



# CARPE PROGRAM 2003–2010



Publication services provided by **The Mitchell Group, Inc. (TMG)**  
pursuant to the following USAID contract:  
AFR/SD Support Services Contract Number AOT-C-00-99-00224-00



## The USAID CARPE Program, 2003–2010

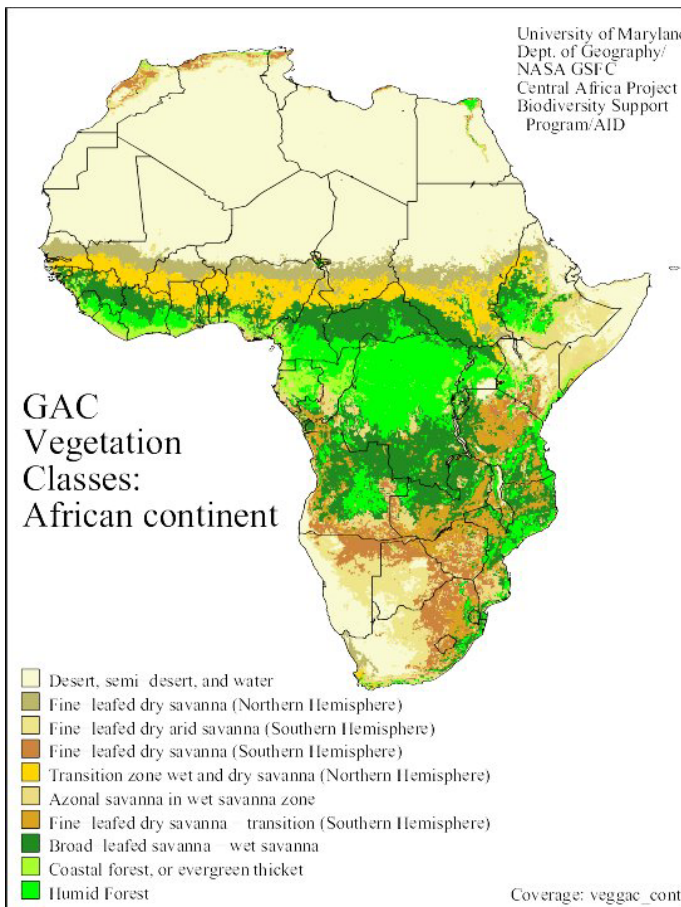
### The Context

With the second largest area of contiguous moist tropical forest in the world, the rainforests of central Africa form one of the planet’s last great tropical wilderness areas. (Only the Amazon Basin is larger.) The Guineo-Congolian Regional Center of Endemism, as this region is also known, was the area from which much of Africa’s existing biological diversity originated. Of an estimated 8,000 species of plants found in this region, 80% are endemic—found nowhere else. It is also Africa's richest area for fauna, with 655 species of birds (36% of which are endemic) and 58 species of mammals (45% of which are endemic). Of these, 16 species of birds and 23 species of mammals are considered threatened or endangered. The region supports the world’s largest populations of low-land gorillas, chimpanzees, bonobos (pygmy chimpanzees), and forest elephants.

Central Africa’s tropical forests (of all types) cover approximately 2 million km<sup>2</sup>; the Congo Basin’s moist deciduous forests cover approximately 1.14 million km<sup>2</sup>, nearly one-fifth of the world’s remaining area of this biome. Tropical rainforest covers parts of Cameroon, the Central African Republic, and the Democratic Republic of Congo, and most of the Republic of Congo, Equatorial Guinea, and Gabon. These forests form the catchment basin of the Congo River, a watershed of

local, regional and global significance. They provide valuable ecological services by controlling and buffering climate at a regional scale, and by absorbing and storing excess carbon dioxide released from the burning of fossil fuels, thereby helping to slow the rate of global climate warming.

The world’s tropical forests have been reduced to about 55% of their original cover, with an estimated 100,000 km<sup>2</sup> being lost each year. Because the region’s forest stock is vast, deforestation rates in the Congo Basin appear low in comparison with other areas of the tropics. However, in terms of actual area cleared annually, the forest loss in the Congo Basin is substantial. It is primarily the result of unsustainable agricultural and logging practices, although fuelwood and charcoal consumption around densely populated areas are contributing factors. While most of the forests of central Africa have, so far, experienced lower rates of clearing than other tropical forests, they represent a huge economic resource certain to be utilized. In



comparison with West Africa, which has already lost much of its forest area, central Africa presents an opportunity to avoid the social, economic, and environmental costs of forest loss and degradation.

More than 60 million people live in the region, and over one-third live in urban areas. Given present rates of population growth, the region is expected to contain 150 million people by the year 2025. Population density is on the whole quite low, with a regional average of 14 persons per square kilometer. There is considerable variation within the region, however, ranging from 4.5 persons/km<sup>2</sup> in Gabon to 25.4 persons/km<sup>2</sup> in Cameroon. While much of the region remains sparsely populated, rapid urbanization has created severe localized pressures on forests and other natural resources. Recent deforestation trends have been troubling, and rising population and economic pressures could further accelerate forest loss in the region. Oil and mineral revenues have been declining in Gabon, Congo and Cameroon, though they have started to increase in Equatorial Guinea. Governments and private commercial interests are turning more energetically to the forest as a revenue source, in some cases to compensate for lower oil and mineral revenues, and in others as a response to global demand for tropical timber products.

An estimated 50% of Central Africa's forests are now under logging leases. This fact means that the commercial logging sector must be involved and cooperate in order to bring about forest conservation and sustainable use at the landscape scale. The value and diversity of timber species makes the Congo Basin the last potential source for large-scale logging in Africa. The thirty species of high-value timber found in Congolese forests are being harvested at clearly unsustainable rates in some areas, and current policies offer few incentives to do otherwise. While logging companies generally harvest only the most valuable trees, the extraction and transportation of those trees causes significant collateral damage to the forests. Furthermore, the logging roads that are constructed open up formerly inaccessible areas to people who clear the land to establish farms and hunt wildlife.

Another severe threat to many large- and medium-sized mammals in Central African forests is uncontrolled hunting to supply "bushmeat" for urban markets and for laborers working in the logging industry. Dramatic reductions in mammal populations could lead to serious disruption of these complex forest ecosystems, damaging their ecological resilience and natural regeneration capacity by eliminating pollinators, seed dispersers, and predators that keep the populations of herbivores in check. There is also a fear that bushmeat hunting and trade contributes to the emergence of new viral diseases into the human population, such as HIV/AIDS and Ebola hemorrhagic fever. HIV, for example, appears to have been transmitted to humans by wild chimpanzees. Moreover, some populations of wild chimpanzees tolerate the closely related SIV virus with few apparent harmful effects, and medical researchers are concerned that the bushmeat trade will eliminate these populations and the potentially invaluable information they could provide that might help in the discovery of a cure for AIDS.

## **The Program**

The USAID Central African Regional Program for the Environment (CARPE) is a 20-year regional initiative that began in September 1995. It was intended to coordinate work on identifying and establishing the conditions and practices required to reduce deforestation and loss of biological diversity in Central Africa. Its U.S.-based partners work with African NGOs, research and education organizations, government agencies, and local specialists and communities. Through these partners CARPE has engaged a variety of African stakeholders in evaluating threats to forests in Central Africa and identifying opportunities for sustainable forest management. An independent

evaluation of CARPE in 2001 (Environment and Development Group, 2002) concluded:

*“In sum, CARPE and its partners have worked with great cost-efficiency to deliver a complex, flexible and imaginative contribution to forest conservation in the Congo Basin. ... the first phase of CARPE has been an extremely worthwhile effort, benefiting greatly from the intellectual diversity of the many organizations, both in the U.S. and in Central Africa, that have worked together to execute its program.”*

After seven years of operation, CARPE is shifting its strategic focus and changing the location of its management functions. In its first phase, CARPE’s partners have focused on increasing our knowledge of Central African forests and biodiversity, and building institutional and human resources capacity. This work included:

- studies conducted by respected institutions (Harvard, Oxford, Center for International Forestry Research, Yale School of Forestry and Environmental Studies, Tropenbos Foundation);
- peer-reviewed articles in journals such as *Conservation Biology* and *Biodiversity and Conservation*; and
- hands-on training and pilot demonstration projects conducted by African NGOs working with local communities to strengthen resource management skills and establish conservation priorities.

Selected research and training documents from the first phase, published in both French and English, are highlighted in the Annex, and a set of 25 briefing papers summarizing the lessons learned is available at [http://www.bsponline.org/bsp/publications/africa/127/congo\\_toc.html](http://www.bsponline.org/bsp/publications/africa/127/congo_toc.html)

In the next eight-year phase, CARPE partners aim to apply and implement sustainable natural resources management practices in the field with an added emphasis on the U.S. contribution to the Congo Basin Forest Partnership. (This initiative, announced by U.S. Secretary of State Colin Powell during the Johannesburg summit in 2002, aims to mobilize new resources and strengthen international efforts to curb deforestation in central Africa.) CARPE will also work to improve environmental governance in the region and to strengthen natural resources monitoring capacity, such as the NGO initiative Global Forest Watch, which works to improve transparency and governance in the commercial timber sector.

As the second phase of CARPE gets underway, the management of the program has shifted from Washington, D.C., to Kinshasa, Democratic Republic of Congo—a country which controls approximately 55% of the dense, humid tropical forest ecosystem that CARPE is designed to help conserve. This will facilitate regional travel; the supervision of existing CARPE-funded African staff in Cameroon, Gabon and the Democratic Republic of Congo; and the administration of the small grants program in the region. It will also permit effective coordination and rapport with African regional initiatives, such as COMIFAC<sup>1</sup>—a coordinating body recently established by central African forestry ministers to share information and harmonize forest management and protected area policies in the region.

CARPE’s objective is relevant to economic development and the alleviation of poverty throughout Central Africa, by helping to conserve the forests and other biological resources that are essential for economic development in the region. This will benefit not only the people and countries of the

---

<sup>1</sup> *Conférence des Ministres en Charge des Forêts d’Afrique Centrale*

region, but also U.S. citizens and the global community as well, by slowing global climate change and conserving the irreplaceable species and genetic resources of the Congo Basin. The forests and biodiversity of Central Africa are threatened by human factors, choices, practices, and behaviors—and these threats can only be addressed by improvements in local, national, and regional capacity to manage these resources sustainably, for broad-based benefits to the societies of the region. **The Strategic Objective of CARPE is to reduce the rate of forest degradation and loss of biodiversity through increased local, national, and regional natural resource management capacity.** This will contribute to sustainable economic development, and help to alleviate poverty for the benefit of people of the region and the global community.

Intermediate results which need to be achieved in order to reach this long-term objective include:

- the establishment of sustainable forest and biodiversity management practices,
- strengthening environmental governance, and
- monitoring forests and other natural resources throughout the region.

The improvements in environmental governance that CARPE will foster will contribute to more general improvements in democratic governance, transparency, accountability, social stability, and reduction in violent conflict in the region as a whole. Monitoring will enable the program to be flexible and manage its activities adaptively in this dynamic region, as well as to demonstrate results on the ground. The framework outlining the interrelationships between these intermediate results and the strategic objective is shown, together with indicators to be used for monitoring progress, in **Figure 1, “Results-Based Management Framework for CARPE II.”**

The second phase of CARPE is planned for the period 2003 to 2010, with intensive implementation and the firm establishment of enhanced regional capacity to reduce deforestation and conserve biodiversity. Following the completion of phase II of CARPE in 2010, it is anticipated that the 20-year program will be completed through a final, four-year period of “handing over,” when CARPE activities and programs will be turned over to Central African institutions.

## **The Landscapes**

During this second phase, CARPE activities will focus on a set of ecologically distinctive and important “landscapes” across the Congo Basin (protected areas within the landscape are indicated in italics):

- Monte Alen–Mont de Cristal Inselbergs Forest Landscape: Mt. Seni and Mbé (Gabon and Equatorial Guinea)
- Gamba-Conkouati Forest Landscape: Loango, Moukalaba-Doudou, Mayumba and Conkouati (Gabon, Congo and Democratic Republic of Congo)
- Lope-Chaillu-Louesse Forest Landscape: Lope, Waka and Dimonika (Gabon and Congo)
- Dja-Minkebe-Odzala Tri-national Forest Landscape: Boumba Bek–Nki, Minkebe, Mwangé, Ivindo and Odzala (Cameroon, Congo and Gabon)
- Sangha Tri-national Forest Landscape: Dzanga Sangha, Nouabale Ndoki and Lobeke (Cameroon, Congo and Central African Republic)
- Lac Tele–Lac Tumba Swamp Forest Landscape: Lac Tele and Lac Tumba (Congo and Democratic Republic of Congo)
- Bateke Plateau Forest Savanna Landscape: Mpassa and Haute Ogooue (Gabon and Congo)

- Maringa/Lopori–Wamba Forest Landscape: Maringa-Lopori and Wanga (Democratic Republic of Congo)
- Salonga-Lukenie-Sankuru Forest Landscape: Salonga (Democratic Republic of Congo)
- Maiko–Lutunguru Tayna–Kahuzi Biega Forest Landscape: Maiko and Kahuzi-Biega (Democratic Republic of Congo)
- Ituri-Epulu-Aru Forest Landscape: Okapi (Democratic Republic of Congo).

### **The Partners**

During the first phase of CARPE, USAID worked with a variety of non-governmental and U.S. government partners, each of which had specific areas of expertise relevant to the program's goals. A major thrust of that phase included small research and pilot demonstration grants for local African groups working on a wide range of conservation and community-based resource management activities. Selected discussions of the grants carried out are listed in the Annex. During the second phase, CARPE will be extending the network even more broadly, beginning with a competitive process for conservation grants in the 11 priority landscapes described above. This will be open to a wider range of participants, including those with narrowly defined or site-specific interests which might not have been able to participate during the first phase, which emphasized coverage of the entire Congo Basin region.

Although the Phase 2 competitive awards have not yet been decided, the list of partners already active in CARPE planning includes World Wildlife Fund-US, the Wildlife Conservation Society, Conservation International, the African Wildlife Foundation, the Jane Goodall Institute, World Resources Institute, Innovative Resources Management, the Missouri Botanical Garden, the Dian Fossey Gorilla Fund International, the Bonobo Conservation Initiative, the World Conservation Union/IUCN, the Smithsonian Institution, the U.S. Forest Service, NASA/University of Maryland, the Peace Corps, the U.S. State Department (which oversees the Congo Basin Forest Partnership), the U.S. Department of Agriculture, and the U.S. Fish and Wildlife Service.

## Annex: Selected Reports and Publications from CARPE Phase I

- Ainge, L., and N. Brown. 2000. *IRVINGIA GABONENSIS AND I. WOMBOLU*. A STATE OF KNOWLEDGE REPORT UNDERTAKEN FOR THE CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVIRONMENT. Oxford Forestry Institute, University of Oxford. Oxford, England.
- Bikié, H., O. Ndoye, and W. Sunderlin. 1998. *CRISE ÉCONOMIQUE SUR LES SYSTÈMES DE PRODUCTION ET LE CHANGEMENT DU COUVERT FORESTIER DANS LA ZONE FORESTIÈRE HUMIDE DU CAMEROUN*. RAPPORT D'ÉTUDE. Center for International Forestry Research (CIFOR), Yaoundé, Cameroun.
- Blackmore, Paul. 1999. *THE TRANSFER OF THE ERU (GNETUM AFRICANUM, G. BUCHHOLZIANUM) DOMESTICATION MODEL TO VILLAGE-BASED FARMERS ON AND AROUND MOUNT CAMEROON*. Mount Cameroon Project, Limbe, Cameroon.
- Boscolo, M. 2000. *FOREST POLICIES AND CONCESSIONAIRES' BEHAVIOR IN CAMEROON*. PRELIMINARY STUDY REPORT. Harvard: Harvard Institute for International Development, Cambridge, MA.
- Brackelaire, V., and C. Ngwasari. 2000. *ETUDE SUR LA MISE EN PLACE D'UN CADRE LÉGAL DE COOPÉRATION SOUS-RÉGIONAL POUR LA GESTION DES ÉCOSYSTÈMES DE FORÊTS DENSES ET HUMIDES D'AFRIQUE CENTRALE*. UICN/CEFDHAC, Yaoundé, Cameroun.
- CEW. 2000. *PROJET "ÉVALUATION ET CARTOGRAPHIE DE L'EXPLOITATION FORESTIÈRE INDUSTRIELLE AUTOUR DE LA RÉSERVE DE BIOSPHERE DU DJA (CAMEROUN)"*. RAPPORT FINAL. Cameroon Environmental Watch. Yaoundé, Cameroun.
- Dallmeier, F. and J. Comiskey. 1996. *METHODOLOGY FOR ESTABLISHING BIODIVERSITY PLOTS*. MATERIALS FOR A SI/MAB ASSESSMENT AND MONITORING FRAMEWORK COURSE, FEBRUARY 7–20, 2000, IN LIMBE/MUDEMBA, CAMEROON. Smithsonian Institution/Man and the Biosphere Program (MAB). Washington, D.C.
- Dkamela, G. P. 2000. *LES INSTITUTIONS COMMUNAUTAIRES DE GESTION DES PRODUITS FORESTIERS NON-LIGNEUX DANS LES VILLAGES PÉRIPHÉRIQUES DE LA RÉSERVE DE BIOSPHERE DU DJA*. RAPPORT D'ÉTUDE. Tropenbos-Cameroon Documents. Kribi, Cameroon.
- Doumenge, C. 1998. *LA GESTION DES ÉCOSYSTÈMES FORESTIÈRES DU CAMEROUN, DU GABON, ET DE LA GUINÉE ÉQUATORIALE À L'AUBE DE L'AN 2000*. SYNTHÈSE RÉGIONALE. UICN/CEFDHAC, Yaoundé, Cameroun.
- Eba'a Atyi, R. 1998. *CAMEROON'S LOGGING INDUSTRY: STRUCTURE, ECONOMIC IMPORTANCE AND EFFECTS OF DEVALUATION*. Center for International Forestry Research (CIFOR). Bogor, Indonesia.
- ERAIFT, 2000. *CARTE DE VÉGÉTATION D'UNE PARTIE DE LA PROVINCE DU BANDUNDU*. Ecole Régionale Post-Universitaire d'Aménagement et de Gestion Intégrés des Forêts Tropicales. Kinshasa, DRC.
- Graham, C. 2000. *USING HIGH-DEFINITION SATELLITE IMAGERY TO ASSESS THE LOSS OF ECOTONE HABITATS IN THE CONGO BASIN*. Jet Propulsion Laboratory, Pasadena, California.
- Hall, Jefferson. 1998. *SUSTAINABLE MANAGEMENT OF AFRICAN MAHOGANIES THROUGH STUDIES OF REGENERATION REQUIREMENTS IN SOUTHWESTERN CENTRAL AFRICAN REPUBLIC*. School of Forestry and Environmental Studies, Yale University, New Haven, CT.
- Hearn, G. W. 1999. *PRIMATE CONSERVATION ON BIKO ISLAND, EQUATORIAL GUINEA*. STUDY REPORT. Department of Biology, Beaver College, Glenside, PA.
- Houben, Patrick. 2000. *SÉMINAIRE INTERNATIONAL SUR L'ÉLEVAGE INTENSIF DE GIBIER*. Développement au Gabon de l'Élevage du Gibier, Libreville, Gabon.
- Iwu, Maurice. 1999. *EVALUATION OF PHYTOMEDICINE DEVELOPMENT AS AN ECONOMIC INCENTIVE FOR BIODIVERSITY CONSERVATION IN CAMEROON*. Bioresources Development and Conservation Programme. Silver Spring, MD.
- Karsenty, A., and D. J. Joiris. 1999. *LES SYSTÈMES LOCAUX DE GESTION DANS LE BASSIN DU CONGO*. RAPPORT D'ÉTUDE. PVO- NGO/NRMS Project, CARPE composante RI 1. Washington, D.C.



## CENTRAL AFRICA REGIONAL PROGRAM FOR THE ENVIRONMENT—CARPE

- Lahm, S., 2000. THE IMPACT OF GOLD PANNING AND ASSOCIATED HUMAN ACTIVITIES ON WILDLIFE AND THE ENVIRONMENT IN NORTHEASTERN GABON. IRET, Libreville, Gabon.
- Laporte, N. 1997. EXECUTIVE SUMMARY: THE USE OF TIME SERIES SATELLITE DATA FOR CHARACTERIZING AND MONITORING THE SEASONAL FORESTS AND SAVANNAS OF CENTRAL AFRICA. STUDY REPORT. University of Maryland, College Park, MD.
- Losos, Elizabeth. 1999. LONG-TERM MONITORING OF A CAMEROONIAN LOWLAND MOIST FOREST: PHASE II, BOTANICAL IDENTIFICATION AND DATABASE DEVELOPMENT. Smithsonian Tropical Research Institute, Washington DC.
- Luketa Shimbi, Henri. 2000. ETUDE DE CERTAINES CROYANCES ET PRATIQUES TRADITIONNELLES QUI FAVORISENT LA CONSERVATION DE LA BIODIVERSITÉ: CAS DE LA PROVINCE DE L'EQUATEUR. Faune et Vie, Kinshasa, Rep. Dem. du Congo.
- MINEF. 2000. REGIONAL WORKSHOP ON THE MANAGEMENT OF FOREST ELEPHANTS IN CENTRAL AFRICA. YOKADOUMA (25–25 MAY, 2000). FINAL REPORT. Ministry of Environment and Forestry. Yaoundé, Cameroon.
- Mogba, Z., and M. S. Freudenberger. 1998. LES MIGRATIONS HUMAINES DANS LES AIRES PROTÉGÉES DE L'AFRIQUE CENTRALE: CAS DE LA RÉSERVE SPÉCIALE DE DZANGA-SANGHA. World Wildlife Fund. Washington, D.C.
- Muloko Ntoutoume, N. 2000. STUDY OF THE IMPACT OF LOGGING ON THE GENETIC DIVERSITY OF OKOUME (*AUCOUMEA KLAINIANA*, *BURSERACEAE*). Unité de Génétique Moléculaire des Ecosystèmes Tropicaux, CIRMF, Franceville, Gabon.
- Ntenwu, T. N. M. 2000. THE ROLE OF COMMUNITY INSTITUTIONS IN THE MANAGEMENT OF NON-TIMBER FOREST PRODUCTS IN THE BIPINDI- AKOM II REGION OF SOUTH CAMEROON. STUDY REPORT. Trobenbos Foundation. Wageningen, The Netherlands.
- Plenderleith, K., and N. Brown. 2000. *BAILLONELLA TOXISPERMA*. A STATE OF KNOWLEDGE REPORT UNDERTAKEN FOR THE CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVIRONMENT. Oxford Forestry Institute, University of Oxford. Oxford, England.
- PRGIE, 2000. OBSERVATION PAR SATELLITE DES FORÊTS D'AFRIQUE CENTRALE. CRÉATION DU RÉSEAU. SYNTHÈSE DE L'ATELIER DU 22 AU 24 FÉVRIER 2000, À LIBREVILLE, GABON. Programme Régional de Gestion de l'Information Environnementale. Libreville, Gabon.
- Ribot, J., and Veit, P. 1999. WORKSHOP ON ENVIRONMENTAL GOVERNANCE IN CENTRAL AFRICA: THEMATIC OVERVIEW. May 27, 1999. World Resources Institute. Washington, D.C.
- Sunderland, T. C. H., and J. Dransfield. [in press]. THE SUSTAINABILITY AND POTENTIAL CERTIFICATION OF RATTANS (*PALMAE*; *CALAMOIDEAE*). In P. Shanley, A. Pierce, and S. Laird (eds.). THE CERTIFICATION OF NON-TIMBER FOREST PRODUCTS. Island Press. Washington, D.C.
- Tachie-Obeng, E., and N. Brown. 2000. *COLA NITIDA* AND *C. ACUMINATA*. A STATE OF KNOWLEDGE REPORT UNDERTAKEN FOR THE CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVIRONMENT. Oxford Forestry Institute, University of Oxford. Oxford, England.
- van Dorp, M., R. Niemeijer, and D. Offermans. 1999. A METHODOLOGY FOR THE SOCIO-ECONOMIC VALUATION OF NON-TIMBER FOREST PRODUCTS ON A REGIONAL OR NATIONAL SCALE. AIDEnvironment/CERUT, Amsterdam, The Netherlands.
- Whitney, K. D., D. Stauffer, D., M. K. Fogiel, K. Holbrook, B. D. Hardesty, A. R. French, A. Lamperti, V. T. Parker, and T. B. Smith. 1996. DJA HORNBILL PROJECT, PROJET CALAO. Department of Biology, San Francisco State University, San Francisco, CA.
- Wilkie, D. S., and J. F. Carpenter. 1999. BUSHMEAT HUNTING IN THE CONGO BASIN: AN ASSESSMENT OF IMPACTS AND OPTIONS FOR MITIGATION. *Biodiversity and Conservation* 8:927-955.
- Wilkie, D. S., G. A. Morelli, E. Shaw, F. Rotberg, and P. Auzel. 2000. ROADS, DEVELOPMENT AND CONSERVATION IN THE CONGO BASIN. *Conservation Biology* 14:1614-1622.

CENTRAL AFRICA REGIONAL PROGRAM FOR THE ENVIRONMENT—CARPE

- Wolff, E., T. Trefon, M. Sintzoff, and H. Mwanza. 1999. GÉOGRAPHIE DES RELATIONS VILLE-FORÊT. VOLUME 1: ANALYSE À L'ÉCHELLE LOCALE. RAPPORT FINAL. Institut de Gestion de l'Environnement et d'Aménagement du Territoire/l'Université Libre de Bruxelles, Brussels, Belgium.
- Zama, I. 2001 LAND TENURE RIGHTS AND CONFLICT MANAGEMENT IN COMMUNITY FORESTRY IN CAMEROON: A STUDY OF THE MOUNT KILUM/IJUM COMMUNITY FORESTRY RESERVE. TECHNICAL REPORT. BDCP/University of Wisconsin-Madison. Yaoundé, Cameroon.



RESULTS-BASED MANAGEMENT FRAMEWORK FOR CARPE II

**Strategic Objective: Reduce the rate of forest degradation and loss of biodiversity through increased local, national, and regional natural resource management capacity.**

**Overall Indicators:**

- #1: Landscapes with operational management plans
- #2: Institutional capacity and regional cooperation on forest management
- #3: Area under sustainable forest management/area of forest degradation
- #4: Total amount of bushmeat harvested
- #5: Area of effectively managed protected areas

**Development Context**

- Stability of Central African governments
- Population dynamics in Central Africa
- International agreements regarding carbon sequestration value of moist tropical forests
- Global timber trade, supply and demand

**Critical Assumptions and Risks**

- Violent conflict prevented
- Corruption controlled
- Governments allow improvements in transparency and environmental governance

**Intermediate Result 1**  
*Sustainable natural resources management practices applied*

**Indicators:**

- Ind 1.1: Area under sustainable management
- Ind 1.2: Livelihood benefits and/or incomes of communities generated by improved natural resources management

**Intermediate Result 3**  
*Natural resources monitoring institutionalized*

**Indicators:**

- Ind 3.1: Area monitored for forest condition/degradation
- Ind 3.2: Number and types of resources monitored
- Ind 3.3: Information disseminated in accessible forms to decisionmakers and advocacy groups

**Intermediate Result 2**  
*Natural resources governance (institutions, policies, laws) strengthened*

**Indicators:**

- Ind 2.1: Policies and laws supporting protected areas, community-based natural resources management, and regulating logging concessions
- Ind 2.2: Civil society is engaged in advocacy supporting sustainable natural resources management
- Ind 2.3: Institutional capacity of NGOs and

**Intermediate Results**

**Illustrative Activity Types**

- Support development of conservation plans involving all stakeholders that include protected areas, logging concessions, and community-managed lands
- Promote forest-based livelihood opportunities that improve local quality of life and increase incomes
- Provide technical assistance on sustainable forestry practices
- Control bushmeat harvesting
- Establish ecological and socio-economic monitoring systems in selected landscapes
- Monitor land use, logging activity, deforestation, and forest access throughout the region using remote sensing
- Compile and disseminate information in forms usable by decision-makers and advocacy organizations
- Support development of national land use and conservation planning
- Support development of policies and laws for protected areas, community-based natural resources management, and logging concessions
- Strengthen capacity of civil society and NGO sector to advocate for sustainable natural resources management
- Strengthen mechanisms for regional institutional cooperation and transboundary natural resources management