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Conservation Development Centre

GEF IMPACT EVALUATION

Case Study: Reducing Biodiversity Loss at Cross-Border Sites in East Africa Project

Impact Evaluation Information Document No. 9

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This paper was commissioned by the GEF Evaluation Office (GEF EO) as an input into its program of **Impact Evaluation**.

A first annual report on this program will be presented to the GEF Council at its November 2007 meeting. The findings, interpretations, and conclusions expressed herein are those of the authors and do not necessarily represent the views of GEF Evaluation Office, the GEF Council, or the Governments they represent. The authors of this document would welcome any comments or suggestions on its contents.

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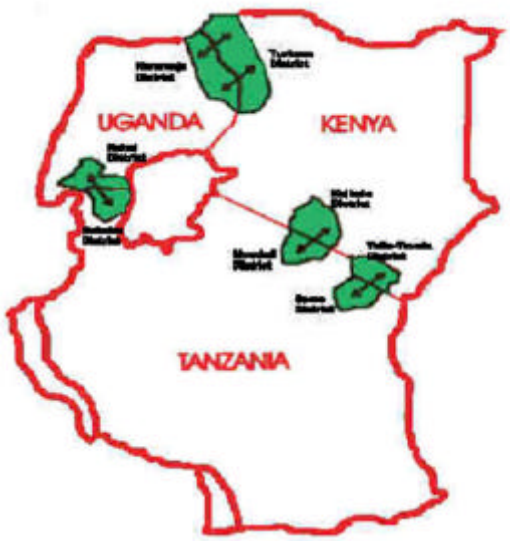
Project overview

The UNDP/GEF project "*Reducing Biodiversity Loss at Selected Cross Border Sites in East Africa*", also known as the East Africa Cross Borders Biodiversity Project (CBBP), was a regional five-year, full-size GEF/ UNDP project that was operational between 1998 and 2003. The overall objective of the regional project was "*to reduce the rate of loss of forest and wetland biodiversity in specific cross border sites of national and global significance in East Africa*". This was to be achieved by establishing an enabling environment (policy, legislation, awareness) that allows sectoral and development agencies as well as local communities to promote sustainable use of biodiversity, and by bringing demands on forest resources into balance with the sustainable supply at key forest and wetland sites.

The GEF funding for the project amounted to US$12.9 million with additional co-financing of US$5.5 million. The project concept was developed in response to requests for a regional biodiversity project from the East African Governments and the recommendations of an external evaluation of the first GEF regional biodiversity project *Institutional Support for the Protection of East African Biodiversity*, which was implemented between 1992 and 1996.

The project had components in each of the three participating countries (Kenya, Uganda, Tanzania), as well as a regional co-ordination component based in Arusha, Tanzania. The project sought to provide support at four levels - regional, national, district and community - and to ensure strong linkages between these levels. Site-based conservation interventions took place at four paired cross-border sites, chosen on the basis of their biodiversity values, as illustrated in Figure 1 below.

The Project cross border sites and global biodiversity importance



1. **Minziro Forest (Tanzania) and Sango Bay Forest (Uganda).** Its extensive swamp forest with West African and Afro-Montane forest species and endemic swamp podo (*Afrocarpus dawei*) represents a *unique ecological community* found nowhere else.
2. **Karamoja (Uganda) and Loima Hills (Kenya)** dry montane forest representing an *ecological refugia/ island* for threatened ecological communities surrounded by arid and semi-arid pastoralist land
3. **Kajiado (Kenya) and Monduli (Tanzania)** dry montane forest, also providing an *ecological refugia* surrounded by arid and semi-arid lands
4. **Eastern Arc Forests: Pare Mountains (Tanzania) – Taita Hills (Kenya)**. Representing one of 25 *Global Hotspots* for plant diversity with exceptional levels of endemism.

Three distinct types of biodiversity loss were identified for these sites:

- **Complete loss of forest habitat** due to either legal conversion of non-gazetted forest to agriculture or to illegal encroachment of gazetted forest and conversion to agriculture or settlement. Both of these processes were taking place at many forest sites at project start-up.

- **Loss of forest cover** due to fire or heavy logging, causing large gaps in the canopy, which would be unlikely to regenerate.

- **Loss of specific biodiversity** components due to selected over-harvesting; or by gradual habitat change in the forest, due to increased openness etc. Such loss is of concern when such components are "keystone", endemic or rare species.

The project adopted and piloted the innovative participatory forest management approach, which started in the early 1990s in East Africa, to address forest biodiversity loss. This approach seeks to empower local communities to own, manage and co-manage forests under a wide range of conditions. The two main types of participatory forest management are *community-based forest management*, which takes place on village or private land, and *collaborative forest management* (also known as Joint Forest Management), which takes place on land owned and managed by either central or local government. The latter type of participatory management allows local communities to enter into agreements with government for sharing the costs and benefits of forest management, by signing joint forest management agreements (Blomley & Ramadhani, 2007).

The project interventions to introduce participatory forest management were targeted at two levels: firstly, to reduce the immediate loss of forest biodiversity through interventions seeking to stop encroachment and to reduce logging and harvesting of key species; and secondly, to prevent such loss in the future by putting in place specific measures, following project completion; i.e. dealing with the root causes.

Due to the extensive coverage of this project, it was not realistic for this case study to evaluate all the various aspects at all the cross border sites. Instead, this study only examined the Sango Bay Central Forest Reserve (Uganda) and the Minziro Forest Reserve (Tanzania) cross border site, which focused on piloting collaborative forest management. This site was considered by former project staff to be the most successful of the field sites and would therefore provide the best opportunities for testing the case study impact evaluation techniques.

Project Logframe Analysis

The first analytical component of the Impact Evaluation Framework used in this case study assesses the delivery of the project outputs and outcomes identified in the project logical framework, or logframe. The project logframe, illustrated in Figure 2 overpage, was the result of modifications made during the first two years of the project and formed the basis for subsequent implementation.

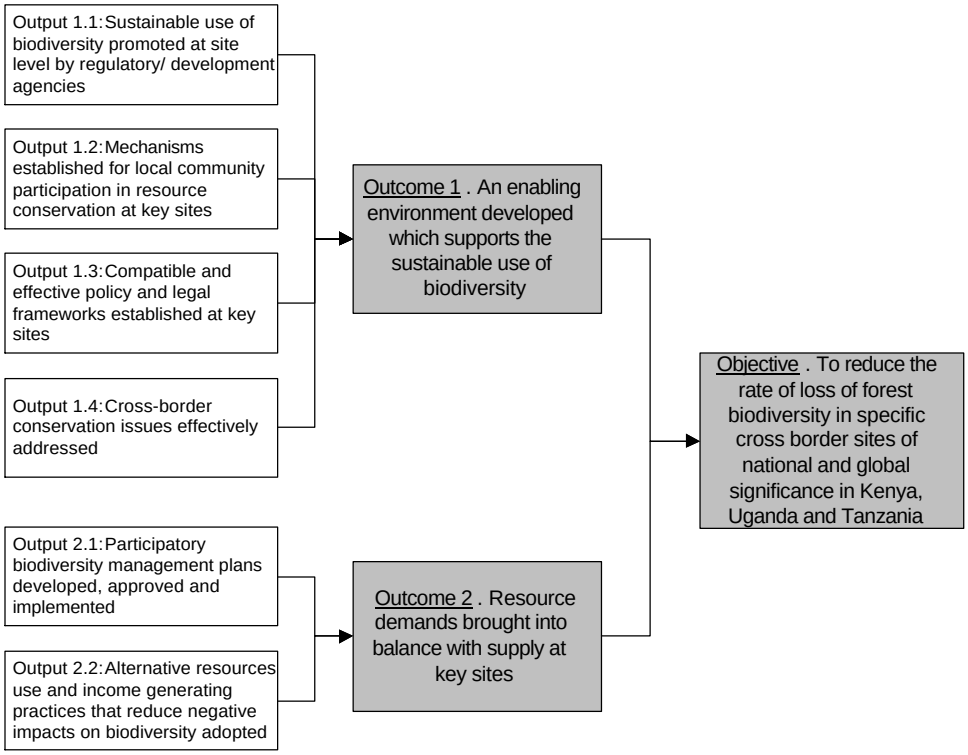
Although very ambitious, the logframe is assessed to be sufficient to produce the desired project objective. The following sections examine the two project outcomes and the level of achievement at the end of the GEF project support with regard to the **Sango Bay-Minziro**

forests cross border site only. Also presented are the rationale underlying the outcomes and an assessment of the actual achievement of the project outputs/ outcomes. The assessment of the achievement of the two project outcomes is summarised in Table 1 below.

Summary of Achievements of Project Outcomes

Project Outcome	Assessment
Outcome 1: An enabling environment developed which supports the sustainable use of biodiversity	**Well achieved (4)**
Outcome 2: Resource demands brought into balance with supply at key sites	**Partially achieved (3)**

Project Logframe



This analysis largely draws on the findings of the *Terminal Evaluation*, Timberlake and Moyini, 2004 (acronym: TE); the *Terminal Evaluation Review*, GEF, 2005 (acronym: TER); *Lessons Learned from the Cross Borders Biodiversity Project in Uganda*, Nabanyumya and Mupada, 2004 (acronym: LL) and a field visit by CDC staff in July 2007 to Sango-Bay/ Minziro Forests and the responsible government agencies in Kampala and Bukoba respectively (see Annex 1 for a list of people and groups met).

Outcome 1: An enabling environment developed which supports the sustainable use of biodiversity

The rationale for this outcome was that for long-term conservation impact to be achieved, there needs to be an environment in which government agencies and local communities can work together to create and implement sustainable use strategies for biodiversity resources.

This requires developing the ability of regulatory agencies to interact with local people, empowering local communities through developing partnerships, and developing a regionally compatible policy/ legislative framework to allow interaction across the full range of policies that affect biodiversity. The main outputs towards achieving this outcome were as follows:

- Output 1.1: Sustainable use of biodiversity promoted at site level by regulatory/ development agencies
- Output 1.2: Mechanisms established for local community participation in resource conservation at key sites
- Output 1.3: Compatible and effective policy and legal frameworks established at key sites
- Output 1.4: Cross-border conservation issues effectively addressed

A detailed reporting of the qualitative and quantitative assessment of the delivery of these outputs and the ultimate outcome is provided in Table 2 below. The assessment has been carried out based on a series of indicators that have either been extracted from the project documentation or determined by the study team.

Output 1.1 (*Sustainable use of biodiversity promoted*) was designed to build the capacity and commitment of regulating agencies to provide leadership in the sustainable utilisation of biological diversity at the cross-border sites. The Terminal Evaluation judged that the District technical officers (especially the District Forest Officers) were supportive of the project and took on the role of collaborative forest management facilitators. At the national level, strong links were established with the National Environment Authority/ Council in piloting collaborative forest management. Development agencies were particularly active at Sango Bay in introducing alternate resource use/ income generating activities. However, there was limited use of NGOs (apparently none were particularly suitable) at Minziro Forest. The overall assessment of the delivery of this output was therefore: **WELL ACHIEVED (4)**.

Output 1.2 (*Mechanisms established for local community participation in resource conservation at key sites)* was focused on establishing and strengthening community mechanisms to enable the piloting of collaborative forest management. The project strengthened, and where necessary established, the Local/ Village Environment Committees that are legally provided for in the Local Government Acts, in order to enable the committees to fulfil their role in coordinating and monitoring forest use and management. At Minziro forest, collaborative forest management (CFM) was initiated with twelve villages, mainly utilising the Village Environment Committees. For the purposes of CFM at Sango Bay, the project formed community-based organisations in a few selected communities, which were active in developing alternative resource uses/ management as well as piloting the CFM process. Although these CBOs were very active and worked closely with the Forest Department, by the end of the project, the CFM plans and agreements with the Forest Department had not been signed. The overall assessment of the delivery of this output was therefore: **WELL ACHIEVED (4)**.

Output 1.3 (*Compatible and effective policy and legal frameworks established at key sites*) was necessary in order to be able to pilot the innovative collaborative forest management mechanisms being promoted by the project. During project implementation, there were a number of innovative and participatory forest policies and legislation enacted in Tanzania and

in Uganda[1]. In Uganda, the piloting of collaborative forest management (CFM) activities at Sango Bay is reflected in the Forest Policy (2001) and the project made written contributions and participated in meetings to develop the National Forestry and Tree Planting Act (2003). In addition, the project was involved in the successful lobbying for a ban on logging in Tanzania that prevented a loophole that was being exploited for illegally harvesting timber (e.g. Podocarpus) in Uganda, which was then smuggled into Tanzania where it was certified and registered, prior to being exported back into Uganda as legal timber. However, there was less recorded success at developing District and local level policies, guidelines and bylaws. The overall assessment of the delivery of this output was: **WELL ACHIEVED (4)**.

Output 1.4 (*Cross-border conservation issues effectively addressed*), was necessary for ensuring the cooperation between countries in the management of these transboundary resources and tackling the threats, which as described above, are often transboundary in nature. A good understanding of transboundary forest conservation policies and practices was developed by a study commissioned by the project, which was undertaken by the African Centre for Technology Studies (ACTS). Regular cross-border meetings were held between local government officials and community groups, but these meetings were heavily dependent on project funding and facilitation and there was little evidence that a sustainable mechanism for continued cross-border liaison was established. The overall assessment of the delivery of this output was therefore: **PARTIALLY ACHIEVED (3)**.

At the end of the project therefore, notable achievements had been made at both the national policy level and at the field level in Sango Bay-Minziro Forests. At the policy level, the project had influenced the establishment of innovative and participatory forest policies and legislation, including a logging ban in Tanzania, which helped to reduce the illegal harvesting of threatened timber species at Sango Bay-Minziro. At the site level, mechanisms for community participation in forest management were successfully established and government and development agencies played an active role in supporting the community activities. However, some aspects of this outcome were not fully achieved, including building in long-term sustainability into the collaboration/ community mechanisms and developing the District and local policies and bylaws to support collaborative forest management. **As a result of this, the study team considered the achievement of this outcome as: WELL ACHIEVED (4).**

Outcome 2: Resource demands brought into balance with supply at key sites

The rationale for this outcome was based on promoting and regulating the sustainable utilisation of natural resources, in a manner that provides tangible benefits to local communities, whilst ensuring support for the conservation of the resources. The main outputs towards achieving this outcome were as follows:

- Output 2.1: Participatory biodiversity management plans approved and implemented
- Output 2.2: Alternative resources use and income generating practices that reduce negative impacts on biodiversity adopted

[1] Uganda policies/ laws enacted included: Forestry Policy (2001), the National Forest Plan (2002) and the National Forestry and Tree Planting Act (2003) and CFM Guidelines (FD, 2003), Participatory Forest Management Plan Process. In Tanzania the main act enacted was the enabling Forest Act (2002), Community-Based Forest Management Guidelines (2002) and Rules and Regulations (2002), which is supported by the National Forest Programme (NFP, 2001-2010) designed to promote Participatory Forest Management (PFM).

A detailed reporting of the qualitative and quantitative assessment of the delivery of these outputs and the ultimate outcome is provided in Table 3 overpage. The assessment has been carried out based on a series of indicators that have either been extracted from the project documentation or determined by the study team.

Output 2.1 (*Participatory biodiversity management plans approved and implemented*) was a major product of the collaborative forest management process initiated by the project. The project successfully developed the Minziro Forest Participatory Management Plan (2003 - 2007) and the Sango Bay Central Reserve Management Plan (2003 - 2012), with very good levels of cooperation and buy-in from the neighbouring communities. To accompany the management planning process, a participatory process was successfully undertaken to mark the entire forest boundary with boundary beacons and trenches, although only a few sections were marked with live markers by the neighbouring communities. Due to the slow start to the project, the management plans were only developed at the end of the project and so had not been approved by the Forest Departments/ Governments. In addition, collaborative forest management arrangement agreements, which provide the foundation for empowering local communities to co-manage the forests, were not in place by the project end. The overall assessment of the delivery of this output was therefore: **PARTIALLY ACHIEVED (3)**.

Output 2.2 (*Alternative resources use and income generating practices* adopted) was designed to reduce offtake of resources from the target ecosystems. The output involved supporting mechanisms for the sustainable harvesting of key forest products, providing alternative supplies of major resources (e.g. fuel, poles) by promoting on-farm woodlots, and introducing new technologies and income strategies that reduce natural resource dependence and increase value placed on biodiversity. Appropriate alternative use/ income-generating activities identified and undertaken around Sango Bay-Minziro included tree nurseries, fuelwood saving stoves, alternative energy technologies (e.g. biogas), agroforestry, cloned coffee growing and beekeeping. The project support included training to extension staff and communities as well as in the provision of the necessary resources.

Logframe assessment for the strengthening of the institutional and financial capacity of Lewa (Outcome 1)

Indicators	Quantitative/ qualitative assessment		Source
Output 1.1: *Sustainable use of biodiversity promoted at site level by regulatory/ development agencies*		**4**	
National/ District agencies funding & staff allocations	Project partnered with national Forest Departments and NEMA/NEMC to pilot CFM. Project trained District Forest Officers to support community activities/ processes. National universities participated in developing resource base inventories.	5	LL, TE
Participation of development agencies	For Sango Bay, the project funded development agencies to successfully introduce alternative livelihood resource uses (VI Agro-forestry, ICR, IRDI and World Vision), although to a lesser degree at Minziro Forest	3	LL, TE, field visit
Output 1.2: *Mechanisms established for local community participation in resource conservation at key sites*		**4**	
Local/ Village Environment Committees	Training needs assessment and conservation awareness creation at start of project, followed by support in establishing/ strengthening the environment committees within local government structures to coordinate and monitor environmental management and resource use	4	TE
CFM Community Based Organisations	CBOs established in selected communities bordering the forest to pilot CFM; three around Sango Bay and one around Minziro Forest (Gugumaji). However, CFM plans/ agreements were not signed by project close	3	TE, field visit
Output 1.3: *Compatible and effective policy and legal frameworks established at key sites*		**4**	
National forestry policy and framework	Substantial inputs (although indeterminable impacts) by the project in the drafting of Uganda/ Tanzania new national participatory forestry policies and legislation	5	LL, TE, field visit
District and village guidelines and bylaws	A limited number of District authorities enacted bylaws, but uncertainty regarding how many, or to what extent these were implemented	3	TE
Logging ban	Logging/ charcoal making ban already in place in Uganda (Cabinet Directive of 1992), but during the project a total forest resource use ban was introduced in Tanzania. However, uncertain the role of project in realising this ban	4	Field visit
Output 1.4: *Cross-border conservation issues effectively addressed*		**3**	
Cross-border liaison mechanism in place	Recommendations on transboundary forest conservation policy issues (bylaws, cross border village protocols, harmonising local policies) developed by ACTS. Regular cross border meetings held between local government officials and community groups at Sango Bay-Minziro, but dependent on project funding/ facilitation	3	TE, field visit
Outcome 1. An enabling environment developed which supports the sustainable use of biodiversity		**4**	
Establishment of policy/ implementation frameworks and capacity	National policies in place with input from the project and some district and village bylaws in place. In addition, capacity at local level greatly increased through the Collaborative Forest Management process and the strengthening of local Environment Committees. Although sustainability appears a challenge	4	TE, LL, field visit

Although figures on actual adoption levels are not available, the use of improved stoves was reported to be widespread. In addition, more progress was made at Sango Bay, where the output was implemented by experienced development NGOs, most notably Vi Agroforestry Programme and Integrated Rural Development Initiatives (IRDI). At Minziro, less success was registered, as there did not appear to be suitable development partners to collaborate with, and subsequently most the activities were initiated through the District Forestry Department.

Although conservation awareness accompanied the delivery of this output, the Terminal Evaluation assessed that there was uncertainty regarding the extent to which these activities had reduced forest resource use and concluded that there was a weak linkage with conservation. This finding is supported by the lessons learnt developed by the project for Uganda, which stated that "*although alternative livelihoods and income strategies can be good entry points for bringing the local community aboard the conservation agenda, particularly to participate in biodiversity conservation, it is not easy to find/ identify appropriate alternatives in the conservation and development nexus. NGOs that are linked to development tend to emphasize the development aspects at the expense of conservation objectives* (Nabanyuma & Mupada, 2004). The overall assessment of the delivery of this output was therefore: **PARTIALLY ACHIEVED (3)**.

At the end of the project therefore, the review team assessed the project had successfully initiated a participatory process for developing the forest management plans and establishing collaborative forest management between the Forest Departments and the local communities. In addition, alternative resource use and income-generating activities had been successfully promoted. However, the forest management plans and the collaborative forest management agreements were not approved and signed by Forest Departments/ Government by the project end, and there was not an effective monitoring system to measure regeneration of key natural resource species or livelihood improvements. **As a result, the study team assessed the overall achievement of this outcome as: PARTIALLY ACHIEVED (3)**

Logframe assessment for the strengthening of protection and management of endangered wildlife (Outcome 2)

Indicators	Quantitative/ qualitative assessment		Source
Output 2.1: *Participatory biodiversity management plans approved and implemented*		**3**	
Forest Management Plans	Final drafts of Minziro and Sango-Bay Forest Management Plans developed in 2003, which, although approved by the communities, were not endorsed by the Forest Departments/ Government. Boundary beacons and trenches marking the entire forest boundary, although only sections of boundary marked with live markers	3	TE, field visit
Output 2.2: *Alternative resources use and income generating practices adopted*		**3**	
Adoption of alternative resource uses/ IGAs	The main alternative resource use adopted around Sango Bay and Minziro was improved stoves, which was reported to be widespread. Other activities identified and introduced by development NGOs included tree nurseries, alternative energy technologies (e.g. biogas), agroforestry, cloned coffee growing and beekeeping. However, level of adoption not clear.	4	LL, TE, field visit
Linkage to conservation	Uncertainty regarding the extent to which these activities had reduced forest resource use and the impact on forestry biodiversity was not clear	2	LL, TE
Outcome 2. Resource demands brought into balance with supply at key sites		**3**	
Regeneration of key natural resource species and sustainability of use/ extraction of key natural resources	Forest Management plans containing frameworks for regulated use of key resources established and approved by communities, but not by Forest Departments/ Government. There is anecdotal evidence on improved regeneration in the forest areas, but this was not measured, nor was the livelihood impact of alternative uses/ IGAs measured. Use of natural resources is under the collaborative forest management agreements, with participatory regulatory mechanisms established, but these were not signed by project end.	3	TE, field visit

Outcomes-Impacts Analysis

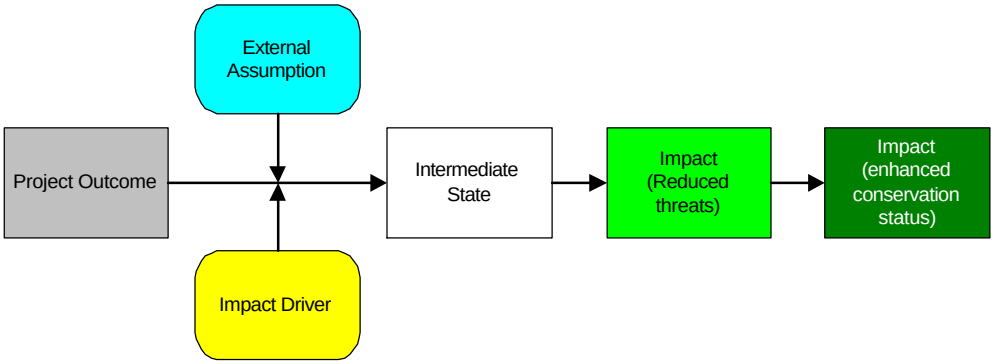
The extent to which project outcomes have been converted to impacts is assessed by an Outcomes-Impacts Analysis, which forms the second part of the Impact Evaluation Framework. As identified in the Project Logframe Analysis above, the project had two major out-comes:

- Outcome 1: An enabling environment developed which supports the sustainable use of biodiversity
- Outcome 2: Resource demands brought into balance with supply at key sites

Both of these outcomes were assessed to have been partially to well achieved at the end of the project. The following sections examine how the two outcomes have led to impacts.

The analysis draws on the project terminal evaluation, post project studies[2] and a field visit undertaken by CDC to Sango Bay Forest in Uganda and Minziro Forest in Tanzania, which included discussions with the government agencies with responsibility for the forests in Kampala and Bukoba respectively (see Annex 1 below for a list of people/ groups met).

The Theory of Change models developed for the Outcomes used the following key for the different coloured/ shaped boxes:

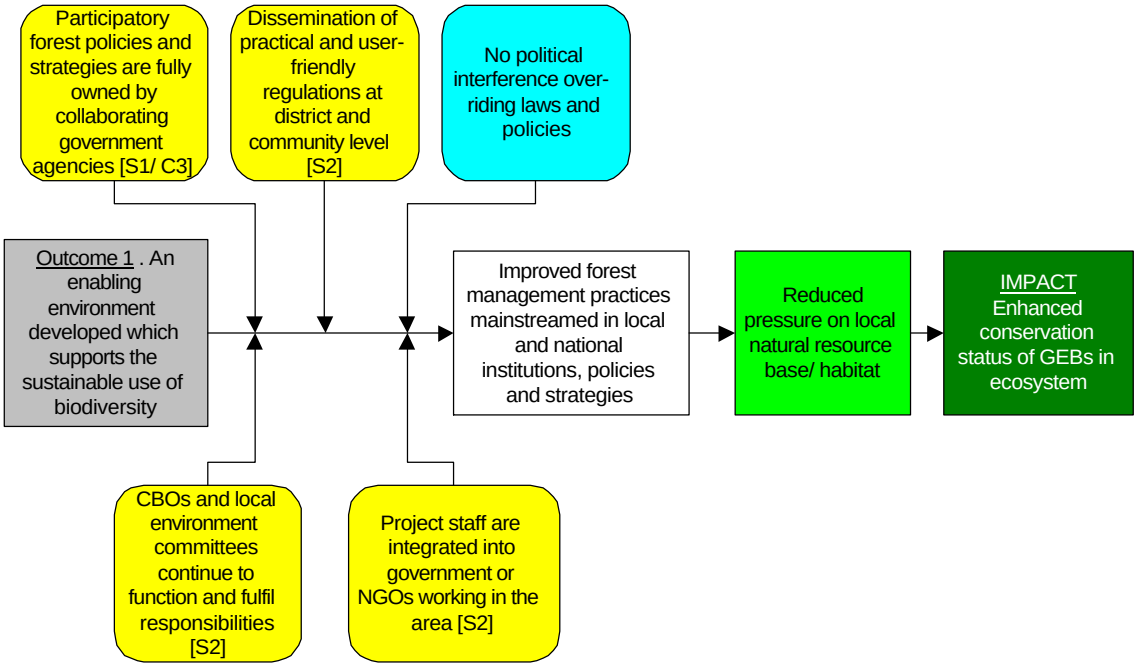


Outcome 1: An enabling environment developed which supports the sustainable use of biodiversity

As discussed in section 2.1, the overall logframe assessment of the development of an enabling environment indicates that this outcome was *well achieved*. The theory of change model for linking Outcome 1 to the intended impact of enhanced conservation status of the ecosystem is illustrated in Figure 3 below.

[2] Main references: Rodgers (2004). *Delivering Significant "Impact" on Forest Biodiversity*, and Nabanyumya & Mupada (2004). *Lessons learned from the Cross Border Biodiversity Project Uganda.*

Cross Borders TOC Model for Outcome 1



The rationale for the TOC model is that the project outcome, *"An enabling environment developed which supports the sustainable use of biodiversity"* will realise impact provided that the Intermediate State "*Improved forest management practices mainstreamed in local and national institutions, policies and strategies"* is achieved. That is, the achievement of this intermediate state will ensure that the mainstreaming of forest management practices will lead to the achievement of the intended impact, i.e. *a reduced pressure on the natural resource base*. The achievement of this intermediate state depends on a variety of factors, including four impact drivers and one external assumption.

The rationale and assessment of the impact drivers are described in the following section, followed by an assessment of the evidence that the intermediate state has actually been achieved. The detailed qualitative and quantitative analysis for the achievement of Outcome 1 to Impact is provided in Table 4 at the end of this section.

Achievement of impact drivers

Participatory forest policies and strategies are fully owned by collaborating government agencies (Socio-political and Mainstreaming Impact Driver).

A central thrust of this project was to build the capacity of government agencies to sustainably manage forest resources in a collaborative and inclusive manner. Therefore, this driver is a key factor contributing to the achievement of the mainstreaming objective and the ultimate impact. The Sango Bay and Minziro Forests provided contrasting levels of ownership from the respective government agencies, as described below.

For the Sango Bay Forest Reserve in Uganda, there were clear indications that the government agency had ownership and commitment to implementing the participatory forest policies and the Sango Bay management plan, despite a difficult transition within Uganda's forestry sector. The closure of the GEF project in 2003 coincided with the restructuring of the

Forest Department, which resulted in the formation of the National Forest Authority (in charge of all Central Forest Reserves), the District Forestry Services (in charge of other forest reserves) and the Forestry Inspection Division. As the National Forest Authority (NFA) did not retain the former district-level staff from the original Forest Department, the process of recruiting new staff led to a six-month vacuum (August 2003 – April 2004) in the management of many central forests reserves (*pers comm*. NEMA Executive Director). However, the Sango Bay Sector Manager, hired in April 2004, had been a trainee under the Cross Borders project (supported by the European Union-funded Uganda Forest Resources Management and Conservation Programme (2002 - 2006)) and took a proactive role in revitalising and facilitating the collaborative forest management institutions and activities initiated by the Cross Borders Project. NFA head office also allocated a limited annual budget for Sango Bay collaborative forest management activities of between 15 and 18 million Ugandan shillings (between US$7,500 and US$10,000) for the financial years 2004/5 and 2005/6. However, the budget was halved for the financial year 2006/7 due to political difficulties facing the NFA at the national level (see External Assumption in Table 4 below). The management plan is being implemented by NFA as far as resources allow, but the relevant Minister still has not approved the plan.

Tanzania is considered a leader in Participatory Forest Management in Africa, with a national survey undertaken in 2006 estimating 209 forest reserves (about 1.6 million hectares) in Tanzania are under joint forest management, representing over 10% of all central or local government reserves[3]. However, for the Minziro Forest Reserve, perhaps in part due to its isolation and distance from Dar es Salaam, the collaborating government agency, the Forest Department, does not appear to have ownership towards the implementation of the *Minziro Forest Participatory Management Plan* (2003-2007). The District Forest Officers on the ground state that they are still waiting for the management plan to be approved by the Forest and Beekeeping Division in Dar es Salaam, and that they lack the financial resources to implement the management plan activities. So, until the management plan is approved and resources mobilised, it seems highly unlikely that the plan will be implemented. The study team's assessment for the achievement of this driver was therefore: **PARTIALLY ACHIEVED (3)**

Dissemination of practical and user-friendly regulations at district and community level (Institutional Impact Driver).

Although the project contributed to the development of new participatory policy and legislation in Tanzania and Uganda, it is important that the end users (e.g. district-level government agencies and communities) clearly understand the policy and have guidelines and a framework for practical implementation. If such guidance is not provided, it is unlikely that the policies will be rolled-out or mainstreamed at the local level. Although this driver was not addressed by the project, subsequent activities by other projects and organisations have made a start to developing user-friendly guidelines. For Sango Bay Forest, a follow-up EU-funded programme, "*Empowering Civil Society for Participatory Forest Management in East Africa*" (EMPAFORM) was established with the objective of supporting "second level" Community Based Organisations with responsibility for facilitating grassroots initiatives in forestry management, such as the CFM community based organisations established by the Cross Borders project. Although a simplified version of the CFM guidelines has already been

[3] The Arc Journal Issue 21 (September 2007). Newsletter of the Tanzania Forest Conservation Group

developed in English, EMPAFORM is supporting the translation of these simplified guidelines, along with the Sango Bay CFM agreements/ plans, into the local language, so that they can be widely read and understood. At Minziro Forest, there was no evidence of practical guidelines being available or being used at the District Forest Offices or in the communities. The study team's assessment for the achievement of this driver was therefore: **POORLY ACHIEVED (2).**

Community based organisations (CBOs) and local environment committees continue to function and fulfil responsibilities (Institutional Impact Driver).

Collaborative management between forest authorities and communities requires a basic requirement for functioning community institutions to represent and coordinate the community activities. The establishment and strengthening of these institutions was a major focus of the project. However, during the site visit to Sango Bay and Minziro Forests, it became apparent that the Local/ Village Environment Committees supported by the project had ceased to function following the project's close. However, the collaborative forest management CBOs established proved to be institutionally more sustainable and have in fact grown in size and capacity. The three pilot collaborative forest management CBOs around Sango Bay Forest have subsequently established good relationships with the NFA and have signed collaborative forest management agreements and undertake joint patrols and maintenance of the boundary. In addition, the NFA are using the three pilot CBOs as a model for scaling-up collaborative forest management in other communities around Sango Bay Forest. As of July 2007, the Sango Bay NFA Sector Manager had received eight community applications requesting support to establish CBOs. The box below describes in more detail the development of the Sango Bay pilot CBOs established by the project.

Progress with Sango Bay Collaborative Forest Management CBOs

Membership has increased
- Kigazi CBO: 40 to 63
- Nkalwe CBO: 52 to 73
- Mugamba-Mujanjabula CBO: 57 to 150

CFM Agreements signed with NFA in November 2005
- The agreements provide an action plan with objectives, regulations/ penalties, responsibilities and returns for joint management of specified compartment of the forest reserve

Successful fundraising capacity
- Each CBO established a bank account and members pay monthly subscription (500 Tanzania shillings)
- Each CBO has accessed micro-grants from the GEF-supported Nile Basin Initiative ($25,000 each)
- Village Forest Management Committees (executive of the CBO) authorise/ monitor harvesting of resources

The *Gugumaji* CBO established by the project around Minziro Forest is also functioning (currently it has 17 members), undertaking a basket-making enterprise and running a tree nursery. This CBO is provided limited support from the District Forest Department and has received support from the Kagera Region Natural Resources Advisor to access further

funding from the GEF Nile Basin Initiative. The Nile Basin Initiative grant has supported Gugumaji CBO and, the more recently formed Minziro CBO, to re-establish community tree nurseries initiated during the Cross Borders project. However, all the pilot CBOs are still dependent on external support and, without the active initiative by NFA, the EMPAFORM Programme, and the Kagera Regional Office to support these institutions, it is very unlikely that they would still be functioning today. The study team's assessment for the achievement of this driver was therefore: **PARTIALLY ACHIEVED (3).**

Project staff are integrated into government or NGOs working in the area (Institutional Impact Driver).

Having the staffing capacity after project completion for ensuring continuation of activities and scaling-up is essential to realising ultimate impact. If the project staff were to all leave for new positions outside the scope of the project, then the institutional knowledge would be lost and it would be highly unlikely that the continuation and mainstreaming of improved and collaborative forest management would take place. At Sango Bay and Minziro Forest the senior project staff have all left the project area. In Uganda, the project managers have since gone to work for other NGOs, whilst in Tanzania the project managers were relocated to other regions within the government system. As a result, much of the institutional knowledge and expertise has indeed been lost and the current promoters of collaborative forest management in Sango Bay-Minziro were not participating in the Cross Borders Project. The only continuation was provided by a trainee under the EU-funded Forest Resource Management and Conservation Programme, who received training by the Cross Borders project during the last year of the project and went on to become the current Sango Bay Sector Manager for NFA. That said, a number of project staff have remained within the environmental management sector, for example, the Uganda Programme Manager is now manager of the EU EMPAFORM Programme, which is supporting secondary level CBOs in the Sango Bay area. In addition, the project did build capacity at the national level with a cadre of staff who have gone on to more senior positions in universities and government (*pers. comm.*, NEMA Executive Director). The study team's assessment for the achievement of this driver was therefore: **POORLY ACHIEVED (2).**

Achievement of intermediate state and impact

The assessment of impact drivers and external assumptions presented in the previous section and in the table below suggests that there is only partial evidence that the conditions were in place for the delivery of the intermediate state identified in the TOC model for Outcome 1. The next stage is to assess what evidence exists that the intermediate state was actually achieved, which then enables conclusions to be drawn from the TOC model about the ultimate achievement of impact from Outcome 1. This is discussed below.

Intermediate State: Improved forest management practices mainstreamed in local and national institutions, policies and strategies

The study team's assessment of the achievement of this intermediate state was that for the case of Sango Bay-Minziro Forests, a good enabling policy and legislative environment has been created, but that this has only partially resulted into improved management practices on the ground. At the community level, the establishment of community-based organisations has provided an effective and reasonably sustainable community institution for collaborative forest management. However, the effectiveness of collaborative forest management was very

much dependent on the government agencies taking the lead after project closure. In Uganda, the NFA had financial resources and support from its headquarters to take on this leadership role. However, in Tanzania, the District Forest Department lacked the resources and support to implement the collaborative forest management. Consequently, the study team's overall assessment for the achievement of this intermediate state is: **PARTIALLY ACHIEVED (3)**.

In conclusion, the Outcomes-Impacts TOC model approach for assessing impact from Outcome 1 suggests that although there was good buy-in for collaborative forest management at the national level and at the community level, with a strong enabling policy environment, there was insufficient capacity and buy-in from the government agencies to ensure that the necessary conditions were in place to fully deliver the intended impact.

Outcome 1 - Impact TOC assessment

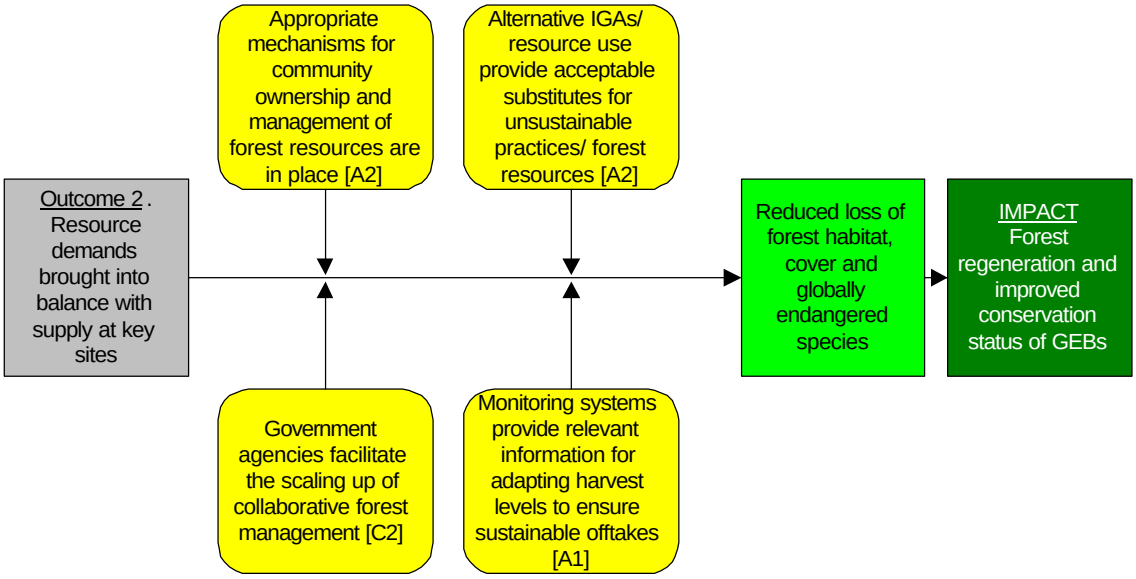
Indicators	Quantitative/ qualitative assessment		Source
Impact Driver 1: *Participatory forest policies and strategies are fully owned by collaborating government agencies [S1/C3]*		**3**	
Financial and technical support	In Uganda, the National Forest Authority (NFA) has shown commitment to implement CFM and the management plan at Sango Bay Forest Reserve, although the extent of plan implementation is limited by funding. Also, NFA activities are not integrated with the District Forestry Services, who are not active. In both Uganda and Tanzania the District level administration has not taken on any of the project activities due to lack of resources for mobilisation.	3	Field visit 2007
Impact Driver 2: *Dissemination of practical and user-friendly regulations at district and community level [S2]*		**2**	
Development of guidelines	A simplified version of the forest policy has been produced in Uganda, although the level of dissemination is less clear. A major problem identified in Sango Bay was that the policies and even the community collaborative forest management agreements are in English, which the majority of the community don't read. The EMPAFORM project is proposing to translate these documents into the local language. At Minziro Forest there was no evidence for the dissemination of policies and guidelines, which in part reflects the lack of implementation of the management plan.	2	Field visit 2007
Impact Driver 3: *Community based organisations (CBOs) and local environment committees continue to function and fulfil responsibilities [S2]*		**3**	
Environment Committees and Collaborative Forest Management CBOs	The Local/ Village Environment Committees (part of local government) that were established/ strengthened at Sango Bay and Minziro have ceased to function following the end of the Cross Borders support. However, the Collaborative Forest Management CBOs established in forest adjacent communities are still active and accessing new donor funding (3 in Uganda and 1 in Tanzania). The CBOs still lack sufficient capacity to function independently, relying on support from NFA/ EMPAFORM (Uganda) and Kagera Regional Office (Tanzania).	3	Field visit 2007
Impact Driver 4: *Project staff are integrated into government or NGOs working in the area [S2]*		**2**	
Staffing levels	In Uganda, all the project staff left. The only person to stay was a junior trainee who subsequently became the. Sango Bay NFA Sector Manager. The Uganda Project Manager continues to have an interest in Sango Bay, as he is the current EMPAFORM Programme Manager. In Tanzania, field staff have also moved onto other positions outside the project area, leaving only the District Forest Officers behind	2	Field visit 2007
External Assumption 1: *No political interference over-riding laws and policies*		**3**	
Political interference	There have been no local level political interferences at Sango Bay-Minziro Forest. However, the capacity of the National Forest Authority to manage the Central Forest Reserves has been negatively impacted by the Presidential authorisation of the degazettement of Mabira and other key Central Forest Reserves, which resulted in the withdrawal of donor funding and the resignation of senior staff at the start of 2007. In Tanzania, the ban on the use of timber has recently been lifted nation wide, which has led to the resumption of timber harvesting at Minziro Forest Reserve, but with harvesting plans that are not based on up-to-date information	3	Field visit 2007

Indicators	Quantitative/ qualitative assessment		Source
Intermediate State 1: *Improved forest management practices mainstreamed in local and national institutions, policies and strategies*		**3**	
Community level	Successful establishment and registration of CFM CBOs that are empowered to directly fundraise for conservation and development activities. Sango Bay has become know as "*The University of Sango Bay for Collaborative Forest Management*", with at least one study visit every two months. However, local/ village environment committees have ceased to function after project completion	3	Field visit 2007
District level	Forest Department (Tanzania)/ District Forest Services (Uganda) are struggling to function effectively due to lack of budget allocations, and have not continued the activities initiated under the project	2	Field visit 2007
National level	Participatory forest management is now widely accepted as best practice in Uganda and Tanzania, which is reflected in the enabling policy and legislation enacted. The NFA (Uganda) has an annual budget for supporting CFM at Sango Bay (~$10,000) and resources to implement the Management Plan. However, The Forest and Beekeeping Division (Tanzania) have not endorsed Minziro Management Plan, which has meant that the Bukoba District Forest Department have not implemented the plan or other collaborative forest management activities	3	Field visit 2007
Achievement of Impact: reduced pressure on local natural resource base		**3**	

Outcome 2: Resource demands brought into balance with supply at key sites

As discussed in section 2.2, the overall logframe assessment of the development of an enabling environment indicates that this outcome was *partially achieved*. The theory of change model for linking Outcome 2 to the intended impact of enhanced conservation status of the ecosystem is illustrated in Figure 4 below.

Cross Borders TOC Model for Outcome 2



The rationale for the TOC model is that if the project outcome, "*Resource demands brought into balance with supply at key sites"* is achieved it will directly lead to impact without the need for an intermediate state. This is due to the fact that this outcome deals directly with the sustainable use and reduction of threats to the global environment benefits, i.e. *a reduced loss of forest habitat, cover and globally endangered species*. However, the achievement of this impact does depend on a variety of factors, namely four impact drivers.

The rationale and assessment of the impact drivers are described in the following section, followed by conclusions from the TOC model about the ultimate achievement of impact. The detailed qualitative and quantitative analysis for the achievement of Impact from Outcome 2 is provided in Table 5 at the end of this section.

Achievement of impact drivers

Appropriate mechanisms for community ownership and management of forest resources are in place (Socio-economic Impact Driver).

An underlying rationale behind collaborative forest management is that the benefits captured locally from the forest (goods and services) combined with the gain in power over their local natural resources should create sufficient incentives to motivate communities to collaborate actively in the protection and management of local forest resources and to refrain from illegal activities within the protected area (Meshack & Raben, 2007). This driver is specifically concerned with ensuring that the local communities have the necessary ownership to be sufficiently empowered to manage the forest resources. The principal mechanism for

achieving this is through legal agreements with the forest authorities that clearly lay out rights and responsibilities of both parties.

For Sango Bay Forest, the sense of community ownership was confirmed towards the end of project implementation when "*in early 2002 the local committee found a large "army" group cutting timber with chain saws. Villagers demanded that authorities get these illegal loggers out of the forest. They were arrested*" (UNDP/ GEF, 2003). Since project closure, CFM Arrangement Agreements were signed between the National Forest Authority and the three pilot collaborative forest management CBOs in November 2005. These agreements built on the Sango Bay Forest Management Plan and contain a specific collaborative forest management plan for the related forest block, which sets out the objectives and nature of collaboration, a zoning scheme for use and non-use and an implementation matrix of activities identifying associated 'Agreed Regulations', 'Penalties for offences', 'Roles and Responsibilities' and 'Rights and Benefits'. However, it was not possible during the field visit to gauge the extent to which the action plans have been implemented, in part because the systematic *participatory monitoring plan* that was scheduled for development during the first year of the CFM agreement has not yet been initiated.

For the Minziro Forest, no collaborative forest management agreements have been developed or signed between the Forest Department and the surrounding communities, which has meant that the communities lack the necessary ownership to take the lead in forest conservation. The study team's overall assessment for the achievement of this driver was therefore: **PARTIALLY ACHIEVED (3).**

Alternative IGAs/ resource use provide acceptable substitutes for unsustainable practices/ forest resources (Socio-economic Impact Driver).

A major focus of the project has been to address the threats to forest conservation posed by the subsistence needs of the local communities. The rationale seems to be that if acceptable and economically-competitive alternatives can be provided to unsustainable use of forest resources, then local communities will continue to support the conservation of the forests.

The promotion of woodlots and improved stoves, initiated by the project, has been reported to reduce the need for firewood collection; however, there are no direct measures to back this up and the reduction in forest resource use seems to be dependent on the location. For example, at Minziro Ward in Tanzania, 816 improved stoves were provided by the project, which has subsequently led to wide-scale replication leading to, it is said, 2,200 stoves in the Ward, which has reportedly led to a one-third reduction in fuelwood demand. However, in discussion with the Mugamba-Mujanjabula CBO bordering Sango Bay Forest, all but two of the improved stoves were said to have broken and there had been no replication, implying that firewood is still collected from the forest.

In addition, there is only limited evidence that the alternative resource uses/ IGAs have provided any substantial economic returns to the CBOs, except for Gugumaji CBO bordering Minziro Forest, which has limited returns from its basket-making enterprise. Generally, communities interviewed around Sango Bay forest during the 2007 field visit did not see themselves better off in the short term, but were hoping that the collaborative forest management agreements and practices would lead to better long term prospects (especially from woodlots and beekeeping). Community confidence in the benefits that CFM may ultimately provide was bolstered by one CBO member who sold a three-year old woodlot of 0.75ha for over $1,000.

However, the study team felt that addressing the subsistence needs of local communities was not sufficient to address all the threats to the forest. Firstly, there is the threat from other non-resident communities, such as the transboundary pastoralists, who occasionally seek refuge and grazing land in the forest reserve following expulsion from other areas. Secondly, there is the threat from commercial interests and the pressure to convert the forest reserves into other more profitable land uses. This threat is very real in Uganda and Tanzania. In Uganda, the President's authorisation was given in 2007 to convert parts of Mabira Forest Reserve into a sugar plantation, although this authorisation is being challenged by civil society. In Tanzania, the threat from commercial interests has re-emerged following the lifting of the logging ban in Minziro Forest at the end of 2006, and the current outdated harvesting plans being used to undertake logging. These commercial and external threats to the forests will in part be addressed if there were a high level of local community ownership and interest in the protection of the forests (as addressed under the previous impact driver). The study team's overall assessment for the achievement of this driver was therefore: **POORLY ACHIEVED (2).**

Government agencies facilitate the scaling up of collaborative forest management (Replication Impact Driver).

The rationale of the project was that the concerned government agencies would take over from the project in facilitating collaborative forest management. However, in reality, most activities stopped at the close of the project, as neither the Forest Department at Minziro nor the recently formed National Forest Authority at Sango Bay were in a position to take on this facilitation role.

At Sango Bay Forest, it took six months for the NFA Sector Manager to be recruited and then it took additional time for NFA to gain the trust and cooperation of the initial pilot CBOs, in part because NFA did not provide the same level of resources and financial incentives that the Cross Borders project provided. However, after a period of a year, the NFA had developed a good working relationship with the existing three pilot CBOs (as attested by the signing of CFM Agreements in November 2005), and more recently, NFA has been working with eight additional communities bordering Sango Bay Forest Reserve to replicate the collaborative forest management model, with the aim of forming new CBOs. In addition to the encouraging signs of replication, the experience at Sango Bay is also being regarded as a model for Collaborative Forest Management in Uganda and hosts at least one visit every two months to learn from the so-called "*University of Sango Bay for CFM*" (*pers comm.* NFA Sector Manager).

In Tanzania, the Kagera Region Natural Resource Advisor is supporting the pilot CBO, Gugumaji, but there is no scaling up taking place regarding CFM, due to the under-resourced District Forest Department and the lack of an endorsed management plan. The study team's assessment for the achievement of this driver was therefore: **PARTIALLY ACHIEVED (3).**

Monitoring systems provide relevant information for adapting harvest levels to ensure sustainable offtakes (Environmental Impact Driver).

Effective monitoring is essential for collaborative forest management and ensuring that resource demand is kept inline with supply. The project introduced a Threat Reduction Assessment, which is a useful management tool for tracking impacts of collaborative forest management and resource use on threats to the forest. Because the technique relies on subjective assessments, it is relatively easy for communities to engage in (Ball, 2007).

However, despite its potential, this monitoring technique has not been adopted by NFA at Sango Bay or by the District Forest Department at Minziro. Instead non-timber resource extraction from the forest is self-regulated by the communities. At Sango Bay Forest, the forestry staff (only three full-time rangers) do record basic information from their patrols, which are included in the monthly reports sent to Kampala, but no analysis is undertaken on this dataset to inform forest management. There are plans at NFA to initiate diagnostic sampling at Sango Bay, which would be undertaken every three years, and would provide a measure of how forest biodiversity is changing over time. However, currently there is no data/ analysis available to measure how forest biodiversity or livelihoods have changed (*pers. comm*. NFA Sector Manager). At Minziro Forest, the need for good monitoring is especially important since the lifting of the logging ban in 2006. However, detailed stocktaking and harvesting plans have not yet been put in place.

The study team's assessment for the achievement of this driver was therefore: **NOT ACHIEVED (1).**

Achievement of impact

The assessment of impact drivers in the previous section and in the table below suggests that there is limited evidence that the conditions were met for the delivery of the ultimate achievement of impact from Outcome 2. In conclusion, it seems that the mechanisms established by the project have not yet matured sufficiently to realise the intended impact. There is limited evidence that the alternative uses/ IGAs are being replicated and the lack of monitoring makes is difficult to assess whether these alternatives are in fact reducing pressure on the forest resources.

Outcome 2 - Impact TOC assessment

Indicators	Quantitative/ qualitative assessment		Source
Impact Driver 1: *Appropriate mechanisms for community ownership and management of forest resources are in place [A2]*		**3**	
CFM agreements	Community Forest Management Arrangement Agreements signed between NFA and the three pilot CBOs around Sango Bay Forest Reserve. Although, it unclear the extent to which the associated action plan is being implemented. At Minziro Forest no CFM agreements have been developed	3	Field visit 2007
Impact Driver 2: *Alternative IGAs/ resource use provide acceptable substitutes for unsustainable practices/ forest resources [A2]*		**2**	
Reduced forest use	The promotion of woodlots and improved stoves has been reported to reduce the need for firewood collection, although this seems dependent on location. Other forest resource uses have not substantially changed	3	Field visit 2007
Sufficient economic returns	None of the CBOs are realising any substantial returns at present, except for Gugumaji CBO bordering Minziro Forest, which has limited returns from its basket making enterprise. Generally, communities interviewed did not see themselves better off in the short term, but were hoping that CFM would lead to better long term prospects (from woodlots and beekeeping)	2	Field visit 2007
Targeting all threats	Commercial interests are not being directly addressed. In 2007 timber harvesting restarted in Minziro Forest. Also, the threat from non-resident communities such as the cross border pastoralists seeking refuge in the grassland sections for Sango Bay Forest Reserve is not addressed	2	Field visit 2007
Impact Driver 3: *Government agencies facilitate the scaling up of collaborative forest management [C2]*		**3**	
Scaling up	Most activities stopped at the close of project, as they relied on project technical support and funding. NFA subsequently took over support for the three pilot collaborative forest management CBOs at Sango Bay and is now working with a further eight new communities to replicate these pilots. In addition, there are regular visits from outside to the so-called "*University of Sango Bay for CFM*" (more than one visit/ two months). In Tanzania, Kagera Region Natural Resource Advisor is supporting the pilot CBO, Gugumaji, but there is no scaling up taking place regarding CFM, due to the under-resourced District Forest Department	3	Field visit 2007
Impact Driver 4: *Monitoring systems provide relevant information for adapting harvest levels to ensure sustainable offtakes [A1]*		**1**	
Monitoring systems	No systematic forest resource assessments or monitoring systems are in place. The Threat Reduction Assessment carried out by the project has not been repeated, nor has the methodology been adopted by the Forest Department/ NFA in Minziro/ Sango Bay. Since the logging ban has been lifted in Minziro, there is a need for harvesting levels to be conditional on detailed stocktaking and harvesting plans, which have not yet been undertaken.	1	Field visit 2007
Achievement of Impact: reduced loss of forest habitat, cover and globally endangered species		**2**	

Targets-Threats Analysis

The third and final component of the Impact Evaluation Framework – the Targets-Threats Analysis – seeks to provide a direct measure of the project impacts. As far as possible this analysis assesses the status of the biodiversity values that the project has identified (section 4.2) and secondly, assesses the changes in the threat levels impacting on these biodiversity values (section 4.3).

This analysis was based on the project documentation, in particular *Delivering Significant "Impact" on Forest Biodiversity'* (Rodgers, 2004) and *Threat Reduction Assessment Report* (Mupada & Nabanyumya, 2003), as well as discussions with local experts and communities during the field visit in July 2007.

Identification of GEBs, Key Ecological Attributes and threats

This study has based the identification of the global environmental benefits (GEBs) on the project documentation. The first GEB identified in the project documentation is the entire Sango Bay-Minziro forest-grassland system, which covers an area of around 850km² in the river Kagera flood plain and represents a unique assemblage of species from west, central and eastern Africa (montane, medium altitude and lowland forests). The remaining GEBs relate to individual species, which are of specific global conservation concern. The eight GEBs identified are listed in the box below, along with the internationally agreed conservation status for the species-level GEBs.

1. Evergreen swamp forest-grassland system		System
2. *Afrocarpus dawei* (coniferous timber tree)	Endemic	Species
3. *Pseudagrostachys ugandensis* (shrub)	Near Endemic	
4. *Coffea canephora* (shrub)	Globally Rare	
5. Blue swallow (bird)	Globally Endangered	
6. Forest francolin (bird)	Restricted Range	
7. Grey-cheeked mangabey (primate)	Only site in Tanzania	
8. Thomas' galago (primate)	Only site in Tanzania	

The project did not identify nor monitor specific Key Ecological Attributes for these global environmental benefits, although for the first system-level GEB, the study team has identified three important key ecological attributes. Regarding the threats to these GEBs, the project identified the four major threats to the forests, which are discussed in section 4.3 below.

Assessment of achievement of GEBs

The assessment of the GEBs is primarily based on the project's Resource Monitoring and Evaluation, which sought to measure forest area, forest cover and forest species components. Unfortunately, the participatory biodiversity monitoring and evaluation framework for Sango Bay (UNDP/GEF – MUIENR, 2001) did not identify indicators for the species-level GEBs, instead choosing to monitor species that were legitimately used by local communities (e.g. medicine, food plants, sources of income, etc.), problem animals, or indicators of environmental change. Although this theoretically will provide information on the rate of biodiversity loss, it did not relate to the species of global conservation concern identified in the project documentation. As a result, this assessment is based on expert surveys and

observations carried out by project staff and consultants. Since the project closure, there have been no identified surveying or monitoring of the Sango Bay-Minziro GEBs. A summary table of this assessment is provided in Table 6 at the end of the section.

Evergreen swamp forest-grassland system

The first global environmental benefit identified for Sango Bay-Minziro was the entire forest-grassland system, which represents a unique community assemblage.

The first key ecological attribute, ***forest-grassland size and extent***, seems to have remained constant and there have been no reported incidences of degazettement or encroachment. This KEA was further secured by two actions initiated by the project. Firstly, by upgrading 6,000 hectares of Minziro Forest Reserve (32% of forest area) and 12,000 hectares of Sango Bay Forest Reserve (30% of forest area) to strict Forest Nature Reserve status (Rodgers, 2004). Secondly, through the participatory process to re-establish and agree the forest boundaries and to clearly demarcate the boundary with beacons and trenches (and in places with live marker trees). Therefore, the assessment of the conservation status of this KEA is **STABLE**.

Although there was no project data collected for the other two Key Ecological Attributes, the study team were provided a very rough assessment of the last KEA, ***forest regeneration processes***, by UNEP Division of Early Warning and Assessment from a quick assessment of available satellite images (August 2007). The assessment indicated that although Sango Bay-Minziro forests appeared to have been affected by fire, there appeared to be visible regeneration of vegetation in previously bare patches. This finding was also supported by the consultations undertaken during the 2007 field visit, in which both local communities and the Sango Bay NFA Sector Manager stated that there had been regeneration of certain forest patches (although these have not been quantified). Therefore, based on this information the tentative assessment of the conservation status of this KEA is **INCREASING**.

The overall assessment is that the conservation status of Evergreen swamp forest-grassland is **STABLE**.

Species of global conservation concern

Three plant species and two bird species contained within the Sango Bay-Minziro forests were identified at the outset of the project as of global conservation importance and two additional primate species were identified towards the end of the project in 2003. The status of these species was assessed as either “not being lost” or “being lost” as defined below (Rodgers, 2004):

- “Not being lost”: the species can be demonstrated to have a population which was widespread or locally abundant in the relevant habitat at that site, and that the population was regenerating or reproducing (where relevant).
- “Being lost”: the species could be shown to be localised and rare with no regeneration in the relevant habitat.

The end of project report summarising impact on forest biodiversity (Rodgers 2004), stated that there were widespread or locally abundant populations of all the targeted species of conservation concern, i.e. “not being lost”. However, the methodology for this assessment was not clear to the study team and the project documentation did not provide information on trends or link the conservation status to project interventions. At best, the data provides a baseline for future monitoring. Since the project end, the study team is not aware of any

follow-up studies or monitoring, so this assessment only relates to the status of these species at the project close at the end of 2003. As a result of this lack of time series data, it was not possible to assess the trend in the conservation status for the species-level GEBs. A summary of the baseline provided for the species of conservation concern is provided below.

Afrocarpus dawei, Pseudagrostachys ugandensis and Coffea canephora

Three plant species were identified of specific conservation concern due to their global importance, and the project assessment of their occurrence is given below.

Afrocarpus dawei, a coniferous timber tree, which is endemic to Sango Bay-Minziro forests. At the end of the project, this tree was present at two sites out of ten in Minziro forest and was present at 39% of sites in Sango Bay forest. Its status at the end of the project was considered to be 'widespread and recovering' (Rodgers, 2004). However, the study team did not get a sense of whether this status was an improvement on the pre-project level, nor what the post-project trend was. Indications from consultations with the forest authorities and communities was that during the year after the project ended, there was an increase in illegal harvesting of timber, although once the NFA became established in mid 2004, the illegal harvesting level dropped again.

The other two plant species of specific global conservation value were shrubs. Firstly, *Coffea canephora* or wild coffee, which is considered Globally Rare and found in several locations in both Minziro and Sango Bay forests (Rodgers 2004). Secondly, *Pseudogrostachys ugandensis* is classified as Near Endemic, and was assessed by the project to be widespread and regenerating within Sango Bay forest, although not present within Minziro forest (Rodgers 2004). It was unclear to the study team the basis of these assessments.

Blue swallow and Forest francolin

Sango Bay-Minziro forests contain significant numbers of Guinea-Congo biome restricted bird species and both forests have been classified as an Important Bird Area due to the presence of globally threatened species (i.e. Blue swallow). Independent surveys were commissioned by the project in Sango Bay between 2000 and 2001 (Pomeroy, 2001) and in Minziro over a 12-day period in July/August 2000 (Baker, 2001). The purpose of these surveys was to provide baseline data of the avifauna of Sango Bay-Minziro and their associated habitats. The Minziro forest bird survey provided specific counts for the two identified species as described below.

The Forest francolin (*Francolinus lathami*) is classified as having a Restricted Range and Minziro forest is the only site it is found in Tanzania (it is also not present in Sango Bay forest). Several sightings were made between 100 and 200 metres into the Minziro forest, the largest group being five individuals (Baker, 2001).

The Blue swallow (*Hirundo atrocaerulea*) is classified by IUCN as Globally Endangered and is an intra-African migrant that winters in lowland areas such as Minziro and Sango Bay forests. In 1987, less than 20 individual were recorded during an 18-day survey of Minziro forest (Baker & Hirslund, 1987) and during the subsequent 12-day survey of 2000, four individuals were recorded (Baker, 2001). Although these numbers are low, this would indicate that the grassland in and around Minziro Forest represents an important habitat for this declining species, whose conservation status was raised in 2001 from vulnerable (10% chance of extinction in 100 years) to endangered (20% chance of extinction in 100 years) due to the continued destruction of both its breeding and wintering habitats.

The Sango Bay survey report did not specifically identify the Blue swallow (and Forest francolin is not identified for Sango Bay), but it did measure bird species numbers and total species counts at various sites, which had previously been measured in 1994 (Kasoma & Pomeroy, 1996). Although the dataset was too small for statistical analysis, the overall trend between 1994 and 2001 was an overall decline in forest bird and grassland bird species (Pomeroy, 2001). However, the Sango Bay Management Plan (2003) cited an inventory of Blue swallows in Uganda, which recorded 232 individuals in the Sango Bay area (no date of survey given).

Changes in conservation status levels before and after the GEF support

Key Ecological Attribute/ Species	Indicator	Conservation Status			Trend	Data Source
		Baseline	Project end	Now		
GEB: Evergreen swamp forest-grassland						
Forest-grassland size and extent	Incidences of degazettment or encroachment	No degazettment or encroachment recorded, assisted by participatory exercise to re-establish and demarcate boundaries			⇔	Rodgers (2004)
Canopy cover	No directly measured				-	-
Forest regeneration processes	Vegetation changes in forest gaps	Minziro forest affected considerably by fire. Visible regeneration of vegetation in previously bare patches			↑	UNEP Division of Early Warning and Assessment, August 2007 (quick assessment of available satellite images)
		Sango Bay forest affected by fire activity in both time periods. Regeneration observable			↑	
GEBs: Species of conservation concern						
Afrocarpus dawei, Pseudagrostachys ugandaensis, Coffea canephora	Stock levels	Although no specific surveys were undertaken for these species, the observation made by the project was that their occurrence was "widespread" and "regenerating"			-	UNDP/GEF – MUIENR (2001)/ Rodgers (2004)
Forest fFrancolin/ Blue swallow	Baseline counts	Baseline established in 2001 in Minziro forest for these two species. In addition, Inventory of Blue swallows in Uganda recorded 232 Blue swallows in the Sango Bay Area			-	Baker (2001)
Grey-cheeked mangabey/ Thomas' galago	Presence within the forest	Baseline established in 2003 to identify species. Thomas' galago were regularly seen in forest edge vegetation and in forest canopy			-	Perkin & Bearder (2003)

Grey-cheeked mangabey and Thomas' galago

In 2003, the project commissioned a nine-day primate survey of Minziro forest to document the species of galagos and, where possible, other primates and mammals. The results of the survey identified two primate species that have not been recorded before in Tanzania. Firstly, the Thomas' galago (*Galagoides thomasi*), which were "regularly seen" in forest edge vegetation and in forest canopy and secondly, the Grey-cheeked mangabey (*Lophocebus albigena)*, where a troop of 10-15 individual were seen (Perkin & Bearder, 2003).

Assessment of reduction of threats to GEBs

The second aspect of the Target-Threats Analysis was to understand the changing threat level to the identified GEBs. The project used Threat Reduction Analysis (TRA) for measuring the change in the main threats to forest biodiversity, including from encroachment, logging, fire, and biomass extraction. The rationale underpinning TRA is that the monitoring of threats to biodiversity provides a proxy measurement of conservation impact and biodiversity status. The basic methodology for TRA is outlined in the box below.

The basic steps in a Threat Reduction Assessment[4]

1. Define the project area of focus for the TRA (spatially and temporally), village-forest reserve interface over two years
2. List all the direct threats to the biodiversity at the project site, which were present at the project start date
3. Rank threat on three criteria: area, intensity and urgency
4. Add the scores across all 3 criteria to get total ranking
5. Determine the degree to which each threat has been met (this requires project stakeholders to first define what "100% threat met" means for each threat)
6. Calculate the raw score for each threat
7. Calculate the final threat reduction index score – represented as a percentage

The TRA methodology is more subjective than the approach adopted by the Targets-Threats Analysis in the other Case Studies. However, it was possible to use the findings of the TRA to demonstrate changes in threat levels according to the framework adopted by this study.

The Threat Reduction Assessment provides an assessment of the degree to which major threats to forest cover were managed or reduced, rather than the threat level itself, and consequently it was only initiated following the start of the main project interventions in 2000/2001 up until the end of project activities in 2003. Therefore, to obtain an assessment of the threat levels at **pre-project intervention levels**, it was necessary to go back to the early project documentation (1998/ 1999). From the review of the available documentation, it was possible to find an assessment for two of the four major threats identified for Sango Bay-Minziro forests, as given in Table 7 below. The key to the scoring system is given in Table 5 in the methodology section of this report.

Expert assessment and ranking of threats at pre-project levels

Threats to the GEBs	Severity Score (1-4)	Scope Score (1-4)	Overall ranking
Encroachment/ conversion of forest land	Not ranked at project start		
Logging	4	4	4

[4] Adapted from (Persha & Rodgers, 2002)

Uncontrolled bushfire	3	2	2
Over-harvesting of non-timber forest species	Not ranked at project start		

The analysis below presents, as far as possible, the trends in the threat levels from before the project (baseline), at the project close, and currently. A summary of this analysis is presented in Table 9 at the end of this section.

Threat: encroachment/ conversion of forest land

Although the extent of this threat was not specifically assessed at pre-project intervention levels for Sango Bay-Minziro, the threat of land encroachment by cultivators and pastoralists is identified in both the management plans for the two reserves (2003). These threats, if realised, will directly lead to loss of forest habitat. During the project, all conversion and encroachment was stopped and existing encroachment reversed, as confirmed by provisional analysis of satellite imagery and the conversion of 18,000 hectares of the forest to strict Forest Nature Reserve status following the re-establishment of the forest reserve boundaries (see forest-grassland size and extent under the system-level GEB above).

The reduction of this threat has been supported and sustained by the re-establishment of boundaries through participatory surveys and demarcation exercises involving both the forest authorities and the local communities. At Sango Bay-Minziro professional forest surveyors were recruited to locate the correct boundaries and original marker beacons. The forest authorities and local communities subsequently demarcated this boundary with beacons and trenches and by clearing the vegetation in a two metre wide swathe around the entire forest boundaries.

At Sango Bay, 195 kms of boundary were surveyed and according to the NFA Sector Manager, the community still respect these forest reserve boundaries (apart from one current dispute on the Western boundary that NFA, Local Government and communities are seeking to resolve). In addition, at Sango Bay about 60km of the boundary had been planted with live markers by the end of the project, which in places are still being maintained by the pilot collaborative forest management CBOs. During the 2007 field visit, the three Sango Bay pilot CBOs established by the project stated that they still maintained weekly patrols of the forest (sometimes jointly with NFA staff), but that morale was low, because the patrols are voluntary and are no longer facilitated with GEF funding.

At Minziro forest, the local community participated in boundary resurvey and demarcation. However, during the field visit in 2007, the Bukoba District Forest Officers indicated that some of the boundary markers are becoming overgrown, as they lack the resources to maintain the two metre wide swathes, and due to the limited progress with collaborative forest management, the community have not taken on this responsibility. The Gugumaji CBO stated they still undertake forest patrols, although they lack resources and facilitation, whilst the Village Environment Committees had ceased to undertake patrols since the project end.

The overall assessment was that there is a **DECREASING** threat level from encroachment/ conversion of forest land.

Threat: Logging

The threat from logging to loss of forest cover at Sango Bay-Minziro was assessed to have a pre-project threat ranking of both very high severity and scope. The TRA assessments for

both Sango Bay and Minziro forests recorded a substantial reduction in the logging threat level (for timber and poles) between 2000 and the end of 2003. At Minziro forest, the percentage *threat met* rose from 25% following the initiation of project interventions to 70% at the end of the project. At Sango Bay the percentage *threat met* rose from 40% to 85%.

At Sango Bay forest, specific transect /plot data allowed the assessment of quantitative information on logging and other cutting pressures, which was integrated with the more subjective TRA logging pressure assessments. The transects were covered at the onset of the monitoring programme in 2000, and again at project closure in March 2004. The two main paths through the forest were the baselines; as these were public rights of way and were therefore not indicative of disturbance. The side paths going off from these baselines were for purposes of resource extraction and so indicative of disturbance. The number of side paths is thus a quantitative measure of disturbance. Walking along these side paths allowed a quantification of stumps from logged trees or cut poles or vegetation cuttings. With the project interventions it was hypothesised that levels of disturbance (i.e. number of side paths per km of main path, and number of signs of extractive use) would decrease over the project period. The results of the observed decrease in disturbances are shown in Table 8 below.

Baseline and terminal monitoring of disturbance and logging pressures in Sango Bay forests

Parameter	2000	2004
Baseline Path One (Kateera)		
Number of side paths	81	43
Number of stumps	120	5
Number of poles cut	40	0
Number of vegetation cuttings	130	10
Baseline Path Two (Kakuuto)		
Number of side paths	80	60
Number of stumps	128	15
Number of poles cut	62	51
Number of vegetation cuttings	141	18

As activities such as collection of dry fuelwood, medicinal plants, and other non-timber forest products are allowed, the project demonstrated that this represented a significant decrease in logging (Rodgers 2004).

However, since the project closure the Threat Reduction Assessments have not been continued and the logging has recently been permitted again in Minziro Forest, making it difficult to assess the current threat level from logging. During the 2007 field visit, the NFA and Forest Department considered that although there was an increase in illegal logging following project closure, the level of logging is currently still lower that at the pre-project intervention level. The overall assessment was that there is a **DECREASING** threat level from logging.

Threat: Fire

The threat of fire to loss of forest cover was assessed to have a pre-project threat ranking of high severity and medium scope at Sango Bay-Minziro forests. The burning of grassland within the forest reserves for cattle grazing also represents the greatest threat to the Blue swallow habitat (Baker, 2001). The TRA assessment for Sango Bay indicates that there was a significant reduction in the threat level of fires, with 40% *threat met* recorded after the initial activities in 2000 rising to 90% *threat met* at the close of the project in 2003. Although there

is no monitoring data available for the change in threat level of fire since the project close, the NFA Sector Manager indicated that the threat was still reduced, in part due to the controlled grazing zone that is currently being enforced within Sango Bay, whereby cattle grazers are required to buy six months grazing permits. However, for Minziro forest, there was no evidence available regarding the percentage threat met, even though the pre-project threat level was assessed to be higher than at Sango Bay. The overall assessment was that there is a **DECREASING** threat level from fire.

Threat: Over-harvesting of selected non-timber forest species

The final major threat to the Sango Bay-Minziro forests related to the unsustainable offtake of non-timber forest products. This threat was not assessed at the start of the project and was not covered by the first TRA conducted in 2000. However, during the TRA conducted in Sango Bay in 2003, the Kigazi and Nkalwe CFM villages assessed the percentage threat met from poor harvesting of palms (40%), unregulated grazing (75%), hunting (between 20 and 50%) and unregulated fishing (5%). During the field consultations in 2007, both NFA and the CFM CBOs for Sango Bay felt that extraction of non-timber forest was more sustainable following the implementation of CFM agreements where sustainable levels of harvesting are established and are being self-regulated by the community groups. However, there was no systematic monitoring system in place to measure offtake levels and consequently it was not possible to make an objective assessment regarding sustainability. At Minziro Forest, it was not clear whether this threat level had been reduced or not. The overall assessment was that there is an **UNCHANGED** threat level from over-harvesting of selected non-timber species.

Changes in threat levels before and after GEF support

Threats to the GEBs	Indicator	Threat Level			Trend	Data Source
		Baseline	Project end	Now		
Encroachment/ conversion of forest land	Incidence of encroachment/ land conversion	No incidences of successful encroachment or land conversion since project			⇩	Rodgers (2004) 2007 Field visit
	Measures put in place to prevent the chance of future conversion	The project initiated re-establishment and demarcation of forest reserve boundaries, which continue to be respected and maintained			⇩	Field visit 2007
Logging	Percentage of threat met (Minziro Forest)	25	70	-	⇩	Rodgers (2004)
	Percentage of threat met (Sango Bay)	40	85	-	⇩	Rodgers (2004)
	Maintenance of reduced threat level after project closure	The lifting of the logging ban in Minziro and the reduced level of CFM activities seems to indicate the threat level has increased post project, although no to previous levels			⇔	Field visit 2007
Uncontrolled fires	Percentage of threat reduced (Sango Bay)	40	90	-	⇩	Rodgers (2004)
	Percentage of threat reduced (Minziro)	No data available			-	-
Over-harvesting of selected species	Sustainable off-take levels	TRA (2003) indicates limited success at reducing threat in two forest blocks during project implementation, but no monitoring system since project closure			⇔	Mupada/ Nabanyumya (2003)

Conclusions

The main conclusions from this case study have been summarised according the two components of the analysis.

Project Logframe Analysis

The Terminal Evaluation and Terminal Evaluation Review rated the achievement of the project outcomes as satisfactory. The main achievements to develop an enabling environment (Outcome 1) were that new participatory national forest policies were in place with inputs from the project, and that local community participation mechanisms were established and strengthened to enable government agencies and forest authorities to jointly manage the target forests. The main achievements to bring resource demands in balance with supply (Outcome 2) were the development of participatory forest management plans with high levels of buy-in from the community, the adoption of alternative use/ income-generating practices, and anecdotal evidence for improved regeneration in forest areas. However, although the project appears to have largely achieved its objectives, there was an inadequate project monitoring and evaluation system to measure the level of uptake of project activities by local communities and the resulting impact on local livelihoods, and to measure whether the delivery of project activities had the desired impact on biodiversity resources at the sites.

Outcomes-Impact TOC Analysis

The analysis of the Sango Bay-Minziro Forests site, shows evidence that partial success has been achieved in mainstreaming improved forest management practices, especially at the national policy level, which can be expected to have a trickle-down effect to field sites in the longer term. In addition, a start has been made in establishing sustainable site-based institutions through the collaborative forest management CBOs, which again should realise greater impact as they mature. However, despite this good foundation a great deal more financial and technical support is deemed necessary to strengthen, replicate and institutionalise the collaborative management processes piloted in order to bridge the gap between the project outcomes and impacts. Overall, the assessment was that impact from the outcomes has been poorly to partially achieved.

A major conclusion from this analysis is that five years is too short a period to establish sustainable community institutions. Although the project made a good start at Sango Bay, the CBOs could not support themselves at the project end. Therefore, provisions need to be made during project implementation to ensure continued support post-project, whether through government agencies or follow-up projects or programmes, until the institutions are financially and institutionally independent.

Another conclusion at the village level is that registered community based organisations are more institutionally sustainable than more informal committees, in part due to their ability to establish a bank account and fundraise. The CBOs established by the Cross Borders project, have all managed to access additional funds from international donors, such as the GEF-funded Nile Basin Initiative, and have managed to access technical support.

Although, there is limited evidence for achievement of impact at the Sango Bay-Minziro forests, the fact that Collaborative Forest Management CBOs are starting to be replicated and scaled up in Sango Bay does indicate that over time and with continuing external support,

these community institutions have a fair chance of maturing and playing a more significant role in joint forest management, and ultimately in realising impact.

Targets-Threats Analysis

The project did not emphasise the direct measurement of the conservation status of the global environmental benefits accruing from Sango Bay-Minziro forests, due to a number of factors including the difficulty in establishing biodiversity baselines and the long time for changes in ecosystems and biodiversity. As a result, there were neither measurements of the rate of biodiversity loss both before and after nor any clear indication of the status of forests and their biodiversity before and after the project. Consequently it was difficult to make any firm conclusions about the conservation status of the species of global conservation concern and only possible to obtain circumstantial evidence and expert opinions that the conservation status of the forest-grassland system-level GEB had improved. The study team felt that the inventories and surveys could provide a useful baseline for future monitoring of the conservation status of the GEBs in the Sango Bay-Minziro forests.

The project did invest substantial resources into measuring the threats to the global environmental benefits, which was considered by the project to be a more realistic, participatory and effective approach to measure the achievement of impact of global environmental impacts. The Threat Reduction Analysis proved a cost effective tool for measuring biodiversity loss during project implementation. It provided good evidence that threat level from logging, fire and extractive use had been reduced at Sango Bay and to a lesser extent Minziro Forest over the lifespan of the project. The Terminal Evaluation considered the TRA to be an appropriate technique, especially as the Sango Bay-Minziro forest ecosystem did not contain any large charismatic species to focus conservation attention, unlike in the Lewa and Bwindi Case Studies. In addition, the TRA provided indications of impact in a short time, produced results readily interpreted by all stakeholders, practitioners and community members, and enabled good levels of community involvement and ownership. However, concerns were raised over the consistency and objectivity of the application of this technique across sites.

Unfortunately, despite the successful application of the TRA methodology, the forest authorities have not taken it up for Sango Bay-Minziro after project closure, which has undermined the ability for effective collaborative forest management and made it difficult for this study to assess the post-project threat levels. From the 2007 field consultations, the opinions of local communities and the forest authorities was that although threat levels had increased since the project closure, the threats to the forest were still lower than before the project intervention.

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People/ groups met during Sango Bay-Minziro field visit: 4-14 July 2007

Summary of people and groups met

Met	Name	CBBP Position	Current position	Current organisation
5-Jul-07	Dr Festus Bagoora	Ist UNDP/GEF project, NEMA	Acting Director of Environmental Monitoring and Compliance	
5-Jul-07	Fortunate Sewankambo	Uganda Programme Coordinator (NEMA Director of Policy, Planning and Legal Division)	Director Communications and Advocacy	World Vision, Uganda
5-Jul-07	Robert Nabanyumya	National Project Manager	EMPAFORM Regional Coordinator	CARE International in Uganda
6-Jul-07	CD Langoya	Forest Officer - Partnerships (EU Forestry Prog.)	Independent consultant	Forest Inspection Division, Uganda
6-Jul-07	Dr Henry Aryamanya-Mugisha	Executive Director	Executive Director	NEMA, Uganda
6-Jul-07	Edward Mupada	National Technical Officer	Independent consultant	
6-Jul-07	Godfrey Acaye		Coordinator	National Forest Authority, Uganda
6-Jul-07	Xavier Mugumya	Field Project Officer, Moroto	Natural Forest Management Specialist	National Forest Authority, Uganda
8-Jul-07	James Byamukama	Sango Bay Site Manager	Field Officer	IGCP, Kabale, Uganda
9-Jul-07	Kigazi Tukwatirewamu CFM Group (16 members). See participation list in following table			
9-Jul-07	Denis Sebugwawo		Secretary	Uganda Network for Collaborative Forest Associations (UNETCOFA)
9-Jul-07	Kalyesubula Fred		Ag Deputy CAO	Rakai District HQ, Uganda
9-Jul-07	Lt Stephen Buloolo		District Internal Security Officer	Rakai District HQ, Uganda
10-Jul-07	Jane Niwandinda	Trainee under EU FRMCP	Sector Manager, Sango Bay	National Forest Authority, Kyotera, Uganda
10-Jul-07	Kiyingi Jamil		District Wetlands Officer	Rakai District HQ, Uganda
10-Jul-07	Nkalwe Sango Bay CFM Group. See participation list in following table			
11-Jul-07	Mugamba-Mujanjabula Save the Forest Group. See participation list in following table			
12-Jul-07	Ally Kombo		District Executive Director	Bukoba Rural District, Bukoba, Tanzania
12-Jul-07	Deogratias Nholope		Technical Advisor Livestock	Kagera Regional Office, Bukoba, Tanzania
12-Jul-07	Mr Kissimba		Ag Assistant Adminstrative Secretary, Economics Cluster	Kagera Regional Office, Bukoba, Tanzania
12-Jul-07	Mr Marugu		District Commissioner	Misenyi District, Bunazi, Tanzania
13-Jul-07	Abdul Majid Said		Ward Officer	Minziro Ward, Missenyi District (formerly Bukoba District), Tanzania
13-Jul-07	Finias Kagenda		Natural Resources Officer	Bukoba Rural District, Bukoba, Tanzania

Met	Name	CBBP Position	Current position	Current organisation
13-Jul-07	George & Martina Nkokonjelu	Beneficiary		Minziro Village, Missenyi District (formerly Bukoba District), Tanzania
13-Jul-07	Gideon Medad		Chairman	Gugumaji Kassambya, Tanzania
13-Jul-07	Goldian Munyambo	District Forest Officer	District Forest Officer	Bukoba Rural District, Bukoba, Tanzania
13-Jul-07	Leuterius M. Mugarula		Village Officer	Minziro Village, Missenyi District , Tanzania
13-Jul-07	M.H. Chimagu	District Forest Officer	District Forest Officer	Bukoba Rural District, Bukoba, Tanzania
13-Jul-07	Paskazia Mwesiga	-	Technical Advisor Natural Resources	Kagera Regional Office, Bukoba, Tanzania
13-Jul-07	Philman Francis		Executive Secretary	Gugumaji Kassambya, Tanzania
13-Jul-07	Sered Kyaruzi		Coordinator	Gugumaji Kassambya (CBO set up by CBBP)
13-Jul-07	Wilbard Bayona	Local Plant Collector	Member of Minziro LEC	Minziro Village, Missenyi District, Tanzania

Members of the Sango Bay CFM Community Based Organisations met (project established)

Kigazi Tukwatirewamu CFM Group	
1	Mauricio Mayinja
2	Ssebuwagu Paskal
3	Malichadades Teymga
4	Kokuslubila Oliva
5	Namatovu Tedi
6	Naasazi Wini
7	Kalakimbi
8	Naggayi Divina
9	Namat
10	Sekayanjo Gonzangu
11	Namaganja Sikola, Treasurer
12	Sbekajugo Mathias, Secretary General
13	Juku Christopher
14	Kibaya Peter
15	Koyongo Ali
16	Ssebuggwawwo Denis, Networker

Nkalwe Sango Bay CFM Group	
1	Mutesasira Christopher, Chairman
2	Polly Madleya Ssewanyana, Secretary
3	Gartuludi Kabanda Wabakyala
4	Kasule Matia Lutawania
5	Magembe Umali
6	Ssebundeke Bosk
7	Mamatovu Merget
8	Nalongo Matoku
9	Atuheire Fadison
10	Mary Goreeth Nkangi
11	Melgilindo
12	Magulet Namwenje
13	Isima Senkindu
14	Nalusiba Tewo
15	Namatov Nor
16	Kalawudiyo
17	Ssengabi

Nkalwe Sango Bay CFM Group	
18	Kabanda Eleuesiti
19	Nelawula M Salongo
20	Madina Nanyonga
21	Nakigoye Ketulad
22	Mukasa Vincent, Secretary for youth
23	Snewanyana
24	Mpagi Pauline
25	Kato Pastor, Secretary for defence
26	Mary Ssemogonda
27	Moyiga Jozefini
28	Malala Aginensi
29	Torpista Nabyonga
30	Nalwe Regina Mutesasira
31	Tedy Buye
32	Mirembe Julius
33	Kakwavu Fradika Muwenika
34	Tarsis Mabuye, NFA Patrolman
35	Odoi JB, facilitator (NFA Forest Supervisor)
36	Jane Niwandinda, facilitator (NFA Sector Manager)

Mugamba-Mujanjabula Save the Forest Group	
1	Goncaga Kasiita, Chairman
2	Bbaale Francis, Secretary
3	Matovu Denis
4	Lubowa Edward
5	Kuuki Michael
6	Ssaba Konys
7	Mugelwa P
8	Kyabaggu Peter
9	Nabakooza Josephine
10	Nakajula Boonamaria
11	Wousswa Jamiano
12	Nakateero Tereza
13	Muddu Renatus
14	Kilwauka Henry
15	Namutebi Betty
16	Namutebi Bena
17	Waswa Cosma
18	Likwata
19	Achia K
20	Sengabi Girazio
21	Lukwago Ssentongo
22	Matouu Zavenio
23	Laulesia Muwonge
24	Kafeelo Joseph
25	Kafukuku Mikayiyi
26	Namusu Anitta
27	Namatocu Dorothy
28	Nalunjoji Leonia
29	Namwanga Victoria
30	Waswa Kasima
31	Sseketta Bonny
32	Gafabusa Vincent - NFA facilitators
33	Niwandinda Jane - NFA facilitators

Photographs of the active Sango Bay Collaborative Forest Management CBOs, July 2007

Mugamba-Mujanjabula Save the Forest Group, under podocarpus trees

Nkalwe Sango Bay CFM Group