoods security. This implies that for conservation management strategies to be successful some benefit sharing with communities will be necessary to reduce the alienation by local communities, but importantly a real effort must be made to assist in making up the short fall in local households incomes

Political support for the protection and maintenance of Rwanda's forests is emerging, mainly through the economic importance of tourism. However financing proper management and protection of the PA is still a problem. Getting conservation needs on the list of national proprieties is a must if finances are to be found. An important route is through developing a better comprehension for the **total economic value** of Rwanda's forests. Currently there are many benefits from the forests that go are unappreciated. Through understanding the dynamics between the ecosystem and the economy we can fully appreciate using variety of methods the value and potential costs to the economy of environmental change. This report presents some entry point estimates of these hidden values as a precursor to much needed detailed valuation studies. Some values of Rwanda's protected forests and where they accrue to at different levels of the economy are presented below:

Annual Livelihoods and Ecosystem Values from Protected Areas (\$US)				
Type of Value		Amount	Level of Economic Benefit	
Livelihoods	Value- Nyungwe	5,000,000	Local	
Forest				
Watershed	Protection-Drinking	2,800,000	Local Community, National	
Water				
Tourism Revenue	Gate and permit receipts	1,600,000	National (Local in the future)	
Soil Nutrient Conservation		5,000,000	HH, Local Community, National Economy.	
Carbon Sequestration		"Large"	Global Community	
<b>Total</b>		<b>&gt;15,000,000</b>	<b>All levels</b>	

Developing knowledge of livelihoods and ecosystem values allows the economic importance of these forests to be appreciated in economic decision making frameworks at the national level. The development of Rwanda's PRSP and PEAP budgetary frameworks presents a good platform for these values to be appreciated. If the economic importance of the forests is fully realised against other national needs, rational economic prioritisation of the budget can be made. In addition the international donor community is increasingly turning towards direct support to the national budget as a way of administering assistance known as 'basket funding'. Unless Forest protection and management is represented in the national budget plans the importance may well be overlooked and finance for conservation activities may suffer.

### *Policy Framework (Issues and constraints)*

#### Market failure and the role of the state in forest management

Market failure is the less than optimal functioning of a market to provide goods or services over a given period. Two such sources of market failure occur in the provision of public goods and in externalities. **Public goods** have two attributes that discourage private markets because profits and benefits cannot be appropriated by the supplier:

Rwanda has acute national fuel wood shortages (PRSP 2002). Deforestation causes increased fuel wood costs, both in terms of money and time spent in collection. When wood becomes scarce, prices typically increase and this can trigger more investments in tree growing. Wood supply can thus to a large extent be ensured by allowing markets to develop for wood from plantations and trees on-farm. Alternatively other unregulated or illegal natural timber harvesting may be a course of action to meet supply

#### Poverty Reduction Strategy Process

Rwanda has initiated policy and budgetary processes at a national level which have a bearing on the future management and financing of development activities, including those that relate to environment and protected areas. At a national level Rwanda has made progress down the path to integrated and participatory budgetary planning through the Poverty Reduction Strategy Process.

#### Poverty and economic activities

Important determinants of the living conditions of households and their members will be the economic activities in which they are engaged and the returns they are able to attain in these activities. For many households poverty may be associated with having too much labour (given available land, capital or demand), which is likely to manifest itself in underemployment or unemployment. For other households though it may be associated with too little labour, with members working long hours, typically at low returns and so in a situation of time poverty to add to their other dimensions of poverty (these pressures may imply lower school attendance by children of these households). The PRSP argues that both these types of poverty are important.

From the Profile of Poverty in Rwanda it is clear that poverty is disproportionately concentrated among households whose primary livelihoods are agricultural activities, either on own account or through agricultural wage labour. Overall, for those households whose primary activity is own account agriculture, nearly 97% of active members work on their household farm; these households are not diversified at all. For the remaining households diversification takes the form of around 20% of other active members working on a household farming activity. There is very little other diversification in household's economic activities, although it is a bit greater for those households whose principal activity is non-agricultural employment in the private sector (formal or informal). Once again the prevalence of agricultural activity is apparent, especially among the poor, and the majority of households appear to have little other alternative.

#### Agriculture in poverty alleviation

As emphasised in the PRSP, agriculture must be a central element of a poverty reduction strategy in Rwanda. It is therefore particularly important to understand the factors behind the low income levels of many of those working in this sector. Some initial key issues explored here are ownership of land, ownership of livestock, patterns of crop cultivation and the use of output, and the use of inputs in crop cultivation.

#### Land Ownership and Access

Access to land is clearly a key issue. According to the EICV results, on average, 79.4% of households in Rwanda own some farmland. The PPR indicates that the percentage of the households owning some land in the lowest quintile (poorest households) is on average around 85%. The percentage of the households that own farm size of less than 0.2 ha becomes smaller as we move up the quintiles. For example, as many as 40.5% in the lowest quintile own less than 0.2 ha compared to only 14.9% in the top quintiles.

The long-term sustainability of Rwandan agriculture will be challenged by continued population growth and resource scarcity. Demographically induced changes in the structure of landholding exert an appreciable impact on reported changes in soil productivity. To the extent that population pressure has contributed to less stable land use rights (i.e., land rental rather than ownership), expanded use of more



distant and fragile lands on steep slopes, and longer periods of use, it has been detrimental to agricultural productivity in Rwanda.

#### Rural Credit

Access to rural credit is still limited in Rwanda according to the PPR(2002). However, out of 40 cells surveyed in every province, Cyangugu (26), Umutara (24) and Gikongoro (18), ranks the highest in terms of communities reporting having access to rural credit. The most badly served in terms of access to rural credit are Gisenyi (4), Gitarama (5) and Ruhengeri (6) as the only cells out of 40 that had access to rural credit. The accessibility to rural credit and incidence of poverty in provinces does not clearly show much relationship. For example, Gisenyi has the lowest access to credit yet is the least poverty-stricken. On the other hand, Gikongoro, one of the poorest and most poverty-stricken provinces has modest accessibility to credit.

#### Agricultural Output Marketing and Storage

The PPR highlights that few poor households sell any of their agricultural produce. That is, on average, in the lowest quintile (poorest households), we see more households selling none of their output as compared to the top quintile (wealthiest) the majority of the households sell at least some output. Overall, however, about 60.3% of the households in Rwanda sold some of their agricultural output. The implication is that poverty is more entrenched in the provinces where many households are unable to sell any of their output. The reasons for this need to be investigated further, but as part of this alternative income generating activities may be important in targeting to reduce poverty significantly.

#### Socio economic issues in relation to PA

People living in close proximity to Rwanda's forests use them as part of the local resource base available to them in order to secure their livelihood. The areas of Nyungwe, PNV and Gishwati have protected status with regulations governing their protection. Despite regulations prohibiting the use of areas with a protected status, failure to enforce the regulations means that local people have been able to access these areas to exploit the resources.

#### Forest Dependency

Masofera (2002) goes further to explore forest use and dependency amongst households in selected communities around the Nyungwe Forest Reserve (NFR). The survey elicited detailed information about economic activities in the forest in the context of total household income and a variety of other social and economic factors. With this information a general linear model to explain the relation ship between these factors to explain forest dependency.

Of particular interest are the following relationships:

*Total agricultural income, market access, household average age* - where these factors were low or poor, household dependency on the forest was higher

*Household size* – where this was higher, households were more dependent on the forest

These findings suggest that poorer households may be more dependent on forests to secure their basic livelihood, through the consumption of bushmeat and other wild food as well as for goods to sell on local markets, where many poorer households have fewer other livelihood options.

Around Nyungwe there is a significant buffer zone area consisting mainly of mature pine plantation. The establishment of buffer zones has affected communities around the NFR differently People who live near the plantations are able to collect fallen dead wood for fuel wood. However land had been expropriated from local people by the government during the formation of the buffer zone and in such cases and with people not deriving any direct benefits, it is felt that the buffer zone is a limitation for the expansion of their agriculture into the reserve.

Buffer zone management schemes need to clearly research the equity and capital issues in local communities realizing benefits from the buffer zone, as it would be difficult for most communities to secure the level of finance necessary to engage in commercial forestry activities. However communities did express a keen interest in being involved in co-management schemes. In addition to buffer zones are large tea plantations. People who live close to tea plantations have off-farm economic opportunities have positive attitudes because buffer zone plantations provide them with seasonal income through employment

However, caution need to be taken in any interventions aimed at improving communities' livelihood opportunities. Research has revealed that membership of community group/institutions, access to services and interventions within communities in south western Uganda is largely socially defined, and poor or marginalized people (including women and the Batwa) are largely excluded from such benefits because they don't have the means, or even do not have access to the necessary information. Even the most grassroots-based CBOs have been found to exclude the poorest people. As such creative techniques need to be applied by development interventions in order to reach the poorest people, otherwise such interventions could easily end up widening the wealth gaps within communities.

An issue to be highlighted around the PNV is access to water. The volcanic geology of the PNV area means that rain water either runs off rapidly or percolates quickly through fissures in the ground. The forest plays an important role in maintaining a steady supply of surface water. However during the drier months permanent water sources may only be found within the boundary of the national park. Whilst the park authorities often grant permission for local people to access such water sources, this poses a conservation risk. As people access the park their activities may not be restricted to the collection of water. It is difficult for the park authorities to monitor and control such activities given their limited resources. Attention must be drawn to methods of supplying water to local communities from the permanent water found in the forest. However appropriate environmental impact assessment must be made to evaluate the risks associated with the supply of water from the park.

In the WCS et al study, tourism ranked very low as a benefit from the forests. Tourism was mainly perceived as being useful to the country. It is clear that most tourism revenue does not accrue at the local level. Developing the link in people's minds between tourism and other park benefits, especially revenue sharing, in all areas around the park should be part of the tourism development program. However the impact of tourism revenue sharing schemes in the community may be diluted due to the high population density relative to tourism revenue.

#### *Integrating community conservation with Rwanda's Institutional processes.*

It is clear that the biggest threats to forest conservation stem from the low level of social and economic development in communities surrounding the PA. Whilst community conservation activities can help to ameliorate some of the tensions between people and parks, their effects are limited by the ability of conservation organizations technical and organizational mandates, i.e., the strategic and technical extent as well as the physical and financial capacity to which they are able to get involved in rural development in the communities surrounding the PA. It is clear then that there is a need for much greater coordination of activities that assist in the conservation of the PA through rural development and poverty alleviation. Whilst conservation organizations are able to get involved in community work it seems logical that this must be prioritized by focusing on communities that pose a specific conservation threat to the park.

At the national level the development of the PRSP and the emerging PEAP process provides a platform to integrate the conservation and community agenda into national planning and financing frameworks. However the challenge lies in having an appropriate 'voice' with which to communicate the needs. The ministry of finance will tend to listen to sectoral demands regarding budgets and is not able to directly work on sub sector issues. In terms of conservation and protection of the PA the National Biodiversity Strategy and action plan should form the basic framework to develop a sector investment plan for the

ministry of lands water and environment. as the NBSAP begins to detail the objectives priorities and actions that will ensure the proper management of the environment. In addition it addresses the capacity issues in implementation of activities, i.e. who should be doing what. The sector investment plan is the basic tool for the Ministry of Finance to reconcile the proposed schedule of activities and their associated budgets with the national budget plan.

**Table 1. Direct/indirect benefits that together provide the total economic value of forests**

<b>Direct economic benefits:</b>	<b>Indirect economic benefits:</b>
Timber: Fuel wood Construction materials Charcoal	Soil protection and Erosion control Water conservation: - Percolation into aquifer –stable release rather than flash flooding - Maintaining local industries
Non Timber Forest Products: Medicinal plants Wild honey Bark cloth Wild food (flora and fauna) Craft / Thatching materials	Hydropower production, and brewing
Recreational use: Park entry fees Guiding fees Gorilla permits Earnings by tourism industry	Climate control
Forge and Crops/shifting cultivation	Carbon sequestration
	Water related health issues (extra household expenditure on treatment, longer distance travelled to clean water source.)

### *Economic values of Rwanda's Forests*

This section will provide some case studies and rough estimates regarding the potential value of Rwanda's forests to local people as well as the national and global economy.

### Livelihoods Values

Masozera (2004), points to significant but variable amounts of annual household income and consumption values being derived from Nyungwe forest. Some average figures for focal communities from the study area are shown in the table below:

<b>Community</b>	<b>Forest Income \$US</b>	<b>Other Income \$US</b>	<b>Total Income \$US</b>
Bwege	76.44	50.96	127.4
Rangiro	23.63	133.87	157.5
Nshili	16	144	160
Kitabi	22.56	203.04	225.6
Gisakura	77.87	700.83	778.7

## **Development recommendations**

**Improve food security.** Forest dependency is significantly influenced by low productivity from on farm activities i.e. where farm incomes were low. In addition the use of forests during the 'hungry gap' points to their important role in food security as a type of insurance. Efforts to improve agricultural productivity (Clay,1996) and food storage may significantly reduce the need for households to depend on the forests. This will require linking with organisations able to provide appropriate advice on sustainable agricultural practices, agricultural extension and training as well as appropriate technologies. Fundamentally for conservation organisations this means developing the focus of rural development activities on communities around the PA as a priority group for development.

**Develop support for income generating activities.** The people in this region are some of the poorest in Africa. Significant proportions of people admitted to using the protected forests and in fact depend on them. However given the large number of people living adjacent to these protected areas current use is unlikely to be sustainable and there is a need to develop other methods of generating income. Support could be provided by a number of international and local NGOs specialised in rural development such as CARE.

**Improve integration of markets and add market value.** Poor market access is a critical factor associated with forest dependency. Enabling remote rural communities to trade more effectively in local markets would assist in reducing forest dependence. Better knowledge of market prices would be one way of achieving this as would the development of producer/marketing groups. Support for such activities may be found from such organisations as the IITA Foodnet program, the USAID funded PEARL program in Butare.

### **Conservation recommendations:**

**Community conservation projects need to take place with law enforcement and monitoring.** The increased positive relationship between people and the park in areas where projects have been operating over the past 10 years is a good sign, as seen in recent experience from Bwindi, Uganda. CC planning should take this into account and also contribute to the support of community-friendly law enforcement activities in parallel with supporting the local communities. Making the links clear as to why policing is important and that in the long term it can benefit people is needed so that they better appreciate the role of park authorities. Importantly should community conservation efforts include community use or management there is still a pressing need for third party monitoring and enforcement of regulations to ensure sustainable harvesting limits are adhered to. Emerging evidence from around Bwindi Forest in Uganda and other CC programs world wide can provide useful lessons.

## **3) ASSESSMENT OF THE NYUNGWE NATIONAL PARK BUFFER ZONE, SOUTH WEST RWANDA**

### **Summary**

Nyungwe Forest Reserve is the most important natural forest in Rwanda because of its area and biodiversity. Like any natural forest, Nyungwe Forest Reserves is under pressure due to the increasing population density. To reduce human pressure on the natural forest, a buffer zone was created in the early 1970s. It was made up of exotic tree plantations with fast growing trees, namely pine (*Pinus patula* and *P. oocarpa*) and cypress (*Cupressus lusitanica*). Trees were planted in the buffer zone over 30 years ago. Various donors were involved including Swiss Technical Co-operation, The European Development Funds, The World Bank, La Caisse Française de Développement and Belgian aid. The creation of these tree plantations had three major objectives: to set up a clear demarcation of the limits of the natural forest, provision of woody products (timber and energy) and job creation amongst rural communities.

These trees which were planted over different periods cover some 10.700 ha, most of them have reached or their full rotation age and need appropriate interventions in terms of thinning, pruning or exploitation. Although people can still cross the buffer zone, the planted trees have played a big role in showing the demarcation of the natural forest. People living near the buffer zone have benefited in terms of employment and firewood whenever clearing was done. The construction of the roads opened up the area to other part of the region. The additional forest provided other environment services such as soil and rivers protection. However, the fact that the local population is not allowed to exploit any resource from

these tree plantations is likely to compromise the plantation objective of protecting the natural forest and contribution to the sustainable management of the natural forest. Beginnings of destruction of these plantations have been noticed in some areas of the buffer zone. Local communities can benefit substantially from the buffer zone if various types of trees are planted and the management of the buffer zone shared with local associations.

### **Access to the Nyungwe Buffer Zone**

Currently the buffer zone is owned and managed by the government. Responsibility was with Forestry in Ministry of Agriculture. Now that Forestry has moved to Environment, a greater link between PA and buffer management can be implemented. There remain extensive plantations and some open degraded areas of scrub and bracken. However, many people interviewed expressed a desire for more access to the buffer zone. If part or all of the buffer zone is maintained as pine plantations then there are several options to provide benefits to surrounding communities. One is to keep the buffer zone in its current state and have the central government maintain ownership and management responsibilities which would allow employment. Another option would be to implement some a Joint Forest Management Regime (JFM) that would give more input to local communities over management decisions. JFM arrangements have been implemented in a variety of places in Africa and India (Wily, Rishi). JFM aims to improve management of forest resources by giving at least some management authority to local communities dependent on the forest. The rationale is that by giving local communities more management authority there is a greater incentive for them to manage the forest sustainably while trying to maximize benefits (Wily). Such an approach could possibly be fit into the existing policy trend in Rwanda of decentralizing government authority to local communities.

An alternative approach would involve the government possessing title to the land but leasing the rights to harvest and manage the forest to private entities and communities. There could be several leasing arrangement ranging from long term leases giving private entities harvesting rights along with management responsibilities to short term leases that allow harvesting with management responsibilities remaining with the government.

Similar issues should be investigated if the “open” buffer zone is planted in tea. There are already several models of tea plantation ownership in Rwanda: for example, tea cooperatives where local farmers have ownership in a cooperative and manage the plantations, tea planter associations where each tea farmer owns, manages and harvests a small plot in a plantation.

These various management and ownership regimes for pine, tea and possibly bamboo should be tested within District Environmental Plans, and explored on the ground via project and community development funds. These studies could aim to identify the likely effects of different management and access regimes would have on PA Conservation, on income generation and its distribution, along with other social factors such as employment and infrastructure development. Existing tea and pine plantations outside of the buffer zone could be used as models.

### **Value added products**

The economic value and social benefits associated with adding value to the products produced from tea or pine plantations may be substantial and therefore should be investigated. For instance, one pine stem (approximately 25 cm in diameter) can be processed into 4 timbers worth about \$2.00 each. There is also significant potential to add value to the timbers. For example, a desk worth approximately \$9 can be made from 3 timbers. In addition, five timbers can make a door worth \$20. Raw tea worth between \$0.09 and \$0.11 per kilogram is processed into a final product worth about \$1.70 per kilogram. It would be valuable to conduct more piloting into the socioeconomic benefits (i.e. income, number of jobs, etc.)

that are generated by making value added products from tea and pine and compare them with each other and other alternatives.

### **Bamboo**

A local species of Bamboo are common in and around Nyungwe Forest Reserve and the buffer zone. Bamboo is used extensively in the area for construction, making local crafts such as baskets and for ceremonial purposes. The possibility of establishing Bamboo plantations in the buffer zone could be investigated as an alternative to tea or pine. Some people interviewed expressed an interest in planting bamboo or a mixture of tea and bamboo in the buffer zone. In connection to this, many people thought that there was a shortage of bamboo. Currently, bamboo is used locally with some crafts being sold to tourist. However, there may be potential to substantially increase the value of bamboo by training local people to make high quality crafts and then creating more opportunities to sell these crafts to local markets and tourists (i.e. create markets for these products where tourist frequent such as visitor centers or museums). ICRAF have an interest in this.

## **4 Socio-economic Analysis of People around PAs in the Albert Rift** (A summary)



*Boys using forest products to make toys*

**Planning the Surveys** The planning for these surveys took place over several months as the three NGO partners, CARE, IGCP and WCS, wanted to ensure that all interested parties would have the chance to contribute to the process and design of the surveys. Development NGOs as well as Conservation NGOs participated to ensure that information of use to them was collected.

### **Information recommended by the Virunga Volcanoes Group to be collected included:**

- Information on the harvesting of natural products
- Information on crop-raiding
- Information on human demography.
- Information on agriculture and livestock farming.
- Information on water needs.
- Information on tree and bamboo plantations.
- Information on the attitudes of people towards conservation.
- Information on the local economy.

### **Information recommended by the group from Nyungwe Forest Reserve to be collected included:**

- Information on bush-meat harvesting.

- Information on mining of coltan and gold in Nyungwe Forest.
- Information on the encroachment of the forest
- Information on bushfires in Nyungwe Forest.
- Information on the buffer-zone management and the attitudes of people towards the buffer-zone management.
- Information on the attitude of people towards the conservation of Nyungwe
- Information on human demography
- Information on local economy.

**In both areas there was a community conservation approach in place, which involved the collaboration of Protected Area Managers with communities around the protected areas, through an individual elected in each sector to be in charge of the environment. These were ultimately named ANICO (Animateur de la Conservation). Each ANICO member is one representative among the 9 elected people who make up the Administrative Committee in each sector. We selected the ANICO, who were known to have some basic education, as interviewers in PNV and NFR, as well as school-teachers to collect data via questionnaires. Equal opportunities were given to both men and women.**

**The questionnaire was built on a number of concepts as shown below:**

#### *Household Income and Agriculture*

- Questions about the structure of the house, ownership of radios, bicycles, motorbikes, number of livestock and land size were all made with the aim of providing a basic measure of wealth per household.
- Questions about field size and crops grown were asked to obtain a better understanding of the livelihoods and economies of the households around the forests.

#### **Attitudes Towards Conservation**

- Questions were asked about the knowledge of the parks in their respective country, their knowledge of the protected area authorities and other NGO projects involved in conservation, with the aim of understanding how much people know about conservation in their country.
- Crop-raiding was also highlighted as important information to collect during the survey. This would help the park management to know where crop-raiding was occurring, which animals were raiding the fields and where this threat was occurring.
- Questions were asked about bush-meat hunting in general to obtain some idea of how much illegal hunting was taking place around the forests.
- Attitudes towards conservation were also important information for the park management, for them to evaluate and revise the community education programmes. The information that was collected included their attitudes towards the park and the factors that affect the people's attitudes towards conservation.
- Harvesting of non-timber forest products was also noted and measurements of the frequency and abundance of products harvested were obtained.
- Information about the management of the buffer-zone and the attitudes of local people towards the buffer-zone management. This information would establish what communities currently obtain from the buffer-zone and what it could be used for, once harvested.

#### **Economics and Access to Markets**

- An understanding of the economics of households in the regions was also deemed necessary and the survey asked how people made money, where they went for credit and whether they benefited from tourism or membership of any association.

## **LESSONS LEARNED AND POLICY RECOMMENDATIONS**

### **Socio-economic Situation of Communities around the Forests**

The results presented here are a summary of the status of local communities living around these forests. Many more analyses could be undertaken with the data and once this report has been published the data will be made available on a website for others to analyse further. The analyses we have presented here aim to provide a baseline situation, which can be monitored for changes in future.

The results of this survey show the socio-economic situation of people living within 10 km of Volcanoes and Nyungwe. As can be seen from the demographic structure, these communities suffer high mortality rates, people emigrate elsewhere when they become older and the average age is very low (20-22 years) per household. The limited economic opportunities which exist in many areas adjacent to protected areas mean that many middle-aged men and, sometimes women, migrate to look for economic opportunities elsewhere, usually to look for casual or formal employment or to become involved in trade.

Compared with the communities studied in Rwanda and the DRC, more people in Uganda own goods such as radios, bicycles and motorbikes, can afford iron sheet roofs and they are able to afford to send more children to secondary school. They own more land and livestock too. This difference may be, in part, a result of the political conflicts that have occurred over the past 10 years in Rwanda and, more recently, in eastern DRC. Uganda's conflicts finished in the mid 1980s and the country has been relatively stable in this region since then. However, there are probably other factors such as access to markets and the growth of the economy at a national level that are contributing to these differences in relative wealth.

Having very poor people around these PAs has serious implications for conservation. Poor households are likely to have limited economic alternatives and are more dependent on the PA for their subsistence, or as an income source where wealthier people may use them to exploit the PAs. Other research has also demonstrated that it is difficult for poor households to access locally available channels to improve their livelihood, e.g. the local CBOs credit and savings groups, whose membership tends to be socially stratified according to wealth and education. The poor are, thus, logistically excluded since they can't afford the conditions of membership. They are also less likely to benefit from interventions by NGOs if not well targeted (Kjersgard 1997, ITFC in prep.). Moreover, the negative impact that the protected areas have on the community hits them the hardest, especially crop damage and restricted resource access. As such, the poorest people seem to become significantly more negative towards the PAs when they are restricted from accessing the resources therein, or when they suffer costs associated with PAs, as has been revealed by results of a study made by ITFC (in prep.).

Crop-raiding remains a challenge for local communities and conservation organizations around the PAs. Though pilot interventions mainly experimenting on the use of live fences have been implemented in some parishes around BINP, these are still far from solving the problem. Around MGNP, and PNV the communities, in conjunction with park management, erected a stone wall. But the problem is not totally solved. Crop damage creates negative attitudes among the community, especially when they perceive that little is being done to solve it. Crop damage is actually one of the reasons why park-edge households do not plant trees, because they believe that trees create a habitat for problem animals.

### **The Local Economy**

This study was carried out in one of the poorest and most densely populated parts of Africa. Farming remains the major source of livelihood, and people have little access to other opportunities to improve their livelihoods. The problem of land shortage in Rwanda and the Goma region of eastern DRC, means that there is a limit to the extent people can increase their wealth by farming.



Access to markets does seem to have some impact on wealth creation, however, people around Bwindi and Echuya, where wealth is still relatively high had large distances to travel to markets. For many, PA-adjacent communities, lack of market for their produce, largely a result of the poor road networks, further limits their livelihood options. The terrain around all these parks is difficult because of the steep hills and so the road network is poor and many areas are remote. Thus, some communities cannot produce some of the marketable products, especially if they are perishable, because they are constrained by the inability to get them to market. Even when produce is storable, the traders who make it to these remote areas offer very low prices. The remoteness of the areas also implies that there are very few avenues for alternative means of employment.

This study, however, demonstrated that although access to markets may have some effect on wealth creation, it is not the only reason as to why people are poorer. What is probably more important is that a market for products exists and that people can afford to buy them. The potatoes grown in Ruhengeri by PDV supply much of the rest of Rwanda. As a result, there are opportunities to make money in this region. It is possible that opening up trade between DRC, Rwanda and Uganda with the new peace in the region may help increase wealth amongst the people living there. What is clear is that development support should help create markets for products and improve access to more distant markets. Providing credit schemes to allow the development of businesses is one way to help people to find alternative ways of generating an income. However, these need to be linked to market development as well. People in Uganda had more access to micro-projects and funds within the community. They also had access to grants, which they stated were preferable because they don't have to pay them back. These factors could have also contributed to increased wealth in the region.

### **Community-Forest Interactions**

The data shows that people living around these forest parks derive benefit from the use of the forests. Over 50% of households around all forests felt that they personally benefited from the presence of the forest, and only Bwindi and Virunga parks had responses lower than 70%. On average though, more households felt that the country benefited from the forest than they did. This may point to the general perception that park-adjacent households do not get a fair portion of park benefits, though they bear the bulk of the PA costs. Instead, revenue from the PAs is invested at community and country levels. Community benefits cannot compensate for individual household losses, as a result of wildlife damage.

One of the challenges of community conservation has been the slow rate at which the attitudes of park staff towards communities has changed, from viewing them as poachers by default, to viewing them as useful partners, in accordance to the changes in PA management policy. Secondary, perception of relations with PA staff is intricately related with perception of benefits from those PAs. There is an indication that the demand for PA resources and the levels of illegal resource access are still at levels that should cause concern. However, attitudes to the parks and park staff-community relations have greatly improved in comparison with when the parks had just been gazetted.

In this study, tourism ranked low as a benefit resulting from the forests. Tourism was mainly perceived as being useful to the country. Yet the responses differed where people were asked directly if they benefited from tourism and higher percentages of people felt they did benefit. This may be because of the definition of 'benefit' as 'individual benefit' as mentioned above. In the case of tourism, benefit in many people's minds implies hard cash, because they all imagine the thousands of dollars that tourism generates in the tourism areas and in the country. So, if individuals are not earning some of that money directly, they may not easily consider themselves as beneficiaries, and it may take some probing to link tourism to other benefits such as revenue-sharing. This is especially true in areas outside the tourism sites, given the localized nature of tourism.

### **Additional Policy Recommendations**

ICD projects need to take place with law enforcement. The increased positive relationship between people and the park in areas where ICD projects have been operating over the past 10 years is a good sign and has been found in a more in-depth study that followed this one, undertaken by ITFC. The main complaints made by those interviewed are a lack of access to the forest around Bwindi and how the guards treat them when they are caught in the forest, even after 10 years of ICD support to help them become less reliant on the forest. There are several factors that may lead to this response. Firstly, people may be jealous of their neighbours, if they see them benefiting from an ICD project when they don't benefit. Secondly, the whole process may encourage them to complain in the hope of receiving more support in the future. The research by ITFC indicates that the main factor that stops people entering the forest to carry out illegal activities is the level of law enforcement and not the support they have received from ICD projects. ICD planning should take this into account and should also contribute to the support of community-friendly law enforcement activities, together with supporting the local communities. Clarifying why policing is needed and explaining why, in the long term it can benefit people, is necessary if the role of park guards is to be better appreciated.

Relationships between park guards and communities need improving. It was clear from the responses that the people did not work well with protected area staff. Accusations of bribery, beatings, and fines were some of the common causes of complaint. The new Community Conservation Department in ORTPN should work on training guards how to work with local communities so that they are seen to be fair and firm, rather than aggressive and cheats. It may be worth looking at policing practices where they have been working on promoting community policing practices that minimise conflict in problem areas. There is a need to channel more resources into community conservation activities and to recruit more staff.

Evaluate the multiple use programme in Bwindi and expand it to Nyungwe The multiple-use zones in Bwindi were developed to allow controlled access to the forest to harvest specified forest products. This experiment needs to be fully evaluated and, if necessary, modifications made and adopted in other forests. Given the very fragile nature and limited area of the vegetation in the Virunga Volcanoes it may not be possible to allow access here but access areas could be developed in Nyungwe.

Improve coordination between conservation and development projects. Conservation projects are trying, not only to conserve the forests in this region, but also to support the development of local communities. However, there are much larger sources of funds for development and many different development projects in the region. Many of the needs identified in this study could be supported by development projects already working on the issues but who are not linking the activities to the conservation of the forests. There is a need to work together to reduce the negative impact development projects have on the environment and to develop ways in which they can support conservation through their activities.

## **Conclusion**

The results of this survey are a 'snapshot' of people's livelihoods in the Central Albertine Rift in 2002. They can be used as a baseline for monitoring changes in levels of poverty, attitudes and behaviour towards the conservation of these forests. The people surveyed here are some of the poorest in Africa and make a living from very small parcels of land. Family sizes are large because infant mortality is high, with 50% of the population under 20 years of age. If infant survival improves there will be severe pressure on the land available and few options other than emigration. Emigration is still possible in Uganda where land is still available in the north and east of the country and in DRC where land is available to the west of Virunga park, but it is much more of a problem in Rwanda. There is a need to improve infant survival and at the same time to reduce family sizes in this region if the protected areas are not to face huge pressures in the future. The recent invasion of the Virunga Volcanoes in DRC by Rwandan farmers is a case to highlight, where the pressures to find more land led to the deforestation of over 15 km<sup>2</sup> of forest for farmland, before it could be halted. Conservation practitioners need to work more closely with development organisations to ensure that these forests survive in the future.

## ANNEX 11: References

- ARCOS. 2003. Report on Albertine Rift Strategic Framework Planning Workshop. 71p.
- Banham, W. 2004. Capacity needs assessment for biodiversity conservation of Rwanda's Montane Forest National Parks. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Baumgarten, A. 2004. Buffer zone assessment of Akagera National Park, Rwanda. 2004. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Bush, G.K. 2004. Conservation management in Rwanda: A review of socio-economics and ecosystem values. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Forrest, J. 2004. A GIS and remote sensing capacity assessment for Protected Areas management in Rwanda. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Government of Rwanda. 2002. Poverty Reduction Strategy Paper. National Poverty Reduction Programme, Ministry of Finance and Economic Planning.
- Kock, M.D. 2004. Ecosystem health in Akagera National Park: health and disease issues at the interface. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Makana, J., T. Habiyaambere and J. Hall. 2004. Evaluation de la zone tampon de la reserve forestiere de Nyungwe, sud-ouest du Rwanda. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP). 37p.
- Masozera, M. 2002. Socio-economic impact analysis of the conservation of the Nyungwe Forest Reserve, Rwanda. MSc Thesis, University of Florida, Gainesville.
- Mehta, H. 2005. Ecotourism development in Nyungwe Forest Reserve, Rwanda. Unpublished document.
- MINICOM/OTF. 2003. Rwanda Tourism Strategy.
- Mugemana, J.M.V. 2004. Legal framework analysis of Protected Area in Rwanda. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP). 43 p.
- Opio-Odongo, J. 2004. Institutional analysis of Protected Area management in Rwanda. Institutional Analysis Report. J001. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- ORTPN. 2004. Strategic Action Plan. 2004-2008. 69p.
- Plumptre, A.J., M. Behangana, T. Davenport, C. Kahindo, R. Kityo, E. Ndomba, D. Nkuutu, I. Owiunji, P. Ssegawa, G. Eilu. 2003a. The biodiversity of the Albertine Rift. *Albertine Rift Technical Reports*, No. 3. 105p.
- Plumptre, A.J. 2003b. Lessons learned from on-the-ground conservation in Rwanda and the Democratic Republic of the Congo. *Journal of Sustainable Forestry*. 16: 71-91.
- Plumptre, A.J., A. Kayitare, H. Rainer, M. Gray, I. Munanura, N. Barakabuye, S. Asuma, M. Sivyah and A. Namara. 2004. The socio-economic status of people living near Protected Areas in central Albertine Rift. *Albertine Rift Technical Reports*, 4. 127p.

- Victurine, R. 2004. Sustainable financing in the context of Rwanda's Protected Areas. Protected Area Biodiversity Project. (WCS/MINITERE/UNDP).
- Walpole, M. 2004. Nyungwe Tourism Development Strategy, Wildlife Conservation Society, Rwanda.
- Weber, W. 1979. Gorilla problems in Rwanda. *SWARA* 2:28-32.
- Weber, W. 1981. Conservation of the Virunga Gorillas. MSc Thesis. University of Wisconsin, Madison.
- Weber, W. 1987. Ruhengeri and its resources: An environmental profile of the Ruhengeri Prefecture, Rwanda. USAID, MINAGRI, Kigali.
- Weber, W. 1989. Conservation and development on the Zaire-Nile Divide. PhD Dissertation, University of Wisconsin, Madison.
- Weber, W., and A. Vedder. 1983. Population dynamics of the Virunga Gorillas: 1957-1978. *Biological Conservation* 26: 341-366.
- Weber, W., and A. Vedder. 2001. *In the Kingdom of Gorillas*. Simon and Schuster. New York, NY.