

Fate of the Forest: Accelerated Logging in the Central African Basin
Congo as a Case Study

Discussion Paper
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Almost half of Earth's original forest cover is gone, much of it destroyed within the past three decades.

Africa contains one of the three large blocks of the world's tropical forests. Originally moist forest covered about 6,799 km² of the continent. Today only 2,302 km², or 34%, remains (WRI 1997). Much of this forest has been lost as a result of the rapid expansion of the logging industry, followed by uncontrolled changes in land use. This pattern has been repeated in every forested country in Africa during the last 30 years. As a result, logging operations are leading to catastrophic consequences for the ecosystems, the flora and fauna, the economy and the people of these forests.

Poor forest management for short term gains provokes significant ecological and social problems, problems which are costly both to nations where the forests occur and to the international community. Lacking carefully designed management plans, these operations lead to disorganized and destructive land use, depletion of natural resources (wood and wildlife), impoverishment of soils, destruction of watersheds and siltation, increased human population density and disease, and emission of greenhouse gases. Environmental and economic costs therefore weigh heavily on local, national and international communities.

A land rush is now going on in central Africa. This has been provoked by increased interest in the region by internationals and multi-nationals due to democratization, liberalization of economies, the end of apartheid in South Africa, and the recent devaluation in the central African currency. Interest in the forestry sector has been significantly stimulated by the depletion of forest resources in Asia and subsequent export restrictions from those countries. Over the last three decades logging penetrated into a significant percentage of the forest of central Africa, but in 1996 interest began to accelerate in acquiring logging rights to the remaining forest as quickly as possible. As part of this process, a diversification of the nationality of loggers has occurred. In the late 1980's Middle Eastern operators acquired many concessions, and in the mid 1990's companies from several Asian nations began to acquire concessions. Between Jan 1996 and Feb 1997, Asian firms acquired over 4 million hectares in central Africa. There is a realization that natural resources are in abundance in central Africa, can be exploited profitably, and under conditions in which few environmental constraints are placed on the producer. All of these factors have contributed to the current land rush by transnational companies. As a result, accelerated logging will lead to greater environmental change in the large African forest block in the next ten years than has occurred in the last 2000 years.

If history is any indication, this wholesaling of forest resources will not engender sustainable development. In view of the scarcity of the resource sold, the economic gains accrued at both local and national levels are far below value: often even the meager forestry taxes to be paid are not. The indigenous people in these forest blocks do not benefit from logging, nor are they part of the decision-making process. Because they do not have any right to the land vis a vis the state, they are forced to stand by and watch as their forests are exploited. Although employment may be made available for the duration of logging operations, traditional lifestyles and cultural relationships are disrupted. In particular, Pygmy societies disintegrate, as they settle in and around logging camps, often becoming indentured servants of Bantu laborers. Infant mortality

climbs, and little attention is paid to their health or education. Pygmies are marginalized and powerless in the face of this invasion of their traditional lands. Over time their culture and people will certainly die out.

Today only a handful of African forests remain pristine, with healthy ecosystems harboring endangered and unique flora and fauna, and providing ecological services to their region and the globe. While protected areas are only a part of the systems which are urgently needed, it is imperative that these be created and/or institutionalized in the very short term. Without strict protection, large virgin tracts of forest, with all they contain, will certainly disappear in the next 10 years.

The following description provides details to substantiate the rising concern over accelerated logging and its potential impacts on the Central African Forest Basin. This information comes from the northern Congo, providing a case study by documenting current trends in concession attribution and exploitation in the forestry sector. In fact, the current situation and trends in northern Congo are moderate compared to those in surrounding countries of the basin. Only Zaire, because of the extent of forest, relative isolation, lack of infrastructure and current political situation, is less affected than Congo. Therefore, the trends described below represent an underestimate of the situation in much of the Central African Basin.

Case Study: Northern Congo

The Forestry Context

Before the arrival of Europeans, the forests of northern Congo were intact for at least 1000 years. Previous deforestation was probably the result of the Bantu penetration into northern Congo some 2500 years BP, and subsequent cultivation. Since 1960 logging has been the major element of change in the forests of northern Congo.

During the 1960s, the forests of this part of Congo were surveyed, and exploitation units established (Map 1). Funded largely by the United Nations Development Program, determination of forestry management units was based solely on consideration of the wood resources available in these blocks, not the ecosystems, biodiversity, wildlife or humans within them. No master plan was established for the timing of the exploitation of these forests, no environmental impact assessments were carried out, and local people were not consulted. Soon after the blocks were designated the first units came under exploitation, again with no consideration for any factor other than the volumes of wood available in them. These originally-designated units remain the template from which forestry concessions are allocated today.

Operations within forestry units likewise disregard environmental, social and even economic impacts. Although the Forestry Law in Congo requires approval of management plans and stipulates certain harvesting and development practices, enforcement of the law is lacking. Currently in northern Congo there is not a single active forestry unit for which there is a management plan. In addition, when a logging company negotiates a contract there is a

significant amount of latitude, therefore considerable room for negotiation on timber volumes extracted, diameter classes and species exploited, taxes paid, and development activities to be undertaken in the region. This leads to corruption in the attribution and exploitation process, and few safeguards for the ecosystems and people that are being exploited. Simply, loggers are not required to be responsible managers.

Acceleration of Logging.

Concession attribution.

In northern Congo, an area deep in the Congo Basin, the last twelve month period has seen more activity in the forestry sector than in any previous year to date. Of a total of 8.9 million hectares of forest deemed exploitable in northern Congo, 3.2 million hectares of unexploited forestry blocks have been either re-attributed, or attributed for the first time, to forestry companies since January 1996. This is a total of 36% of the exploitable virgin forest in northern Congo, and represents a surface area greater than the total area of forestry blocks in exploitation at any time in northern Congo prior to January 1996.

Concession Attribution in Northern Congo	
Total prior to 1996	During 1996 alone
2.1 million ha	3.2 million ha

In 1994 the Likouala and Sangha Regions of northern Congo contained ten blocks with 3.6 million ha that were not in blocks under contract; today that figure has dropped to 1.2 million ha. In 1996, alone, five new blocks were attributed in new frontier zones containing a total of 1.4 million ha. This is more forest than remains unattributed to logging firms. All land west of the Sangha River (2.9 million ha) has been attributed, and 67% of the land that is east of the Sangha River in forestry units has been attributed. A full 60% of the land in forestry blocks in northern Congo is now in active concessions.

Concession Attribution in Likouala and Sangha Regions	
Total prior to 1996	During 1996 alone
1.0 million ha	1.4 million ha

Exploitation rates.

Exploitation in northern Congo focuses primarily on two species of African mahogany, *Entandrophragma cylindricum* and *Entandrophragma utile*. The exploitation is extensive with densities of exploitable trees generally varying between 0.2 and 2 trees of these two species per hectare. Much of the land in these concessions is swamp or unexploitable for other reasons, leading to varied intensity of exploitation. The rate of exploitation is dependent on the density of wood and the annual cut given the company, not the sustainability of the activity based on a management plan.

The surface that was exploited annually previous to 1996 was small, less than 40,000 ha in a total of ca. 8,900,000. At this rate of exploitation it would take approximately 225 years to exploit the entirety of the forest in northern Congo. Given the number of concessions that have been either reactivated or attributed in 1996, the amount of forest exploited could legally jump to ca. 150,000 ha annually. This would reduce the time that it will take to exploit the entire remaining forest, including those areas not yet attributed, to 59 years. This figure would be considerably reduced if any of the seven concessions that have not be attributed were to be contracted in the coming years, which is highly likely. Activating these concessions would account for a further reduction of 3,604,962 ha, or 40% of the exploitable surface.

Annual Forest Exploitation Rates in Northern Congo		
Time	Ha/Yr Exploited	Time Until Entire Forest is Exploited
Prior to 1996	40,000 ha	225 years
During 1996	150,000 ha	59 years

For the Likouala and Sangha Regions, which contain the most interesting forests from biodiversity, ecosystem and wildlife points of view, and which are home to human populations with traditional, intact cultures, the figures are more dramatic. At the rates of exploitation previous to 1996, the surface available in these two regions would have taken ca. 150 years to exploit. At the rates that will soon be attained in these two regions, it will take a maximum of 42 years to exploit the entire forest. It is probable that the remaining two concessions in the Likouala and Sangha Regions will be attributed to logging companies. This would effectively reduce the time to extinction of virgin forest in northern Congo, excluding the Nouabale-Ndoki National Park (386,600 ha), to 34 years. This does not account for the unexploitable area in each concession which encompasses ca. 25% of the concessions. If this figure is subtracted from that to be exploited, the time to deplete all forests in the Likouala and Sangha Regions is reduced to ca. 25 years.

Annual Forest Exploitation Rates in the Likouala and Sangha Regions		
Time	Ha/Yr Exploited	Time Until Entire Forest is Exploited
Prior to 1996	24,000 ha	150 years
During 1996 alone	86,000 ha	42 years
Projected after 1998/99*	105,000 ha	34 years

*Projected if the remaining 2 concessions are granted

Impacts of Logging

The usual effects of forest exploitation are evident in northern Congo. Typically the forest is divided into blocks of 25 to 50 ha. Every exploitable tree is counted and mapped. This is followed by the construction of a road infrastructure and a dense network of skidder tracks and considerable destruction of the forest canopy. Harvesting is accompanied by a high level of illegal harvest of wildlife, with large volumes of meat being exported from the area for consumption in urban regions of the country. In areas where human populations are present, or grow as a consequence of the extraction of resources in the area, colonization in the form of slash

and burn agriculture occurs. The lack of management plans or clear land tenure results in significant mixing of cultures and a free-for-all exploitation of the land and any resources that can be extracted from it. Local people remain minor employees, and groups such as the Pygmies are marginalized and usually live in extreme poverty. This uncontrolled exploitation often results in complete destruction of the forest cover in areas of human habitation. Overall, the forest ecosystem is damaged beyond repair. Elephants, which are a keystone species in this ecosystem, are usually reduced to only a remnant of former populations, large mammal populations are depleted, and the forest structure is changed permanently.

Sustainability is often the stated objective of “green labeling” of logging operations. If the objective includes the sustainable exploitation of the species, densities and diameter classes that are exploited on the first cut, current activities are by no means sustainable. Carbon dating demonstrates that the trees exploited in forestry concessions in northern Congo average more than 200 years old, and some are as old as 1000. Sustainability must take into account the forest resource that is being exploited and its capacity to regenerate to exploitable levels. Surprisingly this is not done. Until further data are available on regeneration, it is very difficult to imagine how one might establish sustainable management plans for concessions anywhere in Africa.

Recommendations

The case of Congo demonstrates a rapidly changing trend in logging operations in the Central African Forest Basin. New concessions are being granted at an unprecedented rate, exploitation rates are increasing four to five-fold, and ecological and social impacts are being ignored. And these trends in Congo are likely to be less dramatic than in other countries in the basin.

Governments of the Central African Basin, donor agencies, and private forestry companies must act urgently to address the rapid acceleration of forestry operations in the Basin and the negative impacts provoked by these activities. We call on all interested parties to move now on the following actions:

- Begin an immediate assessment of the situation, including current and planned concession attribution and exploitation rates
- Establish forest zoning: re-assess attribution of concessions in light of zoning categories which include protected areas, carefully managed forest blocks, and zones which are designated for agriculture or other land uses. Such determinations should be based on surveys of economic and biological resources, environmental services, land use capability, and current human occupancy and use.
- Assure transparency in the allocation of forestry concessions and revenue generation. Attribution should be based on management plans, monitoring and enforcement capabilities, financial returns, and proven performance of candidate companies.

- Improve forestry practices to reduce undue damage on the remaining forest, reduce timber waste, and protect the regenerative capacity of the forest. Operators should insure that endangered species are protected on their lands, and that export of wildlife products from their concessions is not facilitated by their operations. Independent monitoring must be built into operations.
- Insure local participation in forest management, in which local interests and cultures are safeguarded.
- Designate new and expanded protected areas in the forest, especially in light of the uncertainty of sustainability of logging practices.
- Accelerate research on the sustainability of forestry operations in the basin (including autecology and life history of commercial species, regeneration dynamics)

The stakes increase every day. Investment now in establishing systems of proper forest management will avoid huge costs in the future: the forgone benefits of squandered forest resources, the costs of resource restoration and rehabilitation, the loss of wildlife and its potential for alternative revenue generation, and the social costs associated with all of the above.

Therefore, Central African governments must provide the will to enact these changes. Donor agencies must assist in providing technical and financial support. Private companies must commit to responsible, sound practice and assume more of the costs of their impacts. With these stakeholders working in concert, the forest of the Central African Basin may continue to yield biological, economic and social benefits well into the future. The window of opportunity to do this is very short. In five years it will be difficult to establish sustainable management schemes in central Africa. In much of the forest, it will simply be too late.