

CHAPTER 5

THE FORESTS OF THE CENTRAL AFRICAN REPUBLIC IN 2008

Alain Billand

With collaboration from: Gaston-Prosper Nakoé, Hervé Maidou, Josiane Kondaoulé, and Oyele Minile Sako

Introduction: The Macro-Economic and Political Context

The Central African Republic (CAR) covers an area of 620,655 km² and has approximately 4.2 million inhabitants, according to 2005 estimates. The table (table 5.1) of estimated population in CAR between 1980 and 2050 indicates that the population will double in the 30 years between 1980 and 2010.

The last decade has been marked by numerous rebellions and sporadic conflicts. Presidential and legislative elections were held in 2005, enabling CAR to experience a period of relative stability. Since 2007, CAR has experienced tensions on its borders to the north and east related to conflicts between Chad and Sudan. These conflicts led to the installation of an operational EUFOR detachment in Birao in March 2008. According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), nearly a quarter of people in CAR are victims of violence and fighting has displaced approximately 295,000 persons, with almost one third fleeing to Chad, Cameroon or Sudan.

Table 5.1: Estimated population of CAR 1980-2005 and projection through 2050

Year	Population (x 1,000)
1980	2,329
1985	2,678
1990	3,008
1995	3,450
2000	3,864
2005	4,191
2010	4,592
2015	5,021
2020	5,434
2025	5,831
2030	6,214
2035	6,586
2040	6,946
2045	7,289
2050	7,609

Source: United Nations, 2006.

Gross Domestic Product

With a GDP in 2007 of CFA 820,588 million, the Central African Republic is among the poorest countries in the world, having a *per capita* Gross National Income of \$ 360. The poverty rate is close to 70 % and social indicators are very low, explaining its rank of 172nd out of the 177 countries evaluated in the United Nations 2006 Human Development Index.

In late December 2006, the external debt service and guarantee of CAR were estimated at \$ 1.1 billion in nominal terms, or \$ 856 million in net present value (NPV). The International Monetary Fund (IMF) conducts regular missions to review programs supported by the Poverty Reduction and Growth Facility (PRGF), including the economic and financial performance of the programs as well as progress in implementation. In late 2007, the International Development Association (IDA) of the World Bank and the IMF

established that the Central African Republic was eligible to benefit from debt relief under the enhanced Initiative for Heavily Indebted Poor Countries (HIPC) and had reached its decision point. CAR is the 32nd country to reach its decision point under the Initiative.

Some creditors will grant the Government of CAR debt reduction immediately, but to receive irrevocable debt relief at its completion point, CAR will have to implement a comprehensive package of reforms starting in 2008. In particular, CAR must: continue to implement an economic program supported by the PRGF of the IMF; develop a strategy for reducing poverty; and carry out key reforms to improve public finance management, governance and transparency, markedly in the mining and forestry sectors, which are critical for growth.

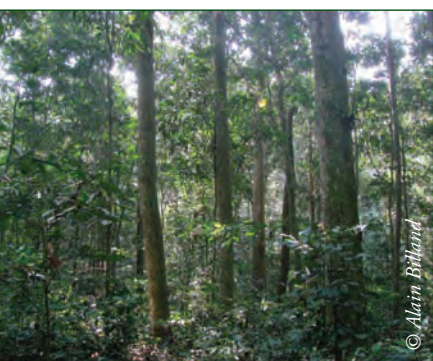


Photo 5.1: Forest understory in Dzanga-Ndoki National Park.

In addition to debt relief under the HIPC Initiative, CAR will be eligible for assistance from the Multilateral Debt Relief Initiative (MDRI) when it reaches its completion point under the HIPC Initiative. This will further increase the resources that the government has to reduce poverty. Debt relief provided under the enhanced HIPC Initiative will be approximately \$ 583 million in NPV terms, which represents an additional reduction of 68.1 % beyond traditional debt relief granted by bilateral and commercial creditors. The notional amount of debt relief granted under the HIPC Initiative is estimated at \$ 823 million.

The IDA aid contribution to CAR under the enhanced HIPC Initiative amounts to \$ 209 million in NPV terms, including the donation of \$ 66 million represented by the elimination of arrears in November 2006. After the directors of the IDA and the IMF determined that CAR had reached its decision point, the IDA began providing the remaining balance of their aid (\$ 143 million). The IMF will provide assistance in the

amount of \$ 27 million (equivalent to SDR 17.33 million²⁴) in NPV terms under the HIPC Initiative. According to principles established with regards to sharing the burden of the enhanced HIPC Initiative, the other creditors of CAR will provide the balance of the debt relief under the Initiative.

Assuming that CAR reaches its completion point before the end of 2009, debt relief granted by IDA under the MDRI framework would amount to \$ 75 million in NPV terms at the point of decision, or approximately \$ 182 million over the entire period. Debt relief granted by the IMF under the MDRI is estimated at some \$ 1.6 million in nominal terms (World Bank, 2008).

The 2007 value-added of the forest sector was CFA 51,722 million or 6.3 % of GDP. The value of exports (all sectors combined) was calculated by ICASEES (*Institut centrafricain des Statistiques et des Études économiques et sociales*) at CFA 124,618 million with 41.1 % CFA allocated to the forestry sector.

Forest Resources and Land Cover Changes since 1990

Forest Areas



Photo 5.2: Savanna landscapes dominate CAR.

With 283,136 km² of dense forest, dense deciduous forest and forest-savanna mosaic, forest cover occupies nearly half (45.6 %) of the national territory, with a predominance of open forest. Closed forest (i.e. dense, semi-humid, dry and gallery forests) covers about 92,500 km² or about 15 % of the territory. Only a fraction of the closed forest is considered production forest, where the State has instituted industrial logging permits. The production forest represents 3,800,000 ha in the south-western forest region.

Change in Forest Cover since 1990

Forest cover in CAR, and its evolution since 1990, has been estimated using different sampling methodologies by several organizations and groups.

Every five years, the FAO carries out a review of global forest resources. The last available assessment is from 2005 and indicates a total forest area in CAR of 23.203 mil-

lion hectares, supplemented by 10.122 million hectares classified as “other wooded land.” These data for 2005 are accompanied by an estimate of the annual rates of change in forest area, for the periods 1990-2000 and 2000-2005. For these two periods, the change in the extent of forest appeared stable with a loss of 0.1 % of forest area per year.

²⁴ The SDR is an international reserve instrument created by the IMF in 1969 to complete official financial reserves in member countries. SDRs are allocated to member countries in proportion to their quota-share in IMF. The SDR is also an account unit at the IMF and certain other international bodies. Its value is determined using a basket of currencies.

Table 5.2: Forested area of CAR by land cover category

Land cover	Area (ha)
Lowland dense forest	4,614,732
Sub-montane forests (900-1500 m)	1,440
Mountain forest (>1500 m)	0
Swamp forest	27
Mangrove	0
Total dense forests	4,616,199
Forest-cropland mosaic	1,816,380
Forest-savanna mosaic	22,774,437
Dense deciduous forest (Miombo)	922,923
Other plant formations	30,970,737
Cropping land	917,676
Other land uses (town, villages, industrial sites...)	47,106
Total	62,065,458

Source: compilation of land cover data produced by UCL, JRC and SDSU.

Table 5.3: Change in forest cover in CAR from 1990 to 2005

Area		Forest					Other forested areas		
Area		Annual rate of change					Area		
1990	2000	2005	1990-2000		2000-2005		1990	2000	2005
*1,000 ha	*1,000 ha	*1,000 ha	*1,000 ha/yr	%	*1,000 ha/yr	%	*1,000 ha	*1,000 ha	*1,000 ha
23,203	22,903	22,755	-30	-0.1	-30	-0.1	10,122	10,122	10,122

Source: FAO, 2005.

In 2004, another estimate of forest area in CAR was published by the JRC (Mayaux *et al.*, 2004) which used a different method for identifying forests by satellite and relied on a different forest typology than that used by FAO. This estimate suggested that forest cover in 2000 consisted of 8.227 million hectares of dense forest, 21.395 million hectares of forest mosaics, 24.746 million hectares of wooded land, and 5.665 million hectares of woody brushlands.

Finally, in 2008, Duveiller *et al.* (2008) published a new estimate of the rate of deforestation for the period 1990-2000, using a sampling of high-resolution satellite images. This estimate indicates a gross deforestation rate for the dense forest strata of 0.13 % per annum between 1990 and 2000. The authors nevertheless express reservations about the accuracy of this information for CAR because it was obtained from a limited number of samples.



Photo 5.3: Landscape mosaics are formed by alternating areas of forest and savanna.

Legal and Institutional Framework for Managing Biodiversity Resources

Legal Framework

Forests

Until 2008, the primary text relating to forests and wildlife was Law N°. 9003 from June 9, 1990. At the end of 2008 and after nearly two years of drafting and consultation, this law was the subject of major reform and was formally approved by CAR's parliamentary institutions in September 2008. The text came into force on October 17, 2008 (Law N°. 08.022).

As concerns logging, three implementing provisions of the 1990 Act are in force. Decree N°. 91098 of February 2, 1991 lays down detailed rules for granting logging and management permits ("*Permis d'exploitation et aménagement*"). A May 2006 ministerial decision cancelled special cutting permits ("*Permis spéciaux de coupe*"), putting an end to a logging system that was difficult to track and had poor sustainability. Finally, Ministerial Decree N°. 019 MEFCPE from July 5, 2006 validated the national norms for preparing management plans that remains in force.

Wildlife and protected areas

In 1916, the first law on wildlife protection was promulgated, prohibiting hunting in reserves, and in 1925, the first two game reserves were created in the eastern part of the country. In 1929, a decree was enacted which provided for the establishment of national parks and reserves on the condition that they not harm economic activity in the regions where they were established, and subsequently the first national park was created in 1933.

Under the heading "Partial hunting reserve," a new category of protected area was established in 1935 where hunting was permitted for a period of six months. Hunting was completely banned in these protected areas in 1939, at which point they became wildlife reserves. In 1940, the national parks were redefined and in 1944 all other categories of protected areas were established. Finally in 1954, the definitions of different classifications of protected area were brought into accordance with the London Convention.

More recently, several official documents concerning environmental protection have been promulgated, they include:

- the July 2, 1984 Order N°. 84045 on wildlife protection and hunting regulations;
- the July 9, 1990 Law N°. 90003 establishing the Central African forestry code;
- the Act of November 9, 1965 concerning the national forest domain;
- multiple laws concerning the establishment of protected areas and their management.

Texts for wildlife are comparatively more numerous, with 14 orders and decrees identified for the period between 1971 and 2006. These texts relate to hunting weapons regulations, general hunting regulations (permitted and prohibited practices, the trade in hunted products, enforcement) and trophy hunting regulations (guides, sectors and areas, quotas). An official land management plan exists for CAR which divides the territory into different management units according to land use: agricultural zones, forest areas, hunting areas, etc. In practice, grazing and mining are increasing both in forest areas and hunting zones.

There are four other important texts for natural resource management. Among these texts, the Environmental Code is new, while other important texts are part of the first generation of laws created after the country's independence:

- Environmental Code, Law 07018, of December 28, 2007;
- Law 62/350 on the organization of wildlife protection in CAR;
- Law 65/61 regulating ranching in CAR;
- Law 61/208 on the mining code.

Finally, at the international level, it should be stressed that the Central African Republic has signed the following conventions concerned with biodiversity: the African Convention of Algiers; the World Heritage Convention (UNESCO); the Washington Convention (CITES); the Berne Convention; and the Bonn Convention.

Institutions and Capacity

The Ministry of Water and Forests, Hunting and Fisheries and the Environment (*Ministère des Eaux et Forêts, Chasse et Pêches et de l'Environnement* -MEFCPE) has had several names in the past, but its main mission to sustainably manage ecosystems and renewable natural resources, has remained constant since 1982.

A Forest Fund supported by forest taxes was established in 1992 to contribute to forest and tourism development in the country. This fund was transformed into the Trust for the Development of Forestry and Tourism (*Compte d'Affectation spécial pour le Développement forestier et touristique* CAS-DFT), which split into two separate funds in 2008: forestry development (CAS-DF) and tourism development (CAS-DT). The tax recovery rate for the DF account is high, reaching nearly 100 % annually, despite occasional delays from some concessionaries. The fund has been used to provide matching funds for large forestry projects

benefitting from international public assistance. Through 2007, CAR was successfully able to honor its commitments to donors, which is exemplary in the sub-region. The fund has also permitted CAR to cover membership fees or dues to international associations (i.e. UN, FAO) and supported the participation of CAR in important international meetings. This financial mechanism is the only one that has been maintained, with IMF requesting the closure of other funds and accounts in the sector. Unfortunately, since 2007, the CAS-DF has regularly been requisitioned by the government and has accumulated major payment delays. The CAS-DT created jointly by the MEFCPE and the Ministry of Tourism in 2008 is devoted to combating poaching and promoting tourism.

The wildlife administration has a total of 80 staff, with varying levels of training, that are divided between their central administration and decentralized services.

Table 5.4: Number of staff in the CAR wildlife administration according to division and level of training

Level of training	Central administration		Decentralized services		Total	
	Wildlife	Forests	Wildlife	Forests	Wildlife	Forests
University	8	12	5	48	13	60
Advanced technicians	4	6	8	32	12	38
Technical officers	25	12	30	80	55	92
Total	37	30	43	160	80	190

Source: MEFCPE-FORAF, 2008.

In terms of logistical capacity, MEFCPE has a network of radio transmitters, 25 vehicles, 11 motorcycles and 18 buildings, including the Ministry headquarters in Bangui and 17 more decentralized buildings. In some provinces, the decentralized services responsible for wildlife or forests share space with other administrative services, such as *préfets* or *sous-préfets*. The Ministry had a budget of CFA 5.3 billion in 2007, which declined to CFA 3.6 billion in 2008. These amounts are incredibly low (about € 8,000). The CAS-DF Forest Fund has received increasing revenues, rising from CFA 1.8 billion in 2006 to CFA 2.1 billion in 2007. The structure of this type of extra-budgetary fund means it cannot be used directly by the ministry for current expenditures. However, most of the CAS-DF appears to be used for purposes other than the forestry sector. The funds for wildlife and tourism development are financed by taxes on hunting.

CAR has established an independent mechanism for wood export controls on its borders with BIVAC, a company providing import control and inspection services. BIVAC, which is managed by a private international supervisory body, oversees the collection of forest export taxes and transfers them to the customs office after deducting their compensation.

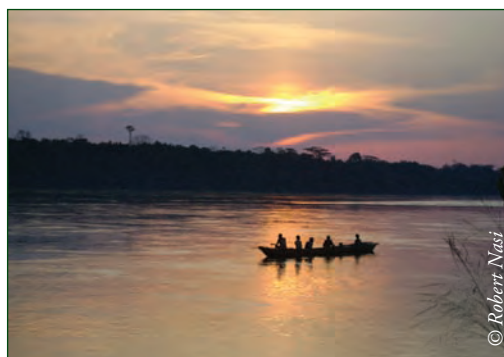


Photo 5.4: Water is an omnipresent element in Central Africa.

Training and Research

CAR has three levels of forestry training: the university; the *Institut supérieur de Développement rural* (ISDR), which trains senior technicians and engineers; and the *Collège technique de Développement rural* (CTDR), which trains technicians who successfully completed the equivalent of

three years of high school education, but were unsuccessful at the BAC.

Besides the university, there are other institutions such as the *Institut centrafricain de Recherche agronomique* (ICRA), which specializes in agricultural research. Based in Bangui, the center has branches in Boukoko, Bambari and Bouar.

Forest Logging and the Timber Sector

Typology of Forestry Titles

The only official logging license in CAR is the operating and management permit (*Permis d'exploitation et aménagement*, PEA). This permit grants industrial logging rights, according to prevailing national norms and the specific terms of a management convention. In return, the company pays rent for the area and a fee related to the volume produced and exported.

The PEA is awarded by tender, following the decision of an allocation committee and issuance of a presidential decree.

The new forest code modified the duration of PEA allocations. Previously, the duration corresponded to the lifespan of the company, but it is now limited to the rotation duration (provided the terms of the management plan are met). The granting of the PEA is conditional to the implementation of a management plan and installation of a processing plant with an industrial processing rate of over 70 % (article 44 of Law N°. 08.022 of 17 October 2008, Forestry Code).

Formal Logging in Natural Forests

Due to the small number of PEAs, forestry statistics on the production of logs have a high degree of variation. If one or two PEAs encounter problems or delays the statistics on production for the country are impacted significantly. At the end of 2007, three PEAs were returned to State control and their production halted completely. Industrial forest production in the CAR is expected to stabilize gradually after the State allocates these

three PEAs to companies. All production today is done in accordance with management plans. These documents include much stricter controls on the species and the annual volumes to be harvested. In addition, the use of management plans provides the State a means to estimate expected forest revenues, which can now be predicted over practically the whole rotation period.

Table 5.5: Wood production in CAR from 2005 to 2007 (m³)

Product	2005	2006	2007
Logs	454,402	624,861	537,998
Sawn wood	71,386	84,304	97,001
Sliced veneer	-	-	-
Peeled veneer	4,686	6,293	4,300
Plywood	1,434	805	740

Source: MEFCPE-FORAF, 2008.

National statistics monitor over thirty commercial species. From one year to the next, two species alone represent around 70 % of the log volume harvested, sapelli and ayous. Five to seven other species have production exceeding 1 % of the total volume, including kossipo, aniégré-longhi, sipo, iroko, tiama, bossé, padouk. The

other species monitored nationally are exploited in a very marginal fashion with volumes for each species below 1 % and a cumulative total of approximately 12 %.

It should be noted that logs and sawn wood exports stabilized for the period 2006 and 2007.

Table 5.6: Tree species logged in CAR and corresponding volume of logs produced from 2005 to 2007 (m³)

Species	2005	2006	2007
1. Acajou	8,075	4,841	1,926
2. Ayous	108,577	93,557	81,279
3. Bossé	4,263	5,177	5,122
4. Dibétou Bibolo	1,270	9,419	8,390
5. Various red wood	4,793	10,332	11,110
6. Iroko	32,062	18,620	22,458
7. Kossipo	6,786	37,174	24,033
8. Longhi aniégré	46,228	29,327	34,506
9. Padouk	0	2,019	6,195
10. Paorosa	0	17,538	1,107
11. Sapelli	215,220	335,604	295,954
12. Sipo	21,896	28,909	21,098
13. Tiama	3,095	14,399	14,561
14. Doussier	0	4,051	3,059
15. Bété	0	1,033	840
Other (16 to 34)	2,138	12,862	6,360
TOTAL	454,403	624,862	537,998

Source: MEFCPE-FORAF, 2008.

Table 5.7: Wood product exports from CAR between 2005 and 2007 (m³)

Product	2005	2006	2007
Logs	145,912	192,259	193,213
Sawn wood	52,940	70,779	76,042
Peeled veneer	4,686	6,293	4,300
Sliced veneers			
Plywood	4,880	475	513
Planed sawn wood			
Other			

Source: MEFCPE-FORAF, 2008.

Production statistics by region and importing countries demonstrate the sensitivity of Central African production to fluctuations in international markets. After steadily increasing since 2000, exports to China appear to be stabilizing at around a third of the total volume of logs exported. Among the significant changes in 2007, are

the halting of exports to Switzerland, the strong increase in the Turkish market and the doubling of exports to France.

Forestry legislation in force in the CAR does not provide for the existence of communal or community forests.

Table 5.8: Destination of log exports from CAR between 2005 and 2007 (m³)

Region	2005	2006	2007
Europe	113,491	111,499	83,156
South-East Asia	22,106	64,420	69,035
North America			
African countries outside of COMIFAC			
COMIFAC countries	4,896	15,166	18,832
Other destinations	5,418	1,174	22,191
Total	145,911	192,259	193,214

Source: MEFCPE-FORAF, 2008.

Table 5.9: Importing countries of logs from CAR by annual imported volume (m³)

Country	2005	2006	2007
Germany	26,772	29,906	28,925
England	15,504	24,505	26,628
Belgium	178		
France	13,260	10,357	20,150
Italy		404	3,758
EU	4,073		3,695
Switzerland	53,704	46,328	
China	16,434	27,498	24,035
Hong Kong	5,673	36,790	45,000
Shangai		132	
Cameroon	4,896	14,953	18,832
Congo		213	
Turkey	178	619	22,191
Other	5,240	555	
Total	145,912	192,260	193,214

Source: MEFCPE-FORAF, 2008.

Industrial Timber Processing

Wood processing is performed by seven industrial sawmills, with a total capacity of 500,000 m³, and a peeling plant. There is only one sec-

ondary processing unit, a plywood plant, which mainly serves the sub-regional market (MEFCPE-FORAF, 2008).

Informal Sector

As in all Central African countries, people in CAR use wood extensively as a source of domestic energy. Data on the volumes of wood harvested in the informal sector, as well as the sectors affected and revenue generated, are under-represented in national statistics.

There is an important artisanal timber sector, which creates legal problems particularly when

the artisanal sector processes logs that are accounted from PEAs under State contract.

In terms of bushmeat hunting, an FFEM-funded project, PGTCV, implemented by CIRAD, showed that between 1999 and 2006 the tonnage of bushmeat sold in the main market in Bangui (PK12) did not change. The turnover of this market alone was estimated at CFA 14 billion per year, or 2.2 % of GDP in CAR.



Photo 5.5: Collecting wood is an important informal sector activity upon which rural communities depend.

Progress Towards the Sustainable Management of Production Forests

At the end of 2008, all awarded PEAs had agreements with the State noting their management plans were either in preparation or operation. An area assigned to the forest company SEBOCA was authorized by the Administration to carry out logging without PEA status, despite the fact that PEA is the only legally recognized status. Consequently SEBOCA production is

not subject to PARPAF support and has no commitment to a management plan. The company is nevertheless subject to the same taxes as the PEAs, which they pay regularly at least in terms of surface area and felling, and is also among the companies under the purview of the BIVAC independent auditor for exports.

Table 5.10: State of forest management in CAR in 2008

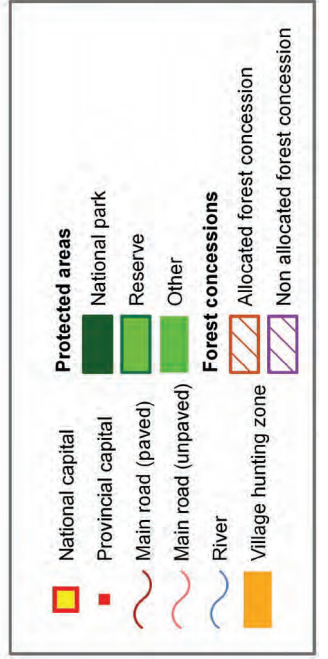
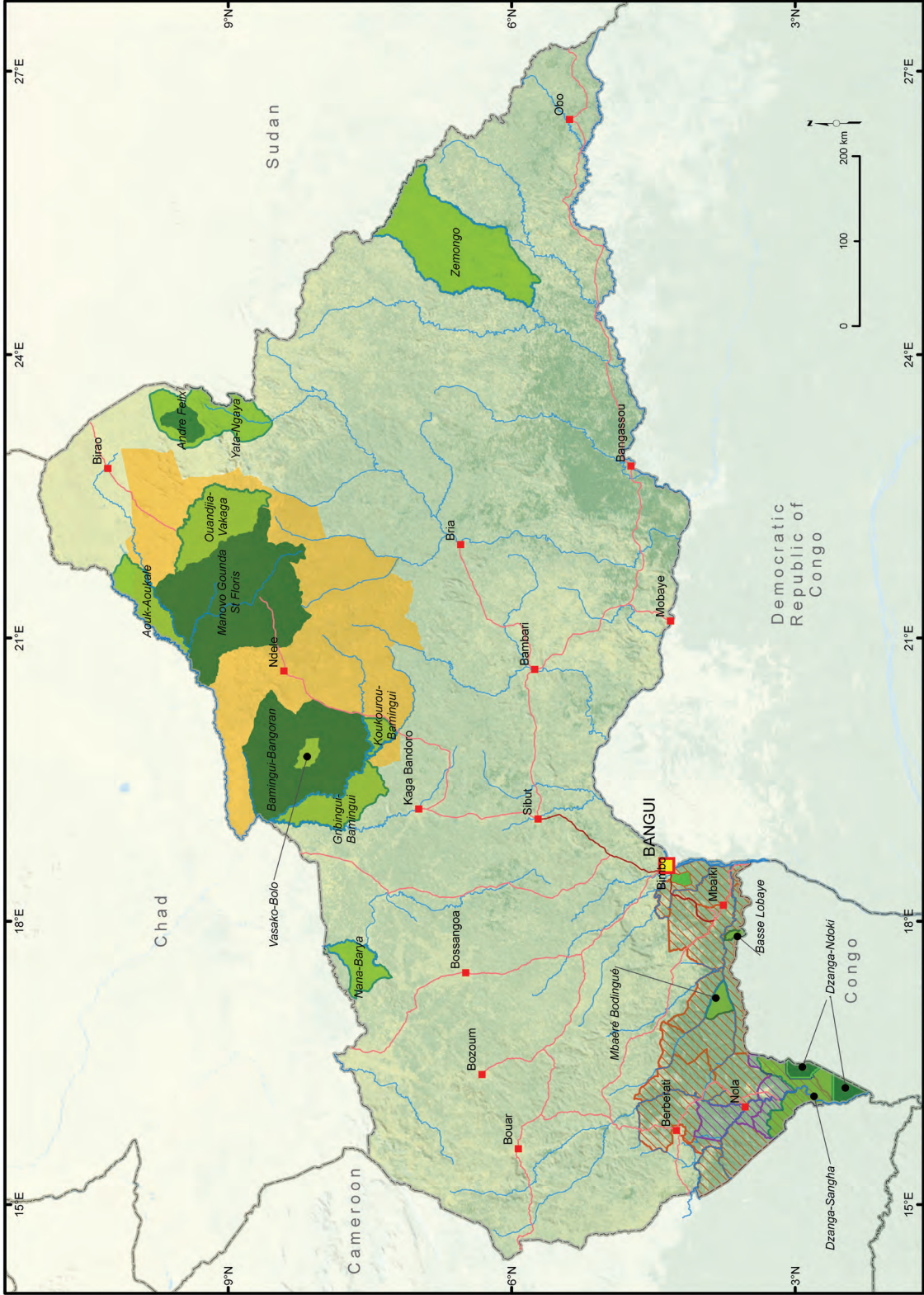
Forest concessions	Number	Area (ha)
Under final agreement (approved management plan)	8	1,739,055
Under provisional agreement (management plan in preparation)	3	582,789
Process not initiated	3	
Total concessions already allocated	11	2,321,844
Total annual cutting zones (AAC) in 2007	10	81,684

Note: the annual cutting zones only affect those concessions with final agreement. SCAD has three open zones and SEFCA has two.

Source: MEFCPE-FORAF, 2008.

As of mid-2007, the PEA 169, assigned in 2006 to the company IFB, had an OLB legal certificate covering 19,550 hectares. No CAR company is formally committed to a process of voluntary eco-certification; however, preliminary contacts have been made between SCAF and WWF for possible support in this direction.

Since 2007, CAR has taken first steps towards the FLEGT process, with a letter of intent to engage in negotiations towards a voluntary agreement and the establishment of a AFLEG/FLEGT focal point, with support from the European Union.



Sources: PARPAE, PARN, ECOFAC, GTZ, WRI, and FORAF.
 Figure 5.1: Forest concessions and protected areas in CAR

Biodiversity Conservation and Development

Biodiversity Components in CAR

Ecosystem diversity

CAR is covered by four major ecological domains, which from south to north include the dense equatorial forests, the Sudano-Guinean

woodlands, the Sudan savanna woodlands and the Sudano-Sahelian steppes.

Table 5.11: Ecological and phytogeographical domains of CAR

Ecological domain	Vegetation	Observations
Congo-Guinean	- Dense humid forest (south-western tip) - South eastern forests (Bangassou) - Peri-forest savanna in the south west	The dense forests in the south west are the only forests in industrial production.
Sudano-Guinean Medio-Sudano	- Wooded and tree savanna - Dense semi-humid forests and gallery forests	All the central, eastern and western part of CAR, more than 2/3 of the territory.
Sudano-Sahel	- Shrub savanna, grassy savanna on cuirasse and steppes	Far north of the country

Source: Boulvert, 1986.

Diversity of species

There is no comprehensive report on biodiversity in CAR. The report “National Strategy and Action Plan on Biodiversity” (MEEFCP, 2000) presents a count of 3,602 species of plants, including 2.8 % endemic species, “out of a potential of 5,000 assumed to exist on the national territory.” The report further states “with regard to wildlife, it has proved very difficult to get an accurate picture of the abundance of different species inhabiting different ecosystems in particular in forests and outside protected areas and game reserves.”

According to the World Conservation Monitoring Center (WCMC), CAR has about 1,010 known species of amphibians, birds, mammals and reptiles, of which 1 % are endemic and 1.5 % are threatened. IUCN reports 224 species of mammals in the CAR, of which four are classified as endangered, eight are vulnerable and nine are threatened. The most detailed information available on wildlife comes from inventories carried out in specific protected areas. Since 2002, forest concessions have also included surveys of wildlife in their inventory management statistics, but the data have not been analyzed to evaluate biodiversity throughout the dense forest area in the south west. The northern areas are rich in wildlife and have been open to game hunting for many years. They are nevertheless experiencing major poaching problems related to sub-regional tensions. Table 5.12 presents the results of a survey conducted in August 1998 in Manovo Gounda Saint-Floris National Park.

Table 5.12: Population numbers of key mammal species

Species	Number
Leopard	900
Lion	170
Cheetah	50
Elephant	2,000
Hippopotamus	900
Giraffe	475
Waterbuck	200
Kob	3,500
Reedbuck	1,400
Giant Eland	900
Damalisque	300
Hartebeest	1,000

Source: MEEFCP, 2000.

Overall, there is agreement that due to a series of factors there has been a significant decrease in wildlife in CAR over the past two decades, especially in savanna areas. Certain mammal species have almost completely disappeared, as is the case with the white rhino (in 1950) and black rhino (in 1985) (MEEFCP, 2000). Many other species have been significantly affected, including elephants, hippopotamuses, crocodiles and giraffes. It is estimated that 75 % of elephants disappeared in north CAR between 1982 and 1985 at the peak of the heavy poaching period. After a respite between 1990 and 2000, elephant poaching is once again intensifying due to the growing demand of the illegal trade in ivory.

Formal Management of Biodiversity

Protected areas and hunting zones

There are a total of 15 protected areas in IUCN categories I to IV. In addition, 33 designated hunting zones and 11 community-based hunting zones have been identified under Order

019 of August 30, 2007. In total, the protected areas of CAR (all categories) cover an estimated area of 17,330,015 ha, representing approximately 28 % of the national territory.

Table 5.13: Protected areas in CAR by IUCN category

Type of protected area	IUCN category	Number	Total area (ha)
Integral reserve	I	1	86,000
National park	II	5	3,188,700
Special reserve	IV	2	316,815
Wildlife reserve	IV	5	2,440,000
Biosphere reserve	I and IV	2	14,600
Designated hunting zone	VI	47	7,931,800
Community-based hunting zone (ZICGC) (11 set up and operational)	VI	11	3,332,100
Total		73	17,330,015

Source: MEFCPE-FORAF, 2008.

No protected area is implementing an approved management plan, including those that have enjoyed long-standing project support.

However, most sites are under management and in the process of developing management plans, with draft versions of management plans available.

Table 5.14: State of protected areas management in CAR in 2008

Protected area	IUCN category	Area (ha)	Status of management plan
Vassako Bolo Integral Reserve	I	86,000	In preparation
Dzanga Ndoki National Park	II	122,000	1 st draft finalized
Manovo Gounda National Park	II	1,740,000	In preparation
Bamingui Bangoran National Park	II	1,070,000	In preparation
Mbaéré Bodigué National Park	II	86,700	In preparation
André Félix National Park	II	170,000	Nonexistent
Dzanga Sangha Special Reserve	IV	315,900	1 st draft finalized
Gbazabangui Special Reserve	II	915	2001
Basse Lobaye Biosphere Reserve	IV, V	14,600	Nonexistent
Zémongo Faunal Reserve	IV	1,010,000	Nonexistent
Aouk Aoukalé Faunal Reserve	IV	330,000	Nonexistent
Gribingui Bamingui Faunal Reserve	IV	230,000	Nonexistent
Yata Ngaya Faunal Reserve	IV	450,000	Nonexistent
Nana Barya Faunal Reserve	IV	420,000	Nonexistent
Designated hunting sector (80 set up but only 47 are used)	VI	7,931,800	Nonexistent
ZICGC (11 set up and operational)	VI	7,207,600	In preparation
Total		21,185,515	

Source: MEFCPE-FORAF, 2008.



Photo 5.6: A male sitatunga (*Tragelaphus spekei*).

Biodiversity management in forest concessions

Within forest concessions there are two different types of zones that contribute to the protection of biodiversity:

- Conservation zones, whose main objective is the maintenance and preservation of special or fragile ecosystems. Logging is forbidden and the installation of new settlements or any form of agricultural practice is not permitted. Harvesting of non-timber forest products, fishing and hunting are permitted with restrictions imposed based on the Forest Code and the Code for the protection of wildlife.

- Integral protection zones, whose main objective is the integral protection of a section of a PEA and represents the equivalent status of protection of a wildlife reserve. They are defined taking into account biological surveys, in particular looking at elephant and ape presence and diversity among woody species. All forms of activity, including traffic, are prohibited except for research and ecosystem conservation purposes.

It should be noted that the limits of conservation zones and PEAs may be altered depending on the outcomes of participatory stakeholder workshops.

Economic Development of Biodiversity

Tourist infrastructure in protected areas

There is capacity for tourism and hunting in the country in the sites where 15 companies operate safaris. There are also two lodges in CAR: one at the Sangha Dzanga National Park (Doli Lodge of Bayanga) and one at the Mbaéré National Park (Red Buffalo Camp). There are an estimated 135 guest beds available in the periphery of protected areas. Forty-two guides operate in the protected areas (MEFCPE-FORAF, 2008).

In the north of the country, roads maintained for tourism and hunting are not accessible due to safety issues. All tourist facilities were destroyed in this region by armed conflict. In the south, 140 km of trails were constructed in the Bayanga sector.

Tourism

A total of 1,500 tourists visited the south of CAR in 2007 (MEFCPE-FORAF, 2008).

For recreational hunting, an estimated 190 visitors were recorded in 2007. They mainly frequented northern CAR despite security issues in the area. The giant eland remains the most prized species, a quota of 161 permits having been issued in 2007. Further, for 17 hunting companies, the hunting quotas in 2007 for the five major species were significantly higher compared to the previous year (30 % for the giant eland, 300 % for the lion) (MEFCPE-FORAF, 2008).

Table 5.15: Animal quotas allocated in CAR in 2006 and 2007

Species	Quotas 2006	Quotas 2007
Giant eland	127	161
Buffalo	280	364
Bongo	61	69
Leopard	41	56
Lion	9	27

Source: MEFCPE-FORAF, 2008.

For the hunting year 2006-2007, the number of permits granted stood at 190 big game/non resident permits, 24 big game/foreign resident permits, 13 big game/national permits and 57 medium game/national permits (MEFCPE-FORAF, 2008).

The number of medium game permits only affects the city of Bangui, where the residents acquire their licenses on the spot to go hunting in the provinces.

According to safari companies, the sector generated 800 direct jobs and 2,000 indirect jobs in 2007.

Conclusions

CAR has allocated nearly all of its production forests in the south west as PEAs, with the only other type of allocation being protected areas and reserves. Since the elimination of the special cutting permits, there are no other types of logging permits. Community forests do not exist according to the 1992 Act, however, the new forest code of 2008 provides for the establishment of municipal and community forests.

With the support of the PARPAF project, funded through AFD and the government of CAR via the CAS-DF, forest management has improved. At the end of 2008, all 11 PEAs allocated to concessionaries had formally approved management plans (8) or plans in preparation (3). Three other concessions were awaiting assignment in 2008.

Regarding the status of protected areas, there are significant differences between the situations in the north and the south. Management in the vast northern parks has been made difficult by the proximity of countries in conflict, which have created and sustained insecurity in large parts of the territory. Major support provided to some protected areas of northern CAR over 15 years by the European Union, through the NRDP and

then the ECOFAC project, should be completed in 2010. The sustainability of the financing of protected areas in the north, and the surrounding village hunting areas, remains an important challenge. The possible decommissioning of a Biosphere Reserve unfortunately reflects the powerlessness of the country and of its international partners to ensure the sustainable integrity of some of the protected areas affected by conflict.

Park managers, forest concession managers and other local stakeholders in the south of the country are now part of a regular and constructive dialogue aimed at building sustainable and constructive relationships over the long term. The sustainability of these partnerships will depend on closer cooperation between the MEFCPE departments in charge of protected areas (DFAP) and forest management (DIAF).

Another challenge for the Administration will be to better harmonize conservation practices in the protected areas partnering with different projects and conservation NGOs, particularly with regard to management plans.