

# **USDA-Forest Service Technical Assistance Trip Equatorial Guinea**

In Support to USAID Central African Regional Program for the Environment  
(CARPE) for Assistance in Reducing Forest Degradation and Loss of Biological  
Diversity in Equatorial Guinea

## **FINAL REPORT**

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Report Submitted by:

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## **SCOPE OF THE TECHNICAL ASSISTANCE**

The objectives of this mission were to travel to Equatorial Guinea and, working with Conservation International (CI) and the National Institute of Forest Development (INDEFOR), evaluate INDEFOR's institutional capability and timber concession operations ability to reduce forest degradation and loss of biological diversity. Also, evaluate what technical assistance USDA Forest Service (USFS) may be able to contribute to the development of INDEFOR's institutional capability.

## **BACKGROUND**

USAID Request and Objectives of the Technical Assistance Trip:

The U.S. Agency for International Development's (USAID's) Central Africa Regional Program for the Environment (CARPE) is intended to coordinate work to identify and establish the conditions and practices required to reduce forest degradation and loss of biological diversity in Central Africa. CARPE is a nine-country effort executed through partnerships with African NGO's, research and education organizations, government agencies, and private-sector consultants. During the first phase, CARPE Partners focused on increasing knowledge of Central African forests and biological diversity and building institutional and human resources capacity. After seven years, the focus is shifting to apply and implement sustainable natural resources management practices in the field.

Work is just beginning in Equatorial Guinea. The primary NGO working in Equatorial Guinea is Conservation International (CI). CI submitted a proposal to USAID to support CARPE's strategic objectives of reducing the rate of forest degradation and loss of biological diversity. They saw their activities also supporting the U.S. goals for the Congo Basin Partnership to promote economic development, poverty alleviation, improved governance, and natural resource conservation. CI will have a permanent presence in Equatorial Guinea and will provide in country support and coordination for all activities tied to CARPE, including any assistance provided by USFS. CI has established an office within INDEFOR to fulfill their role.

USAID funded CI's proposal and defined specific 3-year targets and annual benchmarks. There are specific items that refer to how the Forest Service may contribute, although CI's role and responsibilities include other area. Any contributions the USFS makes will be through CI. The specific items referring to the USFS are found in Table 1.

**TABLE 1**

<b>CARPE WORKPLAN</b>							
Monte Alen-Monts de Cristal Landscape, Equatorial Guinea segment							
Baseline		Three Year Landscape Target Value	Benchmark	Activity Category	Planned Task	Responsibility	
Year	Value		Annual		6/04-6/05	Partner	Person
Strategic Objective: Reduce the rate of forest degradation and loss of biological diversity through increased local, national, and regional natural resource management capacity							
Sub-IR 1.3 Logging Concessions are Managed for Sustainability							
FY04	No effective control by INDEFOR of logging concessions	Best practices and minimum standards for forestry concessions defined and being incorporated in logging operations	Report of current practices in forestry concessions completed.  Logging concessions mapped and in the INDEFOR landscape database with ancillary data.  Logging best practice guidelines and minimum standards being prepared.  Regular monitoring and evaluation of logging activities taking place by INDEFOR enforcement staff.	Activity 1.3: Support and encourage government and private sector partners to improve practices in forestry concessions in accordance with conservation principles to reduce forest fragmentation and bushmeat hunting.	Help INDEFOR evaluate current practices in logging concessions across the landscape.  Provide INDEFOR technical assistance to map current logging concessions.  Provide technical assistance and training to allow INDEFOR staff to collect and evaluate socio-economic and biological data on the impacts of logging.  Develop best practices guidelines for logging concessions.	USFS CI INDEFOR	Palmer Kernan Obama

The European Union funded the highly successful CUREF (Conservacion y Utilizacion Racional de Los Ecosistemas Forestales) project from 1996 to 2002 (Phase 1 & 2). Much was accomplished including training and data gathering. The second phase of the CUREF project was focused on officially establishing INDEFOR and the Instituto Nacional de Areas Protegidas (INAP). INAP was established as INDEFOR, in August 2002, as a technical arm to the Ministry of Agriculture and Forests with responsibility to manage parks, reserves, and forest concessions, and to collect information on forest resources, conducting inventories, and analyze data. The law establishing

INDEFOR is not very explicit about its roles or in distinguishing INDEFOR's roles from other agencies within the Ministry of Agriculture and Forests.

INDEFOR was given a building, which is being renovated, and salary. INDEFOR has the technical expertise to complete much of the needed work in the field. Unfortunately, INDEFOR has not received adequate operational funds to accomplish its mission since the CUREF project ended. (For more information on CUREF see [www.internetafrica.com/curef](http://www.internetafrica.com/curef))

### **TECHNICAL ASSISTANCE OBJECTIVES:**

- A. Assess INDEFOR's institutional capability to reduce forest degradation and loss of biological diversity.
- B. Examine timber concession operations and their impacts to natural resources.
- C. Evaluate what role Forest Service might play in achieving program goals.

### **ACTIVITIES:**

To meet the objectives, it was necessary to meet with CI's on-site project manager, various personnel in INDEFOR and the Ministry, make site visits to currently active and inactive timber concession operations, visit communal forest operations, and visit untouched primary forests.

### **ANTICIPATED OUTPUTS:**

- A. An assessment of timber concession operations.
- B. An assessment of INDEFOR's institutional capability to reduce forest degradation and loss of biological diversity.
- C. A recommendation on what role USFS might play in meeting program objectives.

## **FINDINGS and RECOMMENDATIONS**

### **A. General:**

The potential to reduce forest degradation and loss of biological diversity is tremendous. However, there are major obstacles.

1. Operational funds for INDEFOR are lacking. To successfully implement activities, both at the offices and in the field, complementary funding is needed within INDEFOR for vehicles and motorcycles, both field and office equipment, and for field expenses. People solely sitting in their offices will not guarantee sound management of the forests (Public transportation outside Bata is extremely limited). A pre-condition to continued USFS support will be the availability for INDEFOR and/or its partners to provide transportation to forested sites and field personnel.
2. Logistical support for expatriate technical experts is not yet in place. This is being worked on by CI and should be in place by the end of this calendar year.
3. The Ministry of Agriculture and Forests has the authority to control timber-harvesting operations. They too lack funding and transportation for their harvest inspectors. Properly equipping their field people is fundamental to achieving sound forest management.

In spite of these obstacles, the opportunity to have a major impact is now. The previous CUREF project has done much of the groundwork, including critical training. INDEFOR has the technical

expertise and training to accomplish much of its mission. What it needs is financial support. The additional good news is that we do not need to repeat the work completed under CUREF, including much of the training, under the CARPE project. Our focus should be to get trained people to the ground, refining their skills, and building new skills where they are lacking.

### **B. Logging Concessions:**

The 1997 Forestry Law, which is adequate to achieve sustainable forest management, outlines the basic rules for timber extraction. These rules are also placed in the timber harvesting concessionaire contracts. The Ministry of Agriculture and Forests has inspectors assigned to each timber harvest concession. The main focus of harvest inspectors are scaling and grading logs before they leave the concession to assure the Government that what is harvested is paid for. The concessions are designed to maximize extraction the easiest way possible to fill market orders with no annual limits on harvesting.

During field visits to concessions, we did not encounter any inspectors. This made it difficult to assess their needs and current duties.

Extraction is guided solely by market values and diameter limits, with limited consideration to forest values and maximizing utilization.

INDEFOR has limited information on growth and yield and no information on current forest conditions. There is a general lack of information on regeneration and silvics of forest species. The last forest inventory was completed by FAO in the 1980's. There is a serious need for updated information.

The last update on concessionaire operations was completed in 1998. INDEFOR currently does not have a clear picture of what is taking place or where. Essentially all forested land outside protected areas is under concession. I heard 80 percent of forests are currently under concessionaire contracts. This was difficult to confirm, but based on INDEFOR's map from 1997 showing concessions, it does not appear that less than 80 percent is under contract for harvest.

It is clear in some areas that forests are being overcut. It is unclear what specific impact this will have on the forest and future harvest levels. Road building, felling, and extraction operations are not well designed and coordinated. This is causing unnecessary impacts to soils, water, regeneration, and wildlife habitat.

Much of the tree is wasted under current utilization. Concessionaires take only the very best material, generally only the first log. The remainder of the tree is left in the forest. Once a log is brought to the landing, all defects are cut off these logs and left. A very rough guess is that only about 60 to 70% of the available material is being utilized, and mostly for export markets. It is understandable that concessionaires want to maximize the value of what they export, but this is not

what may be best for the forest and Equatorial Guinea if they wish to maximize incomes and utilization of their woods. This lower value material, that is not being utilized, is usually absorbed by local market demands. In Equatorial Guinea there does not appear to be an adequate local market capable of absorbing the quantity material that is left in the woods. There may be a possibility of developing markets in adjacent countries or for making high quality furniture for local and export markets.

There is a lack of information from which to design localized best management practices. Additionally, there is no existing monitoring information, particularly on regeneration of commercially valuable species.

The basic science behind what conditions are needed to assure regeneration is also unavailable. However, there are "known" practices that, if applied, will lessen forest degradation while specific information is gathered.

Most of these practices are known by INDEFOR based on work completed with the CUREF Project (Proyecto Conservacion y Utilizacion Racional de Los Ecosistemas Forestales funded by the European Development Fund). CUREF completed a forest inventory design, a list of forest management practices, changes in the basic law for better forest protection, a model forest management plan, and, among many other activities, lots of technical training. This work does not need to be repeated, just put into practice, which will require INDEFOR having operational funds, vehicles, and equipment, as noted above.

### **Recommendations:**

1. Harvest inspectors need to inspect the entire harvesting operation to ensure that the contract and the rules within the Forestry Law of 1997 are being followed. INDEFOR has the best-qualified people to ensure that harvest inspectors understand the rules, how to inspect for them, and what the impacts to the forests are if the rules are not followed.
2. INDEFOR should design a transportation system for each forestry operation and should design the skid trail layout for each harvest area prior to felling. Where possible directional felling should be used to align with skid trails and lessen forest impacts during extraction.
3. INDEFOR should develop growth and yield tables for all commercially valuable species.
4. INDEFOR should develop monitoring protocols for checking regeneration.
5. INDEFOR should complete a new forest inventory. This is absolutely critical to understanding current forest conditions and calculating an appropriate level of harvest.
6. INDEFOR should update their information on logging concessions. This could include mapping the areas, gathering data on what was harvested from where, determining extent and level of damage, and certifying regeneration is being achieved.
7. Utilization of trees cut needs to be increased. Other markets and uses for this material need to be explored and, where feasible, developed.
8. INDEFOR needs to ensure that proven forestry practices, identified under the CUREF project, are being followed during harvesting operations.
9. INDEFOR should mark trees to be left for seed trees in all harvesting operations prior to harvesting beginning until more information can be gathered and analyzed on silvicultural needs.

10. Concessionaires are a part of the solution and need to be brought into proper management discussions. INDEFOR should hold a seminar for concessionaires to help them understand the impacts of their operations and how they can help minimize those impacts. Their willingness to cooperate alone could make a huge difference in reducing forest degradation.

### **C. Institutional Capability:**

INDEFOR is a new organization. The Ministry of Agriculture and Forests and INDEFOR organizations are in transition. There is currently some overlap in organizational structures and duties. Some duties are suppose to move to INDEFOR and heads of current sections within INDEFOR have not been confirmed.

The Ministry sees itself as the authorization body. It literally authorizes and controls harvest operations. It sees INDEFOR as a technical branch that develops management plans, gathers and analyzes information (inventory and monitoring), keeps a technical library, and maintains an active national herbarium. The Ministry of Agriculture and Forests has not directly requested USFS assistance, although there appears to be some needs for assistance that CI should explore.

### **Recommendations:**

1. Roles and responsibilities should be clarified between the Ministry and INDEFOR. Overlap in duties should be eliminated.
2. Heads of sections within INDEFOR should be formally confirmed.

### **D. Role of USFS:**

There is much enthusiasm, talent, and hope in the staff of INDEFOR. They already posses many of the technical skills needed to ensure sound forest management practices. Within this realm, there is a role for the USFS. First, logistical support needs to be in place and INDEFOR needs to have roles clarified and operational funds available before USFS personnel could be effective. CI is working on logistical support and this should be in place by January 2005. The clarification of roles and having adequate operational funds for INDEFOR may be more difficult to resolve. The Ministry and CI are working on these issues. USFS personnel should expect to coordinate with CI in providing any assistance to INDEFOR.

Once adequate funding is found for INDEFOR to conduct field operations, I would recommend the USFS, in order of priority:

1. Provide hands-on field training to INDEFOR personnel in silviculture, regeneration, and monitoring. This will require an extensive literature search on all species and possibly the need to develop monographs in Spanish where they are lacking, as well as, the development of a monitoring protocol for ensuring regeneration following each harvest entry.
2. Work with INDEFOR personnel in developing a sound set of best management practices and silvicultural practices that include forest regeneration standards. As noted before, a set of best management practices were developed under the CUREF project. The priority would be to implement these through forest management plans and concessionaire contracts, while adding practices that focus on regeneration, felling and skid trails. It should be recognized that any set of best management practices are iterative, that is, they must be accompanied with a sound monitoring program so that such practices can be

refined to specific ecological and site conditions. We need to instill the habit of always comparing what was expected with what actually occurred, so that adjustments in management become the norm.

3. Assist INDEFOR in developing field handbooks for harvest inspectors and for field layout of roads, skid trails, and for marking seed trees to leave behind.
4. Assist, as necessary, in the development of forest management plans.

### **E. Resource Management Plans**

During the European Union project of CUREF, one forest management plan was developed as a guide. No others have been developed. The one developed has not been implemented.

There are a number of community forests. The community has the authority to sell the timber to concessionaires. No management plans have been developed for these activities.

### **Recommendations:**

1. INDEFOR should develop forest management plans before harvesting is allowed in community forests.
2. INDEFOR should develop additional standards and practices that protect other forest resources during harvesting operations.
3. INDEFOR should explore, when developing forest management plans, what other resource objectives they may have that specific area, such as wildlife or community objectives to meet common needs within the community.

### **F. Additional findings:**

The Ministry of Forests in concert with the Ministry of Economics set the values for timber sold in concessions every six months based on species and grade using international data from internet on current selling values. Controls on timber transport and export seems to be adequate to ensure that Equatorial Guinea is paid for what is cut.

The quantity of the timber is estimated by scaling logs at the landings. Logs are also graded at this time. The value of logs increases according to log grade. There appears to be a great deal of difference in Ministry employees' grading skills. This could have a substantial impact on financial returns to Equatorial Guinea.

All concessionaires paid the same for timber whether it is hauled from the interior or close to Bata. Timber concessionaires have not raised this as an issue, which may indicate that profit margins are lucrative enough to ignore the additional transportation costs. This may change as sound forest practices and possibly high utilization standards are applied.

Export authorizations need to be signed by the Minister of Forests. It appears that it is not uncommon for authorizations to be delayed, sometimes because the Minister is unavailable. These delays cause barges to be held up for a day or two, which costs the exporter around \$5,000 U.S. per day. These unnecessary additional costs to concessionaires could affect relationships with INDEFOR and their willingness to work toward better forest management.



The list of publications found in the library was difficult to use, as there were no cross references to finding specific items of interest. One had to look through the entire list of publications to find what was available.

**Recommendations:**

1. Evaluate whether the maximum value possible is received for timber harvested under the current valuation system.
2. Institute a system of check scaling and grading. The increase in receipts could easily offset the costs of check scaling and grading.
3. Implement a better system to ensure that export authorizations are timely.
4. Develop a better organization and retrieval system for publications.

## **Appendix A**

### ACKNOWLEDGEMENTS

I am grateful to Christopher (Kit) Kernan for overall assistance and logistical support, without which the visit would not have been successful. I am also grateful for the time D. Ramon Mituy Abaga and D. Diosdado Obiang took out of their busy schedule to show and explain to me concessionaire operations.

### CONTACTS

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Andres Nkisogo, Oficina de Control, Informacion, y Promocion de Especies Forestales

#### INDEFOR

Crisantos Obama, Director

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#### Conservation International

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Robert Fine, Director of IT

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## Appendix B

### MISSION ITINERARY

Sunday 8/1	Palmer arrives in Bata
Monday 8/2	Meet w/ Christopher Kernan, onsite CI manager, and with Crisantos Obama, Director of INDEFOR
Tuesday, 8/3	Local holiday – read documents
Wednesday, 8/4	Meet w/ other INDEFOR and Ministry personnel
Thursday, 8/5	Travel to Rio Campo; Visit the SOFMAL Concessionaire operation; Visit Forest Reservation
Friday, 8/6	Field trip cancelled. Visit two small sawmills and a veneer plant (SIJILFO), plus export log yard in Bata. Veneer plant exclusively using Ilonnba ( <i>Pycnanthus angolensis</i> )
Saturday, 8/7	Visit OCIPEF and export operations and speak with Andres Nkisogo, the person in-charge
Sunday, 8/8	Work on report
Monday, 8/9	Visit concessions (SINOSA) traveling to Monte Alen, spend night
Tuesday, 8/10	Visit active timber concessions (Matroguisa)
Wednesday, 8/11	Visit primary, untouched forest and return to Bata
Thursday, 8/12	Report on observations, findings and recommendation to INDEFOR and Ministry of Agriculture and Forests
Friday, 8/13	Travel to Malabo and meet with University
Saturday, 8/14	Travel home

## **Appendix C**

### LIST OF ACCRONYMS

CARPE – Central African Regional Program for the Environment

CI – Conservation International

CUREF - Conservacion y Utilizacion Racional de Los Ecosistemas Forestales

FAO – Food and Agriculture Organization

INAP – Instituto Nacional de Areas Protegidas

INDEFOR – Instituto de Desarrollo Forestal

NGO – Non-governmental Organization

U.S. – United States of America

USAID – United States Agency for International Development

USDA – United States Department of Agriculture

USFS – United States Forest Service