OCCASIONAL PAPER

The context of REDD+ in the Democratic Republic of Congo

Drivers, agents and institutions

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CIFOR
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List of abbreviations and acronyms

AFD	Agence Française de Développement/French Development Agency
AWF	African Wildlife Foundation
CAR	Central African Republic
CARPE	Central African Regional Program for the Environment
CBD	Convention on Biological Diversity
CBFF	Congo Basin Forest Fund
CI	Conservation International
CIFOR	Center for International Forestry Research
CITES	Convention on International Trade of Endangered Species
CNONGD	Conseil National des Organisations Non Gouvernementales de Développement
CODELT	Conseil pour la Défense Environnementale par la Légalité et la Traçabilité/Council for Environmental Defense through Legality and Traceability
COMIFAC	Commission des Forêts d'Afrique Centrale/ Central African Forest Commission
CoP14	UNFCCC 14th Conference of Parties
CoP16	UNFCCC 16th Conference of Parties
CSO	Civil Society Organisation
DDD	Direction du Développement Durable
DES	Direction des Services Environnementaux
DFID	Department for International Development (UK)
DGF	Direction de la Gestion Forestière
DGPA	Dynamique des Groupes des Peuples Autochtones
DIAF	Direction d'Inventaires et d'Aménagement Forestiers/Directorate of Inventory and Forest Management
DRC	Democratic Republic of Congo
DSCRP	Document de Stratégie et de Croissance pour la Réduction de la Pauvrété en RDC/Growth Strategy and Poverty Reduction Document (for DRC)
EC	European Commission
ECOSOC	Economic and Social Council
EISA	Extended Industry Standard Architecture
ERAIFT	École Regionale Post-Universitaire d'Aménagement Intégré des Forêts Tropicales
ETD	Entité Territoriale Décentralisée/Decentralised Territorial Entities
EU	European Union
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
FEC	Fédération des Entreprises Congolaises
FIB	Fédération des Industriels du Bois
FIP	Forest Investment Programme
FLEGT	Forest Law Enforcement Governance and Trade
FORAF	African Forests (project)
FORCOL	Forêts des Communautés Locales
FORCOM	Foresterie Communautaire
FORMIS	Forest Management Information System
FTI	Forest Transparency Initiative
GEF	Global Environment Fund
GIZ (GTZ)	German Technical Cooperation
HIPC	Highly Indebted Poor Countries
IC	Interministerial Committee
ICCN	Institut Congolais de Conservation de la Nature
IDA	International Development Association

ILO	International Labor Organization
IMF	International Monetary Fund
INERA	Institut National pour l'Étude et la Recherche Agronomique
INGO	International Non-Governmental Organisation
ITTO	International Tropical Timber Organization
JRC	Joint Research Center
LINAPYCO	Ligue Nationale des Autochtones Pygmées du Congo
MDTF	Multi-Donor Trust Fund (World Bank)
MECNT	Ministère de l'Environnement, Conservation de la Nature et Tourisme
MRV	Monitoring, Reporting and Verification
NGO	Non-Governmental Organisation
NOVACEL	Nouvelle Société d'Agriculture, Culture et Élevage
OCEAN	Organisation Concertée des Écologistes et Amis de la Nature
ODA	Official Development Assistance
OFAC	Observatory for Central African Forests
OIF	Observation indépendante des forêts
OSAPY	Organisation d'accompagnement et d'Appui aux Pygmées
OSFAC	Observatoire Satellital des Forêts d'Afrique Centrale
PCPCB	Programme de Contrôle de la Production et de la Commercialisation des Bois
PERENCO	An independent Anglo-French oil and gas company working in Bas-Congo
PNFOCO	Programme National Forêts et Conservation/National Forestry and Conservation Programme
PWC	PricewaterhouseCoopers
R-PIN	Readiness Plan Idea Note
R-PP	Readiness Preparation Proposal
RDC	République Démocratique du Congo/Democratic Republic of Congo
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD-CWG	REDD Climate Working Group
REDD-GCS	REDD Global Comparative Study
REDD-NC	REDD National Coordination
REDD+	Reducing Emissions from Deforestation and Forest Degradation+
REM	Resource Extraction Monitoring
REPALEF	Réseau des Populations Autochtones et Locales pour la Gestion Durable des Ecosystèmes
REPAR	Réseau des Parlementaires pour la Gestion Durable des Ecosystèmes Forestiers de l'Afrique Centrale
RSA	Republic of South Africa
SGS	Société Générale de Surveillance
SIGEF	Système d'Information de Gestion des Eaux et Forêts
SIMS	Spatial Information Management System
TCG	Thematic Coordination Group
TOE	Tonne of Oil Equivalent
UN-REDD	United Nations-REDD
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commission for Refugees
UNODC	United Nations Office on Drugs and Crimes
UNPF	United Nations Population Fund
USAID	United States Agency for International Development
USD	United States Dollar(s)
VPA	Voluntary Partnership Agreement (FLEGT)
WCS	Wildlife Conservation Society
WRI	World Resources Institute
WWF	World Wildlife Fund

Executive summary

Reviewing the conditions in which the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) mechanism is being established in the Democratic Republic of Congo (DRC) is part of Component 1 of the Global Comparative Study on REDD+ (known as REDD-GCS) being conducted by the Center for International Forestry Research. The overall aim of this global study is to provide decision-makers, practitioners, donors and the scientific community with reliable information on the dynamics of national actions related to the REDD+ mechanism. Discussions on REDD originally seemed to focus on the construction of a global structure and the establishment of a multilateral instrument to replace the Kyoto Protocol. But at the 14th Conference of Parties (CoP 14), held in Poznan in 2008, discussions on the reliability of REDD+ focused more on the dynamics of national- and local-level actions and brought out the need to better understand, analyse and explain the domestic institutional context in which REDD+ is being developed.

The Global Comparative Study was first launched by CIFOR and its national partners in the following eight tropical countries: Brazil, Bolivia, Cameroon, Indonesia, Nepal, Peru, Tanzania and Vietnam and then expanded to include DRC, the country studied in this paper. This review has been constructed using extractive approaches. The first inputs were reports, articles, books and documents on the DRC directly related to forest management, socio-economic and political institutions, etc., whether published or not. Because of the diversity of sources, the quantitative data sometimes seem contradictory and conflictual. In the next step, semi-structured interviews were held with experts working in the forestry sector and data were obtained from the participants' observations.

More generally, this review shows that although DRC has a tropical forestry potential second only to Brazil, and thus could contribute to global efforts to mitigate the negative effects attributed to climate change, and has already made halting progress in installing the REDD+ mechanism nationally (R-PP approved, FIP available, creation of national coordination and thematic working groups, etc.) the REDD+ profile for DRC is marred by several structural shortcomings and flaws in the country's public institutions, e.g., poor governance, almost total lack of public authority in certain regions, insufficient national capacity to launch sectoral policy reforms that fulfil REDD+ requirements, and shortage of autonomous financial, material and human resources. Like the international donor community, this review also sees DRC as a 'fragile state'.

The many structural shortcomings can be traced to the malfunctioning that bogs down the contemporary institutions and the tarnished origins of the Congolese state. Further, the reappearance of armed rebels at the border with Rwanda does not facilitate the introduction of REDD+. The existence of the rebel front contributes to socio-political instability that may strengthen a political regime that lacks democratic legitimacy in the eyes of the frustrated and deeply wounded Congolese people. Because of the chronic instability and the socio-political uncertainty, it would be difficult, almost impossible, to implement REDD+ or the 3E criteria (effectiveness, efficiency and equity) in the country. Some of the parties involved may consider this initial interpretation as abrupt and premature, but it confirms the analysis made by Trefon (2009) that the main major initiatives and other projects carried out as part of the rehabilitation of the country ended in relative failure. Responsibility for these ambiguous results can be traced to international cooperation organisations and to the Congolese authorities. Since REDD+ was designed as a new instrument of forestry governance (connected to climate change issues) that could attract funding and was promoted by the international community, it should be able to stimulate sectoral policy reforms especially with a view to advancing more coherent, open management of land tenure, forests, mines and territorial development. The international partners and the national players should implement the pre-conditions: ensure public order and the authority of a legally established State, and social peace based on a socio-political situation that reflects the principles of constitutional democracy.

1 Introduction

This review of the conditions in which the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) mechanism is being established in the Democratic Republic of Congo (DRC) is part of Component 1 of the Global Comparative Study on REDD+ (known as GCS-REDD) being conducted by the Center for International Forestry Research. This global study was produced to provide decision-makers, practitioners, donors and the scientific community with reliable information on the dynamics of national actions related to the REDD+ mechanism. Discussions on REDD originally seemed to focus mainly on the construction of a global structure and the establishment of a multilateral instrument to replace the Kyoto Protocol. But at the 14th Conference of Parties (CoP 14), held in Poznan in 2008, discussions on the reliability of REDD+ focused more on the dynamics of national- and local-level actions and brought out the need to better understand, analyse and explain the domestic institutional context in which REDD+ is being developed.

First of all, Component 1 of CIFOR's Global Comparative Study on REDD+ (REDD-GCS) seeks to identify and understand the institutional and technical arrangements for the implementation of REDD+ and its demonstration activities that are expected to be effective, efficient and equitable and provide benefits in the field (CIFOR 2010). The results of this analysis and the downstream tools developed through this global research should contribute to the ongoing learning process keyed to fulfilling targets assigned to REDD+ demonstration projects in terms of effectiveness, efficiency and equity (3E+). Moreover, lessons learned and best practices brought out through the evaluations made in the first generation of the REDD+ demonstration activities should explain and improve the second generation. Considering the above, this document rests on four series of objectives (Brockhaus et al. 2012): i) effective, efficient and equitable dynamics for REDD+ domestic actions, which depend on institutional governance, the stakeholders' principles and processes and the macro-economic environment in the national political arena; ii) political commitment, the existence of political learning mechanisms and the power dynamics which condition the success of REDD+; iii) well-adapted institutions and institutional mechanisms, the absence of which slackens the effectiveness of well-targeted financial incentives to reduce deforestation and generate the co-benefits; and iv) an improved effective, efficient and equitable domestic REDD+ strategy and the realisation of co-benefits that include relations among the stakeholders, the structures, the processes, the national context and the various policies on the one hand and, on the other, the formulation of adequate options for the REDD+ mechanism thanks to this improved understanding. The Global Comparative Study was first launched by CIFOR and its national partners in the following eight tropical countries: Brazil, Bolivia, Cameroon, Indonesia, Nepal, Peru, Tanzania and Vietnam and then expanded to include DRC, the country studied in this paper. The first sequence of the comparative approach used in this global study centred on case studies for each country in the sample, the purpose being to improve comparisons of the samples in the second sequence using the same variables. In the sample, each country case study included: the country profile; the evaluation of the national REDD+ strategy; an analysis of the media discourse on REDD+; an analysis of the political networks; and studies on sectoral policies that affect forest management. The methodology of the review of the REDD+ context in DRC is based on qualitative and quantitative data from various sources. First of all, the review draws on reports, articles, books and documents on the DRC that were directly related to forest management, socio-economic and political institutions, etc., whether published or not. In some cases,

quantitative data obtained from such a diversity of sources may seem contradictory or conflictual, but actually they evidence the difficulty in obtaining reliable statistics in DRC since the country is being reconstructed in an effort to make life normal again after a period of violent antagonism and socio-political instability (KuyuMwissa 1996; Braeckman 2001). The document then presents the opinions and perceptions of several experts and other persons working on the management of the vast DRC forests.

As an introduction we need to stress that DRC, unlike the other countries in the CIFOR REDD-GCS sample, is a country that is gradually reinstating legitimate authority after its virtually complete collapse in the 1990s (Weiss 1995; Nzongola-Ntalaja 2004; Trefon 2010). The period of independence was followed by close to 30 years of authoritarian rule that left the country in a state of civil war with open rebellion teeming at its borders. Under the cover of civil war, various armed forces systematically stole much of the country's abundant natural resources, especially the forest resources (Jackson 2001; Debroux et al. 2007; Global Witness 2007; International Alert 2009). In 2006, after the Dialogue Inter-Congolais (a series of discussions among the country's political forces), the political institutions held elections under the scrutiny of the international community. After a rather disappointing first term of office, President Kabila was re-elected under questionable democratic conditions in November 2011(Githaiga 2012). As a result, the current climate in the country is toxic, not propitious for the introduction of a reconstruction phase for such a vast land area or for socio-political institutions based on democratic governance. The post-electoral period in 2011, with the opposition violently challenging the results, could easily destroy the bases for peaceful, sustainable political stability. As an armed front was reopened at the border with Rwanda during the first half of 2012, many doubts and questions have been voiced about local-level capacity and the conditions for socio-political stability, which the country so badly needs. But to take hold at the national level, the global REDD+ movement should first find its place on this nascent, bumpy road to the reestablishment of legitimate political authority and a calm, stable country. The national forest sector has been undergoing reform since 2002 (Trefon 2008). When the national authorities realised what was at stake, after the R-PP was adopted in 2009, they launched the REDD+ national process that included the creation of a REDD+ institutional framework to respond to all the challenges facing DRC and its forests. This document, which explains the institutional economics of the DRC REDD context, focuses on the following five themes:

- the analysis of drivers of deforestation and forest degradation
- the institutional environment and the distribution mechanism for income from forests and related fields
- the political economics of deforestation and forest degradation
- the political environment of REDD+ organised around actors, events and processes
- the evaluation of the DRC REDD+ profile with regard to the 3E+ criteria.

2 Analysis of drivers of deforestation and forest degradation

2.1 Introduction

The question of the drivers and dynamics of deforestation and forest degradation is central to the REDD global process (Kanninen et al. 2007), especially in DRC. The stakeholders recognise the analytical framework taken from Geist and Lambin (2001) as an identification list of the direct and underlying causes of deforestation and forest degradation. But no systematic scientific study seems to be available to evaluate the relative importance of the various causes at the national or landscape level. The development of a national consensus on the relative importance of deforestation drivers is a major concern which REDD process implementers feel will be a central element in prioritising actions in the various landscapes.

2.2 Forest cover and historical background

Estimates of total forest lands in DRC vary, depending on the source, since no systematic inventory has yet been made. The differences in the estimates have been caused by differences in

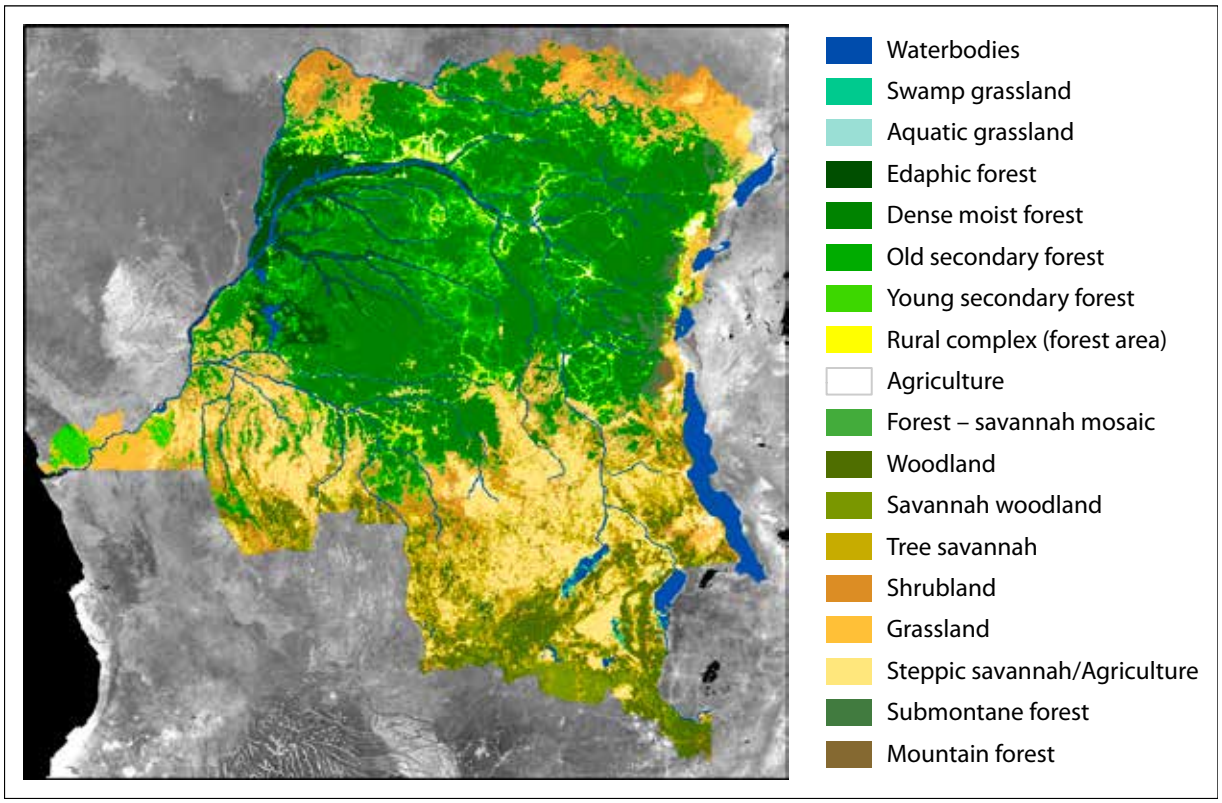


Figure 2.1. Forest distribution in Democratic Republic of Congo, modified on the basis of the land use map 1:3 000 000

Source: Vancustem et al. 2009

methods used and the period of observation, e.g., according to the DRC forest map produced by the Directorate of Inventory and Forest Management (DIAF) of the Ministry of Environment, Nature Conservation and Tourism (MECNT), forests cover a total land area of 1 280 042 km^2, in other words 54.58% of the national territory, estimated at 2 345 000 km^2 while the 2008 document on the State of the Forests in Congo Basin reports DRC forestlands to amount to 155.5 million ha out of a total land area of 2 329 374 km^2, in other words 67% of the national territory (de Wasseige et al. 2009). Mertens and Belanger (2010) agree, on the whole, with this estimate of the DRC forestlands in the Forest Atlas drawn up by Global Forest Watch and the MECNT. FAO (2011) statistics indicate a decrease in forestlands (now 154 135 000 ha) compared with the earliest figures. This figure is supported by Blaser et al. (2011), while Debroux et al. (2007) give an estimate of 145 million ha. Some publications divide the Congolese landscape into three main regions (Debroux et al. 2007):

- **Dense, rain forests in the plains** cover 86 million ha and are located mainly in the Central Basin and Bas-Congo; this type of forest also includes the swampy forests in the Central Basin and the mangroves along the Atlantic Coast. The landscape evolves into forest galleries that start at the Central Basin and penetrate the Kasaï and Maniema Provinces in the south of the country;
- **Mountains and high plateaux** that make up the landscape in the Albertine Rift in the eastern part of the country. This landscape covers the North Kivu and the South Kivu provinces and part of the Maniema and Katanga eastern province. The mountains and the high plateaux in the eastern part of the country overhang a string of mountain lakes in the Albertine Rift Valley. This landscape is shared with the countries bordering DRC to the east, i.e., Uganda, Rwanda, Burundi, Zambia and Tanzania, and has three transboundary lakes in the valley floor.
- **The dry forests and the forest–savannah mosaic**, an ecosystem that forms two blocks on either side of the Central Basin composed of the Orientale, Équateur, Katanga and Kasaï Provinces. This specific type of dry forestland is

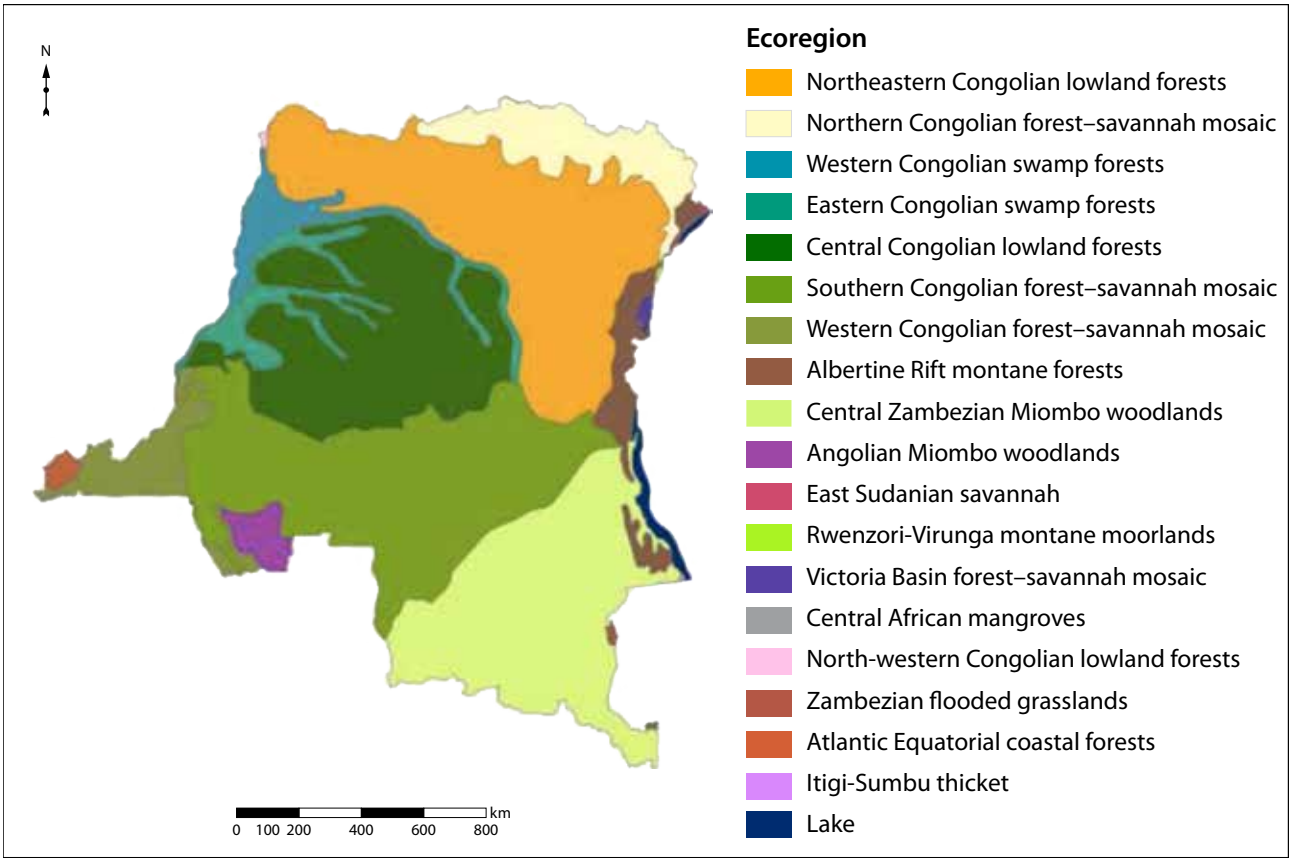


Figure 2.2. Map of WWF ecoregions in Democratic Republic of Congo
Source: Olson et al. 2011

known as 'Miombo'. Note that savannah lands also exist in the Bandundu and Bas-Congo Provinces.

In a similar manner, Olson et al. (2001) produced a detailed map of various types of DRC plant cover, which is still a reference and is better known as the WWF map of ecoregions. The map offers a simplified presentation of the complex plant cover in the Congolian territory.

By combining the criteria for the plant cover as delineated above with data on socio-economic dynamics Defourny et al. (2011) stratified the land into 11 zones that were representative of case studies on the drivers of deforestation for two periods of time: 1990 to 2000 and 2000 to 2005. These 11 study zones are shown in Figure 2.3. Within each of these study zones, the availability of data for the two periods of study was used as a criterion in the selection of samples.

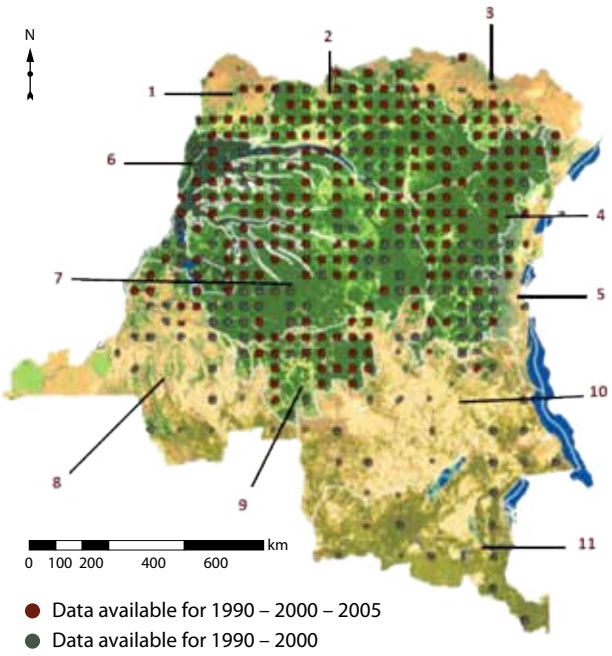


Figure 2.3. Demarcation of zones for sub-national analysis and availability of estimates on deforestation and forest degradation

Zone 1: forest – savannah mosaic, in the north-west. Zone 2: dense forest – secondary forest transition. Zone 3: forest – savannah mosaic, north-east. Zone 4: dense moist forest, in the east. Zone 5: high-altitude forest. Zone 6: edaphic forest. Zone 7: dense moist forest, in the center. Zone 8: forest – savannah mosaic, in the southwest. Zone 9: dense forest – secondary forest transition. Zone 10: forest – savannah mosaic in the south-east. Zone 11: Miombo-type woodlands.

Source: Defourny et al. 2011

Rather than reconsidering the problem of the definition of the forest, this classification broaches the problem from the angle of carbon sinks — especially with regard to a type of plant cover for lands characterised by the presence of trees. This classification takes account of three elements, namely, the land area, the minimum height of the trees, and the canopy cover. The thresholds prescribed by the UNFCCC and the national definition of forestland are used in describing these types of forest plant cover. By overlaying the various maps on the DRC administrative map we see that the densest forests are mainly found in three provinces — Équateur, Bandundu and Orientale — which are often called the country's 'forest provinces'. They comprise 89 million ha of forestlands, i.e., 69.5% of the national forest cover. And then there are the mangroves along the Atlantic coast and the forest galleries that penetrate the Kasaï and Maniema Provinces which are home to the rest of the country's dense, rain forest. The 2002 Forest Code provides three types of allocations of state forest domains: permanent production forests, protected forests, and classified forests. The permanent production forests are sub-divided into allocated and not-yet-allocated forests that a public enquiry has freed of all encumbrances and thus are eligible for allocation. The protected forests are reserve forests where only small-scale timber extraction and commercial extraction of wood for fuel (carbonisation or firewood) are allowed. The forests belonging to the local communities fall into this category. Last, the classified forests are designated for environmental protection. They are part of the State's public domain because it is in the public interest to protect them. This category is composed of nature reserves, forests located in national parks, botanical and zoological gardens, wildlife reserves and hunting areas, biosphere reserves, recreational forests, arboretums, urban forests, and protected areas.

This classification will be applied in the field after the indicative forest zoning process has been completed, a process that will be part of the country's overall land planning and management process. In time it should allow for a distinction to be made between sustainable forest management zones under the concessions regime (permanent production forests), forests slated for rural development, and the biodiversity conservation zones. The World Bank has funded a forest zoning programme (Mpoyi 2012) which should enable the

country to construct a national land management policy and guidelines for land allocation. This would be a major step forward in processes such as REDD+ and in land use projects. Changes in plant cover seem to be less dynamic: data comparisons indicate a rough annual deforestation rate of about 0.25%, which is relatively low. The normal evolution of socio-community dynamics forebodes the inevitable conversion of forestlands into non-forestlands. Population growth is an indication of these dynamics; it creates new need for space for human settlements, food crops and household fuel, mainly composed of wood products from the forests. The 27 October 2009 MECNT report on the potential for REDD+ in DRC predicts an annual loss of forestlands of 0.2–0.3% during the next 20 years (MECNT 2009). These early statistics on estimates of annual deforestation and forest degradation rates match the FAO statistics (2011), i.e., 0.2% for the years from 2000 to 2010. Blaser et al. (2011), referring to official data that the DRC ministry in charge of forests contributed to the International Tropical Timber Organization (ITTO) evaluation, put forth the same 0.2% per annum deforestation rate. Yet, as Debroux et al. (2007) stresses, the country's socio-political instability over the last 20 years has made it impossible to produce reliable estimates. This cautious approach has also been applied to deforestation and forest degradation rates, since Laporte and Justice (2001) had already suggested a rate of 0.4% although these figures are not the same from one region to the next.

All our sources reported a historically rather low deforestation rate that can be traced to a combination of three main factors: i) the logistical configuration of the country which provides a natural protection for forests since the underdevelopment of infrastructure makes most of the forests inaccessible; this protects a good part of the Congolian forest from intensified anthropic exploitation and prevents the development of commercial agriculture that is often a greater cause of deforestation than forest exploitation; ii) an average population growth rate of close to 0.3%, which does not levy serious pressure on the land since the population density is low, about 25 inhabitants per km^2; and iii) large swathes of non-forestland available and easier to convert into human settlements and fields. The average population density in forest areas is low, under one inhabitant per km^2 in certain regions. At the other extreme, population densities are over 1000 inhabitants per km^2 in urban agglomerations such as Kinshasa, Lubumbashi and other major urban centres. This can easily be seen on the population density map produced after the 2006 voters registration.

Comparing studies on the dynamics of deforestation in DRC provided national and sub-provincial data showing that the 'population density' variable correlated most closely with deforestation, which tends to confirm that at these scales, community use of forests is the main direct cause of deforestation. The most popular use is firewood and clearing forestlands for agriculture, with construction coming in third place. Attention must also be given to itinerant slash-and-burn agriculture that precedes the tree cutting and uprooting needed to prepare forestlands for subsistence farming (Tollens 2010). Yet at the local level, other activities such as forestry and mining can have a greater effect on the forest cover than the abovementioned community practices. Although relatively slight worldwide, this forest reconversion rate is among the highest in the Congo Basin and amounts to an average annual national loss of 420 000 ha. But at the local level, this statistical average does not reflect reality anywhere; there are great differences in the level of deforestation throughout the country, from less than 10 ha in some regions to averages of over 1250 ha per year in others. Ernst et *al.* (2012) have mapped the distribution of Landsat samples and give estimates of land areas affected annually by deforestation and forest degradation for the 1990–2000 and 2000–2005 study periods (Defourny et al. 2011). Their representation gives an idea of the geographic and temporal disparity in deforestation across the country.

The major increase in the rate of deforestation between the two study periods (1990–2000 and 2000-2005) through a progression can be summarised as follows (Figures 2.4 and 2.5):

- a resurgence of hotspots (beyond 1250 ha of forestland lost per year) around the centre of the country during the second study period, the type of hotspots which mainly appeared in the north, the southwest and certain parts of the eastern strip of the country during the first period;
- very little deforestation in the second period (2000–2005) observed in the landscapes in

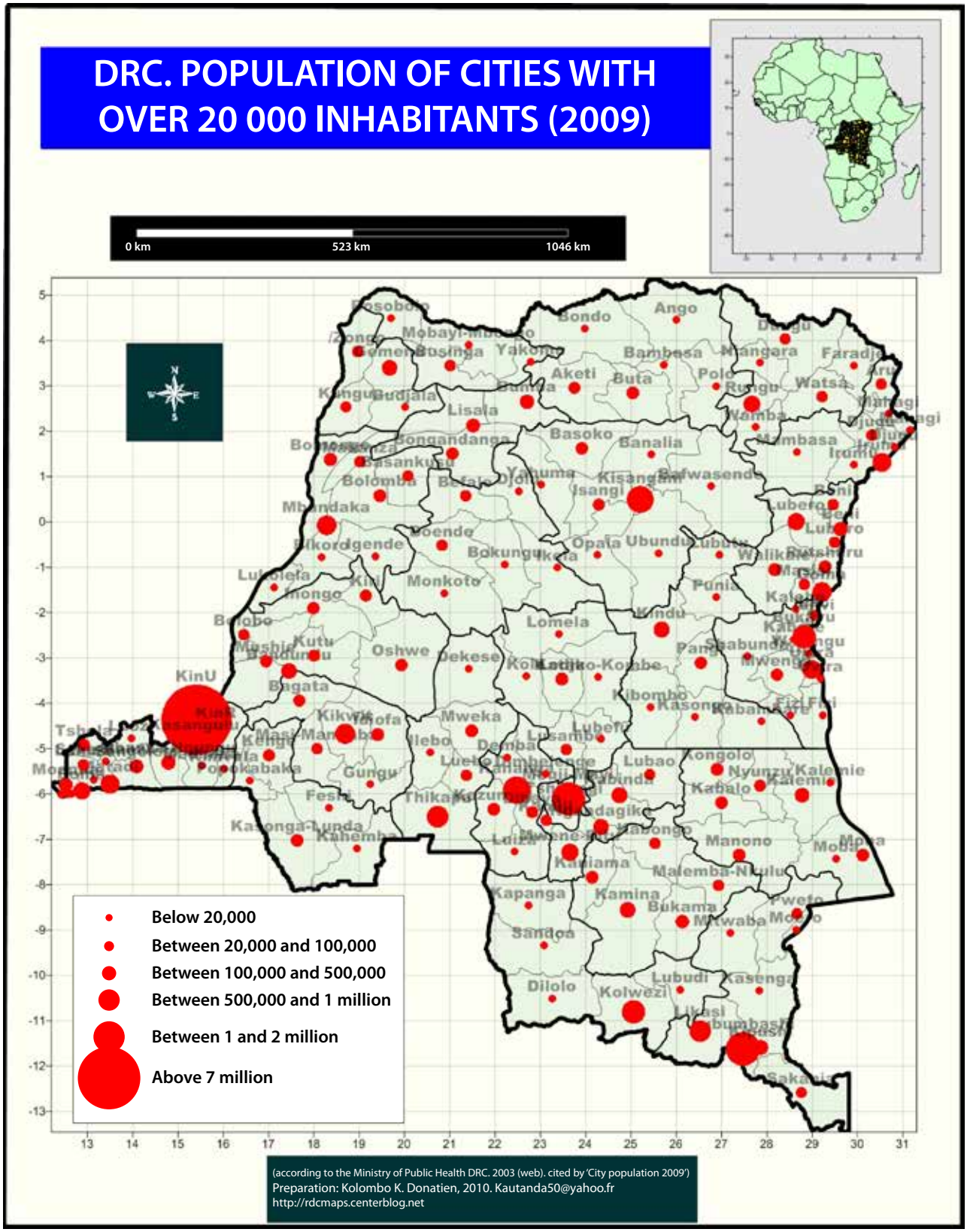


Figure 2.4. Population distribution and density throughout the Democratic Republic of Congo, according to the Ministry of Health; prepared by Kalombo K. Donatien

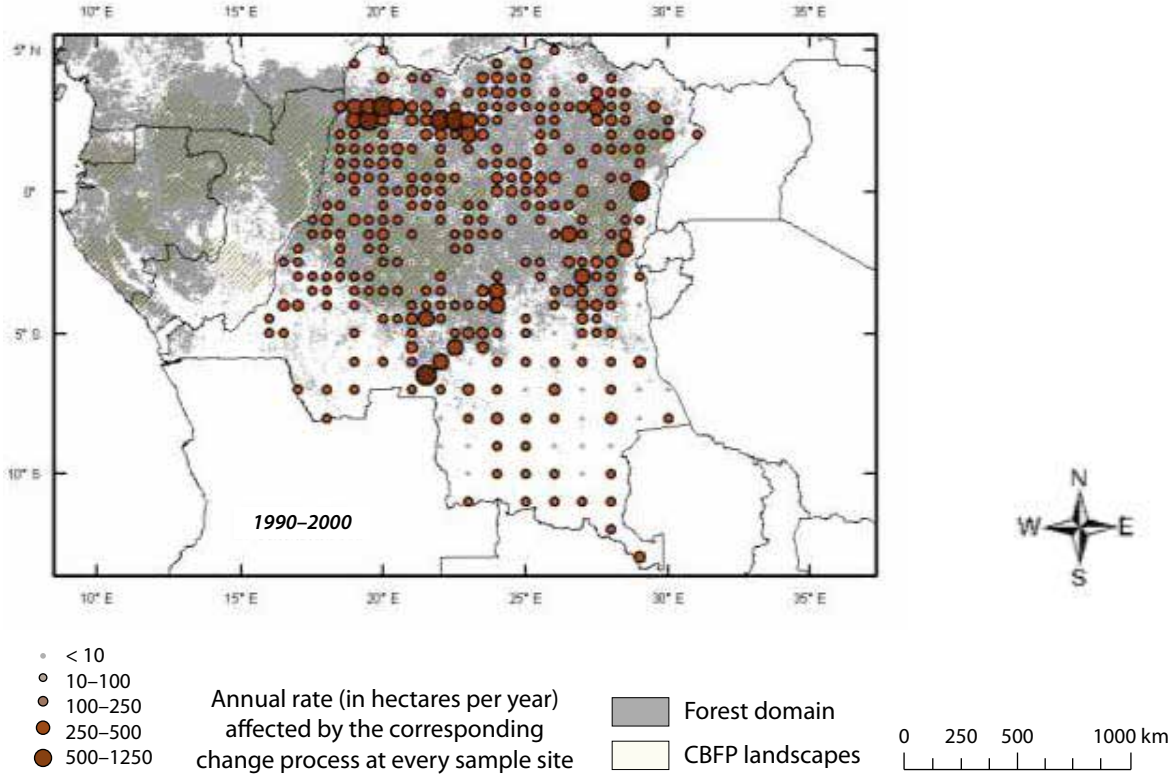


Figure 2.5. Distribution of Landsat samples and estimations (in ha) of the area affected annually by deforestation and degradation between 1990 and 2000

Source: Ernst et al. 2012

the southern part of the country (Katanga and Bandundu Provinces, the south Kasaï and the area around Kinshasa). This is due either to the lack of satellite images for that period or to the disappearances of forestland, as was the case in South Kasaï and Katanga. These zones are among the zones most affected by the deforestation phenomenon; in some cases whole forests disappeared completely in just a few years.

Satellite data are available to estimate forest cover reduction trends for the 1990–2005 period (Ernst et al. 2012). These trends are represented in Figures 2.5 and 2.6. It is not yet possible to check the satellite data against ground truth because the number of inventories is too small. Until the year 2004, according to the 2008 State of the Forests, inventories were only made occasionally and only covered 20 million ha (inventories of forest allocations), and used a very low sampling fraction (de Wasseige et al. 2010). The first land management inventories were started in 2005, and at the time of publishing this report, had only covered 2 million ha. The possibility of making broader inventories may be considered very soon, during the forest domain zoning process. This process seems to be late in starting but is already on the horizon since a methodology has been prepared and discussions are underway concerning the next steps, in particular, technical preparations and fund-raising. Because of the shortage of field data, satellite observations are the only objective source available to evaluate forest reduction trends. For various socio-economic reasons, no significant investments have been made in agro-industry since the colonial era. Most of the old plantations of that era, some of which had consumed forestlands, were forsaken, and very few new large-scale industrial plantations have been created since that time. Up to now, the biggest operational agro-industrial unit is the Société Sucrière de Kwilu Ngongo, a concession. It is spread over an area of less than 15 000 ha and is not located on forestland. There have not been any significant new human settlements or infrastructure during the last 20 years either. Since the colonial era, there have only been three major population shifts that caused demographic explosions in certain major urban centres:

1. the movement from Katanga to Kasaï, which led to a galloping population increase in the

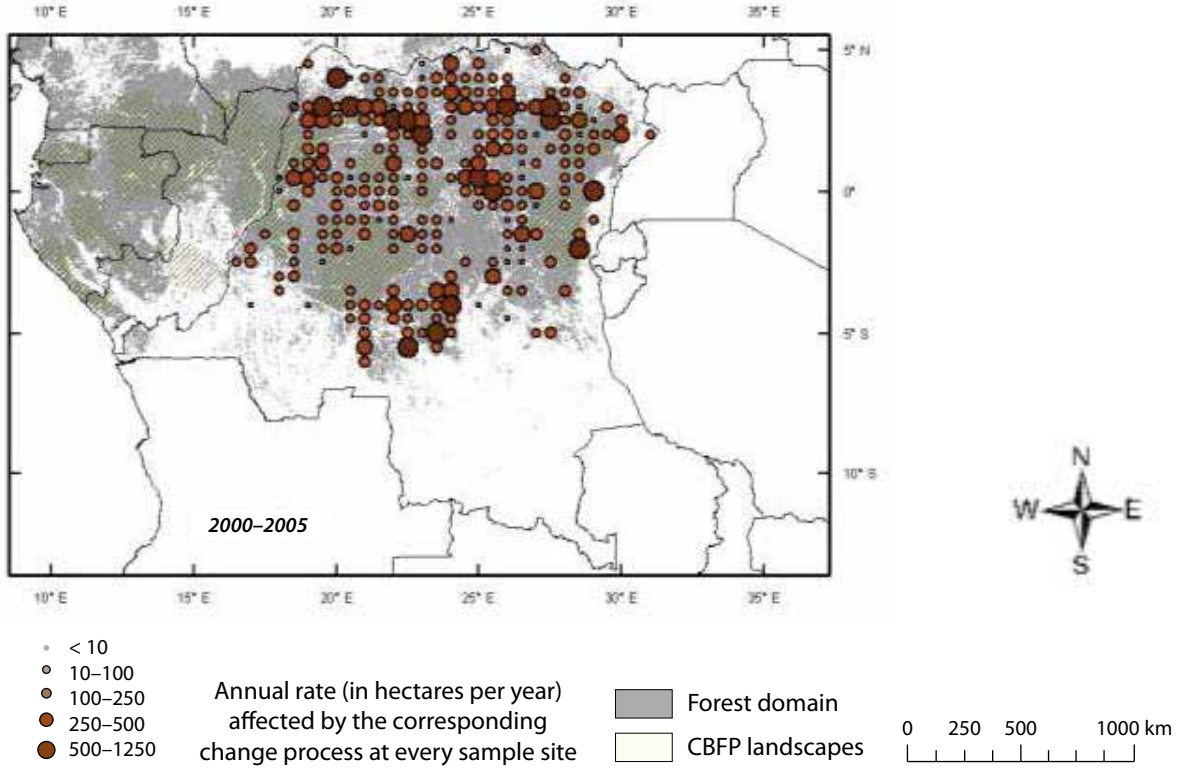


Figure 2.6. Distribution of Landsat samples and estimations (in ha) of the area affected annually by deforestation and degradation between 2000 and 2005

Source : Ernst et al. 2012

cities of Mbujimayi and Mweneditu resulting in the destruction of surrounding forests to make room for new towns and an increase in the demand for firewood and timber;

2. the massive arrival of Rwandan refugees in the eastern provinces of DRC in 1994, which tripled the urban populations of the cities of Bukavu, Goma and Uvira and significantly increased the logging rate to meet the need for timber and firewood in the refugee camps;
3. since 1996, population displacement from the east to the west of the country as a result of wars, thus leading to a major population increase in the city of Kinshasa and, subsequently, a soaring demand for firewood and timber.

2.3 Review of main factors of change in the forest cover

The average annual deforestation rate is estimated at 0.2% (FAO 2011). These rates differ from one region to the next. With reference to the Geist and Lambin (2001) general framework that gives a list of potential drivers of deforestation and a classification of 'direct' and 'indirect' causes, and to the literature, Defourny et al. (2011) identified 35 potential variables that could explain deforestation in the various DRC landscapes between 1990 and 2005. These variables were grouped into eight major categories of causes, three direct and five indirect. These categories are shown in Figure 2.7.

Defourny et al. (2011) did not identify other causes that were relevant to the DRC context for the period under study. Further, shortage of data on that period explains the reason for not modelling the variables. Since this review is the only objective one for the period under consideration and covers the greater part of the national territory, its conclusions provide most of the substance of the section on drivers of change in forest cover. At this stage, the words 'deforestation' and 'degradation' need to be explained.

Defourny et al. (2011) define deforestation and degradation from the vantage point of causes of reduction in the forest cover: deforestation is a reduction in the forest cover resulting from anthropic actions while degradation is the result of biophysical factors, without human input. The UNFCCC requires each country to work out a

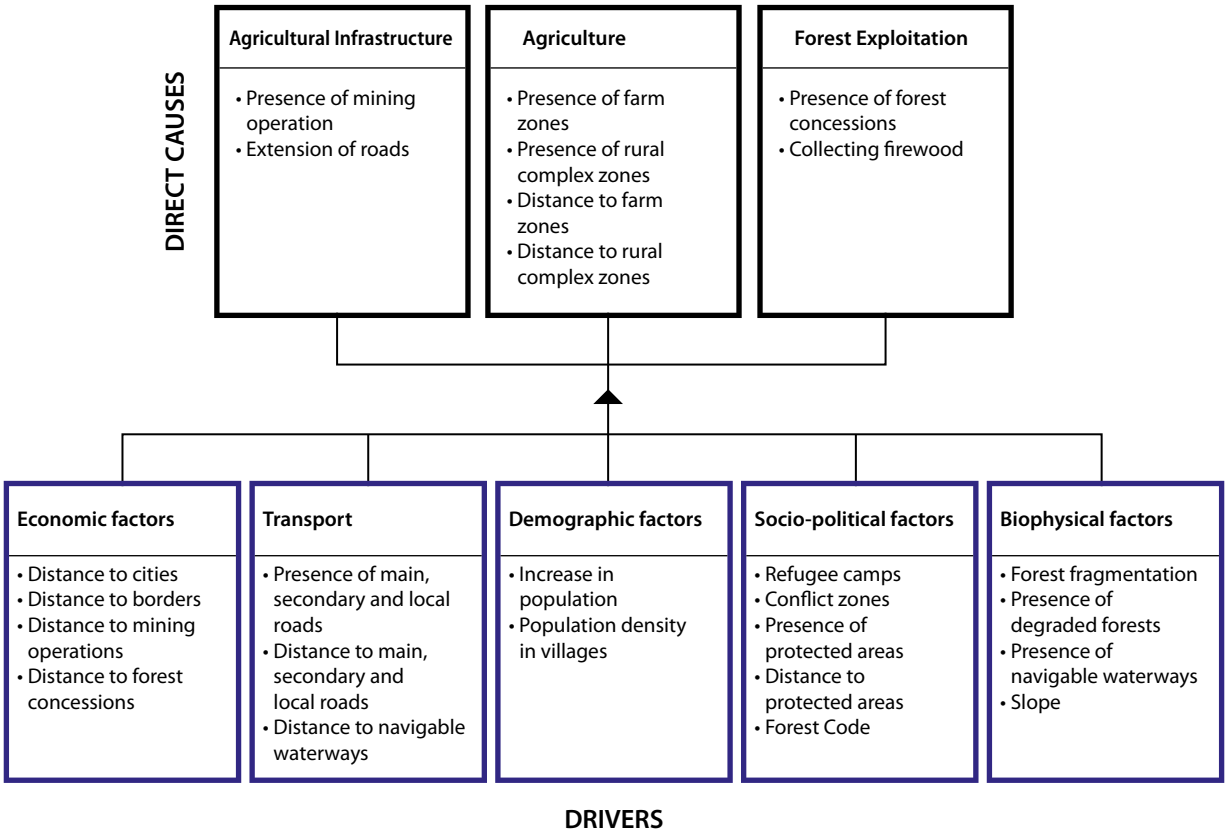


Figure 2.7. Direct possible causes and potential drivers of deforestation and degradation in the context of the Democratic Republic of Congo for the period 1990 to 2005

Source: Defourny et al. (2011)

definition of 'forest' with due attention to specific national features, all the while respecting the UNFCCC threshold for three parameters: land area, canopy cover and tree height (IPCC 1997). From this angle, degradation is defined as the reduction of forest cover, within the limits of the national definition with regard to minimal values for the three indicators, while deforestation refers to a reduction in forest cover that puts one of the indicators below the minimal threshold. The two preceding definitions only consider the forest as a natural reservoir of carbon and only consider its role in regulating climate while communities tend to adopt a more holistic view and consider all the environmental, social and cultural services provided by the forests, with special emphasis on the services they use most: i) the forest as a habitat, villages being established on lands cleared and developed in the heart of the forest zone; ii) the forest as a pharmacy, with animal and plant biodiversity providing most of the products used in the traditional pharmacopoeia; iii) the forest as a 'self-service supermarket', with most of the consumer goods and products for everyday life derived from the forest or produced from animals and plants; iv) the forest as a socio-cultural regulator, playing several social and cultural functions, etc., plus other services provided by the forest ecosystems. Through this lens, the three UNFCCC indicators are not enough to define the forest, e.g., consider village people who obtain their animal proteins from caterpillars or bush meat. If these products become scarce or disappear for some reason or other, the forest would simply no longer exist for these people in that particular place, regardless of the trees that remain. This is how the forest communities have developed endogenous knowledge that regulates forest operations and makes them sustainable in order to protect the holistic dimension of the forest: an ecosystem offers far more than climate regulation services through carbon storage. The life and social equilibrium of the people in the community depend on it. Deforestation is increased by population density in rural areas and by population growth resulting from aforementioned factors,

especially the major population movements since 1994. When rural complexes are connected by road to distribution centres, deforestation becomes more intense, which suggests that the agricultural output is not only for local consumption but also for sale in other consumption areas. During the study period, the forests also suffered nationwide from natural degradation, but this played less of a role in deforestation than community farming.

The more systematic observations made above confirm the position of Laporte et al. (2007) who do not make a distinction between direct causes and driving forces but identify the causes of deforestation in DRC by order of importance as follows: agriculture and grazing, firewood and charcoal production, forest exploitation, illegal logging, urbanisation and related infrastructures. They also note a correlation between demography and deforestation with zones of major deforestation coinciding with zones of high population density (Laporte et al. 2007). Agriculture and mining are sourced as factors that lead to forest fragmentation, which also encourages deforestation. Last, UNEP (2011) identifies the drivers of deforestation and forest degradation in DRC, by order of importance, as follows:

- shifting slash-and-burn cultivation with short periods of fallow
- collection of firewood which meets 95% of the household energy needs
- illegal and small-scale logging, which provides 75% of the wood exports
- rehabilitation of roads that open the forest areas to anthropic activity.

In sum, among the causes identified by the various authors mentioned in the classification by Defourny et al. (2011), the dynamics of deforestation and forest degradation in DRC can be summarised in the following subsections where a distinction is made between the direct causes and the driving forces (indirect or secondary causes).

2.3.1 Direct causes

Infrastructure, agriculture and forest exploitation seem to be the most recurrent direct causes of deforestation and forest degradation.

Infrastructure: Mining and road development. Since 1990, there has not been any significant development in the country's infrastructure: no new human settlements, no major road construction, apparently only a small number of projects to rehabilitate certain badly deteriorated roads. On the other hand, high rates of deforestation have been recorded in connection with small-scale mining operations in Kasaï Oriental, the Orientale Province and the Kivu (North Kivu, South Kivu, Maniema), and industrial mining operations in Katanga Province. Since there is no environmental management of small-scale or artisanal mining of precious metals (gold, diamonds, coltan, cassiterite), whole regions are being stripped to open new mines. According to UNEP (2011), since the withdrawal of industrial mining companies in the 1990s, small-scale and artisanal mining have accounted for 90% of total production and employ 18% of the population. As for roads, road development is mainly in the industrial forest exploitation zones where the operators need the roads to evacuate their timber. Large-scale construction of infrastructure and mining operations can be expected to grow in the medium-term future with the implementation of the DRC–China agreement signed in September 2007 (Global Witness 2011). Two Chinese public companies specialised in public works signed a Resources for Infrastructure agreement with the national Congolese copper company. The agreement, worth USD 9 billion, covers the construction of roads, railroads, hospitals, schools and hydroelectric dams in DRC (Global Witness 2011). In exchange, the Chinese companies are to play a major role in the exploitation of DRC mineral resources.

Agriculture. The socio-political and military unrest in DRC has seriously impeded agricultural development; the last major agricultural enterprises date back to the colonial period. Most of the old plantations were abandoned for a variety of reasons and were converted into forestlands. To date, agro-industry is still not well developed since less than 10% of the farmlands (estimated at over 135 million ha) are being exploited (Devey 2012). Yet, in Katanga Province, private investments are providing support for the development of two types of agriculture: modern agriculture with large crop or stock farms and family farming over small areas. Subsistence agriculture, the main economic activity in the rural areas, covers a total estimated land area of 4–6 million ha although each rural household has an average of 1.5 ha/yr (RDC 2008). The agro-pastoral community

is close to 14 million households but has a ridiculously low production level (Devey 2012). This situation is expected to change thanks to a government agricultural support programme of USD 23 million. Small-scale agriculture seems to contribute directly to deforestation; peasants lack supervision and their farming methods, i.e., shifting slash-and-burn cultivation (moving to other arable lands when the old ones are depleted), can be harmful to the forests. Rural communities prize the fertile forestlands. They cut and uproot the trees, then clear the lands, burn the remaining vegetation and start to plough. UNEP (2011) reports that agriculture still seems to be the main cause of deforestation in DRC. This assertion is not supported by current empirical evidence, which seems to purport that small-scale family farming has a more limited effect on forest canopy losses (Tollens 2010, Ernst et al. 2012).

Forest operations and firewood. The forestry sector is marked by two contradictory dynamics: on the one hand, industrial production has grown continually since the end of the civil war and the major international market crisis in 2008 (Eba'a Atyi 2009), although the annual output from the industrial sector has never exceeded 500 000 m^3 (Mertens and Belanger 2010); and on the other hand, the informal sector has become strong and produces 3–4 times more than the industrial sector (Lescuyer et al. 2012). The growth of the informal sector, thus, seems to endanger the DRC forests (Lescuyer et al. 2012). Furthermore, DRC apparently produces close to 75.4 million m^3 of fuelwood (FAO 2011), to meet the needs of a growing population and the increasing demand of urban households in major cities such as Kinshasa, Kinsangani and Lubumbashi (Tollens 2010; Trefon et al. 2010; Schure et al. 2011; Schure et al. 2012). Many observers agree that gathering firewood harms the forest canopy, i.e., contributes to deforestation and forest degradation (Marien 2010; Ernst et al. 2012). To decrease the negative effects of collecting firewood on the natural forest cover, sustainable alternative solutions have been suggested, e.g., forest plantations, widespread use of cookstoves (foyers améliorés) and an increase in the production of low-cost electricity.

2.3.2 Driving forces: Indirect causes

Economic factors: Proximity of large cities, national borders, mining operations and forest concessions. Large urban centres are major markets for forest products, especially from nearby forests, which are often used as a source of household energy (fuelwood) and for construction and furniture (timber). The deforestation rate is very high in forests near urban centres and along borders where forest products from nearby forestlands are transited, especially as export products. In a recent study, Forest Monitor (2007) studied the question of the wood trade between the east of DRC and the neighbouring countries, i.e., Rwanda, Burundi, Uganda and Kenya, which import 75% of the timber produced through small-scale operations in the east DRC forests. These observations have been supported by Benneker (2012). As for mining operations and forest concessions, both contribute to opening and fragmenting previously exclosed forests (Mertens and Belanger 2010), and make the nearby forests more accessible than other forests, without forgetting that both activities also generate an inflow of labourers who move permanently to areas that were previously uninhabited, thus, in some cases, creating new rural settlements.

Transport: Presence of main, secondary and local roads, distance to roads, distance to navigable waterways. Both small-scale and industrial forest products are evacuated either by road or by water. The Congo River and its vast system of navigable tributaries and river crossings are essential in evacuating forest outputs from the Équateur, Bandundu, Orientale and Bas-Congo provinces. As for the roads, forest exploitation has been intensified in the massifs where the roads are usable; most roads are in very bad condition.

Demography: Population growth, size of urban households. Major population movements and population concentrations in certain areas have led to more intensive forestry operations to meet the new needs for timber and fuelwood (Schure et al. 2012) and to open up new areas for farming. The most significant population movements in the recent history of DRC took place between 1994 and 2005 with vast numbers of refugees from Rwanda fleeing to the eastern part of DRC and east-to-west population displacements following civil wars in neighbouring Rwanda and Burundi and within DRC. These movements have caused major socio-economic change that significantly affected the forestlands.

Socio-political factors: Refugee camps, conflict zones, protected areas, distance to protected areas, forest code. For over 3 years, the existence of refugee camps in the east of DRC contributed to unprecedented deforestation. An estimated +2 million people from Rwanda and Burundi fled to the North Kivu, South Kivu and Maniema Provinces; in other words, more than four times the population of the cities of Goma, Bukavu and Uvira, plus the surrounding villages. This massive inflow of refugees boosted the demand for fuelwood (an average quantity of 2 m^3 per month was given to each family, in keeping with UNHCR standards) and required the construction of shelters made of wood and covered with tarpaulins, which were provided by the UNHCR. According to a UNEP (2011) estimate, since 2002, when the security situation seemed to become more stable, over 2.4 million people have left their homes as a result of spurts of violence. Again, according to UNEP (2011), this population displacement caused an estimated deforestation of 89 ha per day in the Virunga National Park area just to provide firewood. The refugees from Rwanda and Burundi and the internally displaced persons provided an ample labor force for small-scale forest operations to meet the needs of these newcomers.

Biophysical factors: Forest fragmentation, degraded forests, navigable waterways, slopes. The last contributors to deforestation are the biophysical factors: fragmented and degraded forests are easiest to exploit (mainly small-scale and illegal operations), navigable waterways are often used to transport harvests, and sloping encourages landslides and erosion that remove forest vegetation.

In sum, the various sources mentioned above attribute the direct causes of deforestation to the development of roads, agriculture, informal small-scale forest operations, uncontrolled forest exploitation in search of fuelwood, and industrial forest operations for timber production encouraged by the creation of evacuation facilities. These direct causes are favoured by underlying factors called indirect causes, e.g., economic factors, the proximity of evacuation channels, demography, socio-political factors and, last, biophysical factors. Up to now we have not found any published consensus on the relative importance of the direct causes considered at the individual, national or landscape level. Hopefully, the studies underway at the time of publication of this report, will lead to a consensus, which is deemed essential to guiding decision-makers in the REDD+ process.

2.4 Potential for mitigation

A study carried out by McKinsey & Co. on the potential for REDD+ in DRC (MECNT 2009) was central to the REDD+ National Strategy, published in December 2009 (MECNT 2009), shortly before the adoption (March 2010) of the National REDD+ Readiness Preparation Proposal for DRC. The McKinsey approach was based on three main steps:

- preparation of a list of causes of deforestation and categorisation of the causes: 10 causes were identified and grouped into three categories, as shown in the figure below
- definition of a reference scenario on the evolution of deforestation between 2010 and 2030 by modelling the consequences of the foreseeable evolution of certain socio-economic factors on the forest canopy, based on the analysis of various development indicators of the World Bank and other agencies
- identification of four strategic lines of intervention for REDD+ in order to reverse the curve, making it possible for DRC, by the year 2030, to have a positive carbon footprint and become a carbon sink with a capacity of 20 Mt.

The main conclusions of this study were as follows:

- In the reference scenario summarised in the table above, the combination of population growth, overall economic growth, and the growth of certain economic sectors that have a direct impact on the forest, in particular the mining sector and hydrocarbons, will contribute to a loss of national forestland of 9 million ha (a drop from 145 million ha in 2007 to 109 million ha in 2030), which represents net emissions of 390–400 Mt CO_2e.
- The Laporte et al. (2007) study estimated the reference level for emissions caused by deforestation and degradation in DRC for the period from 2008 to 2036 at 200 million tonnes of CO_2 because of community uses, forest exploitation and the development of biofuels by oil palm plantations, which would lead to a deforestation of 23 million ha.
- An intervention strategy could be deployed for mitigation, based on a cross-cutting phase composed of intersectoral political reforms for

the coordination, implementation, funding and management of potentially emission-reducing activities. It would be composed of three sectoral phases: i) management, sustainable exploitation and growth of the forestlands; ii) introduction of a more productive agriculture in the rural forest areas; and iii) limitation of the impacts of urban growth and industry on forestlands. This trend, however, might be reversed and might even transform the country, by the year 2030, into a vast carbon sink with a 20 Mt capacity at an average cost of EUR 6.5 per tonne as can be seen in Figure 2.8.

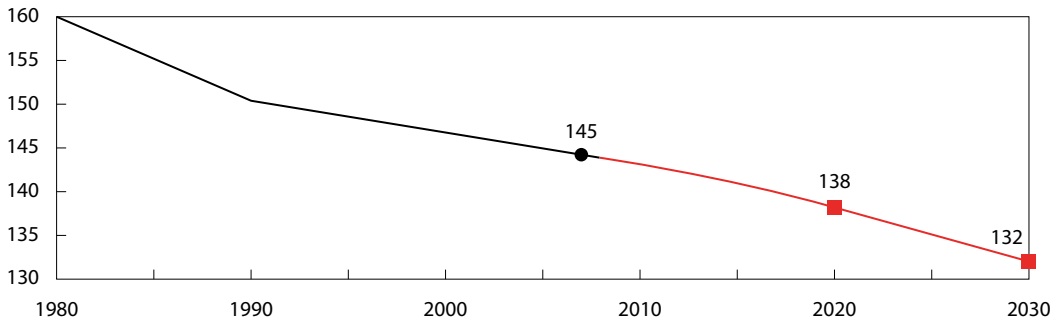
- The McKinsey report has been widely criticised. The most pertinent remark concerned its lack of clarity on the methodology used in calculating estimations and the lack of precision concerning the sources of information cited. But it has the merit of proposing a reference scenario that is based on growth projections, and the country's developmental requirements and their effects on the national forests, rather than on the historical deforestation curve.

Further, FAO (2011) estimated the DRC mitigation potential at 19 639 million/t, i.e., a rate of 127 t/ha. The McKinsey report has scientific value but was a bit too optimistic about the country's development potential. It may have defined its parameters using reports and studies from various reliable sources like the World Bank, FAO, UNDP, the Ministry of Planning and others, but it does not seem to have given due consideration to elements connected to the country's overall socio-political and macro-economic context, which is too optimistic about future growth. An example: the reference scenario predicts deforestation at 3.2 million ha by 2015 to make room for industrial agricultural projects, especially the development of oil palm plantations. During that same period it provides

Deforestation is expected to reduce the forests of DRC by 12–13 million ha by the year 2030

Scenario of historical and future deforestation in DRC[1]

Millions of ha of forest stock in ha



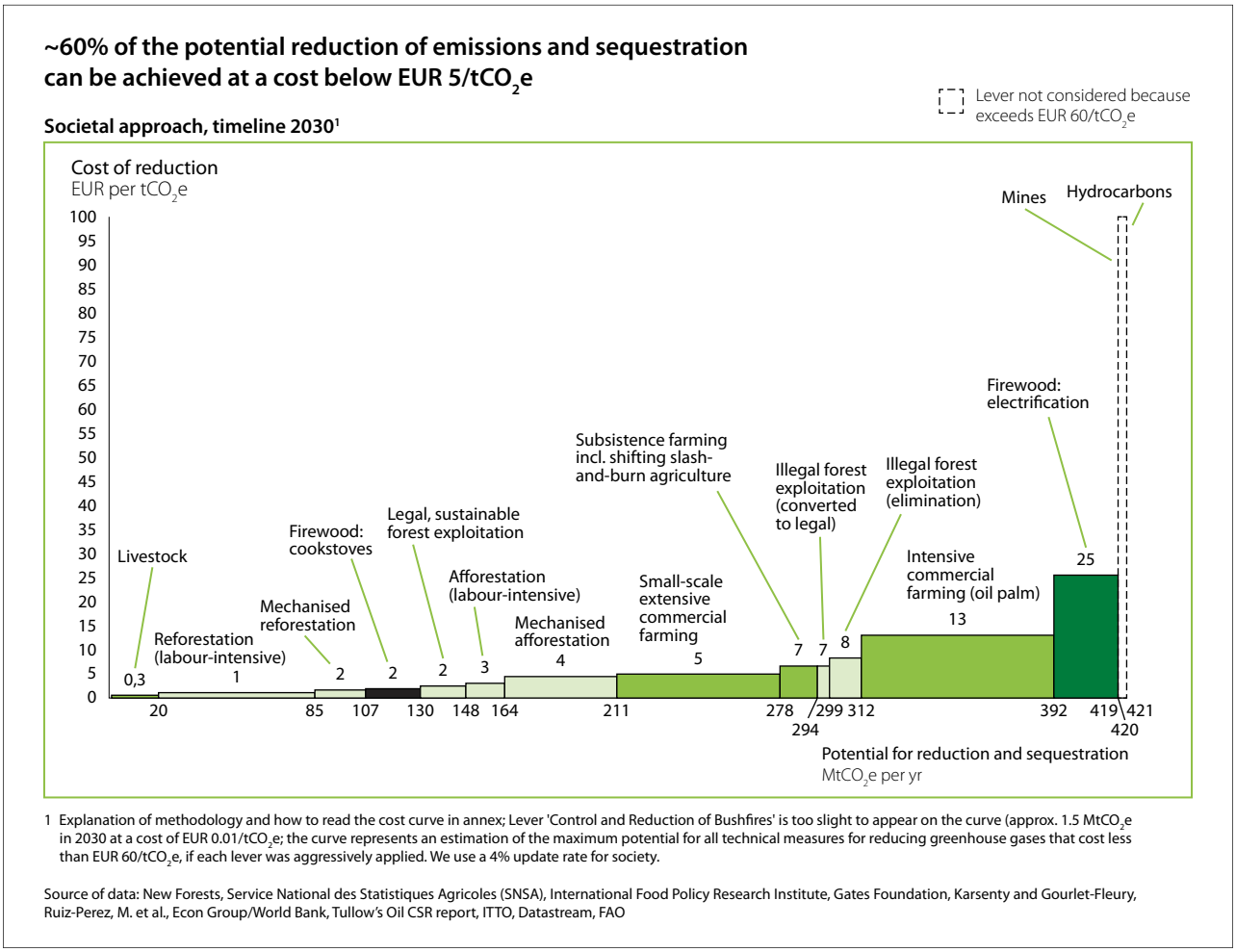
- **Acceleration of deforestation in DRC:**
  - From 360 000 ha/yr (between 0.2% and 0.3%) in the years 1990–2007 to +400 000 ha/yr (more than 0.3% per yr) as of 2010
  - Major impact of country's population and socio-economic growth on the forests
- **This curve does not take account of the effects of degradation ~21–23 million ha between now and 2030, i.e., major contribution to emissions[2]**

1 Represents deforestation without forest degradation
2 The total land area figure for degraded forests is indicative and includes all types of degradation (light, medium, severe)

Source of data: World Bank, FAO, OFAC, UCL, South Dakota University, CN-REDD, R-PIN, CIRAD, CIFOR, CTB, MECNT, Ministry of Agriculture, Ministry of Planning, Ministry of Hydrocarbons, Ministry of Energy, IES, McKinsey, UNEP, PNUD, CSRC, UN-REDD, Greenpeace, WWF, IWG-IFR, CBFP, Rainforest Foundation, FSC, EarthTrends, WRI

Figure 2.8. Scenario of historical and future deforestation in the Democratic Republic of Congo

Source: Ministry of Environment, Nature Conservation and Tourism (MECNT 2009)



1 Explanation of methodology and how to read the cost curve in annex; Lever 'Control and Reduction of Bushfires' is too slight to appear on the curve (approx. 1.5 $MtCO_2e$ in 2030 at a cost of EUR 0.01/tCO_2e; the curve represents an estimation of the maximum potential for all technical measures for reducing greenhouse gases that cost less than EUR 60/tCO_2e, if each lever was aggressively applied. We use a 4% update rate for society.

Source of data: New Forests, Service National des Statistiques Agricoles (SNSA), International Food Policy Research Institute, Gates Foundation, Karsenty and Gourlet-Fleury, Ruiz-Perez, M. et al., Econ Group/World Bank, Tullow's Oil CSR report, ITTO, Datastream, FAO

Figure 2.9. Mitigation potential, societal approach, timeline 2030

Source: Ministry of Environment, Nature Conservation and Tourism (MECNT 2009)

for the development of 400 000 ha, (requiring prior deforestation) for agriculture, and 2.4 million ha of forest degradation caused by large ranches in the woody savannah of the Cuvette Central (central basin).

Investments of this size are disproportionate considering the national macro-economic context where the private sector is little involved for a number of reasons: the logistical infrastructure is not strong enough to support agro-industrial development, especially considering transportation routes, access to energy, and the national labour shortage, which is the Achilles heel of all large-scale investments in DRC; the time needed to make investments of this size, even if the projects were ready to be implemented after studies and other pre-conditions had secured the budget; and the slow pace of political reforms needed to accompany a development programme of this size, despite their prominence in various general policy documents. However, investments of this size could be made without exercising any additional pressure on the forestlands since the country has enormous amounts of arable non-forestlands; several sources report there to be over 100 million ha.

In conclusion, the study unquestionably identified important lines of action for the implementation of the national mitigation potential, but made assessments which, considering recent developments and the national situation, seem exaggerated. The potential could be fulfilled on the following conditions: i) finalisation of institutional reforms, mainly on cross-cutting issues, especially involving the ministries of Agriculture, Rural Development, Industry, Mines and Hydrocarbons, Land Use Planning (Aménagement du Territoire), and Energy; ii) national-level deployment

of a series of incentives to encourage private investment, especially the development of a strategy that involves the private sector in REDD+; iii) development of funding mechanisms keyed to the mitigation potential; and iv) finalisation of the baseline studies, production of legal instruments and the implementation of the downhill institutional reforms.

Important scientific studies that could finetune the national strategy have been identified. They focus on:

- the drivers of deforestation, highlighted in the last phase of the site surveys, that could be used to explain the dynamics of deforestation at the local level where the projects will be implemented;
- the carbon footprint and the distribution of revenue that could be used to develop mechanisms that encourage the participation of all the stakeholders and the introduction of legal instruments that define and secure the interests of all parties;
- the National REDD+ Fund that will be used to develop fund-raising strategies and ways to transfer the available material means to projects and initiatives with a mitigation potential and to improvements to the sectoral public policies that could be enabling for REDD+;
- the approval procedure, which will instil confidence in the private sector and in other potentially promising sectors by strengthening the regulations for this new potential investment sector;
- harmonisation of cross-cutting policies and laws.

Greenpeace (2010b) bitterly criticised this synopsis of REDD+ in DRC and felt that the Technical Advisory Panel and the Participants Committee of the World Bank, when examining the DRC R-PP, ignored problems of governance, user rights, and socio-ecological impacts and preferred relying on the McKinsey report.

3 Institutional environment and revenue-sharing

The assimilation of the REDD+ international mechanism requires a national institutional framework that is innovative and adapted to many stakes and challenges (Wertz-Kanounnikoff and Angelsen 2010) such as coordinated sectoral policies and legal frameworks that, in particular, clarify land and carbon rights. It also requires national measures to strengthen governance (especially forest governance) and the fight against corruption. Systems are needed to ensure well-targeted, equitable distribution of benefits that may be generated by the REDD+ mechanism. This does not only require political reforms but also the creation and/or strengthening of REDD+ institutional and technical capacities (UN-REDD 2011).

3.1 Governance in the forestry sector

Poor governance seems to be at the origin of many of the socio-political and military crises in the life of the DRC. Since the independence of this former Belgian colony, the succession of political regimes have been called authoritarian and despotic (Weiss 2000), two characteristics that have not contributed to good governance, to equitable distribution of national wealth and the co-benefits and nor to economic development capable of improving the people's living conditions. Quite the contrary. Pitfalls have caused the failure of state structures and the government authorities, plunging the whole country into interminable armed conflict and socio-political crises. As a result, forest governance, despite a few praiseworthy public actions and efforts by the civil society, reflects the socio-political and economic life of the rest of the country (Oyono and Lelo Nzuzi 2006; Trefon 2008). Out of 54 African countries, DRC ranks 44th in overall good governance, 50th in political governance and 52nd on the Human Development Index (Suarez 2012).

3.1.1 International commitments

DRC has signed 28 international conventions on the environment. All 28 have been ratified and are now part of the country's national legislation although the State has to make other (legislative, regulatory and institutional) provisions before they can be implemented. This said, the 2002 Forest Code and the very recent law on fundamental principles of environmental protection (July 2011) already include some of the modern principles set out in these international instruments, in particular principles on: consultation and participation in the decision-making process, the sharing of revenue from the exploitation of natural resources, the recognition of traditional rights to forestlands, the possibility to register land and receive deeds,[1] and access to justice for local communities for environmental damage and forest law infractions affecting them.

Furthermore, DRC is a member of the United Nations Forum on Forests (UNFF), a subsidiary body of the United Nations Economic and Social Council (ECOSOC) to which it submits a periodic report on the state of forest governance in DRC. The last one was submitted in 2010 and stressed the problem of funding for the forestry sector.

3.1.2 Sub-regional commitments via COMIFAC and other international environmental initiatives

DRC is a party to the Treaty on the Conservation and Sustainable Management of the Forest Ecosystem of Central Africa that established the Central African Forests Commission (COMIFAC), signed in Brazzaville on 5 February 2005 by

1 Forest Code, article 22

10 Central African countries. The DRC Parliament ratified this Treaty on 31 December 2009. Since that time, COMIFAC has participated actively in various initiatives. Through its Convergence Plan, COMIFAC is becoming a body that harmonises, coordinates and monitors forestry and environmental policies and initiatives among its member states. COMIFAC, for instance, has seen to the adoption of additional legal instruments on very precise themes, thereby committing its member states to:

- the Sub-Regional Agreement on Forest Control in Central Africa;
- the Sub-Regional Directives for a Sustainable Management of Non-Wood Forest Products of Plant Origin in Central Africa;
- the Sub-Regional Directives for the Participation of Local and Indigenous Peoples and NGOs in the Sustainable Forest Management in Central African.

In relation to REDD+, there are six COMIFAC countries (Cameroon, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of Congo and the Republic of Congo) with potentials for their rain forest that have combined part of their Global Environment Fund (GEF) funding to develop a regional project to support capacity-building on REDD+. This project is not merely designed to replicate actions carried out in each of these countries but, quite the contrary, seeks to support sub-regional actions that use

Box 3.1 The 28 international environmental conventions that have been ratified by DRC.

1. Phyto-sanitary Convention for Africa South of the Sahara
2. Agreement Concerning Cooperation in the Quarantine of Plants and their Protection against Pests and Diseases
3. African Convention on the Conservation of Nature and Natural Resources
4. Convention on Wetlands of International Importance Especially as Waterfowl Habitat,
5. Convention Concerning the Protection of the World Cultural and Natural Heritage
6. Convention on the Conservation of Migratory Species of Wild Animals (Bonn)
7. Vienna Convention for the Protection of the Ozone Layer; London and Montreal Protocol
8. United Nations Convention on Climate Change
9. Convention on Biological Diversity
10. Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Waste within Africa
11. International Tropical Timber Agreement,
12. United Nations Convention on the Law of the Sea
13. Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
14. Convention Relative to the Preservation of Fauna and Flora in the Natural State
15. Phyto-Sanitary Convention for Africa
16. International Plant Protection Convention
17. The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction
18. Convention Concerning the Protection of the World Cultural and Natural Heritage
19. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
20. Convention on International Trade In Endangered Species of Wild Fauna and Flora
21. Convention on the Conservation of Migratory Species of Wild Animals
22. African Migratory Locust Convention, Kano, Mali, 23 May 1962
23. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water, Moscow, USSR, 5 August 1963
24. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, Geneva; Switzerland, 18 May 1977
25. Treaty Establishing the African Economic Community, Abuja, 3 June 1991
26. Convention on the Sustainable Management of Lake Tanganyika, Dar-es-salam, 12 June 2003
27. Kyoto Protocol, 11 December 1997
28. Earth Charter

economies of scale to optimise the REDD+ process (COMIFAC 2011).[2] Besides these sub-regional initiatives, DRC is participating in processes to ensure national-level application of international commitments on sustainable forest management and protection of biodiversity, for instance:

- **The agreement on the application of the Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan**. DRC has already started negotiations with the European Union to conclude the Voluntary Partnership Agreement (VPA)-FLEGT agreement aimed to create a traceability and legality verification system, thus ensuring European consumers that the wood they buy comes from legal sources that respect environmental, social and fiscal regulations. This control system enhancement will enable DRC to combat illegal deforestation and degradation, which contribute to climate change. To negotiate with the EU, a VPA Technical Negotiations Commission has been set up and is working on a series of preparatory activities (finalisation of the legality grid and legality verifications procedures, negotiating sessions with the European Commission, etc.). The VPA is scheduled to be signed in May 2013.
- **The national framework for the implementation of the Convention on Biological Diversity (CBD)**. Since ratifying the CBD and depositing the instrument of ratification with the United Nations in New York on 3 December 1994, DRC has been working on its implementation by holding consultations at the national and provincial levels (November 1997 to June 1998) and then *inter alia* by producing a national monograph on the country's biological diversity, a national strategy and an action plan. These tools cover the provinces, specific concerns for the conservation and sustainable utilisation of biological resources and the implementation of the programmes and actions. Furthermore, and in compliance with the terms set out in the CBD, the DRC presents reports regularly to the CoP on progress in implementing the Convention.
- **The national framework for the implementation of the Convention on International Trade of Endangered Species (CITES)**.[3] After having ratified the CITES, DRC issued an order on its implementation and tasked Institut Congolais pour la Conservation de la Nature (ICCN) to serve as the central CITES management body and the scientific oversight authority. DRC periodically transmits an annual report that summarises information on the number and type of permits and authorisations delivered and a bi-annual report on the legislative, regulatory and administrative measures taken to implement the Convention.

Other efforts to improve forest governance. During the last 10 years, the process for the legal review of old forest deeds and the modernisation of legal instruments has been put into practice and finalised. To make progress in applying the laws, over 40 texts for the application of the Forest Code have been adopted and to ensure greater transparency, DRC recruited an independent observer for forest exploitation operations (Resource Extraction Monitoring; REM) and a specialised company (Société Générale de Surveillance; SGS) to establish a strong control system for timber extraction and marketing and a timber traceability chain.

Box 3.1 summarises the various programmes and initiatives underway in DRC to improve forest governance. This information has been obtained from the CODELT study as part of the national forest policy formulation process, with support from the FAO.

3.1.3 Routine forest governance

In 2002, DRC adopted a new forest code and a reforms agenda centred on transparency, the application of the laws, and the participation of the stakeholders. Law 11/2002 of 29 August 2002 establishing the Forest Code was the first effort made by DRC to develop a new outlook to forest resources management, bearing in mind, on the one hand, the requirements of the COMIFAC sub-regional agendas and the international community and, on the other, the country's socio-economic conditions. According to

2 www.comifac.org/Members/MavoungouM/atelier-depreparation-du-projet-regional-redd-financement-gef-22-24-June-2010-yaounde

3 Order no. 056 CAB/MIN/AFF-ECNPF/01/00 of 28 March 2000 to regulate international trade in endangered species of wild fauna and flora (CITES)

Assistance with the installation of a monitoring and traceability system. The Monitoring Programme for the Production and Marketing of Wood (PCPCB) is being implemented with funding from the Multi-Donor Trust Fund (funded mainly by the European Commission and Belgium) and IDA to the tune of USD 8 million. The Société Générale de Surveillance (SGS) is the executing agency. The project was started in February 2010. The aim is to mount a system for monitoring all production (formal and informal) and marketing throughout the country. This project will install a computer-based Forest Information Management System (FIMS) with the assistance of the Helveta company and the field monitoring services.

Independent Observer Sector. A feasibility study on the independent observation mechanism in DRC was carried out by Global Witness in 2007. The Government solicited the intervention of the permanent Independent Observer for the forestry sector. The work was originally to be funded by the Multi-Donor Trust Fund (MDTF) but ultimately was funded by the EU Governance Support Programme and is scheduled to last 3 years with a budget of EUR 3 million. The NGO Resource Extraction Monitoring (REM) was selected through a call for proposals launched by the World Bank's Multi-Donor Trust Fund (MDTF). The Delegation of the European Commission validated the selection process. The project will cover three forest provinces (Bandundu, Orientale and Équateur). Besides the independent observation phase, there will be a phase on the development of monitoring procedures and a phase on training counterpart teams.

The Proformal Project. This is a project funded by the European Commission. It is being implemented by CIFOR with three national partners: the University of Kisangani, the NGO OCEAN and the CREF network of NGOs. The project has a budget of EUR 3 million and was started in September 2010. The goal is to develop policy options to better regulate the artisanal and informal sector in DRC and also in Cameroon, Indonesia, Gabon and Ecuador.

The Forest Atlas Project. A forest atlas is being finalised and could be useful for some facets of physical monitoring such as the positioning of convertible titles. This atlas is being made through a collaboration agreement between World Resources Institute (WRI) and DIAF/DGF which is to provide data regularly to WRI. The first interactive atlases were produced in Cameroon based on an idea proposed by WRI as part of a CARPE I/USAID project. The aim was to create a tool for managing and, more importantly, monitoring illegal operations. The concept has been expanded and turned into a territorial management tool, financed by the World Bank for the PNFOCO (forest and conservation) project. Funding from this project has paid for the product called SyGIS, the SIGEF geographic database.

Development and sustainable management of forests. A USD 2 million contract to support the DIAF will be concluded with the WWF to prepare and disseminate norms and management manuals. Funding has also been obtained from the AFD for two activities: (i) credit lines for private companies to make land use plans (plans d'aménagement) and (ii) capacity-building in monitoring for the Ministry's DIAF, DGF and provincial administrations.

Community forestry. There are two projects: FORCOM and FORCOL. FORCOM, funded by Belgium, is implemented by FAO and targets the development and implementation of community forestry on four sites in DRC. The FORCOL project is being implemented by Forests Monitor with DFID funding. The two projects are helping the MECNT draft legal and technical instruments on community forestry. They are also helping the Ministry to create a community forestry division in the DGF. These two projects have similar goals and, quite wisely, have started discussions on creating one single national community forestry programme. For many people, community forestry is the obvious solution for the informal sector. But it is difficult to imagine how an underendowed forest administration can provide far-reaching technical assistance to communities that are even more underendowed. The texts on the local community forests are still pending.

Forest governance and transparency. a) The FORAF project is funded by the EC's Tropical Forests budget and implemented by the EC's Joint Research Centre (JRC). FORAF is establishing the Observatory for Central African Forests (OFAC), which has three components: i) evolution of the forest cover, ii) forestry economics, and iii) biodiversity. It functions at three levels: the regional level in the six COMIFAC forest countries (but not

in Chad, Rwanda, Burundi and Sao Tomé), at the national level where information is collected through national groups, and at the level of the managed sites (concessions, processing units and protected areas). OFAC and WRI/FTI share the same database. b) the Forest Transparency Initiative (FTI) is funded by DFID (USD 1 million over a period of 3 years). The goal is to produce an 'interactive directory' of forest operators and thus increase the transparency of the sector. The FTI and FORAF projects share the same database. c) Support to cartography, funded by Japan to support the MECNT. A USD 10 million grant was allocated mainly to purchase equipment to strengthen the Ministry's cartography services, e.g., computers and vehicles.

Debroux et al. (2007), compared with the previous Forest Code the 2002 Code was more innovative thanks to its basic principles: public consultations prior to allocation of forestlands; recognition of communities' customary rights to forestlands and respect for traditional user rights; conservation and sustainable development of ecosystems; community forestry; transparent allocation of forest concessions; participation of all actors in forest management; and alternative uses. So that the Forest Code would be properly implemented, the public authorities made three major reviews: i) economic review of the sector that was to lead to a reform in the wood industry taxation system; ii) legal review (completed in 2011) to convert logging titles into forest concession contracts; and iii) institutional review that led to the reorganisation of the Ministry of Environment in charge of forests. During this same period, close to 40 application decrees were adopted to facilitate the implementation of the principles set out in the forest legislation.

But despite the adoption of the new forest law, the application decrees and a new institutional mechanism, the industry continued operating outside the boundaries of the law. In a feasibility study prior to a Global Witness (2007) mission for independent observation of forest monitoring, the picture of forest governance painted by this British NGO was rather negative: ignorance of provisions of the new forest law; legal confusion; an ineffective forest verification and control system; irregular allocation of logging titles; non-respect for social commitments to the local communities by economic operators; insufficient exploitation capacities; and shortage of qualified personnel and appropriate materials. Counsell (2006) and Greenpeace (2007) had already made similar observations. Nonetheless, some worthwhile efforts have been made, especially the ones that led to the cooperation agreement between the Congolese Ministry of Environment, Nature Conservation and Tourism (MECNT) and the World Resource Institute (WRI) on capacity-building in cartography and geospatial forest monitoring (Mertens and Belanger 2010), the process for zoning the forest domain, the MECNT institutional review programmes, etc. But, the Hoare et al. (2008) study brought out systemic weaknesses in DRC forest governance, emphasising that the foundations and roles, institutional frameworks, policies and laws, verification systems and practices would not facilitate the introduction of sustainable, fair management of forest resources (Hoare et al. 2008). This analysis was confirmed by Greenpeace (2010), that toed the same line by bringing out the less positive facets of DRC forest operations and the social scuffles they generated. As part of the fight against illegal logging in DRC forests and the country's preparation for the VPA-FLEGT process, the Congolese authorities signed a contract with the British NGO Resource Extraction Monitoring (REM) for Independent Observation of forest monitoring in order to promote sustainable management and fight against illegal logging (REM 2011). At this point, observation missions have been organised and the mission reports have been validated and published.

The lack of good governance, as described above, seems to hold back progress in forest management and development. Bayol et al. (2012) purport that, compared with the other COMIFAC countries, DRC is lagging behind in forestry management because of the armed conflicts and the 'politicised' process used in converting old logging titles. Furthermore, several observers assert that the governance system applied to the DRC forest sector is bogged down by failings and shortcomings that jeopardise the sustainability of forest resources, the national economy and the socio-political stability (Klaver 2009; Trefon 2010; Kiyulu 2011). This situation is catastrophic but might be reversed, in time, if the DRC/EU VPA-FLEGT negotiations that have just started are successful

and if structural policy reforms to forestry-related sectors are introduced and effectively implemented.

3.1.4 Current corruption and its impact on forest governance and future prospects for REDD

DRC has long been seen as a country not recommended for investment, with an appalling business environment and recurrent problems of governance (Gambino 2011). The administrative burden, stifling fiscal and parafiscal conditions, corruption, impunity and the tendency for fast profits by the political leaders and government agents have landed this country among the last in the business climate plan. In Doing Business 2010, DRC is almost at the bottom of the list of the world's business reformers since it ranks 182nd in a list of 183 countries and it is 164th out of 178 in the corruption perception index (Transparency International 2010). This position, which reflects the endemic corruption, is reiterated by Trefon (2010) in his analysis of the forest sector. As a reaction, the government set up a steering committee for the improvement of the business environment and investments, chaired by the Minister of Planning and adopted a road map on improving the business environment. The World Bank, the International Monetary Fund and the donors in the Paris Club and the London Club made this a prerequisite to achieving the Completion Point in the HIPC Initiative. Also in 2002, a national strategy for fighting corruption was prepared with the help of the Institute of the World Bank.

But for a variety of reasons, especially lack of uptake and political determination during the transition period (2003–2006), the national strategy has never been implemented. Finally, pressed by development partners, the government that was installed in February 2007, after the transition period, drew up a governance contract for the period from March to December 2007, in which a prominent place was given to preventing and fighting corruption. This contract apparently was not implemented either. An Audit and Good Governance Commission was created in 2008 and attached to the office of the Prime Minister who was charged with auditing state enterprises. The results have not yet been published. In 2009, President Kabila proclaimed 'zero tolerance' for corruption. And under his authority, in December 2009 the government held its first national forum on the fight against corruption, with the support of the Electoral Institute of South Africa (EISA) and the steering committee for the implementation of the DRC-RSA-UNODC anti-corruption memorandum of agreement, whose aim was to launch a process for the formulation of a new strategy to fight corruption. Further, a national public finances reform programme was prepared and is being launched with support from the IMF and the World Bank. This programme is essential for poverty reduction and for the IMF growth agreement, approved by the Board of Directors in 2009. Unfortunately although these measures have been adopted, there is no real improvement to the situation in the field (Matti 2010). The application of these measures in the field is curtailed by political, social and administrative sluggishness, which inhibits socio-political change. As was noted by PWC (2011), the risk of corruption is still too high in DRC.

The control systems (parliamentarians, specialised state institutions such as the Inspection des Finances and the Cour des Comptes) do not function well. This climate of overall poor governance may affect the REDD+ development process unless some specific measures are taken, in particular to manage the funding REDD+ expects because, as demonstrated by Chêne (2010), a large number of public agents, politicians, policemen, rebels and economic operators throughout the country engage in large- and small-scale corruption. The Orientale Province hosts two REDD pilot projects, and near the city of Kisangani some FIP sites serve as major sources of fuelwood. The civil society participants in the programme are afraid that the REDD+ funding slated for the local population will be misappropriated. Since the State institutions have buckled, they suggested setting up citizen verification mechanisms with citizen involvement and the participation of mechanisms for monitoring carbon-generated revenue.

3.1.5 Involvement of the civil society

The Congolese civil society organisations play an important role on the national scene, although their capacity is limited and the surrounding socio-political context is relatively hostile (Oyono and Lelo Nzuzi 2006; Rauch 2011). Yet the civil society organisations are recognised as key elements in the definition and implementation of public policy. In the forestry sector, they participate in many programmes and projects run by the Ministry of Environment, Nature

Conservation and Tourism. They are recognised by the DRC REDD+ R-PP and participate in the definition of the national REDD+ strategy at both the national and the provincial levels. They are represented on the REDD+ National Committee (REDD+ decision-making body) by four delegates (including one from the indigenous people). To participate in the REDD+ process, in June 2009 they created a network called the REDD Climate Working Group (RCWG), which is an open platform of the Congolese civil society devoted to climate issues and REDD+. The leading Congolese NGO networks such as Conseil National des Organisations Non Gouvernementales de Développement (CNONGD) (the biggest and oldest), the Natural Resources Network, and the networks of the indigenous peoples (DGPA, LYNAPICO, REPALEF, etc.) are members. Problems of institutional maturity first affected this network in mid-2010 in relation to the question of autonomy and led to the creation of two competing RCWGs, each demanding legal recognition.

Ultimately, the logic used in REDD activities run by MECNT and the REDD-NC convinced the two RCWGs to join forces to advance the process. They worked together on two major studies: one on the vectors of deforestation and forest degradation, supported by the FAO, and the other on consultations at the provincial and local levels concerning the investment plan for the DRC Forest Investment Programme (FIP), supported by the World Bank. It is noteworthy that the participation of the civil society in the preparation of the DRC FIP investment plan and the inclusion of its recommendations and expectations were decisive in obtaining approval for this plan at the FIP Sub-Committee meeting in Capetown, South Africa (29–30 June 2011). The management of the two REDD pilot projects was entrusted to civil society organisations. MECNT signed a EUR 2 300 000 contract with OCEAN for the Isangi project and a EUR 2 600 000 contract with WCS and OSAPY for the Mambassa project.

3.2 Decentralisation and revenue-sharing

3.2.1 Political and administrative decentralisation

The Constitution of 18 February 2006 opens the way to administrative decentralisation and decentralised management throughout the country by organising the breakdown of responsibilities and resources between the central and provincial authorities. To strengthen the decentralisation option, three organic laws were adopted in October 2008: i) law no. 08/012 of 31 July 2008 on fundamental principles of free administration of provinces; ii) law no. 08/015 of 7 October 2008 laying down rules for the organisation and functioning of the Conference of Provincial Governors; iii) law no. 08/016 of 7 October 2008 on the composition, organisation and functioning of decentralised territorial entities (ETDs) and their relationship with the State and the Province. Further, the law on the principles of free administration of provinces specifies that:

- The following ETD or decentralised territorial entities have legal personality: cities subdivided into communes, communes organised into neighbourhoods (quartiers) and/or groupements incorporés; territories organised into communes, sectors and/or chiefdoms (chefferies), the sector or the chiefdom organised into groupings (groupements), and the groupings organised into villages.
- The following ETD or decentralised territorial entities do not have legal personality: the territory, the neighbourhood, the grouping, the village.
- The provincial institutions are composed of the Provincial Assembly (legislative authority) and the Provincial Government (executive body of the Province).
- The Provincial Government is composed of a Governor (elected by the Provincial Assembly), a Vice President (elected) and provincial ministers (maximum 10).
- The Governor is the head of the executive branch of the province and is availed of a public administration of the province. All provincial public services and the national public services in the province are under the Governor's authority.
- The accounts of the provinces and of the ETD are audited by the Inspection générale des finances (General Inspectorate of Finance) and the Cour des comptes (Court of Audit).
- The distribution key for the taxes of common interest to the provinces and the ETDs is fixed by law, after consultation with the Conference of Provincial Governors.
- The percentage of the national revenue allocated to the provinces has been set at 40% and is retained at the source.

The law on the Conference of Provincial Governors stipulates that the Conference of Governors 'is a body for consultation and harmonisation between the national authority and the provincial governors' with authority to express opinions and make suggestions on future legislation. It is composed of the President of the Republic, the Prime Minister, the Minister of the Interior and the Provincial Governors. The law on the composition, organisation and functioning of the ETDs and their relations with the State and the Provinces stipulates that the province is sub-divided into cities and territories. In the first part, it spells out the attributions and functioning of the ETDs and, in the second part, the relations between the ETDs and the province and the State. The Provincial Governor controls the official acts of the ETDs and delegates authority to the Territorial Administrator. Controls are made *a priori* for eight acts (budget, new taxes, etc.) and *a posteriori* for the rest of the ETD acts. Article 101 of the law provides for an annual meeting of the Governor and the Heads of the ETD executive bodies in order to improve consultations and ensure harmonisation of their acts and actions. The province assists the ETDs by providing technical services (programming, budget, public works, etc.) for the implementation of their decentralised responsibilities. The distribution of resources among the ETDs depends on their production capacity, land area and population.

The 2008 law provides for 11 (present figure) to 26 provinces, but is not yet in force. This may be because of lack of political determination or doubt about the viability of certain future entities. The return of armed rebels at the Rwandan border seems to be one of the arguments put forth by the authorities in charge of the process to justify the partial, prudent implementation of the country's political decentralisation process.

3.2.2 Forest decentralisation

The new national forest policy gives more authority for forest governance to the provincial and local authorities and their administration. The primary function of the provinces is to apply national legislation and participate in regulating forest regimes in keeping with the national laws and regulations or, in some cases, to make up for the lack of national laws and/or regulations. In general, we see in substance that: i) the central powers are responsible for making forest regulations and awarding logging permits for industry; ii) the provinces are responsible for issuing timber exploitation permits for small-scale processing and for non-wood forest products (NWFP) except if the NWFP are protected (in which case the permit is issued by the central authorities); and iii) the ETDs are responsible for issuing permits to remove wood to be used as firewood or charcoal and for supervising forest exploitation and/or local community concessions.

The difficult lesson of sectoral decentralisation: Resistance to reforms. Despite the clarifications provided in the new sectoral legal, regulatory and institutional framework, we see that the central authorities, e.g., the ministry in charge of forests (MECNT) still hesitate to relinquish certain activities that are now in the purview of the provinces, e.g., issuance of small-scale logging permits and receipt of tax revenue from lands granted to the provinces. Further, the new provincial institutions (provincial assemblies

Table 3.1 Breakdown of responsibilities according to the Constitution and the new laws on decentralisation

Exclusive jurisdiction of the Central Government
Preparation of a forest programme of national interest and coordination of programmes of general interest Forest regimes on hunting and fishing and on nature conservation (Art. 202.25) Legislation on natural resources conservation (Art. 202.36-e)
Concurrent jurisdiction
Forest regimes (Art. 203.16) Regulations for forest regimes (Art. 203.19)
Exclusive jurisdiction of the provinces (Art. 204.20)
Preparation of provincial forest programmes and their implementation according to a national plan Application of national legislation on forests (Art. 204.20)

Table 3.2 Indicative breakdown of jurisdiction among the three levels of forest governance according to the Forest Code and its implementation texts

Central government	Provinces	Decentralised entities
• Define the national forestry policy • Allocate industrial forest exploitation titles (concessions and standard logging permits) • Regulate forest permits (allocation of permits) • Establish the procedure for classifying and declassifying forests • Draw up forest classification documents • Define the procedure for allocating forest concessions • Define the procedure for allocating forests to local communities • Determine the organisation and functioning of national and provincial advisory councils • Determine the organisation and functioning of the forest registry office, etc.	• Prepare the provincial forest plan • Issue approval documents for small-scale (artisanal) operators and small-scale (artisanal) permits • Exercise certain activities incumbent upon the minister and delegated by him/her • Carry out public enquires prior to the allocation and classification of forests • Determine the list of forest products that may be removed in application of forest user rights • Issue deforestation permits for areas equal to or less than 10 ha • Deliver forest reconnaissance authorisations • Deliver forest inventory authorisations	• Supervision and technical control of forest exploitation by local communities • Recommend authorisations for small-scale operators to the Provincial Governor • Approve contracts for forest exploitation between local communities and third parties • Assist the provincial administration in carrying out public enquiries prior to approval of concessions

and provincial governments) are wasting no time in claiming certain types of forest-related authority for which they do not always have the advanced legal knowledge needed, e.g., to deal with the new normative context applied to sectoral decentralisation that includes log evacuation tax, regulations on small-scale timber production, etc. The provinces are especially peeved that rights to their forestlands, whether to create protected areas or for industrial use, are controlled by the central authorities but that the resulting conflicts are left up to them, without their being sufficiently prepared to adequately cope with the problems. In these provinces, the former 'deconcentrated' administrations (provincial division chiefs) who want to stay accountable to the central authorities (Secretariat General) find it difficult to work with the new provincial ministries, especially since the terms and conditions of this collaboration have not yet been clearly defined. A law on the deconcentrated administrative entities and an organic law on the provincial public services are in the offing to cover the institutional aspects but have not yet reached the national parliament.

Most important, the lack of a common, shared understanding of the new orientations and requirements for decentralisation are at the basis of the power struggle and some tense relations between the three levels of governance (central, provincial and local). Meetings and discussions among the sectoral administrators need to be encouraged and supported; it is not enough to hold political meetings as part of the Conference of Governors where most discussions are on political issues. Such meetings would harmonise the outlook and the understanding of decentralisation in the forest sector among the three levels of governance and would favour the uptake and smooth implementation of decentralisation and sectoral responsibilities.

Last, to support local governance and enable the provinces to exercise their new prerogatives, efforts are needed to build up information, capacities and logistics. Along these lines, the government, with the assistance of the donors, launched an institutional review programme that led to a new organic framework for the MECNT; former departments and services, including the ones with specific authority over the forests, were either eliminated or redesigned. The main beneficiaries of this programme are the Central Government's forest institutions and the provincial and local

administrations. The aim is to rebuild the institutional capacity at the central level and, more importantly, at the decentralised local level where 11 district offices and 51 sub-district offices will be reconstructed, reequipped and run by upskilled staff. Some 1400 agents will be retrained: 950 will be trained locally and 450 will be sent for training in other regions of the country, elsewhere in the sub-region or abroad. Selected staff members will receive additional training in specialised tasks and management systems. This type of training will be part of the services provided through contracts on delegated management and will be included in these contracts.

3.2.3 Financial decentralisation and revenue-sharing

Financial decentralisation. The Constitution stipulates that the finances of the Central Government and of the provinces shall be separate.[4] And an organic law indicates that the ETD and provincial finances shall also be separate.[5] These provisions lay the basis for the financial autonomy of the provinces and the ETDs. As part of the institutional changes underway, financial decentralisation has led to the transfer of costs to the provinces, costs that previously were borne exclusively by the Central Government, in its own name and behalf. This has been done to ensure grassroots level development through proximity management. Further, the Financial Law adopted by the Parliament in March 2011 was promulgated by the President of the Republic on 19 July 2011 and replaces Financial Law no. 83-003 of 23 February 1983 as amended and completed by Ordinance no. 87-004 of 10 January 1987, which became obsolete through changes to the national political and socio-economic configuration. This new law, in a single document, organises the financial laws, the provincial budgets and the budgets of the ETDs. It reasserts the distinction already made between the finances of the Central Government, the provinces and the ETDs, sets out the terms and conditions for allocating national revenue to each level and reiterates the principle of equal duties, taxes, charges and fees. It also spells out the terms and conditions for consolidating the budget of the Central Government with that of the provinces, and the rules governing the integration of the ETD budgets in those of the provinces to which they are attached. As concerns revenue-sharing, the Constitution stipulates that 40% of national revenue[6] shall be withheld at the source and creates a National Equalisation Fund (*Caisse Nationale de Péréquation*) whose mission is to finance public investment projects and programmes to promote national solidarity and remedy the uneven development of the provinces and the ETDs[7]. But just when the principle of 'withholding at the source' was accepted, it became clear that its strict application would create enormous problems since the only provinces that would be able to finance their development activities were the provinces that received substantial national funding, while the others would even have problems in covering the costs of sectors and fields that were to be funded exclusively by the provinces (NtahwaKuderwa 2010). To compensate for the uneven level of resources among the provinces and their capacity to secure national funding, the Central Government, working with the provinces through the Conference of Governors, established the mechanism for 40% payments of the national revenue based on the following two criteria: i) the capacity to collect revenue generated by the provincial services of the tax authority (DGRAD and DGI), and ii) the amount of revenue mobilised by the DGR/DGI and the DGRAD and DGDA central services in terms of population. This was the basis used by the Central Government to provide the provinces with the monthly resources needed to ensure the smooth functioning of the provincial institutions.

An illustration of transfers to the provinces is given in Table 3.3, but there are still problems with transfers from the provinces to the ETDs. This is holding back development at the grassroots level. At the central level, a mechanism is being studied to find a solution to this problem once and for all. At the high-level workshop on the five projects in the rural areas and the governance of the rural development sector, (Bukavu, 10–15 November 2010), the Minister of the Budget predicted that an estimated 10% of

4 Constitution, op. cit., article 171

5 Organic law no. 08/016 of 07 October 2008 on the composition, organisation and functioning of decentralised territorial entities (ETDs) and their relationship with the State and the Provinces, article 104.

6 Constitution, op. cit. article 175 paragraph 2

7 Idem, article 181

Table 3.3 Transfers from the Central Government to the provinces between 2007 and October 2010 (Congolese francs)

	2007	2008	2009	2010 (October)
PROVINCES	131 882 405 875	354 511 019 270	456 305 308 784	328 163 729 134
SOUTH KIVU	7 619 256 015	14 308 833 595	21 082 611 010	18 539 329 344

Source: The expenditure chain, presented by the Minister of the Budget in November 2010

the State's budget would be earmarked for the provinces. Actually, the figure did not exceed 5% because insufficient resources were mobilised at the local level. He reproached the provinces and local entities that had their own taxes and fees for continually creating new taxes without any legal basis, thus discouraging economic operators at a time when the Central Government was trying to improve the business climate and attract new capital.

Sharing REDD+ revenue. From the legal angle there is no information or visibility on the way in which the revenue from the carbon market, including REDD+, could be shared. The process is gradually being established. A REDD+ Procedures Manual for the Approval of REDD+ Projects was established through Order no. 004 of 15 February 2012 and is being revised by the National Coordination of the REDD+ Process, taking account of the critical remarks from civil society. It can incorporate the social standards, which will give an indication of the minimum social standards that project operators are required to meet in order to qualify their projects for national approval. The question of sharing revenue generated by the REDD+ project will certainly be included.

The Congolese system is rife with initiatives and references, some stemming from legal formalities, others drawn from practices used to access natural resources, that could serve as benchmarks for REDD+ revenue-sharing exercises. As for the norms, the mining and forestry sectors provide guidance on sharing revenue from REDD+. In its technical specifications for forest concessions,[8] the Forest Code includes a special section on the creation of socio-economic infrastructure for the local communities, e.g., the construction and improvement of roads, the renovation and equipping of hospitals and schools, and transport facilities for people and goods (Malele Mbala and Karsenty 2010), while the Mining Code obliges the potential mine operators to negotiate and finance a socio-economic development plan with the local community that covers their mine exploitation areas. This plan, with its budget, must be included in the application file for a mining permit. Further, these two laws institute a fee for the lands allocated, of which 40% is paid to the ETDs that supply the wood or the mining products and 60% to the Public Treasury. They stipulate that the 40% must be used for social welfare investments for the local populations.[9]

The oil sector is not required by law to share revenue, but records show that, nonetheless, a very small number of oil production sites in DRC make regular contributions to local development. In any case, this is the only sector that offers an example of a revenue-sharing mechanism that works, e.g., Muanda in Bas-Congo. The PERENCO oil company is unique in this part of the country since it pays the local communities USD 240 000 a year of which USD 150 000 are automatically allocated to social development projects. This arrangement is not imposed by the law but was set out in an agreement dated 9 August 1969 between DRC and Chevron, which sold out to PERENCO.

These experiences give an idea of how revenue generated by REDD can be shared. They need to

8 Law no. 011/2002 of 29 August 2002, op. cit., articles 88 and 89

9 It is important to note the changes that have been made regarding the collection and reallocation of the two land fees. Requirements set out in the new Constitution (article 175) say that the 40% shall no longer be reallocated (or withheld at the source) as an isolated fee, but shall automatically be included in the 40% of the national revenue that is retroceded by the Public Treasury to the provinces. With the new text on decentralisation (especially the law on the free administration of the provinces), these fees are no longer national revenue; they become the province's own revenue so that the very notion of retrocession or 'withheld at the source' is no longer applicable. But the Central Government has not yet agreed to relinquish these two taxes and is still collecting them as national revenue although this position does not have any formal legal basis.

be adapted to the specific character of REDD+ in the future development of revenue-sharing mechanisms. But at this stage, the question of sharing REDD-generated revenue is at the centre of three elements that are decisive to the whole REDD process: i) private investment in the process; ii) guarantees of the project's carbon performance; and iii) guarantees of the continued reduction of emissions throughout the life of the project. The various stakeholders would invest more in the REDD projects, and the risks of conflicts and disputes would be considerably less, if the government worked out a clear policy on revenue-sharing and developed implementation tools that included legal safeguards that applied to the contributions, expectations and interests of all the stakeholders. Thoughts about this issue are very closely connected to other pending issues, namely:

- the identification of the stakeholders of a REDD+ project/activity;
- the twofold nature of 'carbon' and its legal and economic status in DRC;
- ownership of forest carbon in DRC (a question linked to the preceding one);
- capitalisation of non-financial and non-material contributions to the construction of a REDD+ project/initiative.

3.3 Land governance, carbon rights and indigenous rights

Land governance is at the heart of the discussion on the REDD mechanism (Davis et al. 2009). As Cotula and Mayers (2009) show, lack of clarity in land tenure rights can jeopardise the results targeted by the REDD mechanism. It is important to understand the context in the Democratic Republic of Congo.

3.3.1 General framework for land management in DRC

Law no. 073-021 of 20 July 1973, as amended and completed by the law of 18 July 1980 is still the basic law on land governance in DRC. It establishes the principle that all land belongs to the State (Pougoue and Bachelet 1982). Article 53 states that 'the land is the exclusive, inalienable and imprescriptible property of the State'. The law has organised State lands into public domains and private domains.[10] The public domain is composed of all the remaining public lands that are not allocated to a given use or a public service[11] while the private domain is composed of all the remaining private lands that are not allocated to a given use or a public service.[12] The lands in the public domain are 'non-transferable' (inconcessibles); in other words they cannot become part of a private domain nor be exploited in any way as long as they have not been properly deactivated.[13] Land concessions and other types of exploitation rights may only be granted for lands in the State's private domain. The State, thus, is the sole owner of all land. All other parties shall only have enjoyment rights granted through a contract called a 'land concession'. Land concessions are registered in a deed called the 'registration certificate'. Article 61 of the aforementioned law defines the land concession as 'a contract in which the State recognises the enjoyment right of a community, a natural person or a legal entity under private or public law, under conditions and modalities provided by the law and its application provisions'. Lands that may be conceded from the State's private domain are composed of urban lands; in other words, lands in administrative entities that have been declared 'urban' in laws and regulations in force, and rural lands, that is, all lands located outside the cities.[14] This enjoyment right to lands is considered separate from the rights to immovable properties, which are included in ownership rights.

The rights to land concessions and the ownership of immovable properties are made legal through a registration certificate.[15] The registration certificate is a concession title for land and/or immovable property that is registered according to the law by an authorised civil servant, the Conservateur des Titres Immobiliers. The registration certificate is the only legal proof of the existence of various land concessions organised by law. Rural lands can only be transferred after a 'vacant land' enquiry has been carried out according to the procedure described in article 193 ff of the land tenure law. The purpose of this enquiry is to identify the nature and extent of 'third party' rights, including those of the local communities, over the lands in question. The

10 Law no. 073-021 of 20 July 1973, as amended and completed by the law of 18 July 1980, article 54

11 Idem, article 55, paragraph 1

12 Idem, article 56, paragraph 1

13 Idem, article 55, paragraph 2

14 Idem, article 60, paragraph 1 and 2

15 Idem, articles 59 and 219, paragraph 1

enquiry is conducted after the authorised district commissioner has given a favourable response to the request. It is carried out by the Territorial Administrator or by a specially appointed civil servant or an agent. For rural lands, there are three types of user rights:

1. **Rights to rural lands earmarked for a public use** or public service that are part of the State's public domain. As concerns the public domain, there are no specific provisions to establish procedures and modalities for placing property (land, movable or immovable property) in the State's public domain, but sectoral texts exist that empower certain state authorities to assign parts of urban or rural lands as lands reserved for uses of general interest or public service.
2. **Rights to rural lands under customary law that belong to the local communities**. The collective rights of local communities to rural lands are recognised although these lands have not been previously demarcated or registered according to the requirements of modern law. No deeds for these lands have been issued to the community. However the lands have been demarcated and allocated to the communities on the basis of customary, thus unwritten, law. For these lands, which are part of the State's private domain, the State's property rights are superimposed on the customary land rights of the local communities. The customary lands rights are embodied in the land tenure law as a collective land enjoyment right, in other words, as 'customary occupation'.[16] But the new Constitution introduces the notion of customary ownership (appropriation coutumière),[17] which goes beyond the notion of customary occupancy. This is intended for lands that are occupied by a local community or belong to a local community (appropriation coutumière) because the community has always lived there, and cultivated or exploited the land in some way according to local customs and uses.
3. **Rights to rural land concessions**. This involves lands in the State's private domain located outside the urban administrative entities, lands that are part of a concession allocated by the State to a natural person following a vacant land enquiry.[18] The land concessions that can be allocated under this rule include emphyteusis (long-lease), surface, usufruct and the right to use and habitation. These lands are demarcated and registered. The beneficiaries receive a title to the property in the form of a registration certificate. The lands thus become transferrable.

The sections above explain how occupancy rights and collective ownership are legally recognised. The land tenure law refers to the regimes applied to the customary authorities; in other words the manner in which the rights can be established, transferred and practiced. In DRC customary law, the individual members of a community have usufruct not ownership rights to the community lands (Vermeulen et *al*. 2011). Like in collective customary rights to the land, the individual cannot register individual usufruct rights and cannot obtain a deed to the land. Individuals who belong to a community only have the right to satisfy their personal needs in the broad sense of the term. But they cannot request that the lands be shared and nor can they transfer ownership rights to the lands they cultivate or exploit. The sale, rental, transfer or exchange of customary land ownership is non-existent and inconceivable. However, in certain specific cases, the land usufruct, enjoyment, possession or holding rights may be set out in a sales contract, a rental contract, a loan-for-use contract or an inheritance deed. A non-native who wishes to move into a village has to obtain a residence authorisation from the community chief who, by granting it, agrees that the newcomer may farm the community's collective land. Some observers feel that the local communities' land tenure rights are not secure in DRC (Pougoue and Bachelet 1982; Cotula and Mayers 2009; Karsenty and Assembe-Mvondo 2011).

3.3.2 Framework for forest management in DRC

On 29 August 2002 the President of the Democratic Republic of Congo promulgated a new national forest code. This code, like the land tenure code, sets out the principles of public ownership of forests,[19] which are broken down into i) classified forests that are part of

16 Idem, article 388

17 Constitution of 18 February 2006, article 34

18 Law no. 073, op. cit., article 193 ff.

19 Law no. 011/2002 of 29 August 2002, article 7

the State's public domain, ii) protected forests that are part of the State's private domain, and iii) permanent production forests that are also part of the State's private domain. The public forest domain is composed of forests with ecological and conservation purposes covered by a title called the 'classification act' (this is a an order issued by the ministry in charge of forests). The part of the State's private forest domain recognised as permanent production forests is composed of forest concessions and forests that have been cleared of all liens through a public enquiry and thus can be put on the market as 'forest concessions'. Protected forests are forests that are neither classified nor permanent production forests. The State's property rights and the local communities' customary land rights, recognised in article 22 of the Forest Code, are superimposed on the protected forests. In managing its forest domains, the State has committed to consulting the local communities and peoples and to compensating losses of entitlement caused by the creation of classified forests (protected areas) and permanent production forests (forest concessions).

Further, after recognising the local communities' customary possession rights to the forests, the State confirmed the right of these communities to request and obtain a written deed called the 'forest concession'. To distinguish between the timber production and the conservation forests the State decided that the decree on the terms and conditions for allocating the concessions to the local communities would use the expression 'forest concessions to local communities'. The Forest Code is the first legal document in DRC that provides for the possibility to register and obtain a title for collective customary rights to natural resources, thus reinforcing the legal basis for the local communities' direct access to new international markets created as a result of climate change preoccupations, e.g., the carbon market and other types of paid environmental services. Further, the Code recognises the forest user rights of the local peoples and maintains these rights in the various categories of forests (classified, protected, and permanent production), although in the classified forests categories, these rights are highly restricted.

The conversion of forestlands for other uses. Law no. 011/2002 of 29 August 2002 establishing the Forest Code defines deforestation as 'an operation to clear forestland or cut or remove woody plants in order to ready the land for reassignment'.[20] In article 52 the Code sets out the basic requirement that 'all deforestation must be compensated by reforestation, of equivalent quality and land area to the initial forest cover, by and at the cost of the deforesting party'. In other words, the Code does not prohibit deforestation but ensures that the forestry resources be maintained through compensatory reforestation. Article 53 of the Code stipulates that deforestation will only be permitted to meet the needs of mining, industry, urban development, tourism, agriculture, etc., and shall be subject to a deforestation permit and a tax. Half of the revenue from this tax is allocated to reconstituting the forest reserve via the Fond Forestier National.[21] Ministerial Order no. 025 of 7 August 2008 on regulations for deforestation permits describes the formalities (application, procedures, issuance, obligations for the permit holder); these formalities include the obligation to carry out an environmental impact study. Last, logging operations carried out as part of forest exploitation must not be confused or assimilated with planned deforestation. In the Congolese situation, the purpose of deforestation — which falls under non-forest exploitation of forestland – is to capitalise other natural resources in the forestlands e.g., mining, oil extraction, etc., or simply to optimise the area as such, e.g., removing a forest to expand or create a city, or a touristic or industrial site, etc.

3.3.3 Rights of indigenous peoples[22]

The DRC signed the United Nations Declaration on the Rights of Indigenous People in 2007 but has not yet ratified the 1989 ILO Indigenous and Tribal Peoples Convention no. 169, which is a legally binding international instrument.[23] At the sub-regional level, in 2010 the countries of Central Africa, including DRC, adopted the COMIFAC sub-regional directives on the participation of local and indigenous peoples and NGOs in the

20 Idem, article 1, point 6

21 Idem, article 81 and 122, point 4

22 This section drew heavily on a study that CODELT is still finalising on the institutional cartography of the indigenous associations movement in DRC, led by Félicien Kabamba.

23 Most of the countries that ratified the Convention are European or South American.

sustainable management of forests in Central Africa. Some of the political actions in favour of the rights of the indigenous peoples in the country are described hereunder.

Rights of indigenous peoples in the national context. According to the history of migrations in DRC the first settlers in the Congolese territory were the Pygmies (Bahuchet 1996). The term 'Pygmy', considered pejorative by the indigenous leaders, refers to a multitude of groups of hunter–gatherers who live in and around the forests of Central Africa (Guillaume 1989). Their languages and traditions are not all the same. In fact, differences are growing considerably as lifestyles change because of forced sedentarisation of certain groups, contacts with forest enterprises, and ever more projects for the indigenous populations. Yet the groups have much in common (Bahuchet 1990), e.g., hunting and gathering, which are still an important part of their activities and culture. The Pygmies collectively identify themselves as groups that are different from the neighbouring ethnic groups because of their history, customs, lifestyles, etc. As in the other COMIFAC countries, the indigenous peoples of DRC are considered to be socially inferior or 'second rate citizens' (Guillaume 1989; Oyono 2005). As concerns the recognition of the status of the Indigenous Peoples, DRC has not expressed a clear opinion on the problem as defined at the international and regional levels. DRC is bound by the abovementioned COMIFAC Directives, but, again, has not signed ILO Convention no. 169. Furthermore, nothing is written about this issue in the DRC Constitution or in any of the sectoral laws on natural resources.

For the last few years, however, indigenous and other organisations that support the Pygmies, with backing from international NGOs and UN institutions, are calling for legal recognition of the 'indigenous peoples' status for the DRC hunter–gatherer Pygmies living in the forest areas. This is essential to overcoming the marginalisation of these populations. These organisations call for recognition of the specific rights of the indigenous peoples to their ancestral lands and their forests and also to the natural resources located in the traditional land areas. But according to the DRC Constitution, the Pygmies have the same rights as all the other Congolese. They are not entitled to a special status to accommodate their vulnerability and marginalisation. This idea is not new. It can be traced back in the national history since the colonial administration did not grant a special status to the Pygmy population either; the Pygmies were grouped with the Bantus, the Sudanese and the Nilotics indiscriminately under the term 'indigenes' and governed as such. Nonetheless, and despite the absence of any mention in the Constitution, the Forest Code and other sectoral laws, the situation has been changing recently with a tendency to recognise the 'Pygmies' as an indigenous people; this is especially evident in the present ministerial approach of the MECNT (Mpoyi 2011a). The first official efforts to include this concept in the Congolese legal system can be seen when examining the legality of old forest permits (January 2006 to January 2009). Presidential Decree 06/141 of 10 November 2006 to appoint members of the Interministerial Commission on the Conversion of Forest Titles is the first official text to mention the word 'indigenous' but does not give a definition; article 2 point 11, which gives the names of the Commission members, specifies that 'if the local communities which are located near the lands covered by the title in question include indigenous communities, the Commission will be open to an additional member, a representative of these indigenous communities'.[24] All the Forest Code application texts and other MECNT implementation tools developed after January 2008 include the concept of 'indigenous peoples', which is applied exclusively to the Pygmies. This word is used alongside the word 'local communities'; all the new regulatory texts now read: 'local communities and/or indigenous peoples'. Furthermore, the MECNT has appointed a Focal Point within the ministry to deal with the question of the indigenous peoples and the Minister has appointed an advisor for this issue to his cabinet. The MECNT programmes and projects are giving more attention to the specific characteristics of the Pygmies as indigenous people. On 9 August 2010 and 2011 the Minister of the Environment held an official ceremony to celebrate the International Day of the World's Indigenous Peoples (in the preceding years, this day was only celebrated by civil society organisations concerned with the subject). National and international NGOs working in the environmental sector in DRC, and

24 The word 'indigenous communities' used here refers to the Pygmy communities.

UN agencies such as UNFPA, also participated. Last, a National Strategy for Indigenous Peoples project has been proposed, with the support of the World Bank, and is pending finalisation. These examples show a tendency towards genuine recognition of the Pygmy population as indigenous peoples. This orientation, however, has not yet been supported by clear provisions in the Constitution, the Forest Code or other sectoral legislation. The fact that there is no mention in the main texts reduces the strength of the guarantees offered in the regulatory texts of the Forest Code and the present MECNT approach. However, possibilities for developing the legal guarantees for indigenous peoples' rights will be continued. The national REDD strategy, moreover (now being prepared), devotes a whole chapter to the development of the Indigenous Peoples, which is also the focus of one of the Thematic Coordination Groups (TCGs).

3.3.4 The national carbon regime

Understanding the carbon status is a prerequisite for the REDD project promoter in determining quality and in defining the REDD+ revenue-sharing mechanisms. Up to now, DRC has not provided a legal basis for the status of carbon since this issue is very recent and therefore is not yet embedded in law. The issue is being examined as part of the country's REDD+ readiness process. In August 2011, the REDD+ National Coordination held a workshop on sharing revenue generated by REDD+. The question of the status of carbon was considered because of its connection with revenue-sharing. After hearing two presentations by CODELT experts, the participants agreed that the status of carbon should be worked out, bearing in mind the twofold nature of carbon as a natural resource (or at least a derivative of natural resources) and as the product of work. Using the approach that recognises carbon stocks sequestered in natural reservoirs throughout the country, the carbon stocks/reserves can be assimilated to stocks of other natural resources such as oil, minerals, etc. The natural reservoir may be a forest, a geological formation or a seabed. The fact that this resource is embedded in another structure means that managing it will depend largely on the management of the other structure. The forest carbon stock, thus depends on the management of the surface and underground forest carbon sinks. This is the first approach which would give carbon the status of the natural resource in which it is embedded. Furthermore, carbon is considered to be a genuine product since its existence depends on investment and work by a product-generating project and as such it can be assimilated to any other product resulting from a production activity, be it commercial or not-for-profit. The second approach does not consider carbon as a natural resource but as the result of a very precise activity. This conceptual articulation has legal implications that need to be examined, with due attention to the specific DRC context.

3.4 Conclusion

The institutional environment of the forestry and related sectors in DRC still seems to suffer from many structural weaknesses. This situation has not changed fundamentally with the development of the REDD+ mechanism as a new instrument that could impact the interactions between the forests and climate change (Trefon 2008). Actually, all these institutions reflect the not-very-democratic state of governance in the country, a situation further aggravated by the unending armed conflict. Furthermore, the environmental sector seems to be marginal on the list of priorities established by the political authorities in Kinshasa who are more attracted by the extraction of the country's abundant natural resources. Hence, it is essential to go beyond the REDD+ plans for sectoral policy reforms and put the country back on the track of a normally functioning democratic state.

4 Political economics of deforestation and forest degradation

The political economy of deforestation and forest degradation of DRC feeds on the favourable politico-economic context, sectorial policies incompatible with the goals of sustainable development and the international market's appeal and pressure.

4.1 Politico-economic context of drivers of deforestation and forest degradation and their impact on the REDD+ process

As mentioned in the preceding section, the DRC population is composed mainly of forest people: 90% of the people live in the forests or in neighbouring areas formerly covered with forests that have been cleared to make room for urban development, e.g., major cities like Kinshasa and Kisangani. The traditional living conditions that still exist now depend heavily on the forest. The 2007 NAPA reports that peasant agriculture and non-woody forest products account for 70% of the population's subsistence. The traditional shifting slash-and-burn agriculture requires periodic migration, often to the detriment of the forests, since the fertile forest soils are attractive for climate-dependent agriculture. The biophysical configuration and the logistical development of the country have characteristics that prevent a large part of the national forestlands from being exploited, e.g., 77% of the country is located at an altitude of over 1000 meters, with peaks of 4500–5000 m in the Virunga volcano site and the Ruwenzori mountains in the east of the country. The country has a total of 112 to 154 million ha of forestland (figures depend on the source), but its coastline is a mere 42 km, which is quite short for building enough ports to evacuate its forest production. Nonetheless — and this is common to the Congo Basin region — a major part of the national road system has been designed to facilitate the transport of forest products. For logistical reasons, rail, road and water transport have been combined to ensure the link between the various holding sites for the forest products and other products from extractive industries awaiting transport to the three main exit points: the Matadi River port for transport to the Boma seaport and the two outer ports at Mombassa (Kenya) and Dar-es-Salaam (Tanzania) to the east of DRC. A multimodal map with a juxtaposition of navigable waterways, roads and national railroads shows the configuration of the country's logistical layout, which is designed mainly to evacuate products, including forest products, from the extractive industries. The DRC economy is dominated by the informal sector and criminal activities (KuyuMwissa 1996; Weiss 2000). The formal private sector is very weak: out of 1 580 000 formal jobs, 400 000 are for civil servants (AfDB 2011a). The private sector has created 180 000 formal jobs of which 10% are in the forest sector. Similarly, Tollens (2010) shows that the DRC economy, which is oriented mainly towards extractive activities, is less productive than that of Cameroon, a country in the same geopolitical space.

For the wood sector, in 2009, exports from industrial operations only amounted to 226 000 m^3 of logs and 62 000 m^3 of sawn timber, while exports from the informal sector were estimated to be over 2 million m^3, i.e., close to 10 times the volume of wood exported through formal channels (Blaser et al. 2011; Lescuyer *et al.* 2012).

The institutions are subject to very few regulations. The institutional texts on the management and regulation of development are prioritised below:

- Growth and Poverty Reduction Strategy expressed in the SDGPR
- Sectorial policies expressed in sectoral policy documents
- Multisectoral framework law
- Specific laws (sectoral)
- Implementation texts (government acts, namely, orders from the President of the Republic, decrees by the Prime Minister, interministerial orders, ministerial orders,

orders by the provincial governors, orders from the heads of sectors or chiefdoms (chefferie).

Despite the existence of a second version of the SDGPR that includes environmental issues and the fight against climate change as pillars of the development policy, the cross-cutting sectors related to REDD+ (environment, energy, rural development, hydrocarbons, mines, territorial planning, infrastructure, land tenure issues, etc.) are not yet covered in the national policy documents. Up to now, agriculture is the only field that has its own sectoral policy document. Furthermore, there is very little investment in processing in the part of the economic sector called the extractive industries, which includes, *inter alia*, forestry, mining, and hydrocarbons. Since the very small number of jobs in this formal sector are paid at a rate far below the cost-of-living level, its employees accept parallel activities to round out their income through, e.g., jobs in forestry, often in the informal sector. Last, the main source of household energy is still the woody forest products. The country has an enormous hydroelectricity potential, but the electricity produced is poor in quality and is not well distributed. The households therefore depend on wood and derived products, especially charcoal, for cooking (Trefon et al. 2010; Schure et al. 2012). The demand for wood products is much higher in densely populated areas. In this political and institutional situation with its weak regulations, the government is barely effective and has difficulty in wielding authority, in other words, applying the laws (Weiss 1995; Buscher and Bongenia 2010). All this in an economy where i) the formal employment rate (Weiss 2000; Mazalto 2009), and the salaries are very low, ii) the informal sector has the upper hand, and iii) a parallel economy is feeding on criminal and paramilitary activities. Because of this situation, most of the food for local consumption comes from traditional subsistence agriculture and non-wood forest products. It is easy to understand the consequences of these dynamics on the forests and the biodiversity.

4.2 A forest policy with a strong economic goal

The relative peace that prevailed before the presidential–parliamentary elections in November 2011 in certain parts of the country seems to have favoured the resumption of industrial forestry operations where the annual production is about 300 000 m^3, on a total area of forest concessions of 12 184 130 ha (Mertens and Belanger 2010; Bayol et al. 2012). But the industrial forestry sector is rivalled by the informal sector, which supplies the strong domestic demand, and the demand of certain neighbouring countries (Lescuyer et al. 2012; Benneker 2012). In this situation, the uncontrolled production of the artisanal forest operations seems to be a real threat for the future (Lawson and MacFaul 2010) since its output level is estimated at over 2.4 million m^3 of wood per year, in other words, more than six times the volume of the formal sector (Lescuyer et al. 2012). Besides these two sources, there is another type of forest exploitation in DRC, which is directly connected to the economic activities of internal and external armed gangs who have been supporting wars and serious criminality since the middle of the 1990s (Weiss 2000; Debroux et al. 2007; Mazalto 2009). The DRC forest economy is composed of all these types of production that are ominous sources of deforestation and forest degradation.

The renewed dynamics of the forest economy have been supported by Law no. 11/2002 of 29 August 2002 whose provisions create the political framework for forest management. With this in mind, the public authorities are trying to reconcile goals that are usually conflictual and contradictory among the ecological, economic and social vocations of forest resources by introducing a sustainable management system. This mindset can be seen in the composition and the demarcation of the forest domains. The forests are classified into three categories: the classified forests, the protected forests, and the permanent production forests. The need for forest conservation has led the country to set aside 15% of its forestlands as protected forest reserves. Other COMIFAC countries have followed the Cameroonian example for protected lands and adopted much higher percentages (30%). But the real political effort made in DRC to protect the ancestral forests through the creation of protected zones is worthy of recognition. The economic vocation of the forests is being carried out through the institutionalisation of permanent production forests where concessionary rights are granted through calls for tender, and special fiscal measures are applied.

The new economic orientation can be felt in the observations made by the international funders such as the World Bank just after the civil war. The funders who first called for and financed the reform acknowledged the fact that the DRC forests had suffered from neopatrimonial management during the Mobutu regime (Debroux et al. 2007; Sakata 2007; Trefon 2008). This situation automatically led to abusive exploitation of forest resources, financial losses for both the local communities and the State, and biodiversity losses. Furthermore, the war and the damaged communications infrastructure seriously reduced the productive capacity of the industrial sector. The adoption of the new 2002 Forest Code seemed to provide a suitable solution for tackling the problem of loss of forest biodiversity, stoking the development-oriented economy, growing the tax revenue needed for the State budget, and meeting the claims of the local communities. For Karsenty (2005, 2006) the forest policies reform model in the countries of the Congo basin was a reconfiguration of the forest revenue-sharing modalities encouraged by the Bretton Woods institutions and inspired by the pioneer model tested in Cameroon. This new forest resources management model, which is focused far more on the distribution of forest revenue than on the protection of biodiversity, has been severely criticised by observers (Greenpeace 2007, 2010b; Nguiffo 2008) who feel that the reform contributes little to sustainable forest management and opens the way to resource pillage and illegal exploitation while making only a relatively small contribution to economic development and tax revenue. This counterproductive dynamic is detrimental to the State, the local communities and the long-term future of the forest resources and amounts to an economic orientation imprinted on the forest policy that could accelerate the continuous loss of forest cover and forest biodiversity.

4.3 Deforestation and sectoral policies

Sectoral agriculture, energy and mining policies may encourage deforestation and forest degradation.

4.3.1 Agricultural policy

In DRC subsistence farming is the main economic activity in most of the rural areas. In the Orientation Document on the impact of subsistence farming on the forests, published by the Ministry of Agriculture and Rural Development (MADR), the Ministry of the Environment, Nature Conservation and Tourism (MECNT), and the REDD National Coordination (CN-REDD) in 2010, the Congolese agricultural sector is shown to be going steadily downhill; between 1990 and 2001, for instance, the agricultural GDP per inhabitant declined by 40%, although this activity still now accounts for 40% of the GDP and employs 70% of the Congolese population. Peasant farming accounts for 90% of the national agricultural output but is mainly for home consumption with an average 1.5 ha of land per inhabitant (Tollens 2010), although this average is not at all even throughout the country. As Tollens (2010) emphasises, agriculture in the Congo has steadily declined since the colonial period: industrial agriculture had an annual export figure in 1995 of USD 334 million for coffee, palm oil, rubber, and cocoa exports while in 2003 the figure plunged to USD 4.3 million. Peasant farming (Tollens 2010) was also characterised by a steady drop in yields: for cassava, for instance, the per-hectare yield dropped from 20 million tonnes in 1960 to 8 million tonnes in 2005. The same applies to other widely consumed items: the reference yields for maize, rice and millet in the region are, respectively, 5200 kg/ha, 6000 kg/ha and 2300 kg/ha, while the Congolese farmer only produces, respectively, 1000, 800 and 600 kg/ha. The reason for these low yields can be traced to lack of support and supervision (Chausse et al. 2012). The small farmers use indigenous varieties and poor soil fertility management techniques. In this situation marked by low productivity, the main farming system is shifting slash-and-burn cultivation, which requires constant migration and the conversion of forestlands into farm fields and is responsible for a steady decline in the forest canopy.

The Congolese Government recently expressed its determination to revive agricultural production by adopting Law no. 11/022 of 24 December 2011 on the basic principles of agriculture. This law expresses the political outlook of the Congolese public authorities on the agricultural sector, and establishes a reference framework that is binding for the whole agricultural sector. The following objectives of the new agricultural policy are clear: facilitate the optimisation of potentials;

stimulate agricultural production through the introduction of a special customs and tax regime; revive agricultural exports to generate significant resources and new investments; stimulate the domestic agricultural processing industry; and attract new renewable energy technology. The adoption of this law seems opportune since DRC is becoming a favoured country for large investments in agriculture that requires vast stretches of land (Karsenty 2010; Putzel et al. 2011; Putzel and Kabuyaya 2011; Chausse et al. 2012). Furthermore, the Congolese authorities have just entered a partnership to increase investments in agriculture, as can be seen in Table 4.1.

These efforts to revive and promote agricultural investments create serious threats to the DRC forest cover and biodiversity in the medium-term future despite some legal precautions set out in the agricultural and environmental legislation that was recently adopted and provides for the protection of the forest ecosystems through tools such as environmental impact studies that must be made prior to the installation of large plantations.

4.3.2 Energy policy

Although the energy policy document was not adopted by the authorised bodies, it is based on the major strategic principles and lines of actions that will govern the national energy sector in the future, namely: i) being open to private capital and strongly favouring market liberalisation; ii) advancing institutional reform in the energy sector through the gradual withdrawal of the public sector; iii) overhauling the public enterprise in charge of electricity; iv) creating a national electrification agency (AGENA); and v) creating a national electrification fund (FONEL). There is no sense in examining the question of deforestation in DRC without including the question of energy; the country's energy demand, estimated at 8 million TEP in 2007, was covered almost completely from the following sources (Kasemuana 2009): i) wood 85%, ii) electricity 6%, iii) petroleum products 8%, and iv) charcoal 0.1%. These figures indicate the degree of dependence on the forest. Yet it is difficult to draw a straight line between the wood consumed as energy and the forest losses. Certain markets are supplied from zones that are not called forestlands, especially the wooded savannah and the strips of residual forests found around Kinshasa, Mbujimayi, etc. Although not listed as forestlands, wood removed from these areas contributes to reducing the terrestrial stocks of sequestered carbon.

Hydroelectricity, considered to be one of the cleanest forms of energy, could be the trump card since the country has an estimated +100 000 MW, of which 44 000 MW are located at the Inga facility, in Bas-Congo (Kasemuana 2009). The annual exploitable potential is estimated at 774 GWh, or 66% of Central Africa's potential, 35% of the African continent's potential and 8% of the world's potential. Yet out of a minimum exploitable power capacity of 88 400 MW, only 6000 GWh are produced each year, i.e., 0.77% of the annual exploitable potential (Kasemuana 2009). The electricity sector does not perform well. The main goal of the energy policy is to

Table 4.1 Funding for aid programmes that include agriculture

Project name	Funder	Total cost of agricultural and rural component of the programme (million USD)	Intervention zones
PMURR	World Bank	33.4	
PARSAR	AfDB	41.47	Bandundu, Bas-Congo
PRESAR	ADF	59.05	Katanga, Kasaï-West and East
PRODAP	ADF, GEF, FND, IUCN	46.20	Kalemie (Katanga)
PRAPE	IFAD, FBS	22.6	Équateur
PRAPO	IFAD, FBS	26.30	Orientale Province
PARRSA	World Bank	120	Équateur
PIRAM	IFAD, OPEP	45	Maniema

Source: Ministry of Agriculture (2009)

supply the whole country with hydroelectricity. The programme ending in 2030 provides for the development of 55 hydroelectric sites at a cost of USD 650 million and the promotion of other renewable sources of energy, in particular: i) solar energy since the country is located in a very high level sun belt where values are between 3250 and 6000 Watt peak/m^2/s; ii) methane gas, with Lake Kivu offering reserves of 50 billion m^3, which DRC is not exploiting; and iii) biofuels for which the country has enormous potential considering the huge amount of land available to create plantations to produce biofuels. Hydroelectricity provides a substantial part of the answer to the problem of deforestation in DRC and could replace much of the 85% of the country's energy requirements now being satisfied by fuelwood, despite the policies and programmes mentioned above. Admittedly, there is no improvement programme for the power plant that factors in the foreseeable variations in the water flow rates. This implies that the country's hydroelectric potential will decrease and thus make this resource less and less available. Other energy programmes with a mitigation potential focus on the conversion of biomass into energy and on energy efficiency for both production and consumption (by reducing the wastage rate through the distribution of improved and optimised cookstoves/foyers améliorés/optimisés). Hence concentrating efforts in the energy sector on deforestation in DRC seems to have a mitigation potential that is real, sustainable, economically viable, socially and culturally acceptable and conceivable in the short-term future. More in-depth research on these issues is needed and should consider the possibility of adapting the REDD national strategy and changing the status of the energy sector (mainly hydroelectricity and other renewable sources of energy) from a mere cross-cutting sector into a sector with a greater mitigation potential. This type of refocusing could be used to redirect the available resources to the sector where they could truly contribute to producing results for REDD+.

4.3.3 Mining policy

The highly contrasted mining sector in DRC, full of hopes and worries, straddles many other sectors that range from copper mining in Katanga to trafficking in the east of the country via the diamond mines in Mbuji-Mayi. In such a vast country, richly endowed in underground resources, the contrast between the potential benefits and the daily lives of the Congolese illustrates the very feeble impact of the current mining policy. After the fall of the Mobutu regime and the civil war period, the transition government took important steps to stimulate the development of the mining sector, in particular by restructuring the public enterprises and opening the sector to private investment. The most noteworthy action was, unquestionably, the adoption of a new Mining Code, encouraged by the Bretton Woods institutions (Mazalto 2008). In the preamble, the Congolese legislator explains the reasons for the changes in the old law of 2 April 1981. The new law provides a definition of the role of the State regulator in supporting private investment in mining (Mazalto 2009). The private operators benefit from financial incentives and a commitment from the State and the donors that guarantees their investments. The fiscal system also seems advantageous since the companies are exempt from taxes and customs during their start-up phase. Furthermore, the principle of freedom to prospect for mines is applied throughout the country, subject only to a declaration filed with CAMI, Mining Registry (cadastre minier). The mining law organises access to both large-scale and small-scale research and mining by making a distinction between the following mining titles: i) research permit (PR); ii) exploitation permit (PE); iii) small-scale mining exploitation permit (PEPM); and iv) tailing exploitation permit (PER). The Mining Registry (CAMI) divides the country into mining quadrangles i.e., north–south and east–west squares according to a cadastral grid. CAMI regularly updates a mining map for the whole territory. The liberalisation of the mining sector attracted thousands of formal and informal entrepreneurs. In 2008, CAMI registered 5729 permits of which 463 were exploitation permits (Mertens and Bellanger 2010). The surface area included in mining permits and 'squares' is estimated at over 98 million ha, i.e., 42% of the national territory (Mertens and Bellanger 2010). This inevitably generates conflict over the coexistence of mining permits, forest titles and protected areas. One of the most telling examples is the hydrocarbon exploration authorisation for lands in the Virunga National Park, the oldest national park in Africa and home to an exceptionally rich biodiversity. To cope with the many problems of mining in DRC, (Mazalto 2008, 2009) the Congolese authorities

Figure 4.1. Landscape deforested by mining operations
(Photo: de Floribert Nyamwoga)

have decided to join the Extractive Industries Transparency Initiative (EITI) whose goal is to increase the transparency of financial transactions between government and mining companies. Despite this step towards good governance, there are still many questions, especially concerning the Resources for Infrastructure agreement concluded with a consortium of Chinese companies (Global Witness 2011). The effects of the national reforms have not yet been felt, and their pace and implementation seem uncertain.

The mining sector is also characterised by an explosion of artisanal operations, which constitute an informal sector that is developing far faster than the industrial sector, partly because it is trekking the path of big crime (Jackson 2001; International Alert 2009; Jacquemot 2009). In the latter, like in the artisanal sector, environmental legislation is non-existent or ignored (Heydenrich 2008), which is detrimental to both the formal economy and to the plant cover. The eastern border of DRC seems to be the main breeding ground for the trafficking of mining resources. Several efforts have been made to put an end to this outflow of coltan and other minerals that brings in revenue used to finance conflicts with unknown ramifications throughout the Great Lakes region. This illegal export trade is worth somewhere between USD 300 million and 1.4 billion per year and involves more than 10 million people in DRC and the neighbouring countries (Laurent 2012). As a result of the state of lawlessness, and of the new law that liberalises mining operations, people in certain provinces are entering the informal sector which has made artisanal mining soar to heights that modify many landscapes throughout the country, especially in the Kasaï Provinces where diamond hunters, in their search for new deposits, have penetrated the forests of the former Kivu region in search of gold and, more recently, coltan. They have also entered the Orientale Province in search of gold and diamonds, and Katanga for several mineral resources. The lack of State control and the implication of various political, civilian and military actors are among the reasons for the continuation of the civil war and the insecurity in certain parts of the country.

Changes in land allocations to accommodate mining pass through three stages: forests, exploited mine deposits, and farmlands on former sites with badly degraded, forsaken lands. It is not unusual to find lunar landscapes composed of craters, gullies and ditches that have been abandoned since the earlier operators were under no obligation to restore the sites before leaving them. In Kasaï, for instance, there are more than 130 erosion heads in the city of Mbuji-Mayi, and at least as many, if not more in each village with old artisanal diamond mining sites. In Boya, Kasaï Oriental, a city where artisanal diamond mining is still in progress, homes are next to old veins, which makes the landscape resemble a former artisanal mining site. Recent photos of the Mbuji-Mayi–Mabaya road also illustrate this landscape, which clearly reflects previous artisanal mining sites. Former forestlands that have been abandoned 'as is' will require a substantial reforestation or agroforestry programme to regenerate them.

4.4 Pressure from international demand

Growth in China and other emerging countries has boosted prices of raw materials during the last decade and increased the world demand. It was essential for the African countries to benefit from this boom (AfDB 2011a). The multinational companies are investing heavily in research and are prospecting extractive industries for raw materials while the importing countries are seeking to obtain maximum guarantees for their supply lines in a competitive market. As reservoirs of raw materials, Africa in general, and especially DRC, should play a leading role in the worldwide economy. As a good student of the international financial institutions, the African continent is very open to free trade, a feature that characterises the international economic order. African states, because of weakness or simply complicity, shamelessly allow the multinationals to exploit and violate the rights of local employees. Uncontrolled competition morphs into war, as can well be seen in DRC with its raw materials and its armed rebels. The world cobalt market also illustrates the position of DRC as a reservoir of raw materials. Some car batteries contain cobalt, a by-product of the copper mines that is also found in electronic equipment and cell phones. The world demand has exploded with the galloping increase in the production of these products. The market took root in DRC; in 2010 the country produced 51% of the world's output and contained 46% of the world's reserves (Le Loiet 2012).

But the tense political climate after the presidential elections, which led to the re-election of Joseph Kabila may endanger the large investment projects. The 2007 contract between DRC and the Chinese consortium is evidence of the appeal of Congolese lands (Global Witness 2011). The size and originality of this contract makes it different from Western-style contracts. It is based on a bartering agreement: on the one hand, Gécamines, a public company is to provide the Chinese consortium with 30-year mining concessions that authorise the production of 10 million tonnes of copper, 200 000 tonnes of cobalt and 372 tonnes of gold and, on the other, two Chinese companies (China Railway Group and Sinohydro Corporation) commit to developing the mining sector and to building 36 000 km of paved roads, 31 hospitals, 4 universities, and 50 000 low-rent housing units. German et al. (2010) point out that henceforth the forest sector was integrated into the global economy. The synergy between the current food crisis, the increase in fuel prices, and the financial crisis is putting pressure on the forestlands in countries in the Congo Basin (Tollens 2010). The main market for Congo's timber is still the European Union (Bayol et al. 2012). The wood from the western part of Congo is ferried by river (Congo River) to the Boma port, while the wood from the eastern part is transported by road through the neighbouring countries to ports in Kenya (Mombassa) or Tanzania (Dar-es-Salaam). The report on the international demand for timber (EEC/FAO 2009) mentions a drop in the world demand for wood products because of the financial crisis. The EEC is still the main market for legally exploited timber from DRC. Since the financial crisis occurred just when the legal review of the former forest titles was underway, the sector was doubly affected, first by the global crisis and second by the moratorium proclaimed by the Congolese Government on the allocation of new production titles for the timber industry. Industrial exploitation supplies part of the wood exported from DRC, but the exploitation level is low considering the national potential: out of the total national forest area, the forest titles, which were validated after the abovementioned 2-year legal review process, only covered about 12 million ha, i.e., less than 10% of the national forestlands.

Alongside the regular forest exploitation, especially in the east of the country, there still exists a parallel, informal sector that feeds the markets in Rwanda, Burundi, Uganda and Kenya mainly via the ocean ports of Dar-es-Salaam and Mombassa. The East African roads, which are in very good condition and are accessible from the DRC border cities in the east (Goma, Bukavu, Uvira, Beni, Bunia, Kasumbalesa, etc.), connect these cities to the ports at Mombassa in Kenya and Dar-es-Salaam in Tanzania. This unregulated exploitation is facilitated by the lack of forestry officers and the war that has been raging in the eastern part of the country since 1994; both factors contribute to weakening the State's authority in the eastern part of the country. The forestry sector, like all other sectors of national life, suffers from a lack of reliable statistics. This said, forest exploitation is very wasteful, and the large volumes of waste produced per hectare are not recycled. Last, DRC is engaged in the FLEGT process to improve the governance of its forest sector and may sign a Voluntary Partnership Agreement with the European Union in the next few months.

4.5 Conclusion

A look at the political economy of deforestation and forest degradation highlights the conflict between the objectives of the REDD+ mechanism and the sectoral policies that encourage investment and economic development, at the cost of biodiversity conservation and sustainable forest management, and emphasises a lack of intersectoral cohesion and coordination. This situation does not augur well for the construction and implementation of REDD+.

The cross-cutting nature of the forestry problem complicates the problem of fighting deforestation and forest degradation. In the REDD+ process, technically under the Ministry of Environment, efforts have been made to accommodate this situation by structuring REDD+ governance to include an interministerial committee, an interministerial consultation body, and thematic coordination groups that can form a technical framework that allows each sectoral ministry to make its contributions through the most appropriate channels. Collaboration with the civil society and the private sector has made this process an unprecedented template for participation in the functioning of Congolese State structures. Although the participation effort is praiseworthy, the involvement of the other sectoral ministries in the processes needs to be strengthened.

5 REDD political environment: Actors, events and political processes

REDD+ seems to have created an unprecedented problem in DRC, the problem of reconciling the interests and opinions of the various Congolese actors by capitalising their capacities to find their right position in the interactions specific to the complicated REDD+ institutional mechanisms in order to successfully meet the many challenges.

5.1 REDD+ actors, events and political processes

5.1.1 Typology of the actors

Since January 2009 when it was launched in DRC, REDD+ has attracted four groups of actors with different levels of influence. REDD+ is a multi-actor process under the watchful eye of the international community that involves internal and external expertise in many fields. It has a rather unique institutional structure for the working relations among the various partners. The national REDD+ scene is composed of the following actors:

- the Congolese Government that has entrusted the coordination of all REDD+ activities to the REDD+ National Coordination, an association that operates according to a multifaceted model
- the civil society structured around the REDD+ climate working group
- the private sector (Fédération des industriels du bois, Fédération des entreprises du Congo, etc.)
- the development partners, including the technical partners and the donors.

The Congolese Government. A system that allows close to 20 ministries, led by the MECNT, to participate in the REDD+ mechanism has been created.[25] The following ministries are involved: i) Ministry of the Environment, Nature Conservation and Tourism, ii) Ministry of Planning, iii) Ministry of Agriculture, Fishery and Livestock, iv) Ministry of Finance, v) Ministry of Budget, vi) Ministry of Land Affairs, vii) Ministry of Transport and Communications, viii) Ministry of Social Affairs, ix) Ministry of Mines, x) Ministry of the Interior, xi) Ministry of Commerce and Small- and Medium-Sized Enterprises, xii) Ministry of Industry, xiii) Ministry of Urbanism and Habitat, xiv) Ministry of the Economy, xv) Ministry of Decentralisation and Territorial Organisation, xvi) Ministry of Public Service, xvii) Ministry for Scientific Research, xviii) Ministry of Gender, Family and Children, xix) Ministry for Rural Development.

As mentioned in the preceding section, the MECNT seems anxious to work on the various REDD+ activities but the other ministries are marking time and are not living up to the expectations of the process underway. The representatives of the other ministries, thus, appear to be having difficulty in connecting their objectives to those of REDD+, which brings up the question of the local-level capacity to take over REDD+. This situation is slowing down the preparation of the national strategy. Some ministries are represented on the interministerial committee; all the ones listed above have representatives on the thematic coordination groups. Another element is the inadequate participation of the Presidency of the Republic, the National Assembly, and the provincial governments and parliaments. Because of this situation, the political determination underpinning the REDD+ process seems relatively weak or at least questionable. The Central Government is supposed to play a key role in defining the national REDD+ strategy. To facilitate the inclusion of each ministry's priorities in the preparation of the national REDD strategy, 30 thematic working groups were set up, all led by ministry representatives.

25 The biggest innovation is the establishment of 30 thematic coordination groups responsible for making constructive proposals that can contribute to the construction of the national REDD strategy. These groups are composed of actors from all the components and are supervised by ministry representatives who ensure that their proposals are in line with the government's directives for each ministry concerned.

In the national context marked by i) disagreement about the legitimacy of President Kabila's political regime following the elections of November 2011, and ii) escalating violence culminating in armed conflict with the rebels at the Rwandan border, there is reason to fear that the Congolese authorities will not be paying much attention to the REDD+ mechanism and that this mechanism will be relegated to a back seat or even temporarily forgotten. It is logical for the political agenda to prioritise security issues and the perpetuation of a political position that has been severely shaken and shattered. Hence, the present bad government could make it easier for the elite, including the political elite, to confiscate future REDD+ funding.

Civil society. The first joint UN-REDD-FCPF mission (January 2009) paved the way to a participatory REDD approach involving over 40 members of the civil society. The involvement of the civil society in the whole process became a key element for the future of REDD activities; it was facilitated by the fact that a few civil society organisations (CSOs) had implemented REDD+ projects that same year, e.g., CODELT, an NGO which, with the assistance of WRI, had developed the Making REDD Work in the Congo Basin project for the indigenous peoples and the parliamentarians who were members of Réseau des Parlementaires pour la Gestion Durable des Ecosystèmes Forestiers de l'Afrique Centrale (REPAR). Another example was the Natural Resources Network (RRN), which included a REDD+ programme and received funding from the Norwegian Rainforest Foundation (RFN). To coordinate support for the REDD+ process and make the participation of the civil society more effective, the leading environmental CSOs created the REDD Climate Working Group (RCWG). The RCWG will be the official representative of the national civil society throughout the process. It will be tasked: i) to play a role as a representative of a theme-focused part of the civil society; ii) to structure support for the civil society in the REDD+ process; iii) to participate in all REDD+ operations in DRC; iv) to assist DRC with all negotiations on climate change; and v) to monitor respect of commitments by all parties participating in REDD+ readiness and implementation.

Despite the recognised qualities of the civil society in DRC (Hoefsloot and Eba'a Atyi 2011), there is some doubt about the members' capacity to adapt to REDD. The complexity of the REDD+ mechanism will require the national NGOs, which are accustomed to activities connected to traditional advocacy and related activities, to direct their efforts to learning the process, training, support and implementation. To make its actions in support of REDD+ effective, the civil society will have to make certain positive changes, e.g., avoid succumbing to the opportunistic 'revenue-capturing' actions of REDD+.

Financial partners. There are two important factors. First, in DRC, UN-REDD, through its specialised institutions, namely, UNDP, FAO and UNEP, works together with the World Bank via FCPF to support the REDD+ process. Second, the Kingdom of Norway is the main funder for the REDD process. Much of the funding is administered by UNDP. Part transits through CBFF, which mainly finances REDD+ pilot projects in DRC. And some of the funds to support civil society initiatives are funnelled through the Rainforest Foundation Norway.

Main role of UN-REDD/World Bank. After launching the process in January 2009, the need for appropriate management structures became evident. The World Bank, through the FCPF, agreed to grant an initial subsidy of USD 200 000 (phase 1). The UN-REDD programme, during that same period of time, granted subsidies in two instalments. The first subsidy, USD 1.88 million, was for the 2010–2011 period. In March 2010 the international community appreciated the progress being made in the Congolese REDD+ process and approved funding for the readiness preparation phase (phase 2) through its programmes (USD 5.5 million for phase 2) and through FCPF (USD 3.4 million) in compliance with the forecast budget for the preparation proposal (R-PP). The UN-REDD programme is funded by the Multi-Donor Trust Fund (MDTF), which is financed by the governments of Norway, Denmark and Spain. This programme is implemented by three UN bodies, namely, FAO, UNDP and UNEP, and provides the main source of support for the REDD+ process in DRC. The combined global budget for these UN-REDD programmes is USD 7 383 200 which has been supplied by the aforementioned countries. Mention should also be made of the Government of Japan, GIZ, AFD and ITTO.

Technical partners. This heading includes: i) international non-governmental organisations (INGOs) such as WWF, which has a REDD+

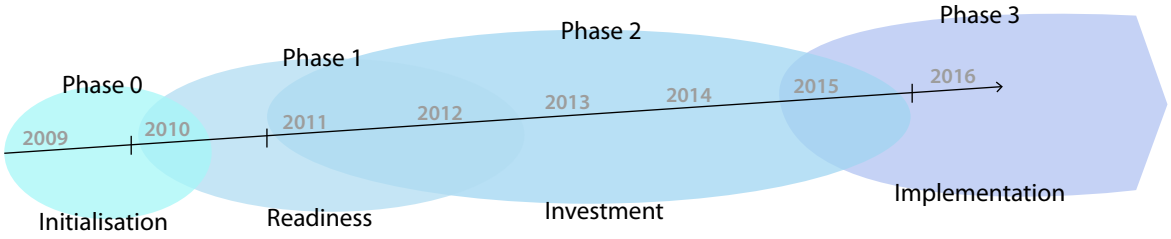


Figure 5.1. Forecast calendar for the REDD process in Democratic Republic of Congo
Source: National REDD Coordination

programme that is implemented together with the national civil society. Other partners include organisations such as the WCS, Conservation International (CI), OFAC-FORAF, OSFAC, USAID-CARPE, AWF, WRI, ONFI, CIRAD that work on REDD+ activities, and ii) university institutions such as the University of Kinshasa, the University of Kisangani, the University of Lubumbashi, and the National Teachers Training University as well as INERA, IFA Yangambi, and ERAIFT. The World Agroforestry Centre (ICRAF) has been working in DRC since 2003 on the use of the participatory approach in the domestication of trees, and participates indirectly in the REDD+ process by working on the contribution of agroforestry to biodiversity conservation and to the mitigation and sequestration of CO_2.

Private sector. Up to now, the main private sector interest in REDD+ has been from two industrial corporations in the wood sector: the Fédération des Industriels du Bois (FIB) and the Fédération des Entreprises du Congo (FEC). Relations between the civil society and the wood industry are often turbulent with the former accusing the latter of being responsible for deforestation, illegal practices and violations of the local communities' rights. These accusations and denunciations do not facilitate the dialogue that is needed between the national civil society and the economic operators to stimulate REDD actions.

5.1.2 Main events

Developments in REDD+ in DRC are marked by a succession of events that follow a road map adopted by the R-PP stakeholders.[26] This roadmap explains the main steps in REDD+: i) initialisation phase; ii) readiness preparation phase; iii) investment phase; and iv) implementation phase. These phases focus on the following four components:

- coordination, overall supervision, information, education, communication, consultation and community mobilisation and implantation
- construction of the national strategy, and preparation in the technical, institutional and regulatory fields
- preparation and implementation of an experimentation programme
- preparation and implementation of anticipated deployment of the REDD+ strategy.

The country has completed the initialisation phase (phase 0) and is now in the readiness preparation phase (phase 1) and may launch phase 2, the investment phase, during phase 1.

5.1.2.1 Events in the initialisation phase

The initialisation phase is a start-up phase designed to: i) identify the stakeholders; ii) inform, educate and sensitise the stakeholders through workshops, TV programmes, etc.; and iii) carry out technical studies needed for the finalisation of the R-PP.

First joint UN-REDD/World Bank mission.[27] An important moment in the beginning of REDD+ was the first joint exploratory mission carried out by the UN-REDD programme and the World Bank, in collaboration with the Congolese government in January 2009. This mission prepared the way for the launching of the REDD process in DRC. UN-REDD was represented by

26 This road map also respects the international norms defined at CoP 16 in Cancun.

27 This first joint mission was very important for the background but also for the development of the REDD process in DRC since it laid down the principle of process exclusiveness and prepared a proposal for an institutional framework for DRC REDD.

FAO, UNDP and UNEP, while the World Bank was represented by the FCPF.

First financial allocation. For phase 1 (2009–2010) a USD 1 883 200 allocation from the UN-REDD Programme and a USD 200 000 subsidy from FCPF were granted in May 2009 to finance the installation and structuring of the national REDD+ process which entailed consultations and cooperation among the main REDD+ mechanism stakeholders (document on the national programme: 'UN-REDD support for the 2009 readiness plan'). The main goals of the initialisation phase were: i) preparation for a REDD+ readiness preparation plan (R-Plan) using a participatory and multiparty approach; ii) information and training for the participants to encourage active participation in the REDD+ process; and iii) establishing the technical phases for REDD+. The funds allocated by UN-REDD and FCPF were to support the fulfilment of these goals, which were considered as prerequisites in the country's preparation for the REDD+ mechanism.

Installation of the REDD National Coordination. In May 2009, the NC-REDD was installed. It operated informally until November 2009 when the organic decree creating the REDD+ process coordination structure was published.[28] REDD is accountable to the Direction du Développement Durable (DDD), which is one of the main departments of the MECNT. The REDD+ process was officially launched at a workshop organised for this purpose by the MECNT on 21–22 August 2009.

National education, training and information campaign. A nationwide education, training and information campaign was needed to launch the REDD+ process. Between August 2009 and March 2012, workshops were held to train and inform the local populations in the following five provinces: Orientale (Kisangani), South Kivu (Bukavu), Bas-Congo (Matadi), Katanga (Lubumbashi), l'Équateur (Mbandaka).

R-PP pre-validation and validation workshops. The consultations mentioned above mobilised all the actors to advance the REDD+ Readiness Preparation Proposal (R-PP). Pre-validation and validation workshops were held on 18 and 19 February 2010 respectively. Thanks to the commitment of all the participants in the R-PP formulation and validation process, the process is now unanimously viewed as a unified national action plan for all activities required for DRC's preparation for REDD+ during the next 3 years.

R-PP finalisation, approval and publication sequence. The DRC R-PP was completed on 2 March 2010. It was widely debated by all the stakeholders in a process that equipped the country to negotiate the subsidies required for its implementation. UN-REDD and FCPF approved the R-PP at the end of March 2010 while the REDD+ National Readiness Plan was to be approved by the UN-REDD Policy Board and the FCPF Participants Committee. The document presenting the R-PP was published on 15 July 2010, after the civil society, the various technical committees, the UN-REDD Policy Board and the FCPF participants committee had made numerous corrections.

5.1.2.2 Events in the Readiness Preparation Proposal

The second phase launches the implementation of the R-PP and should lead to the preparation of a REDD National Strategy. It has four parts and is based mainly, but not exclusively, on two pillars: studies and field experiments.

Studies. A series of studies was needed to inform the writers of the REDD+ National Strategy. Some studies are in the final phases, others have already been completed and sent to the component on preparing the REDD National Strategy. What was needed was: i) a study on the drivers and agents of deforestation and forest degradation; ii) an exploratory study on the potential for REDD+ in DRC;[29] iii) feedback on experiences with alternatives to deforestation and forest degradation that had an impact on poverty reduction; iv) a study on the socio-environmental standards of REDD+ projects and initiatives; v) a national analysis of sectoral programmes; vi) a study on the framework for the use and distribution of revenue

28 The REDD National Coordination started operating informally by holding meetings and taking tangible initiatives. The decree establishing this structure was signed with some delay and confirmed a *de facto* situation.

29 This study was made by McKinsey Co. It was harshly criticized by both the national and international civil society. Greenpeace devoted many pages to lambasting the conclusions of the study which it felt were based on statistics of dubious origin.

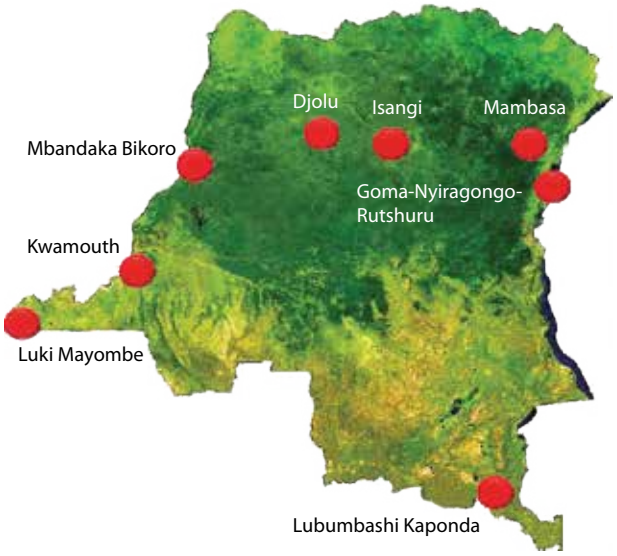


Figure 5.2. Location of pilot projects in Democratic Republic of Congo
Source: National REDD Coordination

generated by REDD+; and vii) a study on carbon law, etc.

Experiments. These are sectoral pilot projects and integrated regional pilot projects. The REDD+ pilot projects[30] were launched in Kinshasa between 27 June and 1 July 2010 at a REDD+ launching workshop for pilot projects, which marked the beginning of a series of experiments that were expected to provide information for the REDD National Strategy. Everyone involved with the project attended the workshop where members of the project management units learned about the management rules and procedures of the African Development Bank (AfDB). This workshop was held subsequent to an FFBC grant of EUR 29.5 million to DRC (16 million for the implementation of six REDD+ pilot projects and 13.5 million to develop community agroforestry and promote community forestry).

Second joint UN-REDD/World Bank mission. To launch phase 1 (like phase 0) a second joint UN-REDD (FAO, UNDP, UNEP)/World Bank mission was held from 18 to 25 May 2009. The main goal was to provide support for the launching of the UN-REDD and FPCF programmes. The main expected outputs were: i) update of the 2009–2010 REDD+ work plan, and ii) definition of the implementation mechanism for the UN-REDD programme and an update on the REDD+ process.

Launching phase 2 of the UN-REDD programme. In June 2010, the UN-REDD programme launched phase 2 of its 2.5-year programme.

The following projects were involved:

- **The REDD+ integrated agroforestry pilot project of South Kwamouth**. This project is located in Kwamouth territory (Bandundu Province) and is being implemented by NOVACEL/SPRL, a private company. It is an integrated rural development project based on agroforestry in a seriously degraded zone of the Kinshasa firewood supply basin.
- **The integrated pilot project around the biosphere reserve of the Luki Reserve** in Mayombe (Bas-Congo Province). The goal of this project, located in Moanda territory, Bas-Congo and, supported by WWF, is the integrated rural development of the Mayombe forest which is located in a zone suffering from heavy deforestation.
- **The integrated REDD+ pilot project of Isangi**. This project is located in Isangi territory (Orientale Province), implemented by the national civil society and led by the NGO OCEAN. It focuses on integrated rural development, land use planning, community forest management and the management of activities in the permanent production forests.
- **The Mambasa integrated pilot project**. This project is located in Mambassa territory (Orientale Province) and is implemented by the Wildlife Conservation Society (WCS). As for the preceding project, its goal is integrated rural development, land use planning, community forest management and the management of activities in the permanent product forests.
- **The integrated REDD+ pilot project in the Maringa-Lopori-Wamba landscape**. This project is located in Djolu and Befale territory (Équateur Province) and is implemented by the African Wildlife Foundation. It focuses on the sedentarisation of slash-and-burn agriculture, the improvement of market access conditions and the development of community forest management in a low-pressure extensive-farming zone.

30 The pilot projects were supposed to be funded mainly by the CBFF. Because of internal procedures at the African Development Bank, which manages the funds, the projects were not started on schedule. Note that the Isangi integrated project is being led by a civil society organisation.

- **The integrated REDD+ pilot project in Ecomakala**. This project is located in Goma, Nyiragongo and Rutshuru territories (North Kivu Province) and is implemented by WWF. It focuses on small-scale plantations in the Goma supply basin, together with the production and sale of briquettes, distribution of cookstoves (foyers améliorés), and the improvement of carbonisation techniques.

5.1.2.3 Events in the investment phase

First joint FIP mission. The starting point for the investment phase was the first joint FIP mission, a scoping mission comprising representatives of the multilateral development banks and observers (Norway and CBFF). The mission worked in Kinshasa from 21 to 27 February 2011. The purpose was to enter into discussions with the government and the main stakeholders to plan the preparatory activities for the FIP Investment Strategy. The other purposes were to: i) discuss the FIP programme's goals, benefits and implementation methods in DRC; ii) discuss how the FIP fit in with and supported the REDD readiness preparation process started in 2009 in DRC with support from the FCPF and UN-REDD programmes; iii) talk with the stakeholders about the types of activities that could be included in the FIP investment programme in DRC, giving due attention to the REDD National Strategy readiness process currently underway; and iv) formulate the Terms of Reference for the joint mission. After the first FIP mission, the Congolese government officially launched the investment phase as a DRC side event to CoP 16 on 8 December 2010 in Cancun, Mexico.

Second joint FIP mission. This mission was held from 9 to 13 June 2011. Its main aim was to assist DRC in preparing the FIP Investment Strategy, which had to i) comply with the FIP priorities and investment criteria, ii) coincide with national priorities, and iii) be prepared in a collaborative, participatory manner, in other words, involve representatives of the local communities and the indigenous peoples. The specific aims of the mission were (Terms of Reference of the second FIP mission 2011) to: i) examine to what extent the recommendations of the scoping meeting had been carried out; ii) examine the preliminary versions of the Investment Strategy and hold discussions with the government and other stakeholders to finalise the document for presentation to the FIP sub-committee; iii) discuss the FIP financial conditions, the role of the private sector in programme implementation and, if appropriate, the management mechanisms for FIP funds, including the role of the REDD National Fund (now being discussed); iv) hold discussions with the stakeholders, especially members of the national civil society and representatives of the indigenous peoples, on their preoccupations and what they expected from the FIP Investment Strategy; v) discuss the monitoring of the FIP Investment Strategy and its programme, the link with the FIP logical framework and with the national MRV system; vi) share ideas with members of the REDD+ National Committee and the REDD Interministerial Committee on their vision of REDD+ and the role of the FIP Investment Strategy; and vii) make a field visit to the Ibi Bateke afforestation project, which is quite profitable (sustainable supply of charcoal, cassava production).

5.2 Participation process and access to information on REDD+

The first UN-REDD/World Bank mission encouraged stakeholder involvement in the DRC REDD+ process. Involvement levels increased with the following four missions. But the Congolese Readiness Plan Idea Note (R-PIN) was drafted without any consultation with the stakeholders. This was a major weakness. The document was left up to the government, international cooperation agencies and consultants-cum-writers. It was at the R-PP level that the stakeholders and, even more so, the civil society became genuinely involved. The studies and the early reflections were made by experts, but it was the discussions among the stakeholders that brought out the common interests and guiding principles needed to define a general framework for REDD+ that was acceptable to all parties. Quite obviously a consultative process of this sort is dictated by the need to respond to the international requirements of environmental democracy, which deem that the construction of a REDD+ National Strategy must be based on an open dialogue process that leads to consensus among the stakeholders.

The aim of the consultative process that characterises REDD+ in DRC is not only to satisfy international norms. It is also a strategy for attracting — the payment of and promises for — international subsidies. The DRC

government's applications, channelled through the REDD-NC, for funding for the implementation of REDD+ dwell at length on the activities of the civil society. As consultations between the government and the civil society become more official, collaboration is growing between the FAO and the civil society and also between the World Bank and the civil society. The FAO, which was responsible for overseeing the study on drivers of deforestation and forest degradation, tasked the civil society with collecting and analysing data in both the qualitative and the quantitative phase of the study. And the World Bank, via PNFOCO, funded national consultations on the FIP National Strategy and entrusted the work to the civil society. The collaboration model seems to institutionalise a working relationship among the various partners, teamwork that is being tested mainly in the thematic working groups that have been structured as platforms for reflection and discussion among the various stakeholders in search of a consensus on the REDD+ National Strategy. The REDD+ consultative processes in DRC are viewed as frameworks for activities that promote open discussion among all the stakeholders and produce norms as well as consensual recommendations that can only be opposed through the unanimous agreement of all the stakeholders. Frank discussion makes this approach interactive since it stimulates dialogue among all parties concerned and thus creates the conditions for a veritable debate on the REDD+ projects. Where appropriate, it helps develop a consensus or may lead to concerted decision-making on the main courses of action. The TWGs provide another multi-actor platform where stakeholders can work together and develop a climate of trust that grows stronger with time.

As part of this process, the government is expected to play a key role in defining the REDD+ National Strategy. To facilitate the inclusion of each ministry's priorities in the preparation of the REDD National Strategy, 30 thematic working groups were set up. They are all led by delegates from the ministries. The other stakeholders feel that the decision taken by CN-REDD to have all the TWGs chaired by delegates from ministries is a trap and shows that the State authorities want to control the whole REDD process. Further, although the idea of holding discussions has been accepted, access to information, which is the cornerstone of REDD+, is still inadequate. There is no mechanism for providing the public with the knowledge on REDD+ it needs to participate more intelligently and share ideas more extensively. Concerning access to information on REDD+ in DRC: i) information exists but is not always accessible; ii) some information does not exist and needs to be produced, e.g., studies, statistics, socio-anthropological data; iii) access to information is asymmetric; and iv) there is no simple mechanism to provide access to information nor an efficient, transparent system for disseminating information.

5.3 Future options for REDD+ policies and processes

After the UN-REDD Policy Board and the FCPF Participants Committee approved the R-PP at the end of March 2010, the DRC became fully engaged in the REDD+ strategy refinement phase. This approval has allowed the country to enter the REDD+ readiness phase and, as was mentioned above, prepare to launch the investment phase at the same time (2011 to 2015) and also to undertake studies that include observations on the national context and will provide a range of options on specific questions.

5.3.1 REDD+ eligible activities

The REDD+ National Strategy, based on the reference scenario derived from the study by McKinsey & Co., has four components: a cross-cutting component to initiate the sectoral reforms needed to ensure the coordination, implementation, funding and control of REDD+ activities and three sectoral components that group the different types of eligible activities, namely:

- management, sustainable exploitation and growth of the national forest capital: this component was designed to develop the sustainable management of permanent production forests, to manage, optimise and expand the classified forests and to increase the carbon storage capacity through afforestation and reforestation;
- accelerated development of a more productive agriculture in the rural forest areas through effective coordination between the MECNT and the Ministry of Agriculture, Fishery and Livestock in order to sedentarise and improve the productivity of subsistence farmers through

higher yields and added value for small-scale extensive commercial agriculture and to develop well-controlled intensive agriculture that will considerably reduce pressure on the forestland caused by an increased food demand;
- limitation of the impact of urban and industrial growth on the forests through better interministerial coordination that should aim to reduce the demand for firewood and, at the same time, increase the offer for woody forest products and alternative sources of energy for the households, and also aim to limit the impact of extractive industries on forests, especially from the mining and hydrocarbon sectors.

Three geographically integrated pilot programmes are being implemented to test certain activities. They will provide feedback that should enrich the strategy on certain specific issues. Furthermore, some priority intervention zones have been outlined in the DRC presentation of an investment plan that was submitted to the FIP. Through geographic prioritisation for the interventions, efforts can be concentrated in areas where the problem of deforestation is the most critical, which is often the areas that supply woody forest products to large urban centres. Besides the climate-related benefits, which are the main aim of the process, the REDD+ activities are expected to produce benefits for: i) the biodiversity, through a major reduction in animal and plant biodiversity losses thanks to better exploitation of their ecosystems; ii) the local communities through the creation of new opportunities, such as direct and indirect employment as well as higher household income thanks to new sources of revenue and the reduction of household energy costs; and iii) the environment as a whole through the improvement of ecosystem services in the forest zones and the maximisation of other sources of wealth.

5.3.2 Funding REDD+

The possibility to obtain funding and the amounts of funding needed for REDD+ activities will depend on three main factors:
- options chosen at the international level, which will have repercussions on the reactions of the financial actors, especially the development partners who traditionally participated in funding the readiness preparation phase, as well as potential investors whose decision to become involved will be based mainly on the prospects of a return on investment;
- options chosen at the national level: thought is being given to the creation of a REDD+ National Fund supported from various sources, a fund that would be used to develop mechanisms and to define criteria for allocating the funds to activities with a high potential for success;
- the capacity to mobilise the private sector, which still needs to be drawn into the movement.

The process has reached an intermediary phase called the experimentation phase. During this phase special studies are carried out to obtain answers to some precise questions, and projects are identified that have the potential to achieve results targeted by REDD+. These experimental projects have been costed at about USD 500 million. The first contribution to this budget was secured at the end of June 2011. At the sub-committee meeting at Cape Town, the Forest Investment Programme (FIP) of the Climate Investment Fund (CIF) adopted the USD 60 million investment plan presented by DRC, via the Development Aid Fund (FAD). Three priority intervention areas have been defined for the FAD, i.e., the supply basins of Kinshasa, Kisangani and Mbujimayi-Kananga. The fund will finance enabling activities, in particular, ones on land modernisation and land tenure security, land use planning, improving the business environment and sectoral activities, especially biomass and energy, community forestry, energy efficiency projects and alternative domestic energy. Strategies for mobilising the private sector as well as cofinancing to add to the FIP allocation still need to be defined. Alternative financial opportunities are being considered to feed the future REDD+ National Fund and to finance specific field projects. For alternative funding, besides FAD, there are private investments in this new promising sector, indirect funding through tax exemptions, and subsidies for certain activities.

5.3.3 MRV system

Since the REDD+ concept is based on demonstration, performance and results that are decisive to future payments, it is vital to define the elements of the demonstrations at the national level and for the REDD+ projects and initiatives, in particular:
- a plausible, realistic reference scenario that is accepted by all the stakeholders; the reference scenario underlying the REDD+

National Strategy has been severely criticised because certain actors feel that it is overly optimistic. It relies entirely on projections from socio-economic development forecasts for the next 20 years. The projection base mainly sources the statistical data from the World Bank, the National Bank of Congo and the UNDP;

- an arsenal of methodology tools and performance/impact indicators that are defined with due attention to the national context and the sub-national diversity, validated by the scientific community involved in climate issues, adopted by partners involved with the process, and capable of making an assessment of the outcome to the satisfaction of all the stakeholders so that they can be used as a reference for estimating payments. Tools of this sort are not yet being produced;
- confirmed national experts who can report on these measurements and can work with the international counter-verification experts to certify the results.

The institutionalisation of the MRV mechanism to meet these requirements will have to include a scientific component, a political and institutional component and an administrative component, supported by tools on procedures, measurements and reporting. It should be led by a national service and be flexible enough to adapt to the local-level project settings. These preoccupations should be better reflected in the approvals procedure and in the forthcoming REDD+ National Standards.

5.3.4 Revenue-sharing

The introduction of a model and efficient profit-sharing mechanisms is vital to the process as a key element in participation and a guarantee of permanency. Work on establishing the model and mechanisms was started last year with the participation of government bodies and the civil society, which is at the heart of all ongoing reflection. Two workshops have already been held on this subject, one at the beginning of 2011 to define the problem and the second at the end of July 2011 to prepare an Options Paper for the decision-makers to analyse further before making a choice. Thought and discussion are still underway. Some of the research has been turned over to resource persons working as consultants. The consultants who were hired have already identified a certain number of problems. More clarification is needed, and there are choices to be made and policies to be adopted on questions that are decisive to the sharing of revenue from REDD+ such as: i) defining the legal status and ownership of carbon, especially forest carbon; ii) identifying stakeholders for REDD+ projects and initiatives; iii) assessing non-material contributions and incorporating them in the cost of the project; iv) clarifying the definition of distributable REDD+ revenue; and v) finding ways to transfer benefits to the communities to avoid zero impact, to reduce the negative effects as much as possible, and to avoid confiscation by the elite.

5.3.5 Proposed participatory mechanisms

The REDD+ process in DRC has developed an especially efficient model of participation despite a few pitfalls that are inherent in all new processes in the experimental stage. Through the process that coordination bodies established by decree, especially the National Committee, the Interministerial Committee and the National Coordination, the process now includes all the main stakeholders, in particular the Government through its appropriate ministries, and the civil society, private sector, local communities and indigenous peoples through their respective representations. There is strong participation in the various activities and the TWG where the details of the REDD+ National Strategy are worked out. But the estimated level of communication and the community uptake of the process are still very low. The process is supposed to be carried out by the provincial representations of the REDD National Coordination (the executive body in charge of the process) and by the provincial wing of the REDD Climate Working Group (CWG) that includes representatives of the civil society. Consultation and free consent are prerequisites to the deployment of the project, and implementation tools are being created. Hopefully the principles will be set out in the REDD+ project approval procedures and criteria now being prepared. The CWG cannot start its work because it is still strapped for funds. Similarly, funding is irregular to pay for the active participation of the civil society. Funds are provided for sporadic activities. This has inspired the organisations to look outside the REDD+ process for the financial resources they need to participate effectively. The participation of the private sector is still at the mobilisation and

awareness-building stage. Even the forest sector has not developed effective links between its operations and the current REDD+ process.

5.3.6 Policies and institutions

Because of its cross-cutting nature, major sectoral reforms are essential to the success of the REDD+ process. The following sectors should be given special attention: i) sectors related to land use, especially land tenure, agriculture, land use planning, rural development, mining, hydrocarbons; and ii) sectors that have a direct effect on the use of woody resources, especially energy, economics, industry, etc. All these sectoral reforms will aim at two goals: i) to integrate the preoccupations of all the sectors, reposition the DRC commitment to climate issues at the centre of DRC policies, and harmonise the sectoral political, legislative, regulatory and institutional frameworks; and ii) to establish effective mechanisms to enhance cooperation and thereby deal with cross-cutting issues more efficiently.

The conclusion to this section is that REDD+ in DRC brings to the fore a group of actors and a variety of events that seem to target the same goal but have different intentions, interests, and agendas. There is reason to fear that the REDD+ mechanism in DRC will be dominated by the 'prisoner's dilemma' game. According to Ostrom (1990) the 'prisoner's dilemma' game theory is conceptualised as a non-cooperative game in which all the players have complete information. From this angle, each actor on the REDD+ scene has a dominant strategy since it is always in his or her interest to choose an individualistic tactic rather than a genuinely collective action.

6 Evaluation of the REDD+ profile with regard to the 3E+ criteria (effectiveness, efficiency, equity) and co-benefits

6.1 Context: Institutions and governance

An analytical look at the socio-economic dynamics of deforestation in DRC points to major institutional weaknesses as the main factors underlying the loss of the national forest cover. These weaknesses can be divided under three main headings: i) an energy model that gives too little weight to the enormous national potential for hydroelectricity and other forms of renewable energy, thus ignoring this vital forest-dependent sector; ii) insufficient supervision for the local communities' subsistence activities since the rural economy gravitates around land use activities, especially agriculture and artisanal firewood production and mining; and iii) too little regulation, which means insufficient application of legal texts governing this subject and too little government representation at the local level where most of the forest activities take place. Similarly, the cross-cutting nature of most issues related to REDD+ requires a level of interministerial coordination that is not generally common to public management in DRC.

Theoretically, the structure of the REDD+ process governance includes a national committee and an interministerial committee for political and interinstitutional consultations to discuss cross-cutting issues, and the CWG to work on giving tangible expression to policies and orientations formulated by the two committees mentioned above. But at less than a year from the end of the readiness period (31 December 2012), these committees, for a variety of reasons, are still having serious difficulties getting started and playing an effective, efficient, equitable role in the process. Furthermore, the MECNT plays a preponderant role in leading the process but has far less power in impacting issues being managed by the other ministries such as agriculture, energy, hydrocarbons, mines, land use planning, public works, transport, land tenure, etc., which can have a direct influence on national forest domains. An example: the MECNT cannot have a direct effect on the energy law now being drafted although this law is decisive for the future of the national forest cover since 85% of the national energy demand is covered by woody forest products. The communications gap is also clear in very attractive sectors of the economy, such as mining and hydrocarbon production, that are controlled by ministries which do not sufficiently incorporate environmental issues, such as forest preservation, in their decisions and agendas. The Virunga National Park, for instance, which is recognised as a world heritage, the very first one in Africa, is at the heart of a major Cornelian dilemma: should the park be declassified to make way for oil exploration which the national economy badly needs in this lean period or should it be recognised as a reserve area to maintain its role in protecting the climate and biodiversity? Hence, strong interministerial coordination is vital to the effectiveness and efficiency of the process, and the Interministerial Committee and the TWGs should consider such coordination as an integral part of REDD+ governance.

The process also depends on the capacity to implement it at the sub-national and local levels where the REDD+ projects and activities are carried out. It is important to consider the big gap between the high level of structuring, coordination, participation and functioning of the process bodies at the national level and the low level of deployment and representation at the

provincial and ETD levels. This is true for all the stakeholders, i.e., the government, the civil society and the private sector. Because of the present process configuration in the provinces, considerable efforts are needed to convince the grassroots communities to take possession of the process. One important Achilles heel in the DRC REDD process is the question of the involvement of the private sector in governance and participation. Up to now there has never been a clear strategy for involving the all-important private sector in the operational phase towards which the process is steadily advancing, but possibly without this key player. The advance into the investment phase cannot be negotiated well until the national private sector, including the banking sector has become involved with the process, taken it over and sunk roots in it. The administrative decentralisation process is the second Achilles heel. As yet it is nothing more than wishful thinking in the minds of the politicians, although it has been written into the main legal instruments such as the Constitution and the decentralisation laws. The effective beginning of the decentralisation process is suffering from weighty burdens that will certainly have repercussions on the REDD+ process at the local level; some crucial issues concern the decentralised and deconcentrated entities ('déconcentration' = transfer of power to relocated agents of the Central Government or to lower level central government authorities or local authorities who are accountable to the Central Government) which are still faltering. One strong point in the REDD+ process in DRC that has often been acknowledged is the participation of the civil society, which has been exemplary and guarantees accommodation of the communities' interests and those of the private sector. This participation is an achievement that needs to be capitalised through better structuring and greater mobilisation of the civil society to make the REDD+ process more effective, efficient and equitable.

6.2 Resource tenure and property rights

The present political, legal and institutional framework for land management offers little security for investments in the land and does not favour productive sustainable land use. Since the REDD+ process is closely linked to land tenure, REDD+ may be affected by the shortcomings of the land governance system in DRC (Cotula and Mayers 2009, Doherty and Schroeder 2011). Although the present land tenure regime includes some measures that seem favourable to investments in land by facilitating and simplifying access to the lands for economic operators, in reality, political and administrative constraints linked to endemic poor governance bog down the system and hence prevent these investments from being adequately guaranteed. Further, the law of 20 July 1973 is not well known or applied, especially at the local level, and the government services in charge of applying this law are not equipped to do so. This situation adds to the current climate of insecurity about property ownership. In addition to these problems, there are also problems with the legal framework, which is faulted for the following reasons: i) the duration of the land concession (25 years); ii) the fact that the decision concerning renewal is taken at the end of the concession period, regardless of the reason, and that the concession holders are not allowed to remove the plantations and other improvements they have made, and have no right to compensation; and iii) the fact that the concession holder is not allowed to remove any constructions he made, for which the State must pay compensation equal to three-fourths of the current intrinsic value (Mpoyi 2011b).

These restrictions seem to explain the low level of investments in the land. Only 10% of the 125 million ha of arable lands are actually being cultivated. DRC has to modernise its laws on land management to incorporate and respond better to the current challenges of increased pressure on the lands and, at the same time, continue its overall efforts to improve resource governance. As concerns land tenure, although the Congolese system is trying conceptually to ensure that the customary land rights can coexist in tandem with the State's quasi-total ownership of the land, the link between the two systems is not always well understood by the State's land administrators and the local leaders (traditional chiefs and government), thus causing misunderstandings which aggravate the land tenure insecurity and the conflicts about property. Before a process as demanding as REDD is implemented, legal pluralism needs to be institutionalised and applied to land management. The goal is to ensure the permanency of the REDD+ results. This is a very basic question that needs to be interpreted and understood in the same way throughout the land

administration services, especially since the carbon law and the revenue-sharing mechanisms depend heavily on it.

6.3 Capacity for monitoring, reporting and verification

Since the payments for the REDD+ process are based on demonstrable results, the effectiveness of the process predicates on the capacity of the national actors to show the results they have obtained from the various REDD+ initiatives. This brings up the question of the national and local capacity to inventory the forest-related greenhouse gases and the reliability of the reference scenario used as the basis for the demonstration. Like many countries in the region, DRC is known to have an unreliable management and national data access system for most of the sectors of national life.

The primary data sources are difficult to identify because there are virtually no statistics centralisation services and, above all, there are very few people trained in this field. Many publications cannot make the difference between 'speculation' and 'data'. Major difficulties in demonstrating REDD+ results can be expected. In the forest sector, various institutions participate in the observation work. The DIAF, for instance, receives managerial assistance from international development aid organisations, but the level of investment and the level of employee preparation and assignment are totally inadequate considering the country's need for efficient inventories. Several processes have been started, e.g., zoning, that will contribute to improving access to the data needed for better inventories on volumes of forest greenhouse gases. Mention should also be made of the insufficient deployment and dissemination of the vast amount of work that has been done at the international level on the production of carbon measurement methods. This weakness, together with the low level of investments and the lack of national training indicate that efforts should be focused on the national MRV capacity, especially since the investment phase is not far away.

Many observers are convinced that there is enough national expertise and capacity for effective MRV (Eba'a Atyi and Bayol 2009; COMIFAC 2012). According to Estrada et al. (2012), DRC has too few people capable of making forest inventories and manipulating modern tools such as satellite maps and GIS, hence MRV may require expertise from outside the country.

6.4 Funding for REDD+ and future cost–benefit options

Much discussion is currently focused on the production of a long-term REDD+ national funding mechanism to handle international payments for actual emissions reductions. Precise financial conditions and institutional arrangements are the backbone of the framework that DRC is trying to develop. The instruments which could be established in DRC are not well understood but, in any case, it is quite clear that they cannot be effective, efficient or equitable unless they include the principles being applied in the new financial mechanisms and in all REDD+ national instruments, namely: i) be founded on the principle of payment for products delivered (enabling policies, emissions reductions verified at national level); ii) be managed according to international norms, especially concerning fiduciary, environmental, and social safeguards and governance; iii) assure transparency at all levels of disbursement and operations; iv) involve the representatives of the Central Government, the local governments, the civil society, and the indigenous and local communities in the development and structuring of a governance system that conforms to national law and, if applicable, international instruments; v) disburse financial resources exclusively for REDD+ implementation in DRC and low carbon development strategies that can be considered as official development assistance (ODA); vi) apply regulations, procedures, criteria and simple guidelines; and vii) accept independent annual audits.

Furthermore, a link has to be established between payments and the national MRV system. REDD+ activities and the scope of MRC in DRC should not be restricted to simply measuring changes in forest area size vis-a-vis carbon types and forest stocks; they should also work out distribution mechanisms for benefits from REDD+ activities. Before a responsible, effective, efficient, transparent MRV system can be created, it is essential: i) to prepare national norms that conform with international methods, norms and protocols as well as good practices to measure changes in the forest carbon stocks; ii) to

create an independent national institution for data collection and information compilation and verification; iii) to develop a coordination and harmonisation mechanism for calculating carbon stocks and flows as well as a MRV system for all sectors and all levels; iv) to develop a coordinated, transparent system of information management using available technologies, and to ensure that all relevant, spatial and non-spatial information is easily accessible to all parties involved and is updated regularly; and v) to develop a mechanism for reporting to the institutions involved, at the national and international levels, and provide relevant information on the carbon market to the stakeholders. External audits by independent companies will be required as part of the verification and safeguards process. The outcomes will be made available to the public through an available mechanism, to ensure accountability and transparency. A REDD+ funding mechanism connected to the MRV system can only be developed if the ministries and the various government agencies in DRC have a thorough knowledge of the MRV system concept (carbon accounting, national requirements of the system) and the components are interlinked.

6.5 Participation, vertical and horizontal coordination

Participation and vertical coordination in REDD+ refer to a political, administrative and sectoral (forests) decentralisation process. Actions at these levels are being tested in DRC. The country is making a genuine effort to establish a legal and institutional framework for decentralisation that includes the various aspects considered above. This is being done in spite of the unending socio-political unrest that may become worse as an armed rebel front continues to collect at the Rwandan border. Furthermore, the process is just getting started and is subject to the weightiness of all processes in the experimental stage, and it is taking place after decades of centralised, authoritarian management by the political authorities, caused in part by the ex-regime of Mobutu (Obotela Rashidi and Mandefu Yahisule 2010). These teething problems during the start-up phase may have a negative impact on the vertical coordination of REDD+ at the central, provincial and local levels. Nonetheless, if the REDD+ provincial institutions become active and receive enough support (information, capacity, logistics), their performance could make up for the shortcomings in the global decentralisation process and, thanks to the cross-cutting nature of REDD+, might even energise this process. But delays in installing REDD+ provincial bodies cause problems, especially since REDD+ projects are well delineated in space and hence require more involvement by the provincial and local actors, who also need to work with the REDD+ national bodies.

The fact that the REDD National Committee agenda has not only envisaged but has even started this activity through the recruitment of provincial coordinators leaves room for hope that DRC will be able to meet the requirements of REDD+ participation and vertical coordination. The Conference of Provincial Governors, which is the proactive framework for the political and administrative decentralisation process, is another lever that could be useful to vertical coordination. The question of REDD+ could be brought before the Conference to further empower the provinces and harmonise their understanding of the REDD+ mechanism. Everything related to REDD+ falls under the MECNT, which is responsible for water and forest resources. Within the MECNT, REDD+ falls under the Division des Services Environnementaux (DES) of the Direction du Développement Durable (DDD), although the Direction des Inventaires et Aménagement Forestiers (DIAF) is responsible for the MRV component.

Besides the MECNT, the structure of REDD+ described in the related organic decree includes the Interministerial Committee (IC) that covers the intersectoral dimension of REDD+. The IC is composed of representatives of ministries that have connections with REDD+. Up to now, however, the inefficient functioning of the IC has decreased the effectiveness of the horizontal coordination of the cross-cutting and multisectoral aspects of REDD+. To strengthen the horizontal coordination, a REDD+ focal point should be assigned in each ministry to monitor REDD+ activities regularly alongside the IC, which needs to be invigorated. Last, the masses' open rebellion against the current political regime and its actions (Githaiga 2012) may heighten social exclusion processes that REDD+ would not be able to shake off. This hypothesis would contribute to a forest governance process that would leave the local communities and the indigenous peoples with the Lilliputian share (Greenpeace 2010a, 2010b).

7 Conclusion

Although DRC has the second greatest tropical forest potential in the world, second only to Brazil, and thus could contribute to global efforts to alleviate the harmful effects attributed to climate change, and although DRC has already made halting progress in establishing the REDD+ mechanism nationally (R-PP, FIP, REDD national coordination working group, etc.), the REDD+ profile in DRC is marred by several shortcomings, and the State institutions have some pronounced structural weaknesses: poor governance; almost total lack of government authority in certain regions of the country; insufficient national capacity to launch sectoral policy reforms compliant with REDD+ requirements; and a shortage of autonomous human, material and financial resources. Certain members of the international donor community share this opinion.

This situation marked by structural defects caused by the poor functioning of the institutions and the background of the State (DiJohn 2008) is made worse by the reappearance of armed rebels at the Rwandan border. This factor alone can increase the socio-political instability that may strengthen a political regime that lacks democratic legitimacy in the eyes of the frustrated, deeply wounded Congolese people (Obotela Rashidi and Mandefu Yahisule 2010). Because of the country's precarious socio-political environment, it would be difficult, almost impossible to implement REDD+ or meet the 3E criteria (effectiveness, efficiency, equity of the REDD+ mechanism). This initial conclusion may seem abrupt and premature, but it confirms the analysis by Trefon (2009) who noted the relative failure of the main large-scale initiatives and other projects carried out as part of the DRC rehabilitation scheme. These mitigated results are to be chalked up to both international development cooperation and to the Congolese authorities. There was a risk that REDD+, which was meant to be a new instrument for forest governance (connected to climate change) that could generate funding, would be misappropriated and confiscated by the politico-administrative elite and a civil society avid for money unless the international community and the country's leading forces restored order and peace on the socio-political scene — based on the principles of democratic constitutionalism — thus putting an end to the current unscrupulous, opportunistic criminal destruction of natural resources.

REDD+ in DRC, as in all the other tropical countries, offers a genuine opportunity to overhaul sectoral forest policies that are incoherent and not adapted. The dynamics of REDD+ actions should, logically, lead to a coherent redesigning of principles, norms and strategies on land use, forestry, mining, agriculture and infrastructure in the country. This would facilitate the assimilation of practices that are more propitious to the fight against climate change. Unless, of course, the government authorities in charge of launching reforms are not sufficiently convinced by the arguments in favour of the introduction of REDD.

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CIFOR Occasional Papers contain research results that are significant to tropical forest issues.
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Reviewing the conditions in which the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) mechanism is being established in the Democratic Republic of Congo (DRC) is part of Component 1 of the Global Comparative Study on REDD+ (GCS-REDD) being conducted by the Center for International Forestry Research. The overall aim of this global study is to provide decision-makers, practitioners, donors and the scientific community with reliable information on the dynamics of national actions related to the REDD+ mechanism. Discussions on REDD originally seemed to focus on the construction of a global structure and the establishment of a multilateral instrument to replace the Kyoto Protocol. But at the 14th Conference of Parties (CoP 14), held in Poznan in 2008, discussions on the reliability of REDD+ focused more on the dynamics of national- and local-level actions and brought out the need to better understand, analyze and explain the national institutional context of REDD+ development.

Subsequently, this review used the extractive approaches. The first inputs were reports, articles, books and documents on the DRC that were directly related to forest management, socioeconomic and political institutions, etc., whether published or not. Because of the diversity of sources, the quantitative data sometimes seem contradictory and conflictual. In the next step, semi-structured interviews were held with experts working in the forestry sector and data were obtained from the participants' observations. Since this analysis covers the period between May 2011 and June 2012 actions in the field and the institutions after those dates were not included.

CGIAR RESEARCH PROGRAM ON Forests, Trees and Agroforestry

This research was carried out by CIFOR as part of the CGIAR Research Program on Forests, Trees and Agroforestry (CRP-FTA). This collaborative program aims to enhance the management and use of forests, agroforestry and tree genetic resources across the landscape from forests to farms. CIFOR leads CRP-FTA in partnership with Bioversity International, CIRAD, the International Center for Tropical Agriculture and the World Agroforestry Centre.