



Convention on
Biological Diversity



***BIODIVERSITY FOR DEVELOPMENT
CASE STUDY MANUAL***

**BIODIVERSITY AND FOREST
MANAGEMENT IN THE
CONGO BASIN**

***Ten good forest management and development
practices that consider biodiversity, poverty
reduction and development***



The **Convention on Biological Diversity (CBD)** is a global agreement that addresses biodiversity and has 191 Parties today. It was established in 1992, with three main objectives: 1) the conservation of biodiversity; 2) the sustainable use of its components; and; 3) the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

The **Secretariat of the CBD (SCBD)** was established to support the goals of the Convention. Its principle functions are to prepare and service meetings of the Conferences of the Parties (COP) and other subsidiary bodies of the Convention, support Parties as appropriate, and coordinate with other relevant international bodies. The SCBD established the Biodiversity for Development Unit in 2008 with the support of the French and German governments. The goal of the Unit is to promote the integration of biodiversity conservation and poverty alleviation objectives in both conservation planning (e.g. National Biodiversity Strategies and Action Plans) and development planning (e.g. Poverty Reduction Strategy Papers or Sustainable Development Strategies). The Secretariat of the Convention is located in Montreal.

The **Central African Forests Commission (COMIFAC)** was established in 2005, at a summit of the Central Africa Heads of State in Brazzaville, to act as the sole regional forum for the conservation and sustainable joint management of forest ecosystems in Central Africa. COMIFAC is the primary authority for decision-making and coordination of sub-regional actions and initiatives on conservation and sustainable management of Congo Basin forests. COMIFAC oversees the enforcement of the 1999 Yaounde Declaration. As such, it is in charge of the supervision and coordination of environmental initiatives related to forest ecosystems in the sub-region. It also monitors the implementation of obligations contracted by member states under various international conventions.

Acknowledgements: This guide was developed with financial support from the French Ministry of Foreign and European Affairs.

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Citation: Secretariat of the Convention on Biological Diversity and Central African Forests Commission (2009), Biodiversity and Forest Management in the Congo Basin, Montreal.

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ISBN: 92-9225-152-X

TABLE OF CONTENTS

FOREWORD	4
INTRODUCTION	
The Congo Basin, a Biodiversity Rich Area	6
CASE STUDIES	
1. Means of subsistence respectful of biodiversity in a forest landscape mosaic	10
2. Fighting poverty through community forestry	12
3. Education and awareness-building to reduce poverty	14
4. Raising awareness on the importance of forest foods	16
5. Weighing in on the human-elephant conflict	18
6. Forest management in the Kigwena Nature Reserve: A question of quality of life	20
7. Forest legislation application constraints	22
8. Ensuring the livelihood of Mbendjele Pygmies through GPS technology	24
9. Cooperation to curb poaching	26
10. Production forests to preserve biodiversity	28
CONCLUSION	
Lessons learned in the Congo Basin forests	30
ACRONYMS AND ABBREVIATIONS	33



FOREWORD



Raymond MBITIKON
Executive Secretary,
COMIFAC

Millions of people living in the Congo Basin depend on its forests for their livelihood. This highly biodiverse region is therefore under pressure from local populations that sometimes draw on its resources without regard for the environment. In addition, the Basin has attracted many logging companies, whose operations are not always in keeping with sustainable development principles. Nevertheless, the case studies presented in this handbook ensure sustainable resource development, the preservation of regional biodiversity and the availability of the goods and services provided by forests.



Ahmed DJOGHLAF
Executive Secretary
SCBD

Though the Convention on Biological Diversity (CBD) is recognized as a leading tool for the promotion of sustainable development, seventeen years after its adoption, significant efforts are still required to ensure its implementation in the field and the attainment of its three objectives: biodiversity conservation, sustainable use and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

To bolster its impact at the regional and national levels and contribute to the better integration of biodiversity protection issues into development and poverty reduction strategies, the Secretariat of the CBD chose to implement a series of pilot actions, including the partnership with the Central African Forest Commission (COMIFAC), in targeted geographic areas and specific development sectors. One of the objectives of this collaboration is to demonstrate that the sustainable development of biodiversity resources based on good forest management practices can significantly contribute to economic development and poverty reduction. This handbook is among the information tools that have been jointly developed by our organizations.

The COMIFAC oversees the direction, harmonization and follow up of Central African forest and environmental policies and therefore, in 2003, established and adopted a sub-regional convergence plan for the preservation and sustainable management of forest ecosystems in the Congo Basin.

The COMIFAC also created the Working Group on Biodiversity in Central Africa (GTBAC) to strengthen the sub-regional means for the implementation of the CBD and enhance the visibility of the actions taken to this effect in the Congo Basin.



We hope that the ten case studies selected here will inspire local, regional and international stakeholders to better implement the objectives of the Convention. Experience shows that sharing success stories clearly gives impetus to hands-on action.

We would like to thank all the partners in the sub-region who shared their experiences by providing us with information on their projects. By contributing to this handbook, they are taking part in the dissemination and experience sharing initiatives supported by our organizations.



INTRODUCTION

THE CONGO BASIN, A BIODIVERSITY RICH-AREA

The forests of the Congo Basin constitute the second largest tropical forest mass after the Amazon. Covering a total estimated area of 200 million hectares – making up almost 91% of Africa’s moist forests – they are the continent’s main forest resource and home to an extraordinary biodiversity that represents an immeasurable potential for regional socio-economic development. There are some 10,000 higher plant species (3,000 are endemic) as well as some 600 timber species along with 1,000 bird species, 900 butterfly species, 280 reptile species and 400 mammal species, including rare and threatened animals such as the large lowland gorilla and chimpanzee.

Seeing the forest for the trees’... fruits

The region’s forests provide ecological goods and services that ensure the survival of local populations. These include flood control, water supply and purification, non-wood forest products (NWFPs) and medicinal plants, which continue to be widely used. Disregard of these goods and services would overlook the proverbial *bigger picture* or what could be equated to... only seeing the forest as a whole instead of the multiple fruits or “services” it provides human populations.



Taking these issues into account, Central African nations have established and adopted forest policies and regulations that are in keeping with international environmental strategies. As certain case studies presented in this handbook illustrate, these tools highlight the need for sustainable forest management approaches that foster the increased participation of stakeholders in decision-making processes.

Forests and the collective wealth

The Congo Basin forests are home to some 30 million people, and constitute the basis of their livelihood, as well as an important source

of revenue in countries of the sub-region. Revenues stem from the formal (industrial logging) and informal (NWFP, charcoal, etc.) sectors. In addition, forests contribute significantly to the growth of the gross domestic products of COMIFAC member-states. Sustainable use and economic valuation of forest resources therefore become important development approaches to counter the progressive degradation of these areas while preserving their economic potential.



Affirmed political will

Recognizing the economic and ecological importance of forests to sub-regional development and the increasing risks that are arising, Central African nations have heightened their regional coordination efforts to ensure biodiversity preservation and sustainable forest management in the Congo Basin. This willingness to cooperate was reiterated in March 1999 when the leaders of six regional forest nations signed the Yaoundé Declaration and in December 2000 with the creation of the COMIFAC. The Congo Basin Forest Partnership (PFBC) was then launched in 2002 and the COMIFAC Convergence Plan was adopted in 2005. Strategic initiatives 4 and 6 of the Plan focus on biodiversity preservation and the development of alternative activities to reduce poverty.

Building transferrable knowledge: the impact of a case study

The ten case studies detailed in this handbook present good forest management and development practices. Implemented by private businesses and international and non-governmental organizations that promote change, the projects lead by example and demonstrate that it is possible to integrate environmental protection issues into poverty-reduction objectives. These case studies refer to the ecosystem approach, which drives all CBD activities and constitutes the very framework of the Convention, fostering conservation of biodiversity

INTRODUCTION

and the fair and sustainable use of its components.

These case studies may inspire others. In fact, one of the objectives of the exercise consisted in documenting Central African efforts towards sustainable biodiversity management, since broader lessons can be learned by focusing on



specific situations. Examining these projects provides new developers with promising means and approaches to resolve the issues they will face, whether they be in the Congo Basin or elsewhere.

Calling for cases and collecting information

The preliminary phase of this initiative consisted in approaching over 230 Congo Basin forest management and development stakeholders. The call was initiated in October 2008, and a form was sent out to various national forest authorities, regional organizations, universities, research institutions, environmental agencies, environmental NGOs and logging companies. However, it was not possible to collect as many accounts as planned. The low rate of response (approximately 10%) can be attributed to different factors but may be linked to the difficulty in accessing electronic means of communication in Central Africa. Unfortunately, budget constraints made on-site field data collection impossible.

Selection process

Each of the chosen case studies enhances forest management knowledge and practices. New, innovative and reproducible approaches were favoured in the selection process.

Technical, scientific and socio-economic benefits (economic benefits for populations, links with Millennium Development Goals (MDG), participative management, etc.) were also defined and used as selection criteria. The selected studies were required to highlight the ways in which the project was linked to conservation, sustainable use of biodiversity and poverty reduction. Each case reflects a particular

aspect of this dynamic in its own way.

Choosing the right path – presentation of the handbook

Ten case studies were selected for this handbook. For each one, essential information is contained in a table. A link is provided for readers who wish to learn more about the project. The handbook also contains a short conclusion and an overview of the lessons learned from the good practices.

This handbook is written for a wide audience. It will be of interest for public and private sector project promoters as well as political decision-makers and NGO representatives. In the perspective of the development of South-South cooperation, this handbook will also prove useful to representatives from organizations in other forest regions around the world whose mandates are similar to those of the COMIFAC.



CASE STUDIES

1- Means of subsistence respectful of biodiversity in a forest landscape mosaic

Organization(s)	Center for International Forestry Research (CIFOR) in partnership with Forest Resources for People (FOREP)
Funding	Swiss Agency for Development and Cooperation (SDC)
Location	Southwestern Cameroun, Takamada-Mone Reserve (Technical Operations Unit)
Themes	Non-wood forest products, traditional knowledge, primate protection, landscape mosaics.
Contact	Dr. Nathalie van Vliet World Agroforestry Centre n.vanvliet@cgiar.org
Link	http://www.biodiversityplatform.cgiar.org/ref/projects/sites.cameroon.htm (June 2009)

Through the Biodiversity Platform launched by ICRAF-CIFOR, the vastly biodiverse Takamada and Mone forest reserves benefit from an important network of local partners to implement the framework of the landscape mosaic concept, and CIFOR experts found a natural partner in the Forest Resources for People (FOREP) NGO. Forest landscape mosaics are generally made up of planting or agroforestry areas, buffer zones and natural forests. This concept can be seamlessly applied to diverse territories made up of ecosystems impacted by human activity.

The Kagwene Gorilla Sanctuary is currently being created at the eastern edge of the territory. Here, landscape mosaics would make it possible to consider different types of uses in a development plan. Despite its formal recognition, the concept remains underused in regions like Takamada-Mone where traditional approaches are based on the segregation of protected areas (e.g. gorilla sanctuaries) and sectors meant for other uses. By applying the ICRAF-CIFOR framework, FOREP aims to preserve the resiliency and adaptability of forest ecosystems.

The goal is to set out approaches that lead to the twofold objective of biodiversity conservation and livelihood enhancement. Implemented in 2004, the first component of the project, which will be deployed until the end of 2010, is based on the premise that ecological services

support most of the local population's means of subsistence.

Two underlying objectives of the project aim to:

- 1) Link local needs to ecological services so as to integrate them into territorial planning;
- 2) Develop a participatory approach to guide territorial planning and monitoring activities.

More specifically, the project endeavours to protect the gorilla population and study NWFP supply chains. The results should impact territorial planning on the outskirts of the protected areas.

The active participatory research approach supported by the project partners has already led to a common vision out of which it was possible to set out a series of indicators to assess the development of territorial features.

The research activities conducted as part of the project will provide information including details on the perceptions and values associated with biodiversity. In fact, researchers have already revealed a series of unwritten rules (often rooted in



the traditional knowledge of the Anyang tribe) that dictate certain interactions between man and the environment.

The knowledge gathered on indigenous species and the traditional uses of natural resources will play a key role in the implementation of the Takamada-Mone biodiversity projects.

CASE STUDIES

2- Fighting poverty through community forestry

Organization(s)	Catholic Relief Services (CRS)
Funding	Highly Indebted Poor Countries (HIPC) Initiative / World Bank and International Monetary Fund
Location	Cameroun, Kadey departement, Batouri commune
Themes	Community forestry, environmental awareness building, participatory management, forest development royalties, poverty.
Contact	Ms. Aurelie Nyapeye Yatchou anyapeye@cm.caro.crs.org
Link	www.crs.org (June 2009)

The poverty-fighting Batouri commune community forestry project focuses on providing popular education and raising awareness among local populations with regards to their forest development rights, including their right to annual timber royalties (ATR). This initiative aims to support communities in the forest reservation process and the elaboration of forest product management, development and marketing plans.

In the Kadey department in the East Province of Cameroun, forest development is an important source of revenue, little of which is invested to improve living conditions, despite a 1994 law stipulating that 10% of forestry taxes must be allocated to development-oriented microprojects of the communities living in areas adjacent to forest development zones. The department is among the nation's most marginalized, and road, health and school infrastructure is severely lacking. Though there are legislative instruments to facilitate revenue generation from forest development, they are not widely known. Catholic Relief Services (CRS) therefore chose to implement their own initiative through awareness-building and technical support activities. Armed with information on their rights, citizens then launched various lobbying activities.

A community spirit was created and advisory groups were set up by statutory community forest holders to monitor the territory and protect it from the many illegal developers. In fact, advisory group

patrols have led to regular seizures of illegal timber.

Unlike community forest developers, large developers seeking profit often have little regard for biodiversity. In informing the population of its rights and helping community groups draft forest attribution applications, CRS created a turnabout. The monitored development of the forests makes it possible for local populations to earn significant revenues from natural resources. The initiative therefore reduced extreme poverty and hunger in the area and preserved the environment.



Though in theory it may seem simple to fill out community forest implementation or ATR distribution applications, the reality is starkly different. In addition to administrative red tape, the applications require the disbursement of significant funds. But with the financial support of CRS and the HIPC Initiative, citizens were able to submit their applications.

The first phase of the project was the granting of rights to community groups on forested land. Concluded in 2007, the process led to the submission of over 40 reservation applications. The second phase consisted in the elaboration of the management plans, some 25 of which have already been approved by authorities. Through this course of action, community members were trained in NWFP collection, transformation and marketing – techniques that generate revenues to cover their first-line needs. In the long term, community forest development and ART will generate enough funds to build classrooms and drinking water outlets.

CASE STUDIES

3- Education and awareness-building to reduce poverty

Organization(s)	Association pour le Développement des Communautés Rurales (ADECOR)
Funding	Central African Regional Program for the Environment (CARPE) of the United States Agency for International Development (USAID)
Location	Republic of the Congo, villages of Longo-Bondi, Youngou (Madingo-Kayes district), Nchiéla, Mpella, Noumbi, Bondi, Kondi, Sialivaku (Nzambi district)
Themes	Awareness-building, legislative instrument accessibility, alternative revenue-generating activities, market gardening, diversification of livelihood means.
Contact	Mr. Philippe Nkounkou Moukoutou ADECOR ong_adecon@yahoo.fr / mukumati@yahoo.fr
Link	http://ccodcongo.ifrance.com/adecon.html in French only (June 2009)

This case study demonstrates the impact of education and awareness-building on poverty reduction and environmental protection and includes two major components. The first involves educating the population on the possible benefits of sustainable forest development and the second builds awareness of the rights and duties of citizens in terms of forest area use.

The villages taking part in the project are located within the perimeter of Conkouati Douli National Park, a region rich in biodiversity that is highly impacted by human pressures. The communities essentially live off maritime, river and forest resources. Fishing, hunting and gathering constitute the peoples' main economic livelihood along with cassava-driven subsistence farming, to a lesser degree. At the expense of food self-sufficiency, most of the processes and techniques employed do not take the ecosystems' fragile equilibrium into account, thus making the populations more vulnerable. There is, in fact, a clear link between environmental degradation and pauperisation.

ADECOR's work to help communities in the implementation of alternative revenue-generating activities and curb unsustainable

resource use was supported by the project's second component: raising awareness of the rights that impact the links between communities and the environment. It was determined that the populations were inadequately informed of the regulatory provisions that grant significant forest development rights to rural populations. Information kits were therefore distributed in villages and workshops were held across the territory. Several of these activities targeted women, who are often excluded from such initiatives.



Successful alternative activities included market gardening and food crop and small-scale livestock production. All partners ensured follow-up of the awareness-building activities through the purchase and distribution of tools and seeds or by providing technical support to build enclosures.

By diversifying the sources of revenue of the populations living inside and around the national park, the project increased citizens' earnings. In the long term, the sustainable use of forest resources should help break the poverty-environmental degradation spiral (such results are only observable in time). Several individuals who once survived by gathering are now seeking the status of agricultural producer, and this area of Central Africa is progressively developing an enviable reputation as a tomato and pepper growing zone.

CASE STUDIES

4- Raising awareness on the importance of forest foods

Organization(s)	International Centre for Research in Agroforestry (ICRAF)
Funding	Food and Agriculture Organization of the United Nations (FAO) / German Federal Ministry for Food, Agriculture and Consumer Protection (BMELV)
Location	COMIFAC region (10 member-states)
Themes	Non-wood forest product (NWFP), food security, forest foods, awareness-building.
Contact	Dr. Zac Tchoundjeu ICRAF Cameroun z.tchoundjeu@cgiar.org
Link	http://www.fao.org/forestry/media/13268/1/0/ (in French only) and http://www.fao.org/forestry/nwfp/en/ (June 2009)

This study aimed to determine means to enhance food security in Central Africa through the sustainable use of forest foods. More specifically, the ICRAF intended to raise awareness and increase regional stakeholders' knowledge of the importance of NWFPs as it pertains to food security and poverty reduction. The ICRAF was, in fact, building on an awareness of the importance of NWFPs to regional development and sought the systematic integration of forest food considerations into various related policies.

According to the FAO, the donor agency, NWFPs "are products of biological origin other than wood derived from forests, other wooded land and trees outside forests". In the COMIFAC nations, NWFPs play a leading role in population survival. They are a means of subsistence and their development generates revenue.

However, the socio-economic importance of alimentary NWFPs is not adequately integrated into sustainable management strategies. In 2006, the ICRAF carried out a field study to draw up an inventory of popular food species, rendering it possible to establish optimal development techniques and determine certain quotas. The study was conducted following a documentary search and interviews with experts involved in NWFP-related activities in Central African nations.

Because of the persistence of several deforestation factors including forest development, many of the trees that provide NWFP of high economic value are threatened. This is the case of the African pearwood (*Baillonella toxisperma*), which provides nuts whose oil is widely used by local and indigenous populations. The disappearance of this species significantly increased poverty and decreased local peoples' quality of life. The study recommended the domestication of the species and its introduction into existing agroforestry systems managed by peasant-farmers.

The study also concluded that alimentary NWFP development quotas were often arbitrarily determined. Experts therefore suggested the sustainable and *in situ* development of alimentary NWFP resources (regulating resource access, harvesting techniques or gathering frequency). Another approach to foster *ex situ* NWFP cultivation in agricultural areas was also proposed.



The study demonstrates that it is possible to manage and add value to natural resources in order to increase revenues. Strategies that could contribute to these goals include the determination of community forests and community hunting grounds. The practical applications of these concepts have therefore been described to the local population in an effort to heighten people's awareness of the importance of sustainable NWFP management.

CASE STUDIES

5- Weighing in on the human-elephant conflict

Organization(s)	Femme, Environnement, Santé et Education (FENSED)
Funding	Central and West Africa Program (PACO) of the International Union for Conservation of Nature (IUCN)
Location	Gabon, Gamba Complex of Protected Areas (West Gabon), Ndougou department
Themes	Man-wildlife conflict, protected areas, means of subsistence, elephants.
Contact	Ms. Edwige Eyang Effa FENSED Fensed21@yahoo.fr , erlymarjo@yahoo.fr
Link	http://iucn.org/fr/propos/union/secretariat/bureaux/paco/apropos_paco/ in French only (June 2009)

The objective of this program was to mitigate elephant-human cohabitation in a Gabonese region in which there is a high concentration of protected areas. The project was piloted in 2005-2006 by the Femme, Environnement, Santé et Éducation (FENSED) NGO. The goal was to protect the elephants and determine strategies to drive them away from agricultural zones. In so doing, the project contributed to fighting poverty in the Ndougou department.

Gabon has implemented a network of protected areas for certain large and emblematic mammals including elephants. These areas are adjacent to inhabited regions where populations rely on agriculture for subsistence. Given that elephants move around without regard for the area's official boundaries, the animals sometimes cross onto cultivated land, destroying the crops and threatening peoples' livelihoods. Authorities have noted an increase in the number of complaints from locals and the elephants have now become the greatest threat to the region's food crops. In some cases, exasperated farmers have taken matters into their own hands and killed the trespassers.

With a hunting ban in protected areas, the mainstay of the local population's food supply is from agriculture, and tensions have arisen between nature conservation agencies and the farmers who sometimes feel wronged, believing that the conservation objectives take precedence over those to enhance their well-being.

FENSED therefore sought to mitigate the conflict. The crux of the organization's efforts was to conduct field visits to assess the damages and ways to prevent elephant incursions. FENSED also organized a workshop during which locals could share their experiences and provide information on the best ways to coexist with the elephants. Several mitigation options were suggested. While some traditional methods to drive away the animals are effective (having guards watch over the crops, installing iron wire fences, fires or glow lamps around the fields, etc.), new strategies were also proposed, including the use of instruments that produce repulsive noise or odors (often pepper-based, a plant that elephants avoid). It was also recommended that farmers sow their new plantations away from the paths that the elephants usually follow and that authorities examine the possibility of providing compensatory financial support to farmers whose fields are damaged. The government and nature conservation organizations may therefore implement a compensatory fund.

The project's success will be measured in the long term. Ensuring better living conditions for farmers is essential in order to maintain the protected areas and safeguard the animals that inhabit them.



CASE STUDIES

6- Forest management and quality of life in the Kigwena Nature Reserve

Organization(s)	Association pour la Protection de l'Environnement au Burundi (Enviro-Protect)
Funding	International Union for Conservation of Nature (National Committee of the Netherlands)
Location	Burundi, Bururi province, Rumonge commune, Kigwena zone; Kigwena Natural Reserve on the banks of Lake Tanganyika
Themes	Community management, agroforestry, revenue-generating activities, forest reserve.
Contact	Mr. Salvator Ndabirorere Enviro-Protect nasalvator@yahoo.fr
Link	http://www.enviroprotect.org/ in French only (June 2009)

The 500-ha Kigwena Natural Reserve is situated in the heart of the periginean forest in Burundi. Like the nation itself, the park has a bountiful natural wealth and exceptional biodiversity.

The main threats to the reserve are poaching, logging and local human pressures on the natural resources. These threats are exacerbated by strong demographic pressures on the natural resources and the socio-political conflicts that have plagued the country since 1993. The region is now reaping the benefits of the nation's peace process but the massive return of the repatriates who fled in 1972-1973 poses a challenge. In fact, the Kigwena Reserve is seriously threatened by overcutting.

The International Union for Conservation of Nature – National Committee of the Netherlands (IUCN-NL) has therefore lent its support to a local NGO, Enviro-Protect, to reconcile natural resource conservation and the fight against poverty. The on-site actions aim to foster the sustainable use of natural resources, implement revenue-generating activities and reforest the affected areas.

The project entitled *Aménagement et gestion communautaire de la Réserve naturelle de Kigwena* [Forest and community management in the Kigwena Natural Reserve], aims to promote the conservation and sustainable use of biological resources while enhancing the living conditions of riparian populations and protecting adjacent Lake Tanganyika. Funding from IUCN-NL made it possible to:

- Produce and sow rapid-growth forest and agroforest plants;
- Support beekeeper associations;
- Promote edible mushroom growing for populations living essentially from poultry farming;
- Support the development of small herds;
- Raise environmental awareness and provide environmental education.

The awareness-building activities have yielded two significant results: a 50% reduction in bush fires and a major decrease in wood poaching, which is attributable to whistleblowing. Other positive impacts on biodiversity include a marked reduction in mushroom, medicinal plant and game gathering.

Alternative revenue-generating activities include the implementation of more sustainable apicultural practices, herd growth and the production of rapid-growth forest and agroforest plants.



Launched in 2004, the project has not yet come to an end. Enviro-Protec continues to disseminate information on the forest species that marry food security, poverty reduction and sustainable forest management. The goal is to ensure that these multiple-use forest species are increasingly developed for commercial use.

CASE STUDIES

7- Forest legislation application constraints

Organisation(s)	Cameroon Environmental Watch (CEW)
Funding	Central African Regional Program for the Environment (CARPE) of the United States Agency for International Development (USAID) and IUCN Livelihood and Landscapes (LLS)
Location	Eastern and Central Cameroun along Moloundou-Yokadouma roads in Bertoua-Yaoundé
Themes	Poaching, bushmeat, forest legislation, sustainable wildlife management
Contact	Mr. Roger Ngoufo CEW cewaire@Yahoo.ca; rngoufo@hotmail.com
Link	http://www.cewcam.com in French only (June 2009)

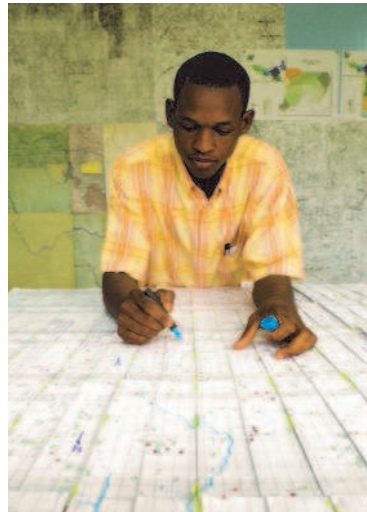
Cameroon Environmental Watch (CEW) has implemented *ad hoc* means to control the flow of poached forest products in the nation's eastern and central regions. The CEW first conducted its study on the constraints in implementing sustainable wildlife management laws along the roads between Moloundou and Yokadouma and between Bertoua and Yaoundé. Enforcing legislation is one of the main obstacles to sustainable wildlife management in Cameroun. The objective is twofold: 1) to defend the rights and capacities of marginalized local populations so that they may possess and manage forest resources efficiently and sustainably; and 2) to contribute to enhancing wildlife resource and biodiversity management by determining the best strategies to prevent poaching and wildlife product trade in southeastern Cameroun.

The project's specific objectives include:

- Developing and implementing a periodic monitoring and data collection method for wildlife product trade;
- Launching a dynamic database to monitor wildlife product trade;
- Strengthening the means of monitoring authorities;
- Determining the wildlife legislation application constraints and making suggestions to expand the statutory framework.

The data used to provide an overview of the situation includes the type of species, their populations and the rate at which they are transported. Experts are also seeking to draw up an inventory of the travel and conditioning methods used by poachers.

This initiative made it possible to compile data that will enlighten political decision-makers and help control illegal activities. In implementing a hunting practice monitoring project, the CEW has enhanced wildlife product trade monitoring. Though illegal activities are still prevalent, this small-scale initiative led to bushmeat seizures in a series of operations involving the authorities, which, in some cases, resulted in the confiscation of elephant, chimpanzee and gorilla meat. Live animals were also found. In one particular case, a species of crocodile on the national list of “integrally protected” animals was found hidden on a bus. When supported, these activities foster the eradication of the illegal practices that maintain poverty and mortgage sustainable wildlife management practices.



Difficult economic conditions are driving people from different regions to explore the opportunities that forest product development can yield, and, in many cases, these products are their only livelihood. Given that the region is insufficiently policed and relatively isolated, it has become a popular destination from which to conduct illegal activities.

In addition to fostering the implementation of a better legislative framework, the CEW seeks to make existing laws stricter and is currently working on a Central African bushmeat trade surveillance system.

CASE STUDIES

8- Ensuring the livelihood of Mbendjele Pygmies through GPS technology

Organization(s)	Tropical Forest Trust (TFT)
Funding	Congolaise Industrielle des Bois (CIB) / World Bank
Location	Republic of the Congo, Kabo forest concession
Themes	Technological innovation, traditional knowledge, commercial forest development, hunter-gatherer ways of life
Contact	Mr. James Mudie TFT j.mudie@tropicalforesttrust.com
Link	www.tropicalforesttrust.com (June 2009)

The FSC standards to which the Congolaise Industrielle des Bois (CIB) wished to adhere required the protection of sites of cultural, ecological, economic or religious importance to indigenous people. That being said, the CIB oversees a forest zone of 1.3 million hectares that is home to 9,000 Mbendjele Pygmies. The Congo Basin Pygmies are among the world's poorest people and depend on forest biodiversity for food, housing and medicine.

The CIB therefore collaborated with the Tropical Forest Trust (TFT), a Swiss charitable foundation, and with the Pygmy communities affected by its activities. The objective was to facilitate the exchange of information between community representatives and the corporation with regards to the areas in the heart of the forest that are of particular importance to the indigenous people. Certain areas were known only to the Pygmies, making it difficult for CIB workers to determine which zones to bypass.

The project was carried out with the support of anthropologists hired by the TFT and enabled the hunter-gatherer populations to establish the zones whose degradation would threaten their survival and in which the company would therefore not conduct logging activities. The Mbendjele were given a simple GPS-based tool to determine the geographic limits of the territories. The information was then translated into GPS or Google Earth maps. The Pygmies, who do not read, used pictograms to locate the zones: a hut represents a village

and other symbols stand for areas in which trees with medicinal properties grow, hunting grounds or sacred and funerary sites.

The protected areas were then identified in collaboration with CIB representatives. The Mbendjele marked certain trees with white paint before determining the corresponding positions using the GPS. The paint also helps loggers identify the zones when carrying out their activities. CIB representatives then communicated their logging plans by visiting the villages and broadcasting the information by radio – a new communication system for the Pygmies. The necessary infrastructure was implemented with the financial support of the World Bank.

The CIB's investments in this initiative led to the company achieving FSC certification for the Kabo concession in 2006 – a first for an African tropical forest. This project demonstrates how leading-edge technology can help forest-dwelling indigenous populations protect their livelihood and has the potential to diffuse the tensions between the populations that rely on forest resources and forest development companies.



CASE STUDIES

9- Cooperation to curb poaching

Organizations(s)	Compagnie des Bois du Gabon (CBG) / World Wide Fund for Nature (WWF)
Funding	Compagnie des Bois du Gabon (CBG) / World Wide Fund for Nature (WWF)
Location	Gabon, Gamba Complex of Protected Areas (West Gabon), Mandji forest concession
Themes	Bushmeat, means of subsistence, wildlife management plan, poaching
Contact	Ms. Jaqueline Van De Pol CBG jacqueline@cbgpog.com
Link	www.panda.org/gabon/gamba or http://cbgpog.com/ in French only (June 2009)

The Mandji forest concession covers approximately 550,000 ha and is an area rich in biodiversity. Including the protected areas that surround it, the forest extends some 1,500,000 ha and is home to emblematic species such as the elephant and the great ape. The Mandji territory belongs to the Compagnie des Bois du Gabon (CBG) and was recognized as a sustainable concession. The CBG is also seeking FSC certification.

Poaching is a major problem in the region and bushmeat constitutes an important source of animal protein for the population. In fact, it is part of the fundamental eating habits of rural Gabonese. In addition to being a means of subsistence, bushmeat generates revenues for poachers and local sellers. However, sustainable hunting techniques could contribute to biodiversity conservation and help fight poverty. It was therefore to this end that the wildlife management program was implemented in the region through a partnership between the Gabonese government, the CBG and the WWF.

Taking stakeholder needs into account, the program aims to curb poaching. Among other things, it revealed that the road system was an important part of the problem since the intensity of the poaching was

strongly linked to forest road distances. Road system management strategies normally limit the direct impacts of poaching.

Project activities and results include the completion of over ten poaching studies, the installation of six guarded gates along the roads, awareness-building activities through training sessions and the distribution of posters and information, as well as the implementation of a poaching alert system and wildlife management office within the concession. The project also led to the implementation of a frozen goods distribution system to meet the population's animal protein needs.

The project highlights the value of partnerships between conservation agencies, public organizations and local communities when searching for solutions that benefit all stakeholders. Public-private partnerships will therefore be established to ensure the long-term implementation and financial stability of the wildlife management plan.



Poaching is one of the world's most complex protected area management issues. In seeking to involve the local populations and meet their needs, projects such as the one conducted in the Mandji concession have great chances of success given people's natural interest in supporting these types of strategies.

CASE STUDIES

10- Production forests to preserve biodiversity

Organization(s)	Forest Program of the International Union for Conservation of Nature (IUCN)/ International Tropical Timber Organization (ITTO) / World Wide Fund for Nature (WWF)
Funding	Forest Program of the International Union for Conservation of Nature (IUCN)
Location	Cameroun
Themes	Tropical production forest, forest certification, poaching
Contact	Mr. Jeff Sayer IUCN jeff.sayer@iucn.org
Link	www.iucn.org/forest/ (June 2009)

Ecologists working in the field in Cameroun realized that the sustainable management of production forests is at least as important for a significant number of wild plant and animal species as the sustainable management of forests in parks and reserves. These forests include those that are developed for their ligneous resources by logging companies. In fact, ecologists have concluded that the two zones have complementary functions in biodiversity conservation.

The ITTO and IUCN have jointly released the Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests. The guidelines highlight the importance of production forests for biodiversity, and the project is based on the idea that, by their very nature, forests contribute to economic development. To test the application of the guidelines, the IUCN conducted a vast field study in different provinces in southern Cameroun. Results showed that many of the species found in the nation's extensive protected areas could also be found in production forests. The study also demonstrated that the changes to the natural environment brought about by selective cutting fostered undergrowth that is richer in certain species. For example, selective cutting led to the growth of a high number of wild ginger and arrowroot family (*Marantaceae*) plants – two species that emblematic animals such as the gorilla and elephant rely on for food. Bongo and other forest antelope also thrive in zones where development has opened up the canopy and yielded rich undergrowth.

It goes without saying that not all of the changes to the natural environment were beneficial. However, the forests managed by logging companies that had taken measures to protect the forest during and after development when seeking to certify their concessions boasted more diverse wild fauna and flora than the areas in which no conservation measures were implemented.



The IUCN, in close collaboration with the ITTO and WWF, determined the ways in which logging companies could alter their practices to foster the preservation of the biodiversity on their concessions, including a decrease in poaching on their territories.

This project demonstrates the importance of considering the value of production forests, even once they have been developed, in order to ensure the survival of a significant number of plant and animal species. These initiatives will contribute to countering the prejudice that forests that have been developed for their ligneous resources are of no value from a biodiversity perspective. The next step will be to support logging companies and local governments in the implementation of management plans based on the principles set out in the guidelines.



CONCLUSION

Lessons learned in the Congo Basin forests

Given their importance to local populations, the forests of the Congo Basin will unquestionably constitute an essential component of any 50% poverty reduction strategy implemented between now and 2015 (MDG). Forest biodiversity conservation and the sustainable use of the forests' constitutive



elements are crucial to lessen poverty and enhance the quality of life of the populations that depend on them. The case studies show that a range of forest strategies and policies yielding social and economic gains for communities must be applied to each biodiversity conservation project.

The coexistence of humans and their natural environment is clearly illustrated in all of the case studies. In fact, the Congo Basin landscapes have been intrinsically shaped by the heritage of the civilisations that have inhabited them. The relatively recent application of the ecosystem approach merges that which for too long was considered to be the functional duality between natural and inhabited areas. Man cannot be dissociated from the natural environment, especially in a region in which history was not written between the columns of cathedrals but rather between the trees in one of the most biodiverse regions of the world.

From multifunctionality to the use of leading-edge technology: Five lessons

The first of the five lessons learned from the case studies pertains to the use of forest management methods that allow for community participation and which recognize the multifunctionality and heterogeneity of forest ecosystems. State-supervised and centralized management that excludes local populations is no longer suitable. The CRS project clearly illustrates this assertion.

Forest sector interventions that were once exclusively focused on timber production now include different products and services and create new economic opportunities for communities, as illustrated by the application of the forest landscape mosaic concept. The ICRAF project fosters the development of all of the elements of the forest landscape as if they constituted a single system. This approach also makes it possible to reconcile biodiversity conservation and better means of subsistence and is part of the IUCN-ITTO production forest management project.

The second lesson learned is intimately related to the first and lies in the need to recognize the significance of forests to the survival of the populations that depend on them. The CBG's anti-poaching project is a perfect example to illustrate



this. Forest patrols are combined with measures to ensure that hunters earn revenue from other sources and that people who consume bushmeat acquire different eating habits.

The third lesson pertains to the initiatives to strengthen the capacities of the populations living in or just outside forest zones. Such actions may involve teaching people their rights or raising awareness of the importance of sustainably developing the natural environment to ensure continued long-term revenue generation. Examples include the ADECOR projects, which demonstrate that education and awareness-building can break the cycle of poverty, the CRS project, which informs people of their rights to collect forest royalties, and the FENSED project, which, through information workshops, helped the population adopt sustainable techniques to control the elephants that trample their food crops.

The fourth lesson learned pertains to the application of simple and innovative methods to bring existing laws into force. The CEW case

study clearly shows how anti-poaching measures can be enhanced by strengthening the capacities of the right authorities.

Finally, the application of technological tools in the field to directly respond to the needs of various stakeholders is the fifth lesson learned. The case study in which GPS technology is used to define the boundaries of the zones that are crucial to the livelihood of Pygmies in the Republic of the Congo clearly illustrates the use of leading-edge instruments and a bottom-up approach.

Models to emulate

The case studies in this handbook are based on projects whose implementation is relatively recent or still underway. This heightens their pedagogical impact since new practices often illustrate the most interesting scientific advances. These examples provide the impulse and inspiration to launch new initiatives.

Though the initial results seem positive, their true efficiency can only be measured in the long term and they must be revisited in a few years' time to validate the first lessons learned.

The effort to compile information on Congo Basin case studies should not end with the publication of this handbook. To date, too few projects have capitalized on their positive experiences in integrating forest biodiversity and poverty-reduction strategies.

The partnership between the COMIFAC and the Secretariat of the CBD becomes of great importance as it helps to disseminate these success stories of Central African forestry initiatives at the international level. It is a model that demonstrates once again that the conservation and sustainable use of biodiversity go hand in hand with human well-being and development.

ACRONYMS AND ABBREVIATIONS

ADECOR:	Association pour le Développement des Communautés Rurales
ATR:	Annual timber royalties
CARPE:	Central African Regional Program for the Environment
CBD:	Convention on Biological Diversity
CBFP:	Congo Basin Forest Partnership
CBG:	Compagnie des Bois du Gabon
CEW:	Cameroon Environmental Watch
CIB:	Congolaise Industrielle des Bois
CIFOR:	Center for International Forestry Research
COMIFAC:	Commission for the Forests of Central Africa
CRS:	Catholic Relief Services
FAO:	Food and Agriculture Organization of the United Nations
FENSED:	Femme, Environnement, Santé et Education
FOREP:	Forest Resources for People
FSC:	Forest Stewardship Council
GEF:	Global Environment Facility
GPS:	Global Positioning System
GTBAC:	Working Group on Biodiversity in Central Africa (<i>Groupe de Travail Biodiversité d'Afrique Centrale</i>)
GTZ:	(German Agency for Technical Cooperation) <i>Deutsche Gesellschaft für Technische Zusammenarbeit</i>
HIPC:	Initiative for Heavily Indebted Poor Countries
ICRAF:	International Centre for Research in Agroforestry
ITTO:	International Tropical Timber Organization
IUCN:	International Union for Conservation of Nature
IUCN-NL:	International Union for Conservation of Nature – National Committee of the Netherlands
MDG:	Millennium Development Goals
NGO:	Non-government organization
NWFP:	Non-wood forest products
PACO:	Central and West Africa Program (IUCN)
UNDP:	United Nations Development Program
UNEP:	United Nations Environment Program
SCBD:	Secretariat of the Convention on Biological Diversity
SDC:	Swiss Agency for Development and Cooperation
TFT:	Tropical Forest Trust
USAID:	United States Agency for International Development
WWF:	World Wide Fund for Nature

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Financial support has been provided by the French Ministry of Foreign and European Affairs.