



Annual Progress Report

Protected Areas Biodiversity Project
(PAB)

2008

Wildlife Conservation Society
Rwanda Program

OVERVIEW

The Wildlife Conservation Society (WCS) has worked since 1959 to assist the Government of Rwanda to better manage its parks and wildlife through a combination of applied research, training, ecotourism, and the generation of benefits for local communities. Beginning in July of 2007, WCS joined with the Protected Areas Biodiversity (PAB) project and other partners to achieve common objectives in the key areas of policy development, improved management systems, revenue enhancement, community benefits and, ultimately, biodiversity conservation. Key results and recommendations from these activities for the period extending from January 2008 up to December 2008 are outlined below, with additional details in the following workplan analysis. Full reports are available from PAB and WCS.

Conservation management in all spheres is more efficient and effective when the overall *policy environment* reinforces the broadest possible range of management objectives. Therefore WCS supported governmental institutions in developing policies following previous year recommendations:

- Reviewing and updating the development of a Wildlife Act which will provide Parks with adequate legal protection, protection to wildlife within and outside protected areas and will provide the necessary systems for managing other related issues such as human-wildlife conflict and compensation policy.

Policies are only effective to the extent that they are implemented. To this end, steps identified in Year One have been implemented in Year Two to improve current ORTPN *management systems* through:

- Production of an ORTPN Business Plan to assist ORTPN to upgrade its financial and administrative systems;
- Investment in building GIS capacity both within Rwanda's parks and at its central office;
- Implementation of a uniform system (MIST) for Ranger Based Monitoring in all Rwandan national parks with trained staff;
- Implementation of a revised system for park visitor data collection.

Revenue enhancements are essential if Rwanda is to expand and improve its conservation and tourism management capacities. Under this objective, activities include:

- Implementation of a workshop on carbon markets and technical aspects of carbon trading to expand the capacity of ORTPN and REMA to capture high-value carbon offset payments for activities in and around the VNP and NNP;
- Better exploitation of the chimpanzee, primate and bird-watching potential in Nyungwe NP through improved habituation, guide training, and visitor management;
- Implementation of visitor satisfaction surveys in Nyungwe NP providing key information for improving tourism;
- Field trip to Costa Rica with REMA and ORTPN senior staff highlighting diversified tourism and ecosystem service payments in action;
- Implementation of a workshop to promote and raise awareness of Nyungwe Ecosystem Service values, estimated at a minimum of \$285 million per year.

Some appreciable proportion of revenues must flow to *local communities* if they are to help reduce rural poverty and the resulting pressure to exploit protected areas, yet our assessment of the District Development Plans from 5 districts around Nyungwe reveals little or no relation to NNP or its buffer zone. Activities implemented to generate increased economic benefits for these communities include:

- Improvement of honey production in Nyamagabe and Karongi districts through training and equipment support, and assessment of potential markets for its sale;
- Promotion of pottery production and training of the marginalized population living around Cyamudongo Forest in Rusizi district;
- Development of two pico-hydro sites in Nyamasheke district to provide a source of electricity to the surrounding community.

Biodiversity conservation is the ultimate goal of both WCS and PAB. Both the Nyungwe NP and the Volcanoes NP were targeted by PAB because of their high biological diversity values, yet both parks also exhibit signs of degradation. Nyungwe in particular has suffered from fires, exotic species introduction, and the loss of native species. Actions taken to address this problem include:

- Removal of all the exotic trees along the Kitabi-Gisakura roadside, including removal of new seedlings since 2007 removal, as well as removal of 683 undetected exotic species beyond the roadside between Kinama and Uwasenkoko;

- Accelerated forest regeneration on burnt areas with an additional 18 plots initiated bringing total area of regeneration plots to nearly 29,000m², using local community labor, with successful demonstration of regeneration (average of 15 new seedlings per 2m² quadrat within plots compared to 0-3 outside);
- Development of long term monitoring plan to evaluate the impact of *Sericostachys scandens* in Nyungwe NP;
- Results from DNA analysis from last Nyungwe elephant and preliminary feasibility study completed;
- Camera traps in use around the park to capture evidence of nocturnal and other difficult to see animal species;
- Protocols developed to monitor health and other visitor impacts on chimpanzees.
- Assessment of level of degradation of Nyungwe along the border with Kibira National Park.

WCS is proud of these preliminary accomplishments and looks forward to a comprehensive program of applied action in 2009 with PAB and an expanded set of local and national partners under the Year Three workplan.

WCS PROTECTED AREAS BIODIVERSITY PROJECT (PAB) WORK PLAN WITH 2008 ACTIVITIES

OUTCOME 1 – Institutions and key stakeholders at central, district and local levels have capacity to manage and conserve natural resources in and around Protected Areas

Outputs	2008 Activities	Year 2 Targets	Achievements	Lessons Learnt	Cost
Policy, regulations					
1.1 A comprehensive national Law on Wildlife and Protected Areas developed and adopted	1.1.1 Support development of Wildlife Act (legal consultant): <ul style="list-style-type: none"> Hire a consultant to review the draft law Workshop to present findings Production & submission of a revised law 	Wildlife Act drafted; Draft submitted and reviewed by ORTPN, REMA.	<ul style="list-style-type: none"> Wildlife Act drafted and under review by consultant hired for the activity and ORTPN senior advisor. Consultation with stakeholders underway to ensure participatory approach. 	Policy and regulation development will only be successful if supported by necessary governmental institutions.	
Planning, management systems					
1.2 A conservation financing plan developed and implemented to improve financial security and options for protected areas	1.2.1 ORTPN Financing Plan: Assist ORTPN to develop overall business and financing plan: <ul style="list-style-type: none"> Information exchange and liaison between UC-business school and ORTPN Business plan preparation 	Business plan complete for ORTPN parks and headquarters, including new financing possibilities, and vetted at ORTPN.	<ul style="list-style-type: none"> Successful visit to Rwanda by four consultants from Berkeley Business School. Meetings and workshops at ORTPN headquarters and all 3 National Parks. Business plan presented to ORTPN with development of individual park plans and new financing possibilities set out. 	Some data was difficult to get from ORTPN, especially before consultants visit, slowing down development. ORTPN has not commented on draft and hence implementation of the plan delayed.	
	1.2.2 PA administrative systems: Analyze and develop improved administration of ORTPN and partner planning, monitoring & evaluation (to be implemented with 1.2.1) <ul style="list-style-type: none"> Review partner and ORTPN experiences/perception of administration status and needs See 1.2.1 above	Combined with 1.2.1 above			

1.3 An information management system developed and used in the PA management system	1.3.1 Map programs / projects / initiatives around NNP (also 1.7.1). Preliminary meetings with local authorities and different stakeholders operating around the park to collect secondary data. <ul style="list-style-type: none"> Produce and disseminate GIS map. 	Map and metadata of all major projects, intervenors, initiatives around NNP.	<ul style="list-style-type: none"> Activity delayed, carry over to 2009. 	Preliminary surveys showed a need to do a holistic survey to capture a set of socio-economic variables. Hence this activity will be implemented as a wider socio-economic study in 2009 and will enable a greater accuracy and data set to be provided showing full range of programs, project and initiatives around NNP as well as other community activities and infrastructures.	
	1.3.4 Review & standardize community, tourism, and financial data systems to be used in PAs: <ul style="list-style-type: none"> Assure implementation of new tourism data collection system Conduct domestic tourism assessment Develop protocols for socio-economic data collection with ORTPN & partners. 	Standardized data systems submitted to ORTPN. Once approved, implementation by ORTPN.	<ul style="list-style-type: none"> New visitor data collection methods implemented. Domestic tourism assessment underway. Socio-economic data protocols under-development. 	<p>New visitor data collection methods implemented by ORTPN but still some discrepancies in accurate analysis with ongoing confusion between visitor numbers, visits and visitor days which needs to be reviewed. Ongoing lack of review and implementation of recommendations for NNP pricing structure may be causing long term decrease in total revenues.</p> <p>Limited cooperation from ORTPN counterpart has slowed the pace of implementing this activity.</p>	
1.4 Strategic plans for biodiversity conservation and community participation in forest resources/PAs management produced by ORTPN/REMA (also 1.8 and 2.6)	1.4.1 Revenue-sharing program: assist ORTPN in formalization of program structure & procedures, improve implementation: (dissemination, proposal submissions, selection, execution) (also 1.8.1 and 2.6.1): <ul style="list-style-type: none"> Discuss with people in charge of community conservation department and park warden on ways of incorporating reviewed procedures. With ORTPN discuss with District, sector and cell level on how ideas could be implemented. Support the production, dissemination and implementation of the reviewed procedures. 	Revenue-sharing procedures in 5 districts surround NNP understood and in use; Mechanisms of project selection streamlined.	<ul style="list-style-type: none"> Activity not achieved as policy not yet harmonised by ORTPN. 	For revenue-sharing program to be successful need more political will to ensure necessary policies are in place to allow effective implementation.	
1.5 District Development Plans updated to reflect	1.5.1.2 Promote conservation / parks in joint action processes and yearly action plans in districts:	Annual workplans in districts reflect new park and/or buffer	<ul style="list-style-type: none"> Meetings held with District Environment Officers and those in charge of Planning in all Districts around NNP to promote 	Districts still reluctant to prioritize conservation activities in their annual workplans and still require a greater understanding of conservation related issues to	

biodiversity and communities in forest resources management (also 1.9 and 3.7)	<ul style="list-style-type: none"> Sensitization to promote Pas conservation in the 5NNP district's annual work plans with local authorities. Assure inclusion of PA and Buffer Zone activities in the next District Development Plans starting from 2008 annual work plan. 	collaborations.	<p>conservation and parks in districts.</p> <ul style="list-style-type: none"> Joint Action Forum creation between local authorities and Park underway. 	<p>effectively support conservation initiatives despite the sensitization during 2008.</p> <p>Conservation activity integration further limited by lack of guaranteed funding preventing Districts to include conservation activities in their annual plans.</p>	
Technical training, capacity-building					
1.6 Staff of REMA, ORTPN and other partner/support agencies trained in key aspects/technical skills of PA management	<p>1.6.2 GIS capacity-building:</p> <p>1.6.2.1 Assess training needs in GIS at REMA and ORTPN central offices:</p> <ul style="list-style-type: none"> Assessment of training needs in GIS for REMA staff 	GIS training needs assessment complete for REMA. Training designed for 1.6.2.2 below.	<ul style="list-style-type: none"> GIS training needs assessment for REMA completed. Training not yet done due to delay in identifying GIS personnel. 		
	<p>1.6.2.2 Provide training, equipment in GIS (also 1.3.6): develop strategy for spatial analysis, train key personnel, provide necessary equipment for ORTPN, REMA.</p> <ul style="list-style-type: none"> Provide equipment in GIS for ORTPN Training of key personnel Initiate use of basic GIS as management tool in ORTPN Develop strategy for spatial analysis at ORTPN. 	ORTPN central (& field) offices have training and equipment to increasingly use GIS as management tool for conservation and tourism.	<ul style="list-style-type: none"> GIS equipment and software purchased and installed for ORTPN (ArcGIS ArcView 9.2 & Spatial Analyst). Basic computer skills training course and GIS course completed in NNP & VNP. GIS database organized and geodatabase format. 	Different skills level of staff during the training – would be more effective to organise training programmes based on ability. Regular ongoing training and follow-up needed to really enhance capacity.	
	<p>1.6.3 Monitoring systems:</p> <p>1.6.3.1 Assess monitoring systems in use across PAs and design harmonization (also 1.6.3.2, 1.3.2 and 3.5.1.1)</p> <ul style="list-style-type: none"> Training on MIST software (entry & analysis) for R&M wardens, their agents & central ORTPN R&M officer. Mentoring using MIST 	Final incorporation of database design into MIST and full implementation in 2 parks.	<ul style="list-style-type: none"> Training on MIST GIS completed for ORTPN staff from Headquarters and the three Parks. Ongoing mentoring using MIST. NNP using MIST to analyze RBM data and produce monthly reports for park management. 	Emphasis on the use of MIST GIS as a management tool using RBM data, data entry, analysis and management of MIST software during the training. Ongoing monthly mentoring planned for NNP with the aim of ORTPN taking over all MIST GIS analysis by 2009. However, ORTPN staff are still slow at entering data resulting in delayed analysis and reporting of results. Difficult getting time with ORTPN staff being available.	
	1.6.5 Comparative field learning for senior ORTPN & REMA staff to Costa Rica to observe ecosystem service payments and diversified tourism in action	High-level REMA, ORTPN staff understand opportunities for carbon/ecosystem	<ul style="list-style-type: none"> Successful field tour to Costa Rica including DG of REMA and ORTPN. Opportunities for decision-makers to learn about successful mechanisms to implement payments for ecosystem services, 	There are many untapped opportunities in Rwanda to benefit and exploit natural resources without negatively impacting the environment. In terms of tourism, Nyungwe in particular is not being developed or exploited to its maximum potential.	

	<ul style="list-style-type: none"> Liaise with people from Costa Rica Coordinate the study tour 	service payments and diversified tourism.	ecotourism, bioprospecting etc.		
	1.6.7 Technical / analytical support to REMA: training / mentoring in carbon-trading	Increased biodiversity capacity in REMA, accelerate / institutionalize PAB actions within REMA; Effective in-house carbon understanding and action	<ul style="list-style-type: none"> Consultant visit to Nyungwe NP to carry out assessment on potential for carbon trading. Workshop and training to ORTPN, REMA, NAFA to give them better understanding of the carbon market and to better evaluate carbon proposals. 	The current lack of understanding within government ministries of evaluating different proposals and recognizing solid proposals increases the risks of government support committed to ineffective and poor proposals. More training and mentoring is needed for government to effectively deal with from carbon-offset trading issues and mechanisms and benefit from these possibilities.	
Coordination					
1.10 National and District level policies and legislation harmonized to support biodiversity conservation	1.10.2 Clarification of Nyungwe Buffer Zone management (policies, standards, responsibilities, benefits, monitoring) (also 2.1.1): GIS assessment of use options & completion needs, scenario-planning: <ul style="list-style-type: none"> GIS assessment Workshop with local authorities and local organizations surrounding PAs about buffer zone management. Workshop for decision-makers. Production of recommendations. 	Full assessments / scenarios analysed, vetted locally and recommendations submitted to MINITERE, ORTPN for decision-making.	Activities not achieved as still waiting for clear law and policy on buffer zone management.	Cannot proceed with sustainable, equitable management of NNP Buffer Zone without clear policies, structures, responsibilities, and beneficiaries. Draft National Forestry Law is wholly inadequate with regard to NNP Buffer Zone issues of protection and production. Restructuring of ORTPN has resulted in lack of clarity on policies.	

OUTCOME 2 – Socio-economic value and financial benefits of the Montane Forest Protected Area System to local communities increased and negative impacts reduced

Outputs	2008 Activities	Year 2 Targets	Achievements	Lessons Learnt	Cost
Forest management					
2.1 Collaborative Forest Management plans developed & piloted in NNP Buffer Zone	<p>2.1.2.1 Provide technical assistance in sustainable forest management to ensure conservation benefits to communities.</p> <p>Design activities & management options with local associations, HELPAGE and PMU</p> <ul style="list-style-type: none"> Assist identified cooperatives to develop and submit CFM plans; raise awareness within identified cooperatives concerning conservation aspects, relationship with park conservation Train DEOs in key concepts; share experience with other districts 	CFM design and initial implementation assures conservation and local benefits, as initiated in 2 districts.	<ul style="list-style-type: none"> Two cooperatives identified in Karongi and Nyamasheke. No further activities achieved due to lack of clear policies or forestry law. 	<p>Willingness to collaborate from partner organizations essential to effectively implement activities. Initial activities delayed due to lack of MOU between Helpage and PAB.</p> <p>External factors can greatly influence successful implementation of activities, especially those relying on government policy and regulation. Additional problems regarding clarification of forestry law has meant that this activity could not be achieved.</p>	
Natural resource management					
2.3 Sustainable income generating / value adding activities developed and piloted	<p>2.3.2. Beekeeping</p> <p>2.3.2.3 Support for increasing productivity and quality of honey by local associations and for linkage to actual markets; promote organic certification process (NNP)</p> <ul style="list-style-type: none"> Assess options for improved honey collection, including experimental hive placements within NNP Provide sufficient smokers, protective gear, honey extractors for Karongi (Gakuta) & Nyamagabe (Kitabi) apiaries as model Improved containers/packaging Training on production and harvesting of honey 	Cooperatives understand objectives; NNP engaged in park-based experiments. Quality Nyungwe honey marketed on pilot basis (from Karongi, Nyamagabe).	<ul style="list-style-type: none"> Gakuta beekeeping apiary constructed near Park buffer zone. Training programme completed for Gakuta cooperative to improve their honey collection and production and general understanding of the beekeeping profession. Marketing and packaging options evaluated and branding / marketing strategy development. Field trip to African Beekeeping conference in Uganda for Beekeeping Development Officer. 	<p>Possibility of Karongi apiary placed inside Park boundary was not possible due to conflicting policies and its interpretation</p> <p>Karongi would also greatly benefit from a production and packaging house near the apiary for them to process and package the honey before transportation.</p> <p>Certification of Nyungwe honey can be administratively complicated and costly, and certification such as organics, varies between countries. The benefits of certification for small cooperatives may be limited at this stage. It is not recommended for organizations to export internationally or seek certification until they are producing at least 100 tonnes of honey per year. The cooperatives should focus on filling local and</p>	

	<ul style="list-style-type: none"> Field trip for advanced beekeepers Marketing of honey production 			national markets before trying to expand into regional or international markets which have high associated costs. The national market within Rwanda is still not yet saturated and hence there is potential to fill this market. Although there has been an improvement in quality and quantity of honey, this needs to be further improved as well as ensuring mechanisms for ensuring ongoing quality.	
	2.3.3. Handicrafts 2.3.3.2. Focus support on bamboo and pottery handicraft quality and sourcing bordering NNP: Initiate support for Cyamudongo pottery and crafts <ul style="list-style-type: none"> Organize, train, and equip marginalized people to produce and market pottery and crafts 	Marginalized people at Cyamudongo have identified and begun to develop craft and dance attractions for tourist markets.	<ul style="list-style-type: none"> Training in modern pottery methods completed. Study tour to Gatagara completed successfully. Workshop, oven and turntable constructed for Cooperative. 	The cooperative need more assistance in organization and coordination to be more effective. Long term assistance and supervision will be needed to produce high quality pottery products suitable for the tourist market. The high level of poverty has a significant impact on the development of their skills due to opportunistic work opportunities and therefore the limited time in improving and developing their skills.	
2.5 Micro-Hydro project in districts by Nyungwe (co-finance)	2.5.1 Develop micro- or pico-hydro model sites in Nyamasheke <ul style="list-style-type: none"> Determine priority sites, local beneficiaries, and appropriate scale / design of operations at Banda Install equipment and train local managers. Conduct workshop for other NNP districts Assess potential sites for YR 3 activities 	At least two pico-hydro projects developed in Nyamasheke with training in local maintenance. Training / outreach to other NNP districts.	<ul style="list-style-type: none"> Two pico-hydro systems installed in Banda, and powering battery charging stations. 50 households including 30 of the poorest households in Banda, provided with battery and lighting systems and have electricity in their homes. A management and maintenance team from the local population trained in charging batteries and basic maintenance of the systems. A group of people from the local population trained in basic electricity. 	Development of systems took longer than previewed and original planning didn't take into account the need for a pilot phase to test proper functioning and efficiency of the systems.	
Benefits from parks					
2.7 Barriers to community tourism reduced in selected areas	2.7.1 Initiate community-engaged tourism at Cyamudongo (Rusizi): training and piloting of local guides (now combined with 2.3.3.2 and 3.3.1.7)				
2.8 Negative impacts of parks on communities reduced	2.8.4 Implementation of interim crop-raiding compensation: promote ORTPN plan (TBD) <ul style="list-style-type: none"> Workshop on interim crop-raiding compensation and policy Final draft of strategy / policy on crop-raiding compensation 	ORTPN Compensation program approved. Implementation discussed and agreed with local authorities. ORTPN includes in the next budget cycle.	<ul style="list-style-type: none"> Policy completed. Consultation meeting with ORTPN and Nyungwe NP policy developed. 	ORTPN not decided to whether there should be specific policy for every Protected Area or one policy for all protected areas. Implementation cannot commence until this is defined/clarified.	

	<ul style="list-style-type: none">• Discuss strategy / policy with local authorities• Implementation plans reviewed / approved				
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OUTCOME 3 – Biodiversity of Nyungwe and Volcanoes Protected Areas System conserved through knowledge-based adaptive management practices

Outputs	2008 Activities	Year 2 Targets	Achievements	Lessons Learnt	Cost
Planning, Management systems					
3.1 Adaptive park management plans for PA system updated through incorporation of research and monitoring data	3.1.2.2 Ecosystem services evaluation assessment for NNP: public presentation of results (also 1.11.1.2) along with carbon offset presentations: <ul style="list-style-type: none"> Workshops for all institutions benefiting from ecosystem services, based on final report Proposals produced to monetize and capture greater share of ecosystem benefits 	Ecosystem services quantified ; recommendations for potential payment processes ; high-level awareness & ideas for action.	<ul style="list-style-type: none"> Ecosystem services quantified and report produced with recommendations for potential payment processes. Awareness raising workshop held with stakeholders and senior personnel in government institutions and ministries setting out next steps and implementation plans. 	There is a lack of understanding of the real value of Nyungwe NP and the potential benefits are not currently being exploited.	
	3.1.3.1 Assessment of encroachment along Burundi border	Quantification of river and border diversion	<ul style="list-style-type: none"> Field trip to the site undertaken Collection and analysis of data Meeting with authorities from Burundian side 	Some area could not be assessed due to insecurity	
Technical training					
3.2 Park staff trained in technical skills and competencies for effective park management	3.2.1 Monitoring: (also in Monitoring 3.5) 3.2.1.1. Train PA-based officers on RBM monitoring data entry & analysis (PNN, PNV) (also 3.5.1.2)	PA-based officers analyzing and using monitoring data for management in coordination with GIS analyses.	<ul style="list-style-type: none"> Ongoing mentoring of PA staff in data entry & analysis. Ongoing mentoring of rangers in data collection. RBM & MIST GIS being actively used in NNP and implementation in VNP & ANP. 	Ongoing mentoring of ORTPN R&M staff needed in order for them to work independently. Also dependent on individual motivation and initiative. MIST is not working as well in VNP. The problems have highlighted a need for more training and mentoring in 2009 and it is recommended that 2 Park personnel are identified to act as MIST point people and to take control of MIST in VNP, provide training and mentoring.	
	3.2.2 Park income leveraging activities in NNP (also in implementation				

	3.2.2.1 Establish regular in-service training for Community Conservation Wardens <ul style="list-style-type: none"> Develop modules to improve understanding and skill set needed to increase effectiveness of CCWs. Conduct training of 10 ORTPN staff engaged with community conservation. 	Community wardens and other key ORTPN staff trained in community conservation.	<ul style="list-style-type: none"> NNP CCWs and other community conservation personnel completed training at KCCEM in Biodiversity conservation and Conflict Management. 	ORTPN promoting all training of staff through KCCEM and not necessarily supporting other independent training opportunities.	
	3.2.2.3 Design interpretation centre at VNP: develop architectural & interpretation plans <ul style="list-style-type: none"> Conception and design of VNP interpretation centre. 	VNP interpretation centre designed and budgeted; submitted to ORTPN decision on full funding.	<ul style="list-style-type: none"> Delayed until 2009. 		
Implementation					
3.3 Adaptive park management plans implemented in Volcanoes & Nyungwe National Parks	3.3.1.1 Biodiversity & ecosystem monitoring systems (now merged with 3.5.2.1)				
	3.3.1.2 Provide essential equipment determined from 3.3.1: <ul style="list-style-type: none"> To be determined based on DNP & ORTPN procurements Expand camera trap training 	Equipment purchased NNP staff more active in field work as a result; personnel satisfaction improved.	<ul style="list-style-type: none"> Camera trap implementation continues in different areas of the Park. 	A more systematic use of camera traps as a monitoring tool needs to be developed at the end of the pilot phase	
	3.3.1.5 Apply improved collection and application of visitation information: <ul style="list-style-type: none"> Conduct domestic tourism satisfaction assessment Coordinate with ORTPN and DNP to implement/ apply results of international tourism feedback 	Adaptive management of tourism initiated, based on tourist feedback.	<ul style="list-style-type: none"> Visitor satisfaction survey implemented to provide baseline data. Results analysed and report produced with recommendations. Domestic tourism survey designed, background research completed and local tour operators interviewed. 	No results were provided by DNP and therefore a new survey was designed and implemented in 2008 providing baseline data. The domestic tourism survey will be extended in 2009 as collecting these data has proved to be a time consuming exercise as it depends on several stakeholders which are beyond our control.	
	3.3.1.6 Assist in road regulations (NNP): public awareness, installation of control posts & pedestrian shelters: <ul style="list-style-type: none"> Sensitization of local people around NNP about road regulations Workshop on road regulations for road users Initiate road regulations 	Dependent on adoption of ORTPN plan now before MININFRA; No night circulation	<ul style="list-style-type: none"> Activities delayed while waiting approval of road regulations from MININFRA. 	Again activities dependent on policy and regulations at the national level, are affected by external factors beyond the control of this project and hence impacts effective and possible implementation.	
	3.3.1.7 Assist in up-grading primate	One group each of 3	<ul style="list-style-type: none"> Habituated groups of black and white 	More resources needed to drastically improve	

	<p>tourism in NNP: locate & habituate additional primate groups:</p> <ul style="list-style-type: none"> Select and train new trackers to habituate & track primates agree on plan of subsequent transfer to ORTPN Improve chimpanzee habituation and identification of chimpanzee individuals Locate & habituate other primates 	<p>species habituated and tourists visiting, with plan agreed for future transfer of tracking and habituation responsibility to ORTPN.</p>	<p>colobus, grey-cheeked mangabeys and chimpanzees, visited by tourists.</p> <ul style="list-style-type: none"> Chimpanzee tracking and habituation ongoing at Cyamudongo, Mayebe and Gisovu. New habituation and tourism protocols and data collection in place improving monitoring of progress. Photo identification database initiated for chimpanzees at Cyamudongo. Implementation of chimpanzee phenology circuits. 	<p>current habituation stage, especially more trackers which would allow the following of multiple sub-groups at the same time. ORTPN has been reluctant to take over responsibility of tracking and habituation.</p>	
	<p>3.3.2 Effective communications 3.3.2.1 Establish management communications systems (electricity and radio) in NNP (also 3.6.1)</p>	<p>Internet established at Gisakura. Park managers communicate across extent of park and with Kigali: management improved.</p>	<ul style="list-style-type: none"> Satellite Internet Connection installed in Kitabi and Gisakura. 		
<p>3.4 Effective methods of ecosystem restoration determined and piloted</p>	<p>3.4.1 Forest restoration: 3.4.1.1 Accelerate forest restoration/tree regeneration in NNP: maintenance at strategic sites; apply lessons to attract complementary (carbon) funding:</p> <ul style="list-style-type: none"> Extend network of restoration plots Maintain & monitor existing plots Develop proposals with REMA/ORTPN to submit to donors for complementary funding of forest regeneration 	<p>Pilot plots demonstrate regeneration; carbon funding attracted for expansion of efforts (contingent on external actors).</p>	<ul style="list-style-type: none"> Ongoing regular maintenance of plots with ferns (and other vegetation) being cut back. Network of plots extended to include Mugote and Kitabi, with 18 new plots developed. Methods designed to carry out comparison of germination in and out of plots to measure effectiveness, with results showing greater regeneration inside plots (average of 15 seedlings in 2m² quadrats within plots compared to 0-3 outside of plots). 	<p>Potential to develop carbon funding for burnt areas but no indication from the government which proposals they would like to be developed.</p>	
	<p>3.4.1.2 Reduction of non-native tree species in NNP: at 500m distance from Kitabi-Gisakura road</p> <ul style="list-style-type: none"> Eradication of the 10 % of 2007 year exotic species remains along Kitabi- Gisakura road Removal of new shootings emerging form 2007 removal Inventory of undetected exotics spp found beyond roadside 	<p>Status of in-park exotic plantations resolved and restoration strategies designed. All visible non-native tree species eliminated from 32km distance along Kitabi-Gisakura road with a width of 80m on average.</p>	<ul style="list-style-type: none"> Temporary workers recruited to work on the removal of exotic tree species on the Kitabi-Gisakura road including maintaining work from 2007 and removing all new seedlings. Large amounts of undetected exotics from 2007 beyond the roadside eliminated at Kinama and Uwasenkoko. Total of 683 exotic trees cut down and removed from the Park. 	<p>There are still areas where exotics exist. Full inventory of exotic species should be undertaken in order to develop a comprehensive eradication program.</p>	

	<ul style="list-style-type: none"> Physical removal of undetected exotics spp found beyond roadside. 				
	<p>3.4.3 Impact of Sericostachys addressed in NNP: research on 2008 expected flowering:</p> <ul style="list-style-type: none"> Workshop to present findings on review of state of knowledge of flowering history & ecology Design applied research action plan Follow up on key research identified during workshop 	Research program defined & initiated on expected 2008 flowering; interim plan for management defined.	<ul style="list-style-type: none"> Long term sericostachys monitoring plan designed and data collection underway to enable evaluation of impact. Phenology data being collected on 2008 flowering. 	Current distribution of sericostachys needs to be mapped in order to be able to determine any future change in distribution. Would be good to have distribution mapped from 10-50 years ago but need to determine if sericostachys can be accurately identified from aerial photos or other GIS / satellite images.	
	<p>3.4.4 Reintroduction / recognition of key, rare species: Assess feasibility of reintroduction of elephants to Nyungwe:</p> <ul style="list-style-type: none"> Identify closest DNA match to Nyungwe elephant population Assess status / availability of potential source populations Report on feasibility of reintroduction of elephant 	Feasibility study on elephant reintroduction completed and reviewed by ORTPN.	<ul style="list-style-type: none"> DNA results from last elephant in Nyungwe and Akagera population analyzed. Preliminary report on feasibility of elephant reintroductions completed with recommendations and next steps. 	Many factors need to be taken into consideration before any decision on elephant reintroduction can be taken.	
Monitoring					
3.5 Protected area management authorities implementing a monitoring system for biodiversity, key indicator species and environmental services	<p>3.5.1.3 Support equipment needs (map printer, GPS, software) at park level</p> <ul style="list-style-type: none"> Provide equipment at park level Training on use of equipment 	Monitoring and analysis being used for management.	<ul style="list-style-type: none"> Equipment supporting park needs and improving work capacity. 		
	<p>3.5.2 Biodiversity and key species monitoring</p> <p>3.5.2.1 NGO support to revise species checklists, finalize design of biodiversity and key species monitoring</p> <ul style="list-style-type: none"> Determine feasible monitoring targets beyond RBM. If additional targets identified, baselines initiated Compile and map results of camera-trap data 	Carry-over from 2007: Park bird list produced, mammal checklist updated with results of camera trapping; if targets identified beyond RBM, additional biodiversity / species monitoring baselines initiated.	<ul style="list-style-type: none"> Camera traps placed around Park and results mapped and used to update mammal list. Park bird list updated through workshop held with park personnel working in the park with a focus on birding. Preliminary herpetology survey undertaken to initiate baselines. 	Species still unknown whether they are still present in the Park such as golden cat and leopard. For camera trapping effort to be effective in identifying their presence or not, this would need to be done on a large scale. Need for larger biodiversity survey identified especially for the little known fauna such as herps and small mammals.	

	<p>3.5.3 Aerial reconnaissance of interior of NNP (merged with 3.5.2.3.) Support study on vegetation trends and impact use in parks, including threatened habitats and threat dynamics</p> <ul style="list-style-type: none"> • Fly reconnaissance • Digitize results • Conduct vegetation, buffer zone analysis • Workshop for restitution • Final report production 	<p>NNP aerial photo mosaic & digitization completed: vegetation baseline established; visible threats mapped.</p>	<ul style="list-style-type: none"> • Preliminary aerial photography undertaken. • Unable to be completed due to poor weather. • Digitizing postponed until photographs are completed. • Institute for digitising photographs already identified. 	<p>Aerial photography was found to be hard to be undertaken during this year due to harsh weather conditions especially poor visibility throughout the year</p>	
	<p>3.5.4 Conduct quantitative survey of Cercopithecus hamlyni in NNP</p> <ul style="list-style-type: none"> • Design and conduct field survey • Design of conservation strategy 	<p>General estimate of hamlyni population known; conservation strategy outlined.</p>	<ul style="list-style-type: none"> • Preliminary survey completed testing different possible survey methods. Field surveys started. 	<p>This activity has proven to be difficult due to the secretive nature of this species and the difficulty in collecting data in order to be able to estimate its population.</p>	
Sustained support					
<p>3.8 Increased awareness of value of park in public and government</p>	<p>3.8.1 Support park-based outreach program targeting local authorities: strengthen planning & assessment, conflict resolution capacity of conservation officers; video capacity</p> <ul style="list-style-type: none"> • Workshop with local authorities to talk about Conflict resolution, crop raiding, revenue sharing and show what is done in PNN • Environmental education to different authorities from cells to districts level on the importance, benefits and techniques of managing natural resources. 	<p>Local authorities understand and promote park conservation; incorporate in policy and practices.</p>	<ul style="list-style-type: none"> • Awareness raising and training sessions held with local authorities around the Park. 	<p>Crop raiding, loss of human lives and traffic of livestock are the major source of conflicts Local authorities are aware of the importance of the park but lack skills and means to impart their knowledge to communities. The ongoing lack of policies makes it more difficult for local authorities to effectively deal with these issues.</p>	