Strengthening Biodiversity Conservation Capacity in the Forest Protected Area System of Rwanda
PROTECTED AREAS BIODIVERSITY PROJECT (PAB)

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UNDP Rwanda

MID-TERM REPORT 2007-2009

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Cover Page

Nyungwe National Park, with 101 900 ha the largest stretch of mountain rainforest in the Albertine Rift, was officially opened in December 2008. After protecting Volcanoes National Park of 16000 ha (see on back cover page) with its famous mountain gorillas, base of high-end ecotourism, Rwanda has set a next step in forest conservation. The GEF-UNDP-REMA Protected Area Biodiversity project and its partners, assist the Government of Rwanda in developing the young Nyungwe National Park, allowing the country to obtain much needed resources out of tourism and Payment for Environmental Services.

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List of Abbreviations

ANICO	Animateur de Conservation (Environmental Extension Worker)
ANP	Akagera National Park
DEO	District Environmental Officer
DFGF- I	Dian Fossey Gorilla Fund - International
GEF	Global Environment Facility
GO	Gorilla Organisation (formerly DFGF-Europe)
IGCP	International Gorilla Conservation Program
KCCEM	Kitabi College of Conservation and Environmental Management
MINELA	Ministry of Environment and Lands
MIST	Management Information System
NAFA	National Forest Authority
NGOs	Non-governmental Organizations (INGOs = International NGOs)
NNP	Nyungwe National Park
NP	National Park
ORTPN	Office Rwandais du Tourisme et des Parcs Nationaux, presently RDB - T&C
PAs	Protected Areas
PAB	Protected Area Biodiversity Project (formally: Strengthening Biodiversity Conservation Capacity in the Forest Protected Area System of Rwanda
PES	Payment for Ecosystem Services
RBM	Ranger Based Monitoring
RDB-T&C	Rwanda Development Board, Tourism and Conservation department
PMU	Project Management Unit
REMA	Rwanda Environment Management Authority
UNDP	United Nations Development Programme
VNP	Volcanoes National Park
WCS	Wildlife Conservation Society

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1. BACKGROUND TO THE PROJECT

The Albertine Rift, the Western branch of the Rift Valley that straddles through Uganda, DRC, Rwanda, Burundi and Tanzania, is one of the most important regions for biodiversity conservation in Africa. Volcanoes National Park (NP), part of the larger Virunga landscape, and Nyungwe NP in Rwanda figure amongst the six most important protected areas for endemic and globally threatened vertebrate species in the Albertine Rift region[1]. In Volcanoes NP, gorilla numbers, presently estimated at 245 (out of some 380 of the entire Virunga massif and 682 world-wide) are slowly but steadily increasing. Other large mammals, most notably African buffalo, have also increased after years of decline. Ranger based monitoring shows, however, a continuing large number of snares and other signs of illegal activities inside the park, highlighting the fragility of these increases. The wildlife situation in Nyungwe NP, with its important chimpanzee and colobus monkey populations, is less clear as conservation partners are in the process of establishing a base line on its key species. Results of monitoring suggests, however, that several mammal and bird species, show a downwards trend.

[1] Plumptre et al. 2007. The Biodiversity of the Albertine Rift. Biol.Cons. 134: 178-194.

Rwanda's tourism industry, the third largest export sector, heavily relies on Volcanoes NP with its enigmatic mountain gorillas. Yet Rwanda's three national parks, Volcanoes, Nyungwe and Akagera should be considered as three interconnected elements of the network of national parks in the country, each with its specific biodiversity and tourism potential.

In December 2008, Nyungwe NP, gazetted in 2005, was officially launched. Expectations were voiced that tourism, carbon sequestration and other Payments for Ecosystem Services, will bring in resources to Rwanda, that justify the setting apart of the 101 900 ha. Against the need for increased conservation results, the reinforcement of the biodiversity conservation capacity of individuals, communities and institutions has become pressing. This is the rationale of the GEF-UNDP-REMA project '*Strengthening Biodiversity Conservation Capacity in the Forest Protected Area System of Rwanda*' or abridged the 'Protected Area Biodiversity Project (PAB). Funded by GEF with a budget of 5.45 Million USD, implemented by UNDP and REMA, PAB started December 2006, and has taken full speed in the second part of 2007. PAB's field activities are implemented by (international) NGOs with a long-term presence in the project area (see page 13).

This report presents the achievements of the first two years of implementation, 2007 till 2009. The main report is largely narrative presenting the highlights of the first two years of functioning. In the annexes, a comprehensive listing of undertaken activities is presented.

2. ACHIEVEMENTS AND LESSONS LEARNT

2.1 Development of policies and strategic planning

Rwanda is engaged in a revision of her principal conservation institution, the *Office Rwandais du Tourisme et de Parcs Nationaux* (ORTPN) that has become the Tourism & Conservation Branch (T&C) of the Rwanda Development Board (RDB) since September 2008. Many of Rwanda's conservation policies and laws such as forestry law are outdated or non-existent, causing confusion in field implementations.

2.1.1 National level – Protected Areas Network: policies and laws

PAB is contributing, financially as well as technically, to the development of the (draft) Revenue Sharing and Wildlife Damage Policies, by giving technical input through position papers and feasibility studies. PAB plans to support the formulation of a Wildlife Policy and Law, and a Biodiversity Policy and Law by funding specialised consultants that are expected to deliver texts to be validated and approved in the second part of 2009.

PAB assists RDB-T&C and NAFA, (National Forestry Authority) in providing clarifications to the buffer zone of Nyungwe NP. NNP is the only national park in the country with a delimitated and operational buffer zone, an important tool to manage human-wildlife interactions. Yet the buffer zone is at present largely without management as exemplified by the (over) mature stands that could bring in resources to the state, as well as employment opportunities to communities.

Nyungwe NP buffer zone
Over the last two years, REMA, through the PAB project, has been able to explain governmental partners the importance of the buffer zone and thereby avoided the risk of expansion of tea cultivation. Yet in its present form, the buffer zone also faces severe management problems

Nyungwe NP is crossed from East to West by the national road, causing much disturbance of traffic in the heart of the national park. PAB organized meetings with stakeholders to propose regulations, avoiding unnecessary disturbance by, for example, trucks that break down and cause pollution.

2.1.2 RDB-Tourism & Conservation: financial and business planning

RDB-T&C has had considerable success in tourism development in Rwanda. This success started with a well-formulated strategy and was turned into reality through its dedicated staff. To sustain this momentum, PAB has funded the formulation of a business plan that proposes to anchor RDB-T&C ambitious strategic aims with practical implementation. It focuses on four areas: capacity, financial situation, operational efficiency and long-term financing. The role of the headquarters with the national parks' management teams is explored and proposals are made to improve on them.

Secondly a capacity analysis evaluated the limitations of infrastructure and manpower, concluding that while further developing its touristic attractions, RDB-T&C will have to adapt its manpower capacity to sustain further growth. Proposals are also provided to define a well-balanced portfolio where the gorilla products will still be the flag-carrier of Rwanda tourism, but actively supported by other options, such as chimpanzee and monkey tracking, savannah tourism, birding, rainforest excursions and cultural & community tourism. PAB has also assisted in the formulation of financial plan of Akagera NP, to assist RDB-T&C in negotiations with private sector on its proposed private management.

Once the restructuring of RDB-T&C has been finalised, more interventions will be undertaken to support its further development.

2.1.3 Districts planning

Preliminary analysis of the 2008-2012 Development Plans of the Districts bordering Nyungwe NP, Nyaruguru, Nyamagabe, Karongi, Nyamasheke and Rusizi conducted in 2007, showed the quasi-non inclusion of the conservation of the national park. Also around Volcanoes NP, Burera, Musanze, Nyabihu and Rubavu Districts, development plans did not integrate conservation issues in 2007. These findings triggered a series of interventions to reinforce contacts with the District administrations, most notably through the District environmental officers.

2.2. Capacity building of conservation personnel

Rwanda has a long history of conservation, with Volcanoes and Akagera National Parks amongst the continent's first protected areas. Much of its conservation capacity was lost during Genocide in 1994, and Rwanda's protected areas staff is generally young in need of capacity strengthening, as highlighted by the Training Needs Assessment, conducted in PAB's preparation phase. With the creation by RDB-T&C of the Kitabi College of Conservation and Environmental Management (KCCEM) in 2008, Rwanda harbours a training centre for protected area professionals of the Albertine Rift region.

Through PAB, training such as has been provided in technical fields for rangers and guides such as (MIST-GIS, bird identification, tourism) and on managerial aspects such as conflict resolution.

Training of guides and rangers

RDB-T&C targets Bird Watching as one of Rwanda's touristic spearheads. Well trained guides are indispensable for the development of this market.

Following the limited conservation relevance of District development plan, an initiation to Park conservation was given to District Environmental Officers (DEO). Supervised by REMA, the training drew participants from the nine Districts around VNP and NNP, at the KCCEM training centre. The training also covered the DEO from the Districts neighbouring Akagera NP.

A study tour was organised to Costa Rica in which the heads of RDB-T&C and REMA, and their NGO-partners participated. One of the tangible results was the recognition of the importance of a biodiversity policy and law, immediately taken up in PAB's work plan upon return (see under 2.1).

Study tour to Costa Rica by heads of RDB-T&C and REMA, and NGO-partners.

2.3 Community Realisations and Capacity Building

The areas surrounding Rwanda's forest protected areas comprise tens of thousands of households, meeting enormous development challenges. Although PAB is not a rural development project, its conservation related activities can make a difference for many people neighbouring the national parks. This holds especially for addressing capacity building, and lifting barriers related with the presence of the park, allowing people to develop themselves.

Community water cisterns (Bugeshi, Rubavu, VNP)
Providing water to communities living at the edge of the park, an alternative to water from inside the park.

A first category of community projects aims to reduce the large number of illegal activities inside the national parks.

The scarcity of resources especially water, firewood bamboo and honey, triggers hundreds of people to go (illegally) inside the national park thereby causing damage to the park's habitat. Spearheaded activities were the construction of six community cisterns at close proximity of the Volcanoes NP border (<1 km), in collaboration with Gorilla Organisation. To address the scarce wood resources (agro-) forestry activities have been undertaken (VNP, GO), as well as a pilot programme that constructed 446 efficient stoves (VNP, GO), reducing household fuel consumption by an estimated 50%. Planting of bamboo, a much sought resource from inside the parks has been the focus of PAB interventions around both Nyungwe and Volcanoes NPs (Helpage).

Also alternatives are offered to bee-keeping inside the national park that is often associated with fire, causing the frequent damaging wildfires in especially Nyungwe NP.

A second category of projects aims to reduce the negative impacts of the national parks on its neighbours, and thereby improving their acceptance and a subsequent respect of its regulations by its neighbouring communities. Through IGCP, works are under way to complete (200 m) of Buffalo Wall financed by PAB project that was erected to reduce human wildlife conflicts around VNP and demarcate its boundary.

Communities groups are guarding the crops and maintain the wall with materials provided through PAB. Some 400 ha in Gahunga sector which had been left because of crop raiding are now being cultivated, mainly with Irish potatoes yielding up to 20 tonnes per ha.

Buffalo wall (Gahunga, Burera VNP)
This wall has allowed inhabitants to grow Irish potatoes on the slopes of Muhabura Volcanoe for the first time since years. Efforts are under way to assure the proper maintenance of the wall by these communities.

With HELPAGE Works have also been conducted to stabilize expanding gully-valleys (Musanze, Nyabihu), that originating inside Volcanoes NP, threatened fields, infrastructures and even human lives. With a total length of 2.4 km, the gully banks have been protected, and bamboo has been planted on both of its sides.

Gully-valleys in Musanze and Nyabihu Districts

A third category of projects aims to provide communities with incentives for conservation. Some 130 landless, historically marginalised people in Musanze and Rubavu that used to exploit the forests inside the national parks have been provided with 8 ha land allowing them to cultivate and have a reliable source of income.

Support will continue to allow a proper registration of the land, avoiding any further loss as in the past.

Through IGCP, PAB assists handicraft production around Volcanoes NP that allows communities and especially women to become involved in tourism related activities.

Women doing handcraft as one of the community activities supported by PAB in conjunction with IGCP

A project is under way, in collaboration with WCS and engineer volunteers from Dartmouth College (USA), to provide communities around Nyungwe NP, with hitherto limited benefits from the national park, with electricity generated from the streams out of the park. An inventory around the park showed some 13 promising sites.

Banda, (Nyamasheke District) was first selected where two picohydros were installed, providing some 50 homes, with the possibility of charging batteries. This included 30 of the poorest households who benefited from batteries free of charge.

Pico hydro station in Banda village (Nyungwe national park) producing electricity used in community activities such as battery charging for house lightening and others

2.4 Biodiverstiy Conservation Realisations at Park level

Tourism, and especially the gorilla-based tourism in Volcanoes NP, is at present the single most important source of revenues for Rwanda's national parks. PAB is assisting RDB and REMA in exploring additional sources of revenues, especially for the recently created extensive, 102 000 ha Nyungwe NP.

2.4.1 PES and Carbon Sequestration Feasibility studies

As shown by a study financed by PAB, Payment for Ecosystem Services allows the Government to obtain additional sources of revenues for the services delivered by the protected forest, such as abundant clean water used by the surrounding agriculture (especially tea estates) and carbon fixation.

A more detailed study was subsequently undertaken by specialized consultants from WCS on opportunities for carbon asset development from 5 proposed projects in Nyungwe NP.

Assisted natural regeneration (see also below) and improved management of the buffer zone were singled out as projects that show potential to benefit from carbon asset revenues, estimated (over a 30 years time span) at 26 m USD.

However, high project preparation costs (4.8 million USD) result in a break-even point, when revenues match the investment costs, only after 6 years. In 2009 PAB will follow this up by developing these projects and allowing the Government to contact potential investors.

2.4.2 Habitat protection and regeneration

Following studies and initial trials of WCS, PAB has assisted in the removal of exotic species that have been planted along the road and in various spots in the forest, stimulating regeneration.

Fires destroyed some 13000 ha inside NNP in the late 1990s. Through the removal of bracken ferns that occupy the forest floor (see pictures), regeneration is triggered on some 50 ha.

PAB and WCS are preparing a project to upscale this pilot project to cover the 13 000 ha, based on carbon sequestration money (see above).

Assisted Natural Regeneration, through the removal of bracken ferns that inhibit the regeneration of trees. Left: dead trees, left over from the 1990s fires. Right the young regeneration after approximately one year

2.4.3 Primate habituation (NNP, WCS)

Mountain Gorilla tourism, first developed in Rwanda, has shown the importance of habituation for the touristic exploitation of Rwanda's forest national parks. Because of WCS long term experience in this field, PAB is supporting its continuing activities in habituation of chimpanzees and other primates such as colobus and mangabey monkeys.

Tracking of chimpanzees has already become the main attraction of Nyungwe NP. Two groups are semi-habituated and open for touristic visits. Especially the chimpanzee group, of some 30 individuals in Cyamudongo Forest, a 4 km2 isolated forest, 20 km West from the rest of Nyungwe NP, has shown to be successful for tracking, with an invariably satisfied tourists.

Chimpanzees are, however, much more mobile than mountain gorillas, their groups split regularly during the day, making their visit less predictable. Continued attention for habituation is needed, to improve the success rates of the two groups, whereas gradually habituation efforts will shift to new groups in especially the northern part of Nyungwe NP.

Tracking of chimpanzees by rangers in Nyungwe National Park

2.5. Research and Monitoring

Research has been on the forefront of the daily work of several PABs partners, in particular the Karisoke Research Centre of DFGF-I working in and around Volcanoes NP since 1967, and WCS in Nyungwe NP since 1988. PAB has been supporting their studies that aim to contribute to science-evidenced management of the protected areas.

One category of studies aims to guide the formulation of management strategies to deal with controversial subjects such as the reintroduction of locally extinct species and the controversial *Sericostachys* liana. Nyungwe NP has lost its main large herbivores, the last buffalo in the 1980s and last elephant in the 1990s, leading to widespread speculation that the lack of grazing and trampling has caused the proliferation of the indigenous vine *Sericostachys scandens*.

In September 2009, PAB organized together with WCS and RDB-T&C an international Sericostachys seminar to clarify this and other issues, to develop a research program and find a consensus on actions that can be taken in the meantime.

***Sericostachys scandens**, an indigenous liana that proliferates covering entire canopies inside Nyungwe National Park, leading some to believe it may degrade the (intact) forest. Sericostachys is however, an important flowerplant for honey bees and the source of 'Nyungwe honey'.*

Participants concluded that the proliferation of *Sericostachys* is most pronounced in the forest areas disturbed by fire. Already in 1907, *Sericostachy*s was found to be dominant in NNP at a time when large mammals were still dominant.

Also scientists presently working in areas with *Sericostachys* proliferation and the presence of large mammals (Bwindi NP, Uganda), explain that elephants instead of trampling *Sericostachys*, promote its proliferation by keeping spots open in the forest.
A study has been undertaken to assess the damage on vegetation inside Volcanoes NP along tourist and the Karisimbi project provisioning tracks.

Various surveys are under way to clarify the status of biodiversity inside the national park. This should allow the inclusion of indicators into future monitoring systems. Amongst the surveys that have been conducted, are the ones on large mammals (VNP), and birds, small mammals and amphibians (NNP).

3. IMPLEMENTATION, COORDINATION AND PLANNING ISSUES

The PAB project was designed in close collaboration with the international conservation NGOs WCS (Wildlife Conservation Society), IGCP (International Gorilla Conservation Program), DFGF-I (Dian Fossey Gorilla Fund International), GO (Gorilla Organisation), Helpage and others. These international NGOs have been working for several decades in and around Volcanoes and Nyungwe NPs.

Based on their expertise and long-term presence, the implementation of most field activities of PAB has been attributed to them, through a special waiver-competition. For the purpose of administration and technical supervision, a project management unit operating through REMA has been established.

In addition to this technical implementation, these international NGOs are co-funders through either their organization's long-term funds (often senior personnel costs) or through funding of third parties, often for specific activities. This implies that they should not be considered as contractors of the project, but as true partners of GEF-UNDP-REMA in the implementation of the PAB.

The Project Steering Committee, headed by the Permanent Secretary of MINELA, and with representatives of the implementing and technical partners (see Annex 2) oversees the project and approves the annual work plan.

With the start of PAB, a Technical Advisory Committee was installed, quarterly uniting representatives from each District adjacent to respectively Volcanoes and Nyungwe national parks, the central and park RDB-T&C chiefs, as well as PAB's technical partners (WCS, GO, DFGF-I,IGCP, CARE, HELPAGE) and implementation agencies (REMA, UNDP). These meetings were the first occasions that united RDB-T&C with its conservation and development partners.

All three national parks in Rwanda have management plans with a time table on planned activities. Although being formulated by the managers of the national park, and shared with their partners, these plans are not yet used to their potential for coordination.

Colobus Angolensis in Nyungwe National Park

PAB intends to build a partnership and learning mechanism, allowing, after the finalization of the project in 2012, RDB-T&C to work more efficiently with its conservation and development partners. PAB also aims to learn and compile lessons of especially the increasing number of community conservation activities.

4. FINANCIAL OVERVIEW

Table4.1. Budget and expenditures 2008 (US$)

	2008[1,2]				2009[1,3]	
	budget	expenditure	% realization	budget	expenditure	% realization
Outcome 1	416,550.00	313,689.25	75	389,138	312,519	80
Outcome 2	449,149.00	354,812.10	79	483,348	370,178	77
Outcome 3	320,917.00	252,028.48	79	506,901	391,068	77
Outcome 4	175,513.00	174,012.24	99	179,755	122,217	68
	1,362,129.00	1,094,542.08	81	**1,559,087**	**1,195,982**	**77**

[1]These figures are drawn from the PAB Accounting system

[2.] Based on a FRW-US$ rate of 545

[3] Based on a FRW-US$ rate of 550

Table 4. 2. Expenditures 2006-2009 and remaining budget (in US$)

Expenditures				Total Budget	Remaining budget (2010-12)
2006, 2007	2008	2009 (till Nov)	Total		
622,644	1,094,542	1,195,982	2,904,885 (53%)	5,450,000	2,450,000 (47%)

Commissioned by UNDP, PAB has been audited in 2007 and 2008.

5. SUSTAINABLE AND FUTURE

5.1. Implementation through long-term partners

A particularity of PAB is that the implementation of its field activities is through its partners, mostly international NGOs with a long term presence in the field. Main associated partners in all activities, both in the field as on a country-scale, are the national park service RDB-T&C and REMA. The institutional memory built up in these organisations during the PAB project time, is the best guarantee for its sustainability. In addition it has shown to provide considerable efficiency because of the experienced personnel and logistics already present.

5.2. Internal review

The PAB, scheduled to last from 2007 till the mid 2012, is in its third year of field implementation. Through its technical partners, PMU is preparing an internal review of its activities that will be the base for the (external) mid-term review, scheduled for early 2010. The review should not only be seen as an internal project issue, but also as a learning process for all partners involved in PAB. The review targets four different categories of activities:

1. *Pilot community conservation activities*: Does the initial (conservation) rationale from the formulation of the project still hold? Most development activities started off with a clear justification of their (potential) impact on conservation, as required because of the conservation orientation of PAB. Yet during their implementation, operational constraints have sometimes pushed this rationale to the background, in order to get the activity running (examples bee-keeping Nyungwe NP). If this is the cause, how should follow-up activities be re-directed?
2. *Pilot projects that need upscaling in order to have an impact*. How to upscale promising pilot projects, such as the assisted natural regeneration in Nyungwe NP and the improved stove construction and distribution around Volcanoes NP? Although successful at their present, limited scale, their impact on conservation can only be felt once this has been up scaled.

3. *Planning the continuation of successful activities after the termination of PAB*. In order to be successful there is a need for various activities to continue over year beyond the lifespan of the PAB project. Examples are the removal of exotics, habituation of primates and visitor satisfaction surveys.
4. *Research activities*: How to give a proper follow-up of studies that were, upon formulation, deemed necessary and that have been rounded off with an end report? Yet practical follow-up recommendations on actions to be taken are lacking. This holds for the studies in Volcanoes National Park (on vegetation damage along tourist and other trails, the medicinal plants study) and Nyungwe National Park, regarding the Sericostachys.

Annex 1. Details of PAB 2007 – 2009 realisations

I. Development of policies and strategic planning for Rwanda's network of protected areas (Outcome 1)

Topic	Consultant	Partners involved	Notes on follow-up
Policies and Laws			
Wildlife policy and law	Led by RDB-T&C	RDB-T&C, WCS	Submitted
Biodiversity policy and law	Prof. P. Kameri-Mbote	RDB-T&C, WCS	Draft restituted, planned to be submitted in 2010
Revenue sharing policy		RDB-T&C, IGCP	Basicideas Incorporated into wildlife policy and law
Wildlife damage policy		RDB-T&C, IGCP, WCS	
Strategic planning			
Business plan	Berkeley Business School	RDB-T&C, WCS,	Following the reorganisation of ORTPN into RDB, an update of the new institutional framework and its organisational consequences has to be made.
Akagera NP financial plan	Marc Daudon, (Cascadia Consulting Group)	RDB-T&C	Report plus presentations submitted to ORTPN-RDB to assist in negotiations on the leasing of Akagera NP
Review of District Development Plans		IGCP, WCS	There is a clear need for training amongst DEO (see II)

II. Capacity Building Personnel Training (Outcome 1, 3)

Topic	Targeted personnel	No	Place	Date	Partners involved
Bird Identification	Guides ANP, NNP, VNP	14	VNP, ANP	5-17 Dec.07	DFGFI-RDB-T&C
Policy acquaintance	DG REMA, Dept. CEO ORTPN-RDB, heads of partner organisations	5	Costa Rica	5-14 Oct. 08	WCS, REMA, RDB-T&C, HELPAGE
Conflict resolution	Rangers (17), ANICO (7), wardens (5) local authorities (10), beekeeping development association (1)	40	Kitabi KCCM	October2008 (5 days)	IGCP, KCCEM, RDB-T&C
	Communitywardens and personnel from sectors	15	KCCM	December 2009 (3 days)	IGCP, KCCEM, RDB-T&C
Community Conservation	Community wardens and personnel from sectors	15	KCCEM	December 2009 (3 days)	IGCP, KCCEM, RDB-T&C
Nature interpretation	Personnel VNP, NNP, ANP	15	KCCEM	Dec. 09 (3 days)	IGCP, KCCEM, RDB-T&C
Conservation/ understanding and interpretation	Newly recruited guides VNP (including 2 interns)	9	VNP	15-20 Dec. 08	DFGFI-RDB-T&C
GIS / MIST	Personnel of RDB-T&C, WCS, IGCP,		various	Intermitted	WCS, RDB-T&C, REMA, IGCP
Introduction to Conservation	DEO		Kitabi KCCEM		WCS

III. Capacity Building and Realisations with Communities (Outcome 2)

Details	Conservation issue	Targeted communities – place	No (women)	Implementing Partner
Community water tanks (25m^3)	Water fetching inside VNP	Inkurunziza, Bugeshi	402	GO
		Muremure, Bugeshi	533	
		Gaheriheri, Bugeshi	449	
		Kabingo, Bugeshi	461	
		6 additional in 2009		
Family water tanks, repairing works		Bisate-Kinigi (Musanze)		DFGFI
Family cisterns				IGCP
Improved stoves	Firewood collection inside VNP	Nyange, Musanze	446 households	GO
Beekeeping	Beekeeping inside NNP is source of frequent fires	Kitabi		WCS
		North NNP		
Agroforestry (each nursery 80000 plants)	Firewood collection inside the parks	Cyanika (Burera)		GO
		Bigogwe (Nyabihu)		
		Bugeshi (Rubavu)		
Land purchase for marginalized people (evicted from the forest, and subsequently lost their land)	Landless people in desperate condition close to the park boundaries	4.8 ha, Hehu-Bugeshi-Rubavu	54 (36)	Go
		3.3 ha, Rurengeri-Mukamira-Nyabihu	72 (45)	
Buffalo wall	Wildlife damage	Maintenance materials distributed.		IGCP

Gully-Ravine control	Reduction of damage caused by gully originating inside VNP	Stabilisation of gullies, originating inside VNP	Kadende (Musanze), Kinyengag (Nyabihu)	HELPAGE
Pico and Micro hydro	Partnership building with neighbouring communities	Banda community, marginalised people		WCS
Handicraft	Increase involvement of communities in tourism related with the parks	Kinigi –women association		IGCP
		Marginalized people Cyamudongo		WCS

IV. Biodiverstiy Conservation Realisations at Park level (Outcome 3)

Topic	Place	Partners involved	Follow-up
Financing Feasibility studies			
Payment for Environmental Services Payments	NNP	WCS	More detailed feasibility studies: carbon asset see below. ToR water studies to be formulated
Carbon asset feasibility study	NNP	WCS	Project preparation, including attracting investors
Tourism satisfaction study		WCS, RDB-T&C	Recommendations made for pricing and improved services
Domestic tourism study	NNP	WCS, RDB-T&C	Importance to incorporate the results into the pricing policy, simplifying its structure.
Habitat Management			
Assisted Regeneration Of degraded forest (following the late 1990s fires)	NNP	WCS, RDB-T&C WCS,	Preparation of a proposal for a scaling up, funded by carbon money (identified as most promising carbon asset development project)

Removal of exotic trees	NNP	WCS, RDB-T&C	Preparation of a management plan for exotic species removal, showing a low level continuation of the activity by ORTPN-RDB
Habituation chimpanzee in Cyamudongo (30 ind) and Mayebe (50 ind.)	NNP	WCS, RDB-T&C	Ongoing, will be extended to a third (Northern) group in 2010
Habituation other primates (grey mangabey, Uwinka)	NNP	WCS, RDB-T&C	Ongoing, will be extended to a third (Northern) group in 2010
Others			
Installation of internet connection in Kitabi and Gisakura offices	NNP	WCS, RDB-T&C	Operational

V. Research and Monitoring (Outcome 3)

Topic	Location	Partners involved	Recommendations / follow-up
Ecological Feasibility Studies			
Reintroduction Elephant	NNP	WCS	Debriefing meeting held (Oct.09). Validation (int.) workshop still to be conducted
Sericostachys scandens, hitherto believed to be invading NNP	NNP	WCS	A workshop was held (Sept.09) deciding on further studies and actions
Medicinal plants: linking traditional healers with the Bisate health clinic	VNP	DFGFI	Establishment of botanical garden to grow medicinal plants. Feasibility study on the domestication of medicinal plants Need for appropriate training in hygiene for traditional healers
Vegetation damage Volcanoes NP	VNP	DFGFI	Follow-up to be given regarding the damage on the trail Karisimbi as well as necessary restoration around the antenna and

Wildlife Surveys			
Survey owl-face monkey	NNP	WCS	To be continued
Survey large mammals	VNP	DFGFI	To be monitored in 3-5 yrs
Survey amphibians	NNP	WCS	Preliminary check-list only, to be further developed
Camera trapping survey (nocturnal animals)	NNP	WCS	Feeding into the check-list indicated below
Checklist birds and mammals	NNP	WCS	Feeding into ongoing surveys

Annex 2. The people managing PAB

MINIRENA	
Ms. Caroline Kayonga	Permanent Secretary, Chair Project Steering Committee
Mr. Emmanuel Nsanzumuganwa	Ex-Permanent Secretary
RDB-T&C	
Ms. Rosette Rugamba	Deputy CEO, Second Deputy Chair Project Steering Committee
Mr. Fidèle Ruzigandekwe	Director Wildlife and Conservation
Mr. Prosper Uwingeli	Chief Warden Volcanoes NP
Mr. Francois Bizimungu	Ex- Chief Warden Nyungwe NP
Mr. Louis Rugerinyange	Chief Warden Nyungwe NP
CARE-Rwanda	
Mr. Giuseppe Daconto,	Regional EEGL Programme Coordinator
DFGF-i	
Dr. Katie Fawcett	Director Karisoke Research Centre
Gorilla Organisation	
Mr. Emmanuel Bugingo	Rwanda Programme Manager
IGCP	
Mr. Eugene Rutagarama	Director
Helpage	
Alexis Byamana	Chief Technical Advisor
WCS	
Mr. Nsengiyunva Barakabuye	Country director
District Environmental Officers	
Mr. Pierre Ndagijimana	Musanze District
Mr. Innocent Harelimana	Rubavu District
Mr. Come Nkezabera	Burera District
Mr. Joseph Serukamba	Burera District
Mr. Leobald Banamwana	Nyabihu District
Mr. Papias Karanganwa	Nyaruguru District
Mr. Ezechiel Nsabimana	Rusizi District
Ms. Evelyne Iyakaremye	Nyamasheke District
Mr. Eric Habyarimana	Karongi District
Mr. Serge Ndayitabi	Nyamagabe District

UNDP – implementing agency

Mr. Anthony Ohemeng-Boamah	Country Director
Mr. John Musemakweri	Program Specialist & Head of Environment Unit
Mr. Toshikazu Mito	Programme Officer
Mr. Nik Sekhran	GEF-UNDP Regional Senior Technical Adviser

REMA – executing agency

Dr. Rose Mukankomeje	Director General, First Deputy Chair Project Steering Committee

PMU - PAB

Mr. Raphael Mpayana	Project Coordinator
Dr. Amy Vedder	Senior Technical Advisor (till March 2008)
Dr. Paul Scholte	Senior Technical Advisor (since December 2008)
Mr. Janvier Mwitirehe	Project Financial Administrator
Ms. Scovia Katabarwa	Accountant
Mr. Aimable Barasa	Driver

Annex 3. Technical Reports[2]

1. Development Of Policies And Strategic Planning for Rwanda's Network of Protected Areas (Outcome1)

1. Daudon, M. Cascadia Consulting Group, Inc. (December 19, 2007). ORTPN Business Plan Analysis Part One: Akagera National Park Valuation Study Final Report.
2. PAB & WCS (Feb. 2008). Commentary on the Draft Forestry Law
3. PCFN (Nov.2007) Analyse des Plans de Développement des Districts: Rusizi, Nyamasheke, Nyaruguru, Karongi et Nyamagabe 2008-2012.
4. Saccardi, D. (Oct. 2007). ORTPN Revenue Opportunities, Data Use, and Operational Recommendations
5. Theunissen, S. et al. (June 2008). ORTPN Business Plan.
6. WCS (Aug. 2007). Comments on the Draft National Forestry Law Rwanda Submitted to Protected Areas Biodiversity Project/REMA and ORTPN.

2. Capacity Building Personnel Training (Outcome 1, 3)

7. Barakabuye, N. (Oct. 2008). Costa Rica Tour Report
8. Buvumuhana, I. (Dec.2008). Education environnementale sur la conservation du Parc National de Nyungwe et gestion des ressources naturelles des autorités locales.
9. Buvumuhana, I. (Dec. 2008). Promotion de la Conservation du Parc à travers le Forum d'Action Jointe et les Plans Annuels des Districts.
10. Kayijamahe, E. (Dec.2008) GIS Capacity building.
11. Mulindahabi, F. (Dec. 2008). MIST GIS Training.
12. Mulindahabi, F. (Dec. 2008). Ranger – Based Monitoring: Standardizing Data Collection & Analysis.
13. PCFN (Dec. 2007). Identification des Connaissances et Attitudes des Autorités Locales en Matière de Conservation du Parc National de Nyungwe

[2] These reports will be posted shortly on REMA's website: www.rema.gov.rw

3. Capacity Building and Realisations with Communities (Outcome 2)

14. Bradbear, N. (Oct. 2007). Apicultural Development for Communities surrounding Nyungwe National Park Review and Recommendations.

15. Brand, D. & I. Buvumuhana (Dec.2008). Banda Pico-Hydro project.

16. Buvumuhana, I. (2008). Développement de la poterie moderne au profit du groupe des marginalises de Cyamudongo.

17. Hakizimana, V. (Dec.2008). Développement de l'Apiculture au profit des apiculteurs des secteurs Gakuta et Kitabi : PN de Nyungwe

18. Norton, M. (Dec. 2008). Analysis of bee product development, sales & marketing: Nyungwe National Park.

19. PCFN (Nov. 2007). Analyse et Indentification des associations locales pour la Co-Gestion de la Zone Tampon du Parc National de Nyungwe

4. Realisations at Individual National Park Level (Outcome 3).

20. Barakabuye,N., F. Mulindahabi, N. Ntare & I. Buvumuhana (Oct. 2007). Rapid field assessment of current road use within Nyungwe National Park: Tarmac Road, Bweyeye, Banda and Ruzizi Roads.

21. Behm Masozera, A. (Dec.2007). Post-Fire Regeneration in Nyungwe National Park, Rwanda.

22. Chao, N. & J. Easton (Dec.2008). Primate Habituation and Tourism: Nyungwe National Park

23. De Gryze, S., L. Durschinger & M. Lambert (draft Oct.2008), final report February 2009. TERRA GLOBAL CAPITAL. Evaluation of the opportunities for carbon asset development from forest conservation, avoided deforestation and reforestation in the Congo-Nile Forest region of the Republic of Rwanda

24. Hurst, L. (Oct. 2007). Preliminary Assessment of Chimpanzee and Primate Tourism Management Issues in Nyungwe National Park.

25. Masozera, M. (April 2008). Valuing and capturing the benefits of ecosystem services of Nyungwe watershed SW Rwanda.

26. Ntare, N. (Dec. 2008). Removal of exotic trees in Nyungwe National Park, Rwanda.

27. Ntare, N. (Dec. 2008). Post-Fire Regeneration in Nyungwe National Park, Rwanda: Extension of plots and Monitoring of existing plotsPAB & WCS (April 2007). Nyungwe Park Buffer Zone and Road Issues: Joint Commission Field Mission Report.

28. Weber, B. (Sept. 2007). Management Effectiveness and Needs Assessment (METT): Nyungwe National Park Rwanda.

29. Weber, B. (Dec. 2007). Protection, Production, and Carbon Sequestration Recommendations for Co-Management of the Nyungwe National Park Buffer Zone.

5. Research and Monitoring (Outcome 3)

30. Easton, J. (Dec.2008).Tourism Satisfaction, Nyungwe National Park.

31. Easton, J. (Dec.2008). Domestic tourism survey: Focus on Nyungwe National Park.

32. Easton, J. & N.Ntare (Dec.2008). A population survey of the Owl-faced moneky in Nyungwe National Park, Rwanda.

33. Kaplin, B. (Jan 2008). *Sericostachys scandens*: An Annotated Bibliography

34. Menegon, M. (Dec. 2008). Amphibians and Reptiles of Nyungwe National Park: A preliminary report.

35. Ntare, N. & J.Easton (Dec.2008) *Sericostachys scandens* Long-

Term Monitoring Protocol in Nyungwe National Park, Rwanda.

36. PCFN (Dec. 2007). Attitudes des autorités locales riveraines du Parc National de Nyungwe face à la politique de partage des revenues touristiques.

37. PCFN (Dec. 2007). Rapport sur l'occupation illégale de la partie de la zone tampon du Parc National de Nyungwe, District de Nyaruguru (Secteurs Ruheru et Nyabimata).

38. WCS Rwanda (Dec.2008). Feasibility Report for the Re-introduction of African Elephants to Nyungwe National Park, Rwanda.

39. Weber, B. (Oct. 2007). Compensation Payments for Crop Raiding and Livestock Depredation: An Overview of Issues and Options in Rwanda.

40. WCS (Dec. 2008). Annual Progress Report.

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41. Anonymous. 2008. Medicinal Plants report.

42. Bizuru, E. (Nov. 2008). Evaluation de l'impact de l'écotourisme et autres activités anthropiques sur la diversité végétale du PNV et recommandations pour la gestion du Parc National des Volcans.
43. Karama, J. (Dec. 2008). Biodiversity Training Workshop for Volcanoes National Park Guides. Dec. 15—20 2008.
44. Nsabagasani, C. (Dec. 2007). Rwanda Bird Guides Training.
45. Tuyisingize, D. (Nov. 2008). The large mammals survey in the Volcanoes National Park. A Technical Report.

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Tibrichu, H. & Marie Rose (Jan. 2009). Final Mushroom value chain analysis report for EEGL project in Rwanda.

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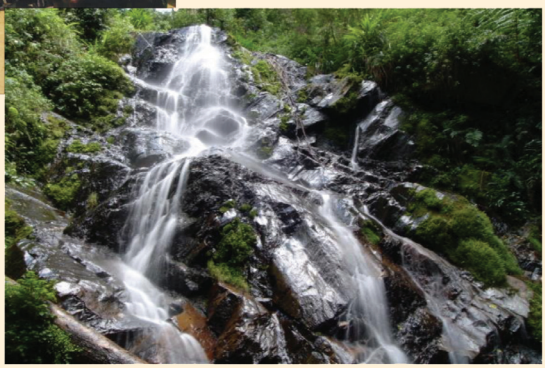
Visit to Nyungwe National Park of students from neighbouring sectors, July 2009