The context of REDD+ in the Democratic Republic of Congo

Drivers, agents and institutions
2nd edition

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RESEARCH
PROGRAM ON
Forests, Trees and
Agroforestry

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Abbreviations

AFD	Agence Française de Développement/French Development Agency
AfDB	African Development Bank
CAFI	Central African Forest Initiative
CBFF	Congo Basin Forest Forum
CBFP	Congo Basin Forest Partnership
CIFOR	Center for International Forestry Research
COMIFAC	Commission des Forêts d'Afrique Centrale/Central African Forest Commission
CONAREF	La Commission Nationale de la Réforme Foncière/National Land Reform Commission
CSO	civil society organization
DDD	Direction du Développement Durable /Sustainable Management Division of the Ministry of Environment and Sustainable Development
DFID	Department for International Development, United Kingdom
DIAF	Direction d'Inventaires et d'Aménagement Forestiers/Directorate of Inventory and Forest Management
DRC	Democratic Republic of Congo
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FEC	Fédération des Entreprises du Congo
FIB	Fédération des Industriels du Bois
FLEGT	Forest Law Enforcement, Governance and Trade
FPIC	Free, Prior and Informed Consent
FREL	Forest Reference Emission Levels
FIP	Forest Investment Program
FONAREDD	Fonds National REDD+/National REDD+ Fund
GCS-REDD+	CIFOR's Global Comparative Study on REDD+
GDP	gross domestic product
GEF	Global Environment Fund
GHG	greenhouse gas
HIPC	highly indebted poor countries
ICCN	Institut Congolais de Conservation de la Nature/Congolese Nature Conservation Institute
IFN	Inventaire Forestier National/National Forest Inventory
INDC	Intended Nationally Determined Contribution
INERA	Institut National pour l'Étude et la Recherche Agronomique/National Institute for Agricultural Research
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Cooperation Agency
LiDAR	light detection and ranging
MECNT	Ministère de l'Environnement, Conservation de la Nature et Tourisme/Ministry of Environment, Nature Conservation and Tourism

MEDD	Ministère de l'environnement et du développement durable/Ministry of Environment and Sustainable Development
MRV	monitoring, reporting and verification
MtCO ₂ e	metric tons of carbon dioxide equivalent
NDC	Nationally Determined Contribution
NFMS	National Forest Monitoring System
NGO	non-governmental organization
NRF	Niveaux de Référence pour les Forêts/Forest Reference Level
OSFAC	Observatoire Satellital des Forêts d'Afrique Centrale/Central Africa Forest Satellite Observatory
PNIA	Plan National D'Investissement Agricole/National Agriculture Investment Plan
PNSD	Plan National Strategique de Developpement/National Strategic Development Plan
RCWG	REDD Climate Working Group
REDD+	Reducing Emissions from Deforestation and forest Degradation
REPALEF	Réseau des Populations Autochtones et Locales pour la Gestion durable des écosystèmes forestiers en RDC
R-PIN	Readiness Plan Idea Note
R-PP	Readiness Preparation Proposal
TWG	Thematic Working Groups
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UN-REDD	United Nations-REDD Programme
USAID	United States Agency for International Development
USD	United States Dollar
VPA	Voluntary Partnership Agreement
WCS	Wildlife Conservation Society
WMO	World Meteorological Organization
WRI	World Resource Institute
WWF	World Wildlife Fund

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Executive summary

For participating countries, many questions remain on how to effectively, efficiently and equitably reduce emissions from deforestation and degradation (REDD+). Understanding the complex relationships between drivers, agents and institutions nationally is vital to ensure effective implementation of REDD+. This report is an updated edition of the initial REDD+ Country Profile in the Democratic Republic of Congo (DRC), first published in 2013. It aims to inform decision makers, practitioners and donors about the opportunities and challenges of implementing REDD+, and to support evidence-based REDD+ decision-making processes. This second edition provides updates on REDD+ policies and progress between 2013 and 2019, as well as analyzing any factors that have led to changes. Through reviews of literature, national and international data and legal documentation, as well as selected expert interviews, this updated edition provides contextual analysis on conditions that are currently affecting the REDD+ policy environment in the DRC. It examines five areas: (1) drivers of deforestation; (2) the institutional environment and revenue distribution mechanisms; (3) the political economy of deforestation and forest degradation; (4) the political environment of REDD+ (actors, events and processes); and (5) implications of the country's current REDD+ design in terms of effectiveness, efficiency and equity in the DRC.

The DRC's annual deforestation rate is among the highest in the Congo Basin, estimated at around 0.2–0.3% during 2000–2015. The State continues to cite this percentage in international conventions, such as the convention on biodiversity in October 2019. Direct causes of deforestation in the DRC range from the development of road infrastructure, to agriculture, uncontrolled logging for fuelwood, and industrial logging to open up transport routes. There are many indirect

reasons underlying these direct causes, including economic factors, proximity to transport routes, demography, sociopolitical and biophysical factors. A lack of data on forest degradation means the country did not include degradation in its Forests Emissions Reference Level document, submitted at the United Nations Framework Convention on Climate Change in January 2018. The government intends to revise its national REDD+ strategy in 2022 with more precise and up-to-date data on these drivers, combined with results from its REDD+ pilot projects. Stakeholders claim, however, that there has been no change in the internal dynamics of each of these main drivers between 2013 and 2019.

The DRC has signed 29 international conventions and enacted more than 40 national laws, decrees and orders around the protection of the environment. However, weak implementation of these international agreements persists. An unstable political context has created major challenges for the DRC's newly-created provinces, in terms of them being fully operational and playing an active role in REDD+. As such, their role in REDD+ to date has been limited, with any progress mainly being driven by the central government that is central to decision making processes. The decentralized governance architecture is different from one province to the next, adding complexity to attempts to design a tool to make sure resources flow from national to provincial and local governance structures. Since 2009, the DRC has announced a number of reforms relating to land tenure, land-use planning and agricultural policy, to create an institutional environment that motivates the implementation of REDD+ in the DRC. However, by 2019, none of these reforms had actually materialized, due to both political changes and a lack of finance, capacity and political will. The DRC's 2002 moratorium on new forest exploitation titles has been the focus

of increasing political interest. With the exception of a few controversial forest concessions granted under contested circumstances, this moratorium has not yet been officially lifted. Yet no assessment or evaluation has been conducted into the impact of this moratorium, in terms of reducing forest loss inside forest concessions or improving forest management. One of the most significant changes in the forestry sector came in 2016, when community forestry, a concept established in the 2002 Forest Law, came into action with the release of an implementing decree and the development of implementation tools. By September 2019, 64 Community Forests had been established all over the country. However, the focus to date has been on community access to these Community Forests, with almost no supporting mechanism in place to enable this access to happen. The implications of this new forest management tool for REDD+ still need to be fully investigated.

The current REDD+ Framework Strategy aims to align with a national sustainable sectoral development strategy which runs until 2035; this covers environment, energy, rural development, hydrocarbon, mines, territorial planning, infrastructure and land tenure issues. However, since 2013, underlying drivers of deforestation and degradation have not yet been addressed. Reforms are taking place within the agriculture and mining sectors in terms of sustainable development and environmentally friendly production, but little has been done along the lines of zero deforestation practices. Drivers of deforestation like hydropower development and fuelwood collection are not well studied. Weak coordination across sectors and ministries has persisted since 2013. This prevents any drivers of deforestation and degradation that stem from sectors outside of forestry from being addressed.

The DRC's commitment to the Paris Agreement targets is an emission reduction of 17% below business as usual by 2030, at an anticipated cost of USD 12.54 million. The contribution of REDD+ to this amount is not clearly stated, but is seen by the government as critically important. National REDD+ policies have not progressed since 2013. Although the REDD+ Framework Strategy was published in 2012, national stakeholders consider it incomplete. The National REDD+ Strategy was expected to be finalized after being piloted in different areas of the country; however, there

has been no rigorous impact assessment of these pilots. The REDD+ policy arena in the DRC is influenced by both governmental and non-governmental actors; however, weak coordination among these actors remains an issue. A further challenge is the lack of clarity around whether the National REDD+ Coordination or FONAREDD is responsible for managing REDD+ finance; the National REDD+ Coordination is officially the main technical REDD+ coordination unit, but it cannot currently approve projects funded by the *Central African Forest Initiative* (CAFI), managed by FONAREDD.

There are more than 100 civil society organizations (CSOs) working in the DRC; yet their role and rights regarding land and forest resources are not fully recognized in the current legal framework. Most REDD+ actors have been inactive recently due to unstable political and financial commitment to REDD+, as marked by the scarce state budget specifically dedicated to it. Though efforts have been made to improve governance, indicators pointing to the DRC's poor governance of REDD+ have resulted in a slowdown of funding for REDD+ in the DRC. In 2019, with CAFI as the main source of funding, the disbursement rate was low, as the country failed to meet its targets for the implementation of REDD+ activities. Inclusive participation of all stakeholders in the REDD+ decision-making process was still seen as voluntary by actors in 2019.

The DRC has adopted a National Payment for Environmental Services as its REDD+ benefit-sharing mechanism. Several REDD+ pilot projects, such as Mai-Ndombe REDD+ Jurisdictional Pilot Project, will benefit from this distributive mechanism. However, to date how this national REDD+ benefit-sharing mechanism should be organized and implemented is unclear. As a REDD+ country, the DRC expected to receive financing for its REDD+ activities from various sources, including public funding, private sector investments, international green funding and the voluntary market. Its national target for these activities was USD 1 billion during 2013–2016. Half of this amount was intended to support the redirection of traditional land-use investments toward REDD+ objectives, using the National REDD+ Fund as the financial mechanism, managed by the Ministry of Finance. Investments targeted by the DRC within the framework

of REDD+ include both ‘business as usual’ investments that are aligned with the objectives of REDD+, and investments that are specifically intended for REDD+. However, little data is available on how these investments are being used and their actual impact. The DRC has now developed national social and environmental safeguard standards for REDD+, and a Safeguards Information System is being designed and will be included in the national REDD+ registry. Monitoring, reporting and verification (MRV) of forest land uses within REDD+ is still under development in the DRC. This is challenged by the different definitions of forest that are in use to report on actual forest cover and forestry land, the lack of data on forest cover, and the lack of technical capacity among REDD+ stakeholders.

Our first DRC country profile, published in 2013, concluded that the DRC’s main REDD+ shortcomings were poor governance, an absence of state authority in many areas of the country, and a lack of domestic capacity, including financial and human resources. This second edition highlights that, between 2013 and 2019, little progress has been made on REDD+ in the DRC, as a result of conflicting interests among actors both at national and decentralized levels; information asymmetry; elite capture and corruption; and the pre- and post-election situation. Enabling conditions for REDD+ in the DRC, such as good governance, transparent data, and effective policies and measures to address the drivers of deforestation and degradation, are not yet fully in place. To date, the effectiveness of REDD+ activities in the DRC is also unclear, due to the absence of rigorous impact assessment.

1 Introduction

REDD+, which stands for countries' efforts to reduce emissions from deforestation and degradation, was acknowledged in the Paris Agreement as a potential mechanism for mitigating climate change. To date, 55 countries have included REDD+ activities as part of their Nationally Determined Contribution submissions (Pham et al. 2019). However, for participating REDD+ countries, many questions remain on how to effectively, efficiently and equitably formulate and implement these REDD+ activities. Understanding the complex relationships between drivers, agents and institutions across the nation is vital to ensure effective implementation of REDD+.

In 2009, the Center for International Forestry Research (CIFOR) initiated a Global Comparative Study on REDD+ (GCS-REDD+). The aim of GCS-REDD+ was to equip policymakers and practitioner communities with tools, information and analyses so they could design effective, efficient and equitable REDD+ policies. The study this report is based on forms part of the first module of GCS-REDD+, which examines national REDD+ policies and processes in 14 countries, including the Democratic Republic of Congo (DRC), with the aim of providing a better understanding of the national context for REDD+ development. Under this first module of GCS-REDD+, CIFOR together with its partners in 14 countries has published a series of REDD+ country profiles

(<https://www.cifor.org/gcs/modules/redd-policies/country-profiles-drivers-agents-institutions/>). These provide contextual analysis on conditions that affect the REDD+ policy environment in each country, and examine five areas: (1) drivers of deforestation; (2) the institutional environment and revenue distribution mechanisms; (3) the political economy of deforestation and forest degradation; (4) the political environment of REDD+ (actors, events and processes); and (5) the implications of each country's current REDD+ design for effectiveness, efficiency and equity. These profiles are based on reviews of literature, national and international data, and legal documents, and selected expert interviews.

The first REDD+ DRC Country Profile was published in 2013 (Mpoyi et al. 2013), four years after the DRC first engaged in REDD+ in 2009, and immediately after the country's National REDD+ Framework Strategy was approved in 2012. Since 2012, the political and socioeconomic context has changed rapidly, and so have REDD+ policies. This second edition of the DRC REDD+ Country Profile aims to provide updates on REDD+ policies and progress between 2013 and 2019, as well as analyze factors that have led to these changes. The outline and structure of this report follow the global GCS-REDD+ methodology design as developed by Brockhaus et al. (2012).

2 Analysis around the drivers of deforestation and forest degradation

2.1 Forest cover and historical background

With a total surface area of 2,345,409 km², the DRC is the largest forested country in the Congo Basin. The first version of this country profile highlighted that forest cover estimates for the DRC vary greatly, and no systematic study has provided exhaustive information about the country's forest cover situation (Mpoyi et al. 2013). These forest cover estimates are summarized in Table 1. The most recent estimate, on which the country based its Nationally Determined Contribution (NDC), is 152 million hectares of forests (MEDD 2015a; 2015b). The differences between the forest cover estimates are largely due to diverse methodologies and definitions of forest cover; in most cases, authors used land area, minimum tree height and canopy cover to formulate their estimates. The official definition of forest in the DRC is based on Ministerial Decree 5094/CAB/MIN/ECN-T/JEB/08 from 22 October 2008, which states that “the DRC defines forest as a forested area of more than 0.5 hectares, with trees up to three meters high, with tree cover equal to or greater than 30%, or with trees capable of reaching these thresholds in situ.”

The DRC's Forest Reference Emission Levels (FREL) document, as delivered to the United Nations Framework Convention on Climate Change (UNFCCC) in January 2018, proposes the use of an operational definition of the forest. According to the DRC government, this definition is supposed to reduce any estimate errors for activity data, while being more relevant to forest cover monitoring at the scale of the main direct drivers of deforestation (MEDD 2018). The document also notes, however, that there are discrepancies between the government's official and operational definitions of forest land. In its operational definition of forest land, the country distinguishes between planted forests and perennial agricultural plantations, the latter being considered forest. By cross-referencing this official definition with definitions included in the DRC's *Guide to Forest Stratification* (2007), it appears that planted forest lands, including cocoa, rubber and *Acacia* plantations developed for agroforestry or forest regeneration purposes, are included in estimates of forest cover. However, in the context of REDD+, oil palm plantations in the DRC are not considered to be planted forests. The implications of this operational definition of forest in the DRC, in terms of REDD+ areas, are poorly understood because of the scope of the FREL. The FREL

Table 1. Forest cover in the DRC as estimated by different authors

Total estimated forest area	Percentage of the national territory	Source
128 million ha (1,280,042 km ²)	55%	Mpoyi et al. (2013)
145 million ha		Debroux et al. (2007)
155 million ha	67%	De Wasseige et al. (2009)
145 million ha		Blaser et al. (2011)
152 million ha		MEDD (2015a, 2015b)
155.5 million ha	67%	Davis et al. (2009)

Source: Summarized from Mpoyi et al. (2013)

document does not include ‘biomass per forest layer’ in its inventory, nor does it include other emissions or absorption sources such as litter, dead wood and organic carbon in the forest floor. Mpoyi et al. (2013) also highlighted that definitions of forest and deforestation in the DRC are interpreted differently by different groups of actors.

Forests in the DRC are located in three main regions Debroux et al. (2007). The first is that of the dense rainforests in the plains, with a total surface area of about 86 million ha in the Central and Bas-Congo Provinces, where swampy forest is located. The second region is the mountains and high plateaus of the Albertine Rift, extending across parts of Maniema, Katanga, North Kivu and South Kivu. The third region is the dry forest and forest–savannah mosaic that is distributed across

the country, covering the former Orientale, Équateur, Katanga and Kasai provinces, as well as parts of Bandundu and Bas-Congo Provinces. The World Wildlife Fund (WWF) map of ‘ecoregions’ (Figure 1) used by Olson et al. (2001) provides a simplified overview of plant cover distribution in the country. By overlaying this on top of existing maps, it appears that the densest forest in the DRC can be found in three provinces: Équateur, Bandundu and Orientale. Collectively this forestland accounts for about 89 million ha, or 69.9% of national forest cover. Law No. 8/012 of 31 July 2008 ratifies the creation of 26 new provinces from a previous 11 (Table 2). However, there is no updated forest cover estimate that aligns the various types of forest cover and their distribution with the country’s new provincial borders.

Figure 1. Map of WWF’s ‘ecoregions’ in the DRC

Source: Olson et al. (2001)

Table 2. Approximate correlation between current and historical provinces

Belgian Congo				Republic of the Congo		Zaire		The Democratic Republic of Congo								
1908	1919	1932	1947	1963	1966	1971	1988	1997	2015							
22 districts	4 provinces	6 provinces	6 provinces	21 provinces + capital	8 provinces + capital	8 regions + capital	11 regions	11 provinces	26 provinces							
Tanganika-Moero	Katanga	Élisabethville	Katanga	Nord-Katanga	Katanga	Shaba		Katanga	Tanganyika							
Lulua				Lualaba					Haut-Lomami							
Haut-Luapula				Katanga-Oriental					Lualaba							
Lomami				Lomami					Haut-Katanga							
Sankuru				Sankuru					Lomami							
Kasaï	Congo-Kasaï	Lusambo	Kasaï	Sud-Kasaï	Kasaï-Oriental				Sankuru							
				Luluabourg					Kasaï-Occidental	Kasaï-Oriental						
				Unité-Kasaïenne						Kasaï-Central						
				Léopoldville					Kinshasa	Kasaï						
				Congo-Central					Bas-Zaïre	Bas-Congo						
Bas-Congo	Léopoldville			Kwango	Bandundu				Kongo Central							
Kwango				Kwango												
Lac Léopold II				Kwilu					Kwilu							
Équateur				Équateur					Coquilhatville	Équateur	Mai-Ndombe					Mai-Ndombe
											Cuvette-Centrale					Équateur
		Tshuapa														
	Lulonga	Mongala														
	Bangala															
Ubangi	Nord-Ubangi															
Bas-Uele	Sud-Ubangi															
Haut-Uele	Bas-Uele															
Ituri	Orientale	Stanleyville	Orientale	Kibali-Ituri	Orientale	Haut-Zaïre		Orientale	Ituri							
Stanleyville				Haut-Congo					Tshopo							
Aruwimi				Maniema					Kivu							
Maniema																
Lowa													Costermansville	Kivu	Maniema	
Kivu			Nord-Kivu		Nord-Kivu											
			Kivu-Central		Sud-Kivu											

Source: Wikipedia: The free encyclopedia 2020

Defourny et al. (2011) classified national land into 11 zones:

- Zone 1: forest–savannah mosaic, in the north west
- Zone 2: dense forest–secondary forest transition
- Zone 3: forest–savannah mosaic, in the 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 south west
- Zone 9: dense forest–secondary forest transition
- Zone 10: forest–savannah mosaic in the south east
- Zone 11: Miombo type woodlands.

The DRC 2002 Forest Code distributes forest into three types of state forest domains, as presented in Table 3.

Although some areas fall under multiple forest types, exhaustive classification will only be available after completion of the forest-zoning process, part of a countrywide land-use planning reform funded by the World Bank. This is expected to enable the DRC to design a national land-management policy and guidelines for allocating land for various uses.

The rates of forest cover loss in the DRC for 1990–2015 (Table 4) are low compared to rates in other tropical forested countries. However, deforestation is increasing (MEDD 2018).

The Ministry of Environment and Sustainable Development (*Ministère de l'environnement et du développement durable*, MEDD) estimates a reduction in forest cover of about 2 to 3 million hectares during this time period. These figures, although approximate, are consistent with the 0.32% deforestation rate reported by MEDD (2015) in its FREL. More recently, Tyukavina et al. (2015), in their review of the gross forest cover loss, estimated it at 65% more than the rate calculated by Hansen et al. (2013) for 2000–2012, seen in Table 4.

Table 4. Estimated deforestation rates in the DRC between 1990 and 2015

Period	Estimated deforestation rate	Source
1990–2000	0.4%	FAO (2001)
	0.25%±0.06%	Duveiller et al. (2008)
	0.15%±0.02%	Ernst et al. (2012)
2000–2005	0.22%	Potapov et al. (2012)
	0.32%±0.05%	Ernst et al. (2012)
2005–2010	0.25%	Potapov et al. (2012)
2000–2010	0.23%	Potapov et al. (2012)
2010–2012	0.27%	Hansen et al. (2013)
2000–2015	0.2%±0.3%	MEDD (2015b)

Table 3. Types of forest in the DRC, their characteristics and related titles

Types of forest	Characteristics	Related purposes
Permanent production forest	Allocated forest Non-allocated forests	Titles for exploitation or conservation
Protected forest	Reserve forests Only small-scale timber and fuelwood (carbonization or firewood) extraction allowed	Community Forest
Classified forests	Dedicated to environmental protection Included as part of the State's 'public' domain	Natural reserves National parks forests Botanical and zoological gardens Wildlife reserves Hunting domains Biosphere reserves Recreational forests Arboretums Urban forests Protected areas

Figure 2. Deforestation hot spots in the DRC

Source: GoDRC (2015)

Figure 3. Annual deforestation loss in the DRC between 2001 and 2014

The orange bars relate to data from Hansen et al. (2013). The blue ones reflect the results of an updated algorithm by Harris et al. (2017), which integrates Landsat 8, 5 and 7 imagery data.

The average national forest loss of 420,000 ha during 2000–2005 that is reported by Ernst et al. (2012) conceals disparities in deforestation rates across the country. As can be seen in Figure 2, deforestation hotspots in the DRC are located near large cities like Kinshasa or Lubumbashi, where population density reaches 1000 inhabitants/km².

Mpoyi et al. (2013) show the impact and distribution of deforestation and forest degradation as it is visible on the ground, indicating that the deforestation figures cited in other literature had been underestimated. To address the lack of field data for evaluating forest loss, several authors have used satellite observations to give more accurate information. As a result of improved methodological approaches, the estimates of Harris et al. (2017) are higher than those calculated using the approach of Hansen et al. (2013) (see Figure 3).

The orange bars relate to data from Hansen et al. (2013). The blue ones reflect the results of an updated algorithm by Harris et al. (2017), which integrates Landsat 8, 5 and 7 imagery data.

2.2 Drivers of deforestation and forest degradation

Defourny et al. (2011) define deforestation as forest cover reduction due to anthropogenic actions, as opposed to degradation, which is the result of biophysical factors without human input. The UNFCCC requires the DRC to establish a definition of forest that takes into account the country's specific circumstances (IPCC 1997). If based on the forest definition presented in section 2.1 above, under the national definition degradation could be defined as a reduction of forest cover; while deforestation is defined by a threshold in the reduction of the forest cover.

Understanding the importance and impact of the various factors driving deforestation in the DRC will help the country to prioritize its different REDD+ actions (Geist and Lambin 2001). In the context of its climate commitments, the DRC's 2015 Intended Nationally Determined Contribution (INDC) document reiterates the country's position as published in its document about the potential for REDD+ in December 2009. The INDC document states that “deforestation and forest degradation are mainly

caused by commercial (40%) and food (20%) agriculture, and by cutting firewood (20%)”. In the context of REDD+, the DRC holds that consensus around these figures was achieved by comparing the results of qualitative (UNEP 2011; GTCR 2012) and quantitative studies (Defourny et al. 2011), with consultations conducted by the National REDD+ Coordination. Section 2.2.1 distinguishes between these direct and indirect (underlying) causes of deforestation to understand forest cover dynamics in the DRC. Consensus around these causes is summarized in a synthesis document (GoDRC 2012), and confirmed in the National REDD+ Strategy in 2012 (MEDD 2015) and the 2018 FREL document. The DRC's FREL adds no new information on direct or indirect causes, but rather proposes an adaptation of the previous classification, following Geist and Lambin (2001). The main changes are to the structure of this classification, as presented in Table 5.

Although numerous studies have examined drivers of deforestation and degradation in the DRC (Megevand et al. 2013; Mpoyi et al. 2013; CAFI 2015; MEDD 2015a, 2015b; Tchatchou et al. 2015), when the FREL was produced in 2018, no up-to-date study was available regarding the current status of these drivers nationwide. REDD+ actors participating in our national consultation workshop felt this was key to prioritizing future actions across the DRC's various landscapes. Studies conducted by Tollens (2010), Peltier et al. (2014), Tyukavina et al. (2018), Lubamba (2019) and Molinaro et al. (2020) suggest that, in many parts of the DRC, deforestation is due to the expansion of smallholder cropland, firewood collection, construction and swidden agriculture, yet forestry and mining have greater potential to damage forest cover than local community practices do.

2.2.1 Direct and indirect causes

Direct causes

The DRC's national forests emissions reference (FREL) document published in 2018 builds on previous analysis around direct causes of deforestation and forest degradation. It highlights that the main direct causes of deforestation and forest degradation (illegal, legal or non-regulated) are: swidden agriculture; artisanal logging; industrial logging; carbonization, fuelwood;

Table 5. Changes to the classification of direct and indirect causes of deforestation and forest degradation in the DRC

Former structure based on Defourny et al. (2011)	New structure based on MEDD (2018), adapted from Geist and Lambin (2001)
Direct causes	
Infrastructure Presence of mining operations Extension of roads	Infrastructure
Agriculture Presence of farms Presence of rural communes Distance to farm zones Distance to rural communes	Agriculture Swidden agriculture Permanent agriculture Cattle breeding
Forest exploitation Presence of forest concessions Collecting firewood	Wood utilization Carbonization Timber illegal exploitation Industrial timber exploitation Fuelwood
	Mines Bush fires
Indirect causes	
Demographic factors Increase in population Population density in villages	Population growth Increase in population Population density in villages
Economic factors Distance to cities Distance to borders Distance to mining operations Distance to forest concessions	Economic factors Crises Lack of jobs Poverty
Transport Presence of main, secondary and local roads Distance to main secondary and local roads Distance to navigable waterways	Roads infrastructures and other factors Distance to roads and waterways Protected areas
Biophysical factors Forest fragmentation Presence of degraded forests Presence of navigable waterways Slope	Biophysical factors Degraded forests Fragmentation
Sociopolitical factors Refugee camps Conflict zones Presence of protected areas Distance to protected areas	Institutional factors Policies Governance Conflicts/wars

Source: Mpoyi et al. (2013); MEDD (2018)

mining; and bushfires (MEDD 2018). The internal dynamics of each of these causes, as presented by the studies mentioned above, remain the same, but their order of importance is altered in the conclusions of the FREL document, as summarized in Figure 4.

Agriculture. The trajectory of the DRC's agriculture sector is punctuated by the abandoning of the old plantations due to sociopolitical unrest in the country. In 2017, the World Bank estimated that agricultural production contributed 20% to the gross domestic product (GDP). To date, less than 10% of the estimated 135 million ha

Figure 4. Direct and indirect causes of forest cover loss in the DRC in 2018

Source: MEDD (2018), as adapted from Geist and Lambin (2001)

of land deemed to be ‘agricultural’, is being fully utilized for that purpose (Devey 2012; USAID 2019). The United States Agency for International Development (USAID 2019) describes the DRC as a “Feed the Future” aligned country, meaning a country with an important agriculture capacity if fully exploited. The agro-pastoral community is estimated to be made up of almost 14 million households (Devey 2012) and 70% of the employed population is engaged in agriculture (USAID 2019), yet production remains low. This situation was expected to change with the implementation of the National Agricultural Investment Plan. Yet MEDD (2015a) reports that agriculture is the main driver of deforestation in the DRC. This perspective is supported by Tyukavina et al. (2018) and Molinario et al. (2020), who report that forest loss in the Congo Basin is dominated by increased clearing by smallholders. Many studies, including the 2009 McKinsey Report, however, have predicted that 2015, 3.2 million ha of land would be deforested for the development of industrial agricultural projects, including palm oil plantations. Over the same period, it has been estimated that another 4 million ha will be deforested and 2.4 million ha of forest degraded to make way for large ranches in the Central Cuvette’s bush savannah. Addressing

the drivers of deforestation and degradation in the DRC therefore depends upon effective policies and measures that will reduce the impacts and expansion of such large-scale industrial agriculture projects. The extent to which these predictions are true, and large-scale agricultural projects have impacted deforestation in reality, is yet unclear due to a lack of confirmed data for this time period.

Wood utilization. Charcoal production, illegal logging, industrial logging and fuelwood are the main uses of wood that impact forest cover in the DRC. The forestry sector is marked by industrial (formal) and informal production. Industrial production has grown continuously since 2008 (Eba’a Atyi and Bayol 2009). However, industrial timber production has never exceeded 500,000 m³ annually (Mertens and Belanger 2010). The informal sector has also grown, with production levels now three to four times more than the industrial sector (Lescuyer et al. 2014; World Bank 2015). The informal sector supplies a growing domestic market. This sector is not governed by the same rules of taxation, traceability, work conditions and requirements as the formal industrial sector, warranting special attention by policy makers to make sure its impacts can be better understood. In neighboring countries, forest products are

largely used as a source of energy, as well as for construction and furniture in large urban centers (World Bank 2015). This increases deforestation in forests that are near to cities, and along borders where forest products, especially products intended for export, are shipped from nearby forestlands. Forest Monitor (2007), Benneker (2012) and Lukumbuzya and Sianga (2017) note that countries like Rwanda, Burundi, Uganda and Kenya import 75% of the total timber harvested by small-scale operations in the DRC's eastern forests.

Fuelwood collection is another important driver of deforestation and forest degradation in the DRC (Marien 2010; Ernst et al. 2012; MEDD 2015). Fuelwood production is on the rise to meet the growing needs of an increasingly urban population (Tollens 2010; Trefon et al. 2010; FAO 2011; Schure et al. 2011, 2012). Formal legislation that regulate access to forests by those involved in the fuelwood trade are scarcely enforced, while informal bodies are used by less privileged and rural actors. To reduce the impact of fuelwood collection on forest cover, sustainable alternative solutions have been suggested by international development partners like the FAO and the World Bank, as well as government agencies like MEDD. Possible solutions put forward include forest plantations, widespread use of improved charcoal cookstoves, and an increase in the production and distribution of low-cost electricity. New strategies are needed to promote the positive aspects of informality, while supporting initiatives that contribute to long-term resource sustainability and meet the increasing urban demand, given the lack of alternative energy sources (Schure et al. 2014).

Mining. The impact of mining on forest cover is significant, as illustrated in the Kasai region, where hundreds of hectares have been deforested and degraded within a few decades for diamond mining and fuelwood. Construction of infrastructure and mining operations are expected to grow in the medium term as two public companies from China have signed a USD 9 billion contract (Global Witness 2011) giving them rights to exploit the DRC's mineral resources. Recent reports argue that these contracts, billed at the time as the "deal of the century", were flawed (Landry 2018). The deal between the DRC government and the Sino Congolaise des Mines has failed to meet expectations in terms of monetary revenues, as the DRC has received no substantial payments to date nor will do in the foreseeable future. A decade

of exploitation has seen no benefits for local communities either (Landry 2018; Larrarte and Claudio-Quiroga 2019). The Chinese companies continue to mine, and the impact on forest cover is yet to be estimated.

Indirect causes

Population growth. The population of the DRC is expected to double almost every 20 years, with knock-on impacts on demand for firewood and land for agricultural and urban expansion. This makes population growth the main indirect cause of deforestation. It has implications for the expansion of cities and their infrastructure, and will also increase demand for 'makala' (charcoal), used by most of the urban population.

The authors of the FREL (MEDD 2018) note that legal and institutional gaps strongly contribute to uncontrolled exploitation of forest areas. As the population moves and concentrates in certain areas, there is an increasing need for timber and fuelwood, resulting in an intensification of forestry operations (Schure et al. 2012). Such population movement has also led to an increase in demand for farming land. In some regions of the DRC, the average population density of forested areas is less than one inhabitant per km². In contrast, population density is over 1000 inhabitants per km² in Kinshasa, Lubumbashi and other major urban centers. Wars in the east of the country have led to significant migration to the west, both from Rwanda and Burundi and within the DRC, with serious impacts on forest cover.

Road infrastructure. Roads increase access to intact forest landscapes, reducing their protection from anthropogenic influence (Kleinschroth et al. 2016). According to the Ministry in Charge of Public Works, the DRC has 153,209 km of road infrastructure, which includes 21,140 km of national highways, 21,124 km of main provincial roads, and 17,245 km of secondary provincial routes, of which about 3,000 km are paved (MdInf 2020). Departmental Order N°79/BCE/TPA/60/004/79 of 28 February 1979 sets the total road managed by the Road Office at 58,129 km. Road expansion in the DRC is minimal and when it happens, it is mainly related to forest and mining development zones, where operators need roads to access sites and transport their products. Mining and forest operations and concessions contribute to fragmentation and make enclosed forest more

accessible (Mertens and Belanger 2010). They also facilitate the inflow of laborers who settle in previously uninhabited forest areas.

Institutional and economic aspects. According to the National Emissions Reference Level, conflicts at a political and governmental level also impact forest cover. This is closely linked to economic crises, the lack of employment opportunities and poverty. For years, deforestation in the DRC has been correlated with the presence of refugees in the region. An estimated 2 million immigrants from Rwanda and Burundi moved into the DRC's eastern provinces. Their need for firewood leads to deforestation of an estimated 89 ha per day in the Virunga National Park. They also constitute a large labor force for small-scale forest operations to meet these needs. A recent study (Reyniers et al. 2015) showed that sharecropping – when landowners allow tenants to use their land in return for a share of the crops produced on the land – is on the rise in the DRC and contributes significantly to forest cover degradation. Between 2000 and 2015 on the Batéké plateaus, it accounted for 15% of all forest cover degradation – more than double the national average.

Biophysical factors (forest fragmentation and degraded forests). It is easier for local communities to access and exploit fragmented and degraded forests as it requires less effort to access, burn and cultivate or carry out artisanal mine activities on them.

Other factors. A range of other factors impact on forest cover, including distance to roads and waterways, and the presence of protected areas. The Congo River has a vast network of navigable tributaries and rivers, which serve to transport harvests. The presence of a large number of roads, and their short distance to navigable waterways, provide opportunities for both small-scale and industrial forestry. The former provinces of Équateur, Bandundu, Orientale and Bas-Congo are the main starting points for the forest production supply chains that use these routes. Though the roads are in bad condition, they have facilitated the intensification of forest exploitation.

In short, the various sources cited agree on the direct causes of deforestation being the development of road infrastructure, agriculture and uncontrolled logging for wood fuel, as well as industrial logging activity and associated transport

routes. These direct causes result from underlying factors or indirect causes, such as economic factors, proximity to roads, demography, sociopolitical and biophysical factors. The consensus given in the national FREL document is that the indirect or underlying causes of deforestation ranked in order of importance are: (1) population growth; (2) institutional aspects; (3) infrastructure development and urbanization; and (4) economic aspects, such as unemployment and poverty (MEDD 2018). Though they are known, the drivers of deforestation and forest degradation vary by region, and correlate to both infrastructure development and demography. They are also largely influenced by national policy choices over ways to use land so as to achieve economic development.

2.2.2 Potential for mitigation

Discussions about the DRC's mitigation potential were initiated with the development of the DRC's INDC, submitted to the UNFCCC in 2015. Here, new trends in the DRC's GHG emissions were presented, including those from the forestry sector. A scenario for 2000 to 2030 anticipated that the DRC could reduce its emissions by 17%, at an anticipated total cost of USD 12.54 million, with a clearly identified contribution from the forestry sector (MEDD 2015a). The INDC also shows how this potential to reduce MtCO₂e is distributed across the different sectors of agriculture, land use, land-use change, forestry and energy. The sustainable management of timber exploitation has potential to reduce emissions by 8.4 MtCO₂e, while afforestation and reforestation could reduce 1.5 MtCO₂e. The rehabilitation of mining and oil quarrying could reduce emissions by a further 0.6 MtCO₂e, and the fight against bushfires could result in a 0.2 MtCO₂e reduction (MEDD 2015a). Actual and anticipated forest CO₂ emissions reduction in the DRC is presented in Table 6.

Many stakeholders argue that these initial expectations were too ambitious, particularly in the context of weak private sector mobilization, political instability and insufficient national workforce to enable reforestation across the country. According to one source, investments like those of a Chinese multinational company focused on agricultural research (fertilizer factory and presidential model farm in N'Djili) and large-scale agricultural development (biofuel production) could transform over 100 million

Table 6. Actual and anticipated forest CO₂ emissions reduction in the DRC

Period	CO ₂ emissions reduction estimates
2000–2010	351.41 ± 38.23 MtCO ₂ e
2010–2014	829.56 ± 84.71 MtCO ₂ e
Anticipated but not yet evaluated	
2015	042 MtCO ₂ e
2016	1,113 MtCO ₂ e
2017	1,184 MtCO ₂ e
2018	1,255 MtCO ₂ e
2019	1,326 MtCO ₂ e

Source: MEDD (2018)

hectares of non-forest arable land without putting any additional pressure on the forest (Putzel et al. 2011). The DRC's INDC does not specifically present REDD+ as the mechanism for reducing its emissions from deforestation, instead highlighting it as an important milestone relating to the DRC's mitigation potential. Of particular relevance to REDD+ is a 2017 publication by scientists at the University of Leeds, UK, which details the 'rediscovery' of peatland in the Cuvette Centrale, at the border between the DRC and Congo. The discovery of this peat swamp forest completely redefines the global estimation of peatland worldwide and has led to new interest in the DRC's forests and their potential for greenhouse gas mitigation. Most of this area is covered by oil and gas concessions (for exploration and/or extraction), timber concessions and concessions for oil palm development and, to a lesser extent, agricultural use. It is partly covered by a Transboundary Ramsar Site, declared in June 2017 (Dargie et al. 2017; Miles et al. 2017).

To reach the DRC's mitigation potential, the following conditions must be fulfilled: (1) finalization of institutional reforms, mainly on cross-cutting issues, involving the Ministries of Agriculture, Rural Development, Industry, Mines and Hydrocarbons, Land Use Planning, and Energy; (2) 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+; (3) development of funding mechanisms keyed to the

mitigation potential; and (4) finalization of the baseline studies, production of legal instruments and implementation of the resulting institutional reforms.

Laporte et al. (2007), estimated the reference level for emissions from deforestation and degradation in the DRC at 200 million tons of CO₂ between 2008 and 2036, divided between community land uses, logging and the development of palm oil-based biofuels, with an estimated deforestation of 23 million hectares. The country relied on a set of national initiatives to develop emission factors. The completed Directorate of Forest Inventory and Management–Japan International Cooperation Agency (DIAF–JICA) Forests project strengthened the national forest resource monitoring system, to promote sustainable forest management and REDD+ in the DRC. The ongoing Mai-Ndombe Jurisdictional REDD+ Program is implementing a green development model at the provincial level, by providing alternatives to deforestation and awarding performance-based payments for climate change mitigation activities, poverty reduction, sustainable management of natural resources and biodiversity protection. The third initiative is the Forest Carbon Map and Model light detection and ranging (LiDAR) Forest Biomass Mapping Project. This project is being developed by WWF, with the aim of producing a map of national forest biomass through an airborne laser system, to quantify forest carbon stocks. These projects are still in the early stages and their results are expected to provide more research-based and realistic estimates of the DRC's mitigation potential under REDD+.

In the context of REDD+, the DRC has initiated a comprehensive national forest monitoring system (MEDD 2018). The first national FREL is essentially focused on deforestation over a reference period of 2000–2014, with a grace period of five years or more, depending on the availability of more accurate data. The only gas included in the DRC's FREL is CO₂. The country emissions estimates are presented in Table 6 for the reference period 2000–2019. A change in emissions is anticipated, however despite the projections in the INDC document the forestry sector's mitigation potential remains unclear, and its contribution to the national emissions reductions efforts therefore remain undefined.

3 Institutional environment and revenue sharing

With fast-changing international rules around REDD+, national institutional frameworks are required to be innovative enough to adapt and tackle the related challenges (Wertz-Kanounnikoff and Angelsen 2010). They need to put in place coordinated sectoral policies, design legal frameworks that clarify land and carbon rights, and ensure well-targeted, equitable distribution of the benefits generated by REDD+. Governance – especially forest governance – should be strengthened in the fight against corruption, as well as institutional and technical capacity building around REDD+.

The arrival of REDD+ in the DRC has opened discussions on reforms aimed at establishing an institutional framework that clarifies associated rights, including land and carbon rights. The same is true for measures to strengthen governance and design systems that ensure equitable distribution of the benefits expected from REDD+ implementation.

3.1 Governance in the forestry sector

The forestry sector in the DRC is under the responsibility of MEDD. However, actions of this ministry are largely influenced by decisions taken in other sectoral ministries, like the Ministries in Charge of Territorial Administration, Finance, and Agriculture. They are also influenced by the overall political environment. The DRC's sociopolitical context is generally marked by a situation of poor governance that covers virtually all development sectors, including the forestry sector (Oyono and Lelo Nzuzi 2006; Trefon 2008). In 2017, the Mo Ibrahim Foundation ranked the DRC 48th out of 54 African states on its general governance index, with a score of 8 out of 100, well below the Central Africa regional average of 50. Specifically looking at good governance, the country ranked 50th, and

for security and rule of law, it ranked 48th with a negative trend between 2012 and 2016. In terms of accountability, the DRC ranked 42nd, coming in at 45th position for participation (Mo Ibrahim Foundation 2018).

Forest governance in the DRC significantly changed with the 2002 Forest Code established by Law 11/2002 of 29 August 2002. The Code was an innovation in the DRC as it aligned the country with the requirements of the Central African Forest Commission (*Commission des Forêts d'Afrique Centrale*, COMIFAC) agenda and tried to adapt to the country's socioeconomic conditions. However, a common criticism is that the Code seems to focus on timber as an exploitable resource and dedicates most of its provisions to regulating this exploitation, with less attention given to other aspects of forest ecosystem management. Since the Code was announced, many calls have been made for its provisions to be enforced so it is properly implemented.

The Code aims to: (1) guarantee public consultations prior to the allocation of forestlands; (2) recognize communities' customary rights to forestlands and respect traditional usage rights; (3) conserve and sustainably develop ecosystems; (4) support community forestry; (5) allocate forest concessions transparently; (6) include all stakeholders in forest management; and (7) provide alternative uses of forest resources and spaces including non-extractive forest uses like conservation concessions, carbon sequestration and bioprospecting rights (Debroux 2007). By 2011, about 40 application decrees, including the Constitution of an Independent Observer, had been adopted to oversee implementation of the Forest Code's principles (Mpoyi et al. 2013). In 2014, the Decree on Conditions for the Granting of Local Communities' Forest Concessions was adopted, followed by the 2016 Decree on

Community Forestry that led, in 2017, to the finalization of a national strategy on community forestry. Community forestry is the country's most recent innovation in forest governance to date. The conditions for implementing the strategy are still under negotiation, but a targeted communication and local capacity-building exercise is ongoing, with the active participation of civil society.

Despite all the measures described above, however, forest governance remains weak (Counsell 2006; Global Witness 2007; Greenpeace 2007, 2010a;

Hoare et al. 2008), as confirmed by more recent studies, such as those by Aquino and Guay (2013) and Tegegne (2016).

There is ongoing debate around the attribution of new forest titles while a moratorium, issued in 2002, remains in force. The moratorium covers any new acquisitions of the right to industrial timber exploitation, including those occurring through the exchange, relocation or rehabilitation of old titles. Many concerns have been raised by actors in the forestry sector (See Box 1).

Box 1. Moratorium on the attribution of new forest titles: Issues and implications for forest governance in the DRC

The moratorium principle

The moratorium on the allocation of new forest titles in the DRC is based on Ministerial Order CAB/MIN/AF-F-T/194/MAS/02 of 14 May 2002, which suspended the granting of new forestry titles. This decree was renewed by Article 2 of Decree 05/116 of 24 October 2005, which published the forest title conversion process and terminated unconverted titles. This Article states that any request to convert former forest titles in forest concession contracts must be requested from the Ministry in Charge of Forests, with a copy of associated documentation also being sent to the Secretary General in Charge of Forests. The moratorium is based on the idea that the country suspends the allocation of new logging titles over a certain period. However, all titles that are still valid continue to run, provided they successfully undergo conversion to a forest concession contract.

The stakes

Debate around the moratorium relates to the status of any titles returned to the State, and the decision to reallocate these titles.

The status of forest titles returned to the State by companies

The status of forest titles that have not been converted is clear – these titles fall within the domain of state forest and are subject to the moratorium. What remains uncertain is the status of converted titles that have been returned to the State by the logging company. In some cases, these titles fall under the moratorium, while in others, they are reassigned to a different company for exploitation.

The decision to reallocate concessions returned by companies

The reallocation of new forest titles in the DRC under the moratorium was conditional on the prior fulfillment of three conditions. The first was a legal framework to guarantee that forest concessions are allocated via public tender, in accordance with the provisions of Article 86 of the 2002 Forest Law. The second condition was the conversion of old forest titles into forest concession contracts, in accordance with the provisions of Article 155 of the Forest Law. To this end, an Inter-ministerial Committee was set up by Presidential Decree 06/141 of 10 November 2006, appointing members for the Inter-ministerial Commission for the Conversion of Forest Titles. The conversion process lasted almost seven years. It was completed on 29 December 2009, with the submission of a report by the Inter-ministerial Commission on Appeals Under the Procedure. The third and final condition was a three-year geographic planning of future allocations. Only this last condition remains a point of debate as some actors believe this step to have been fulfilled, while others do not.

The implications for forest governance

In 2015 and 2018, the Minister in Charge of Forests decided to allocate new forest concessions on the basis that these were not under the moratorium, as they were concessions returned to the State by forest companies unable to exploit their forest titles for various reasons. Concessions were granted to two companies – Société la Millénaire Forestière (SOMIFOR) and Forestière pour le développement du Congo – in August 2014, and more recently to Chinese companies. This decision has caused outcry among national and international organizations, who have highlighted how this violates the moratorium. Their arguments reflect different interpretations of the 2002 Forest Law and its implementing texts, the ambiguity of which results in tensions between those who support the possibility of reallocation and those who advocate for the moratorium.

The adoption of the 2002 Forest Code has not led to any changes in logging practices, many of which are still in violation of the law. Global Witness (2007), Counsell (2006) and Greenpeace (2007) paint a rather negative picture of forest governance in the DRC based on their observations, namely the violation of the provisions of the law, legal confusion between sets of laws, ineffectiveness of the forest verification and control system, irregularities in the logging title granting process, a lack of respect by logging companies for their social contracts with local communities, weak exploitation capacities, and a lack of appropriate human and material resources. These observations have since been confirmed by Hoare et al. (2008) and Greenpeace (2010b), who highlight many disturbing aspects of forest exploitation in the DRC with consequential impacts on social peace.

Nonetheless, some achievements have been made in terms of reducing emissions from deforestation. For example, a Cooperation Agreement was made between the DRC's Ministry of Environment, Nature Conservation and Tourism (MECNT; now the Ministry of Environment and Sustainable Development (MEDD)) and the World Resource Institute (WRI). This agreement aims to build capacity in cartography and geospatial forest monitoring (Mertens and Belanger 2010). This agreement will also cover aspects such as developing a process for zoning forestland and reviewing MEDD's programs.

The Voluntary Partnership Agreement–Forest Law Enforcement, Governance and Trade (VPA–FLEGT) is considered key to fighting illegal logging in the DRC and promoting forest sustainable management (REM 2011). However, the VPA–FLEGT process in the DRC is yet to produce expected outcomes.

Compared with other COMIFAC countries, forest governance in the DRC remains weak. Reasons behind this include armed conflicts and the 'politicized' process of converting old logging titles, as well as the limited government attention to forest issues, as described in later sections of this analysis.

3.1.1 International commitments

Figure 5 presents institutional development within the DRC's forestry sector. The DRC has signed and ratified 29 international conventions

on the environment (Box 2). Although these are now part of national legislation, the country still has a long way to go before their terms are fully integrated through appropriate reforms and revisions of existing texts. Many principles resulting from this international framework are included in the 2002 Forest Code and the 2011 Law on Fundamental Principles of Environmental Protection in the DRC, such as the need to have consultation and participation in decision making, the equitable sharing of benefits from natural resource exploitation, the recognition of customary rights, the possibility for local communities to register and be delivered land titles, and access to justice for local communities in case of environmental damages.

At the international level, the DRC is member of the United Nations Forum on Forests (UNFF), which is a subsidiary body of the United Nations Economic and Social Council. As all members of UNFF, the DRC submits a periodic report on the state of forest governance in the country, however its last report was submitted almost a decade ago in 2010, and focused primarily on the issue of funding for the forestry sector. The DRC's commitment to the international forestry framework has not significantly evolved since 2013, and apart from the Paris Agreement and the DRC's INDC, declaring its emissions reduction objectives and the sectors to be targeted, the country has made no specific forestry-related commitments at an international level. However, the DRC has expressed several general commitments that the country is aiming to accomplish over time such as (i) commitment to an investment program in the forestry sector (2010); (ii) adoption of the National Framework Strategy on REDD+ (2012); and (iii) creation of the National REDD+ Fund in 2012.

Commitments to the monitoring of climate change.

This commitment involves continuous collection of meteorological data, and many national organizations are contributing toward the achievement of these commitments: Agence nationale de Météorologie et de Télédétection par Satellite, L'Institut National pour les Études et la Recherche Agronomiques (INERA), La Régie des Voies Aériennes, La Régie des Voies Fluviales and La Congolaise des Voies Maritimes. However, the data collection body, INERA, lacks the capacity to fully play its role, and the DRC's network for meteorological data collection is weak in

Land-use political development

REDD+ political development

Figure 5. REDD+ and related institutional development in the DRC between 2008 and 2019

comparison to the country's size. Of the 28 stations available in 2009, only 22 were still functioning, and were mainly located in airports (MEDD 2015b). According to INERA staff, there were fewer than 10 stations working in 2019 and those still functioning do not meet the requirements of the World Meteorological Organization (WMO). According to the last national climate communication document, only the system at N'djili Airport in Kinshasa meets current WMO requirements. No system is available to gather data securely, which means that the institutions in charge are unable to provide accurate analyses, produce exhaustive meteorological and climate-related information on the country, or to confirm satellite data with field observations. As a result, the DRC is unable to meet its commitment to transfer climate-related data to international agencies and contribute to global efforts.

Commitments to provide climate information.

By committing to provide climate information, the DRC promised to exchange scientific, technological, socioeconomic and legal data on climate change both at national and international levels. MEDD (2015b) highlights that the DRC is not part of the world meteorological communication system because of its current situation, although it still tries to share its available information with the world network. The partnership with INERA allows MEDD to benefit from the 27 agro-climatic stations used for agricultural research as part of a pilot project within the national adaptation plan, known as the National Action Program for Adaptation to Climate Change/*Programme d'Action National d'Adaptation (aux Changements Climatiques)/Adaptation du Secteur Agricole* (PANA/ASA). MEDD also benefits from data from the Congolese Nature Conservation Institute (*Institut Congolais de Conservation de la Nature*, ICCN), which owns climatological equipment in the protected areas under their control. However, the weakness of intersectoral collaboration and the lack of data from other development sectors hampers the country's capacity to fulfill its commitment to provide exhaustive climate information. As an example, the 2019 World Trade Report (WTO 2019) lacked the main data on the DRC needed to produce a full exhaustive report section on the country. As such, the DRC cannot rely on available information to anticipate impacts and inform neighboring countries of the potential impacts of

its various emissions. It is also unable to effectively monitor the biodiversity of the whole country. Because of the porosity of the borders it shares with nine countries, the DRC cannot provide international conventions with statistics on the total quantities of products imported according to the Montreal Protocol. The DRC was among the first countries to submit a Nationally Determined Contribution (NDC) within the framework of the Paris Agreement, however it remains difficult to anticipate the country's capacity to provide information on its adaptations to climate change, in fulfillment of the conditions of Article 7 of the Paris Agreement.

Commitment to reduce greenhouse gas

emissions. The DRC has committed to processes that aim to reduce its emissions and enhance carbon stocks, i.e. the REDD+ program (see Chapter 4), but a systematic assessment on the impacts of these processes is lacking (Malchair 2016).

Commitment to take measures for adaptation to climate change.

The first adaptation project, known as the National Action Program for Adaptation to Climate Change/*Programme d'Action National d'Adaptation (aux Changements Climatiques)/Adaptation du Secteur Agricole* (PANA/ASA), designed in 2009, was mainly oriented toward the agriculture sector and benefited from USD 3,148,000 in funding from the United Nations Development Programme (UNDP), Global Environment Fund (GEF) and the national government. The results of this project were presented in the project's final report by PNUD et al. (2015), but the measures anticipated in the report have not since been taken.

Commitment to international and national cooperation on climate change.

The DRC has made strong commitments to enhance international and national cooperation in terms of addressing climate change. However, the DRC's cooperation with its neighboring countries is less visible as each country struggles to handle its own situation. Likewise, cooperation between central and provincial levels of government, both across and within provinces, remains challenging.

Commitments to climate change funding.

While REDD+ actors argue that the fight against climate change in developing countries should be financially supported by developed countries

(Kengoum et al. 2014; Kengoum 2019), the DRC aims to internalize, as far as possible, the costs of fighting climate change, committing, for example, USD 3 million of ‘in-kind support’ to the PANA-ASA project (PNUD et al. 2015). In line with this approach, the DRC is prioritizing existing bilateral funding mechanisms, and continues to create new financial mechanisms, like FONAREDD. This commitment includes a regular inventory of needs and funding received. A few studies have tried to compile these data, but have been limited to specific policy processes, such as REDD+.

Commitment to improve national climate governance. This commitment involves encouraging the participation of non-governmental actors in policy-making processes related to climate change. REDD+ and related processes like VPA–FLEGT require this participation and set conditions for it, including the participation of indigenous communities with their free, prior and informed consent (FPIC). Improving national governance also entails recognizing the identity of local communities and indigenous peoples. Local communities are recognized by law in the DRC, but the fight to recognize Pygmies is still underway.

The State also aims to resolve conflicts related to environmental management, by establishing mechanisms to facilitate access to information. These mechanisms are still under discussion, and most conflicts are resolved using traditional administrative or judicial procedures. Access to information is still challenging, as the DRC has not signed or ratified the 1998 Aarhus Convention which establishes certain public rights to the environment, with a particular focus on access to information and justice.

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

On 31 December 2009, the DRC parliament ratified the 2005 Treaty on the Conservation and Sustainable Management of the Forest Ecosystem of Central Africa and a related convergent plan, as well as a sub-regional agreement on forest control in Central Africa, sub-regional directives for the sustainable management of non-wood forest products of plant origin in Central Africa, and sub-regional directives for the participation of local indigenous peoples and NGOs (non-

governmental organizations) in the sustainable forest management of Central Africa. The DRC also attends meetings of the Congo Basin Forest Partnership (CBFP), launched in 2002; this brings together governments, donors, international organizations, NGOs, scientific institutions and private sector actors working with the Central African Forests Commission (COMIFAC), so as to promote the conservation and sustainable management of the Congo Basin’s forest ecosystems. The DRC participates to share its experience of REDD+, as well as to get the input and support of other stakeholders. Since 2013, the DRC has been involved in many initiatives aiming at protecting its forest cover. The most important are the following:

- **Agreement on Forest Law Enforcement, Governance and Trade (FLEGT).** To allow the agreement to be signed in 2013, a Technical Commission for VPA Negotiations with the European Union (EU) was actively engaged in preparatory activities (e.g. finalizing the legality framework and legality verification procedures, negotiating sessions with the European Commission). Negotiations were then suspended by the European Commission for political reasons, including the decline of the European-DRC timber market, and the question of land conversion, which is the main factor behind deforestation. As an approach to respond to the challenges of forest governance in the DRC, however, the Voluntary Partnership Agreement remains relevant. The UK’s Department for International Development (DFID) has provided funding for the FLEGT process in the DRC to resume. This funding supports a FLEGT facilitator and uses the Technical Commission’s work for negotiations (Sansa 2017). However, the increasing exports of wood to non-EU member countries not bound by the EU FLEGT process could negatively impact the efficiency of this instrument in terms of improving forest governance.
- **National framework for the implementation of the Convention on Biological Diversity.** The country has produced a national monograph of biological diversity, a national strategy and an action plan. More importantly, the current New Biodiversity Strategy and Action Plan (NBSAP) (2016–2020) clearly mentions the synergy between REDD+ and biodiversity conservation.

Box 2. International environmental conventions that have been ratified by the 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
23. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water
24. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques
25. Treaty Establishing the African Economic Community
26. Convention on the Sustainable Management of Lake Tanganyika
27. Kyoto Protocol
28. Earth Charter
29. Paris Climate Change Agreement 2015

- **The process of formulating a land policy document.** The DRC has not finalized a land policy document since its independence. A National Land Reform Commission (*La Commission Nationale de la Réforme Foncière*, CONAREF) has now been set up and, since 2014, has been engaged in reforming land sector governance overall. A National Land Policy document is one of the three main deliverables of this process; the remaining two deliverables are the drafting of a revised law on land and its main implementation texts, and the modernization of the land administration process. In June 2018, a national forum, gathering over 400 participants from all

provinces and representing all stakeholders in the land reform process, was held in the former Bukavu and South Kivu provinces. This resulted in the formulation of different options for the National Land Policy. An expert write-shop has subsequently been held in Kinshasa to transform these options into a draft National Land Policy document. A countrywide consultation exercise on this document is currently underway, as a pre-requisite for adoption, before it is submitted to the government. The vision of policymakers is that this land policy document will be useful for at least the next 100 years.

- **Other efforts to improve forest governance.** Over the last 15 years, a legal review of forest titles has been conducted, and a number of texts have been produced to support implementation of the 2002 Forest Code. The legal review of forest titles involved reviewing the consistency of existing forest concession titles, and examining the effective implementation of contract terms signed with regards to these concessions. To ensure effective implementation of the 2002 Forest Code, over 40 implementation texts have been signed and adopted. To improve transparency, the DRC recruited an independent observer of forest exploitation operations (Resource Extraction Monitoring, REM) and a specialized company, *Société Générale de Surveillance*, to establish a strong control system for timber extraction and marketing, and a timber traceability chain. However, in the DRC as in many African countries, environment-related policy reforms take a long time to achieve (Karsenty 2016). One reason is that the policies are intended to be implemented over long periods of time, as is the case of the DRC's Land Policy which will apply until 2100. This may impair the ability of sectoral policies to adapt to fast-

changing sociopolitical contexts, resulting in policy documents that are outdated, sometimes before they are even completed or effectively implemented.

3.2 Decentralization and revenue sharing

3.2.1 Political and administrative decentralization

Decentralization in the DRC is based on the 18 February 2006 Constitution, which gave rise to three main decrees: (i) Law No. 08/012 of 31 July 2008 on the fundamental principles of free administration of provinces; (ii) Law No. 08/015 of 7 October 2008 laying down rules for the organization and functioning of the Conference of Provincial Governors; and (iii) Law No. 08/016 of 7 October 2008 on the composition, organization and functioning of decentralized territorial entities and their relationship with the State and the province. According to these laws, decentralized administrative and legislative governance is organized as presented in Table 7.

Table 7. Decentralized administrative organization in the DRC according to the 2006 Constitution

National level			
Legislative		Executive	
National assembly	Senate	President of the Republic	National government
Provincial level (26 provinces)			
Legislative		Executive	
Provincial assembly		Provincial government	
Composition:		Composition:	
<ul style="list-style-type: none">• Elected provincial deputies• A maximum of 10% appointed		<ul style="list-style-type: none">• 1 governor (elected)• 1 deputy governor (elected)• A maximum of 10 provincial ministers (appointed)	
Decentralized territorial entities			
Cities	Commune	Sectors	Chiefdom
<ul style="list-style-type: none">• Urban councils• Urban executive Commission	<ul style="list-style-type: none">• Communal council• Communal executive commission	<ul style="list-style-type: none">• Sector council• Sector executive commission	<ul style="list-style-type: none">• Chiefdom council• Chiefdom executive commission

Source: Law No. 08/012 of 31 July 2008; Law No. 08/015 of 7 October 2008; Law no. 08/016 of 7 October 2008

The decentralization framework envisaged by the 2006 Constitution has been effective since 2016, where Article 3 provides that city, council, sector and chiefdom are the nominated decentralized territorial entities. The DRC now has 1433 decentralized territorial entities, including 97 cities, 336 urban communes, 267 rural communes, 474 sectors and 259 chiefdoms (Luntumbue 2016).

The Conference of Governors allows governors to consult and harmonize legislation between the national authority and the provincial governor. Members of the Conference of Governors include the President of the Republic, the Prime Minister, the Minister of the Interior and the provincial governors. By law, governors should hold an annual meeting with the heads of the decentralized territorial entities. The province provides technical services, and the distribution of resources among the decentralized territorial entities depends on many parameters, including their size, population and production capacity. The law, after consultation with the Conference of Governors, settles distribution of taxes of common interest to the provinces and the decentralized entities. Currently, 40% of national revenue is allocated to the provinces. The *Inspection Générale des Finances* (General Inspectorate of Finances) and the *Cour des Comptes* (Court of Audit) are in charge of auditing the provinces' accounts.

According to Article 226-1 of the Constitution, territorial redistricting should have been effective within the first 36 months following the first institutions being put in place in 2010. This, however, has not been the case. The law that sets the limits of the new provinces was published on 28 February 2015. Governors of existing territorial entities were forced to resign due to the dismantling of the old provinces. In October 2015, the President of the Republic appointed special commissioners to manage the 26 newly-created provinces, pending the election of governors and vice-governors. These elections were organized by the National Independent Electoral Commission/ *Commission Electorale Nationale Indépendante* on 26 March 2015. The results of these elections show that 20 out of 26 provinces are now controlled by candidates from the presidential majority. In the same way, many special commissioners, initially in charge of provisional administration, were then elected as governors of the provinces where they acted as temporary administrators.

For some analysts (Luntumbue 2016), the reform was initiated without considering new financing needs. One of the problems that arose is the distribution of resources among the new provinces. The division of territories is also not totally unanimous. Some indigenous peoples' associations demonstrated in December 2014 to oppose the merging of their entity with the new Lualaba province (Makal 2014). Another controversy relating to the delineation of border boundaries was between the provinces of North and South Kivu, where there is disagreement about accessing resources in adjoining areas of the two provinces.

Ultimately, province autonomy has not been effective. The logic for accessing central government resources remains that of competition. Political patronage seems to be a determining factor in the capacity of a province to mobilize resources from central government or draw central government's interest toward development issues in the decentralized provinces. Generally, the stronger the governors' personal connections with actors in central government – from a purely political perspective – the more they are able to draw financial resources to their province. This situation leads to inequalities in the treatment of different provinces by central government, resulting in strong disparity in the level of development among provinces and in the capacity of new provinces to assume their administration and the management of their development.

3.2.2 Decentralization in the forestry sector

Decentralized forest governance is at the core of the DRC's 2002 Forest Code. The Constitution and laws on decentralization (Table 8), and the Forest Code (Table 9) distribute responsibilities between central, provincial and local governance, breaking down forest management into exclusive and shared remits.

Figure 6 illustrates decentralization within the Ministry of the Environment, which is in charge of overseeing REDD+ in the DRC. Following a 2015 reform, MECNT became MEDD but remains in charge of both environmental and forestry issues. It has several departments working on forestry issues, including: the Directorate of Forest Inventories and Development (*Direction des Inventaires et d'Aménagement Forestiers*, DIAF); the National Reforestation Service; the Central Control

Table 8. Breakdown of responsibilities according to the Constitution and laws on decentralization

Exclusive remit of central government
<ul style="list-style-type: none"> • Preparation of a forest program of national interest, and coordination of programs of general interest • Forest regimes, legislation on hunting and fishing, and on nature conservation (Art. 202.25) • Legislation on the conservation of natural resources (Art. 202.36-f)
Shared remit
<ul style="list-style-type: none"> • Forest regimes (Art. 203.16) • Regulations for forest regimes (Art. 203.19)
Exclusive remit of the provinces (Art. 204.20)
<ul style="list-style-type: none"> • Preparation of provincial forest programs and their implementation, according to a national plan • Application of national legislation on forests (Art. 204.20)

Source: GoDRC 2002

Table 9. Breakdown of responsibilities across the three levels of forest governance according to the Forest Code and its implementation texts

Central government	Province	Decentralized entities
<ul style="list-style-type: none"> • 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 forest concessions to local communities • Determine the organization and functioning of national and provincial advisory councils • Determine the organization and functioning of the forest registry office 	<ul style="list-style-type: none"> • Prepare the provincial forest plan • Issue approval documents for small-scale (artisanal) operators and permits • Exercise certain activities incumbent upon and delegated by the minister • Carry out public enquiries prior to the allocation and classification of forests • Determine the list of forest products that may be collected in application of forest-user rights • Issue logging permits for areas equal to or less than 10 ha • Deliver forest reconnaissance authorizations • Deliver forest inventory authorizations 	<ul style="list-style-type: none"> • Supervise and control forest exploitation by local communities • Recommend authorizations 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

Source: Mpoyi et al. (2013)

Brigade; the Directorate of Forest Management; the Community Forestry Branch; and the General Directorate of Administrative, Judicial, State and Participatory Income. MEDD works at the provincial level through its decentralized administrations, however, the DRC's model of decentralized forest management is criticized for its inefficient coordination with entities operating at local level (Assembe-Mvondo 2015).

Mpoyi et al. (2013) also discuss the difficulties of implementing decentralized forest governance in the DRC and highlight a lack of common understanding around the provisions of the law. Provinces complain that key decisions over forest-land classification, such as the creation of protected areas or changes to industrial use are taken at the central level, while resulting conflicts are left for them to manage. There is permanent tension between the three levels of governance.

Figure 6. Distribution of MEDD structures at different levels of governance

Source: Dkamela (2018)

Provincial and local-level management of natural resources is not uniformly structured across the country (Kengoum 2014). The influence of the Governor's Office is significant in forest management decisions, to the detriment of sectoral administration in charge of the environment and/or forests. The experience of community forestry decision making speaks for itself. In some provinces, most decisions concerning the allocation of space to communities for community forestry have essentially been taken by the cabinet of the governor in the province, to the detriment of the technical services mandated for this.

3.2.3 Financial decentralization and revenue-sharing

Financial decentralization. According to the DRC's Constitution and law, decentralized government units have separate finances, to ensure

the financial autonomy of decentralized territorial entities. This means that certain costs previously borne by the central government are now transferred to the provinces themselves. To remedy any inequalities arising from the development of provinces and decentralized territorial entities, the Constitution stipulates that 40% of national revenue is withheld at source and put into a national equalization fund (*Caisse nationale de péréquation*) for redistribution.

As well as altering the costs borne by the provinces, analysis by the Natural Resource Governance Institute (NRGI) (2017) concluded that establishing the new provinces has likewise altered the distribution of revenue from natural resource exploitation. It is now the responsibility of the newly-created provinces to ensure revenues from natural resources effectively contribute to the development of their provinces. As the new

provinces become established, how viable the sharing of resources is, becomes a question. The most financially endowed provinces are those which existed under the previous structure of provinces, whereas newly-created provinces lack infrastructure, and sometimes resources, to generate the income needed for their development (Luntumbue 2016). It is expected that the national equalization fund will help improve their capacity to generate their own income from various sources, including the exploitation of natural resources. However, the functioning of this fund is unclear and it is difficult to determine the real contribution it could bring to the development of the new provinces.

It is clear from the Maï-Ndombe REDD+ Jurisdictional Project why support to the provinces is necessary; despite their weak administrative capacity, particularly where newly-created provinces are concerned, they need to maintain full ownership over the forest emissions reduction program for REDD+ to be effective (World Bank 2018) as they will receive some of the payments resulting from emission reductions made within the provinces.

Benefit-sharing schemes in natural resources management

Various benefit-sharing schemes could provide insights to inform the design of a specific REDD+ revenue-sharing structure. The DRC government has experience in systems relating to natural resource access, likewise the legal frameworks of the DRC's mining and forestry sectors also have experience in sharing revenue that could be applied to REDD+. In both, social corporate responsibility is focused around the local communities closest to the title being exploited. Responsibilities include road construction and improvements, the renovation and equipping of hospitals and schools, and transport. Both forest and mining legal frameworks put in place a fee according to the land being allocated, of which 40% is paid to the decentralized territorial entities that supply the wood or mining products, and 60% is paid to the Public Treasury. By law, the 40% must be specifically used for social welfare investments in local communities.

One point of note, however, is that the taxation provision of the 2018 Amended Mining Code

has increased the tax base from that in the 2002 Mining Code, with average rates of taxation now between 48–72% for copper/cobalt, and 55–95% for gold, far above international norms. According to Lassourd (2018), this could negatively impact the development of the mining sector and lead to conflicts as companies call for enforcement of the 2002 Mining Code's Stability Clause.

Although the DRC's oil sector is not legally obliged to share its revenue and contribute to local development, the sector has also employed successful revenue-sharing schemes, e.g. Muanda in Bas-Congo. As reported by Mingashanga (2009), the oil company PERENCO paid local communities up to USD 240,000 a year, of which USD 150,000 was automatically allocated to social development projects negotiated with surrounding communities. This arrangement resulted from an agreement dated 9 August 1969, between the DRC and Chevron, which later sold out to PERENCO. It is not clear today whether this continues to function, but it is a success story that has lessons for REDD+.

3.3 Land governance, carbon rights and indigenous rights

Land governance is an important issue in discussions on REDD+ (Davis et al. 2009). Cotula and Mayers (2009) highlight that a lack of clarity in land tenure rights could jeopardize expected results. Sufficient knowledge about the context and dynamics in the DRC is therefore key.

3.3.1 General framework for land management

Land management in the DRC is organized according to Law No.073-021 of 20 July 1973, amended and completed by the 18 July 1980 Law. These laws put the State as owner of all lands (Article 53). Land in the DRC is structured as presented in Table 10.

According to the legal framework for land tenure in the DRC, only a registration certificate delivered by the authorized civil servant, namely the '*Conservateur des Titres Immobiliers*', proves legal ownership of land and its immovable properties, as well as the existence of the various land concessions. As highlighted above, rights to land

Table 10. Types of land in the DRC and their main characteristics

Type of land	Main characteristics
Public state land:	
<ul style="list-style-type: none"> All public land that is allocated for a determined public use or service 	<ul style="list-style-type: none"> Non-transferable Available for any use only after declassification
Private land:	
<ul style="list-style-type: none"> All remaining land that is not allocated to a determined public use or service 	<ul style="list-style-type: none"> Can be granted as concessions or for other exploitation rights
Private state land:	
<ul style="list-style-type: none"> Urban land (declared urban) Rural land (land other than that which is declared urban) 	<ul style="list-style-type: none"> Can be made available for various uses including residential, commercial, industrial, agriculture or animal husbandry

must be clarified to ensure the conditions necessary for successful implementation of REDD+. Mpoyi et al. (2013) describes three scenarios where land rights require clarification: (i) rights to rural lands that fall under the category of public state land, i.e. that are earmarked for a public use or service; (ii) rights to rural lands that belong to local communities under customary law; and (iii) rights to rural land concessions. The dynamics underlying these scenarios make local communities' rights over land in rural areas precarious, as customary law gives individual community members usufruct rights, but not ownership rights to the community lands (Vermeulen et al. 2011). This precariousness is exacerbated by the fact that land law in the DRC is not yet part of a clearly formulated policy, however since 2017, momentum has been building to equip the country with a land policy document that incorporates emerging dynamics, such as REDD+ implementation.

3.3.2 The framework for forest management in the DRC

The 2002 Forest Code organizes forest management in the DRC. It distributes forest into various categories (Table 11) and sets out conditions for the access and exploitation of various forest resources. Article 22 of the Forest Code recognizes the State's property rights and also acknowledges customary land rights in the various categories of forests. As such, the State is committed to consulting local communities and indigenous peoples, and compensating losses that may result from the creation of certain classes of forest, like protected areas and permanent production forest. Local communities are entitled to request and obtain forest concessions under the legal framework, as described in Section 3.4 of this document.

Table 11. Forest categories according to the 2002 Forest Code

Type of forest	Main characteristics
Classified forests	
<ul style="list-style-type: none"> Falling under the domain of public state land 	<ul style="list-style-type: none"> Includes forests with ecological and conservation purposes Covered by the Classification Act
Protected forests	
<ul style="list-style-type: none"> Falling under the domain of private state land 	<ul style="list-style-type: none"> Includes forests that are neither classified nor permanent production forests
Permanent production forests	
<ul style="list-style-type: none"> Falling under the domain of private state land 	<ul style="list-style-type: none"> Includes forest concessions and forests deemed clear of third-party rights after a formal public enquiry

Source: Law No. 011/2002 of 29 August 2002, Article 7

Management of the process that converts forest lands to other uses is a clear concern of the Forest Law. Article 52 requires that any actors that cause deforestation must provide compensation and support the costs of reforestation, of equivalent quality and land area to the initial forest cover. Activities concerned include mining, industry, urban development, tourism and agriculture, after a permit is issued and related tax is paid. Half of this tax is dedicated to reforestation initiatives.

3.3.3 Rights of indigenous peoples

Although the country did not sign the 1989 International Labor Organization Indigenous and Tribal Peoples Convention No. 169, in 2007, the DRC signed the United Nations Declaration on the Rights of Indigenous People, the main international instrument related to the rights of indigenous peoples. At COMIFAC level, the DRC has signed sub-regional directives on the participation of local and indigenous peoples and NGOs in the sustainable management of forests in Central Africa.

Pygmies are the main indigenous peoples in the DRC; they are hunter-gatherers who were among the first communities to settle in the Congolese territory (Bahuchet 1996). Despite this, the DRC government does not officially recognize Pygmies as an indigenous group and does not accord them specific status. They are not mentioned in the Constitution or in any sectoral law governing

natural resources in the country. The Constitution advocates for equality among all citizens, but this fails to resolve the inequality and discrimination experienced by Pygmies in rural areas.

Debate around the recognition of Pygmies as indigenous peoples in the DRC continues, due to the efforts of national NGOs and indigenous organizations backed by international partners, including UN institutions. Despite their absence from the Constitution, Pygmies are recognized as indigenous peoples in the Forest Code and other sectoral laws. Mpoyi et al. (2013) describe efforts to bring this issue into the debate around forest management in the DRC. Ultimately, local communities and indigenous peoples are entitled to a number of rights provided for by national forest regulations, rights upon which REDD+ will have to rely when defining indigenous peoples' rights, as shown in Box 3.

3.3.4 National management of carbon

The status of carbon within the REDD+ mechanism remains a preoccupation in the DRC. Various studies and tools under development, that are meant to provide a clear view on this issue, have not reached conclusions about how carbon will be treated under REDD+ within the DRC. An important question is who owns the carbon rights. At a national level, the debate has not evolved since the first version of this document. The logic governing discussion remains that of

Box 3. Indigenous peoples' rights to customary ownership of land and forests
The right to establish and live on their land
The right to exploit according to their customary laws
The right to derive personal economic benefits from land and forests
The right to be consulted in all land and forest management processes
The right to access justice in claiming damages, in cases of failure to consider the safeguards provided for by laws and regulations
The right to derive their livelihood resources from forest biodiversity
The right to give consent to all customary land-allocation processes
The right to participate in decision-making processes that would affect their lands/forests, or themselves as communities
The right to prior, fair and equitable compensation in the case of expropriation for public purpose

Note: These rights are as per Article 34 of the Constitution, Article 388 of the Land Law and Article 22 of the Forest Code

Mpoyi et al. (2011 a), which supports the idea that carbon can only exist as a result of an investment and, as such, should be treated in a similar way to any other product resulting from production activity. The DRC continues to vacillate between carbon as a natural resource and carbon stock as the result of an investment or effort. Because of this, any reduced emissions credit is to be issued to the investor, through the national REDD+ registry. At the international level, learning from the experience of other countries, a right-based approach is being adopted. Loft et al. (2015) use a framework that combines benefit sharing, carbon rights and implementation costs to assess the national carbon rights legislation of various countries, including another country in the Congo Basin. They observe that the experience of the REDD+ countries studied demonstrates a clear connection between carbon rights and land rights. As such, efforts to clarify any rights to carbon cannot be disconnected to broader tenure reform, as well as administrative capacity to implement the legal framework. The question therefore is not just one of policy, it also depends on the politics of land tenure.

3.4 Social forestry: Policy processes, institutions and their relevance for REDD+

Social forestry in the DRC has shown great potential since community forestry tools have been put in place (Vermeulen and Karsenty 2014).

3.4.1 Community forestry

Community forestry is not a new concept in forest management, but its implementation in the DRC is relatively new. Three texts now give it a legal basis. The first is Article 22 of the 2002 Forest Law, which provides for community forestry when it recognizes the customary possession of forests by local communities, and the possibility of securing the 'forest concessions of local communities'. The second is the Prime Minister's Decree Number 14/018 of 2 August 2014, defining a system for allocating forest concessions to local communities. The third is Ministerial Order 025 which lays down specific provisions relating to the management and operations of local communities' forest concessions. As a whole, community forestry is guided by a national strategy, which is the result

of a process that culminated in August 2017. The DRC is the last of the COMIFAC countries to put in place a comprehensive legal framework for local communities to manage their own forests. Through these various texts, local communities can now hold forests of up to 50,000 hectares indefinitely, and for multiple uses.

The national vision of community forestry in the DRC is to give local communities and indigenous peoples a special position in local forest governance, and to recognize and strengthen their rights with the purpose of sustainable and equitable management, including improvement of their living conditions (MEDD 2018). The community forestry model differs from other models of forest management, by recognizing the multiple uses of community forests, and letting communities' customary rules apply to their management. In doing so, the DRC is bringing community forestry closer to a traditional model of natural resource management, which is globally recognized as improving the sustainability of natural resources.

3.4.2 Policy processes for the community forestry strategy

The process of setting up the institutional and regulatory framework for community forestry in the DRC took about 15 years, from adoption of the Forest Code in August 2002 to formulation of the strategy on community forestry in August 2017. A major tool for this reform is the Multi-stakeholder Round Table on Community Forestry, launched in Kinshasa in October 2015. A total of four National Round Tables have been held to date, in October 2015, May 2016, February and August 2017. Similarly, since validation of the strategy at the Fourth Multi-stakeholder Roundtable on Community Forestry, two Provincial Round Tables have been held in Mbandaka and Goma, in September and December 2017, respectively. The community forestry strategy has now been legalized, and a five-year action plan has been endorsed by MEDD.

The concept of the Multi-stakeholder Roundtable in the DRC was formulated in 2015, as a proactive response of civil society organizations (CSOs). It is a unique national platform for consultation, coordination and dialogue among various community forestry actors, including women's organizations, indigenous peoples' groups and

national authorities (RFUK 2018). Its purpose is to enable dialogue, experience sharing and joint learning, bringing together different stakeholders in community forestry to make decisions by consensus (MEDD 2018). The Multi-stakeholder Roundtable is coordinated by the *Centre d'Appui à la gestion durable des forêts tropicales* and is supported by Rainforest Foundation UK, WRI, USAID, DFID and MEDD, with technical support via the Community Forestry Division.

The Multi-stakeholder Roundtable ensures that any risks relating to the implementation of community forestry do not distort the objectives of the concept. Risks listed by MEDD (2018) include: (i) limited technical and operational capacity in central, provincial and local forestry administrations and accompanying NGOs to promote the development of community forestry; (ii) insufficient financial and technical resources to support the process at all levels; (iii) a push by technical and financial partners for community forestry resulting in a disproportionate number of local communities' forest concessions and a complete lack of control of the process and its development; (iv) inequitable and unfair sharing of benefits arising from implementation of community forestry projects in the DRC; (v) insufficient public participation, characterized by the absence of a proven dialogue and effective coordination between actors; (vi) capture of the benefits of community forestry by elites, and the subsequent marginalization of the main beneficiaries; (vii) proposed legal architecture that may be constrained by local realities; and (viii) a resurgence of conflicts as a result of implementing community forestry.

3.4.3 Actors within social forestry

The Community Forestry Division, a subunit of the Directorate General of Forests within MEDD, oversees implementation of community forestry. However, many stakeholders are involved in community forestry in the DRC, including local communities, indigenous Pygmy peoples, women, youth and other vulnerable and marginalized groups, local and provincial governments, CSOs, donors and other technical and financial partners, and private-sector companies (MEDD 2018).

Despite the wide variety of stakeholders, only local communities can apply for a Community Forest.

Article 1 Point 17 of the Forest Code, reiterated by Article 2 Point 3 of Decree No. 14/018, defines a 'local community' as a population traditionally organized on the basis of custom, united by clan or parental solidarity ties upon which its internal cohesion is based, and which is attached to a determined territory. Such a definition makes it necessary to clarify the specific situation of Pygmies as indigenous peoples. Their situation remains difficult because the current legal framework does not distinguish them specifically from local communities. Indeed, the Constitution advocates for equality between all people in the DRC and declares any discrimination illegal. In doing so, it gives indigenous peoples the same rights, over both forest and land, as those vested in other citizens. Yet, some risks remain that could be barriers to indigenous peoples' access to community forestry. Beyond the de facto discrimination that exists and is experienced within the villages, the Forest Code distinguishes local communities from indigenous communities. As such, it opens the door to discrimination against indigenous peoples in the implementation of community forestry legislation. Reforms should mitigate this specific risk.

Decentralized local governments are also involved in community forestry, with actors including chiefs of sectors/chieftaincies, and mayors of urban/rural councils (*bourgmestres*). They oversee the assessment of applications for community forests by local communities, and monitor the management and exploitation of these concessions.

Provincial governments are responsible for ensuring compliance with local procedures and providing decision support to the provincial governor. The role of the provincial forest advisory council, as well as that of the provincial Minister in Charge of Forests, is not specified by texts relating specifically to community forestry. But in practice, it is expected that it is the latter who transmits applications to the provincial governor, who is the designated authority for deciding upon and, ultimately, awarding community forestry concessions.

The technical and financial support role of NGOs and other partners is clearly recognized. Among the tools to facilitate community forestry, a power of attorney model is planned. This would allow communities to delegate others actors to act on their behalf in the processes of attribution,

management and monitoring local community forest concessions. The involvement of private-sector companies in community forests is limited by the fact that only exploitation using artisanal means is allowed. However, conservation and forest carbon stock enhancement activities may be of interest to such entrepreneurs.

3.4.4 Implications of community forestry for REDD+ equity in the DRC

Community forestry's maximum authorized area of 50,000 hectares, higher than that of all other countries in the sub-region, is an argument in favor for implementing REDD+ in the DRC. At scale, sustainably-managed community forest areas offer opportunities for both forest conservation and sustainable forestry. Many conservation NGOs are interested in supporting eligible local communities in the context of establishing community forests for conservation activities. Yet, community

forestry also poses the risk of drifting from its original purpose. Most local communities are not yet prepared for the management of community forests so as to derive the socioeconomic and environmental benefits that the model is supposed to offer them over time. As a result, traders could enter into negotiations with communities, using community forestry as a tool to circumvent the moratorium on the allocation of new titles. Similarly, there is concern that in the provinces, the technical role of the provincial governor in the process of allocating and managing community forests is strongly influenced by the governor's politics. The conclusions of Wong et al. (2016) about social forestry remain relevant in the DRC context – understanding who is bearing the cost, integrating the realities of the specific context, and ensuring an inclusive process – will be key to achieving effective and equitable REDD+ outcomes in social forestry.

4 The political economy of deforestation and forest degradation

Understanding the various socio-economic and political dynamics that influence the tackling of drivers of deforestation and forest degradation is key to realizing REDD+ successfully in the DRC.

4.1 The political context behind current corruption, its impact on forest governance and prospects for REDD+

The 2017 ‘Doing business’ report ranks the DRC 187th out of 190 countries in terms of the world’s most important reformers for business climate. In the same year, the DRC ranked 161st out of 180 countries on a corruption perception index (Transparency International 2019). This confirms Gambino (2011)’s observations that the DRC is perceived as a country in which it is highly risky to invest. Responsible for this persistent trend are the endemic practices of corruption confirmed by Trefon (2010)’s analysis of the forestry sector.

President Kabila’s proclamation of “zero tolerance for corruption” highlights political will in the DRC to improve the governance of its business environment. Actions followed that aimed to ensure effective implementation of the 2002 National Anti-Corruption Strategy, however no expected results were apparent in 2013 (Mpoyi et al. 2013). On 14 July 2016, the President of the DRC announced ordinance No. 16/065, creating a Special Advisor to the Head of State, with a dedicated cabinet, specifically in charge of designing strategies and policies towards good governance to be implemented nationally, focused on tackling corruption, money laundering and the financing of terrorism. The announcement of this Special Advisor comes after many other unsuccessful attempts at tackling corruption. Among these were the establishment of the Justice Department, the Commission for Ethics and

Fight against Corruption (whose activities ended in 2007), The Observatory for the Monitoring of Corruption and Professional Ethics (OSCEP) (working within public institutions), the National Financial Intelligence Unit and the Court of Audit. Reports, however, clearly stress weaknesses and lack of resources in these institutions, limiting their capacity to fully contribute to fighting against corruption in the country (Bertelsmann Stiftung 2016; LICOCO 2017).

A set of anti-corruption bills was merged in 2017 under the auspices of the Minister in Charge of Public Service. Two documents resulted from this merger. One is a draft law for the prevention and repression of corruption; the other is the draft law supplementing Decree Law No. 017/2002 of 3 October 2002 on the Code of Conduct for State Public Officials. It is expected that these documents will be legal validated. The OSCEP is specifically responsible for fighting corruption. However, the DRC remains hostile to an Act on the Declaration of Assets, which was rejected as being against the Constitution when submitted to the National Assembly.

The failures of the national control systems – of both parliaments and state institutions – in the fight against corruption and mismanagement of public funds, led civil society to suggest that a citizen verification mechanism was needed, involving citizen participation and mechanisms for monitoring carbon-generated revenue. This raises the issue of whether REDD+ revenue will become public or private funds, or both, depending of the beneficiary and type of payment system. As shown by Assembe -Mvondo (2015), transparency in the initial phases of REDD+ has been weak. This is feared to continue during forthcoming REDD+ activities, as the country struggles to provide existing institutions with enough resources to play their role in addressing the issue of corruption across forest and REDD+ related sectors.

4.2 Drivers of deforestation and forest degradation – the context and impact on the REDD+ process

The DRC has gone through difficult periods since gaining its independence on the 30 June 1960. Each head of State transition has been marked by instability, affecting the whole country's governance context (Mpoyi et al. 2013). The most recent political development to impact forest governance is the struggle for a peaceful political transition of the head of the State in December 2016. The ruling party and all political forces signed a 'New Year's Eve' agreement, which provided for free and democratic elections to be held by December 2017. Although actors (government, civil society, private sector and development partners) enlisted across the DRC, humanitarian crises observed in provinces like Kasai undermined this process, causing instability that raised uncertainty about the advent of peaceful and sustainable political stability. In 2018, President Kabila announced his decision not to run as a candidate in the 23 December presidential elections. The elections therefore resulted in a new president, Mr. Felix Tshisekedi. Because democratization in the DRC is based on external, rather than domestic, pressures, particularly the effect of Western foreign aid on corrupt patronage networks, the regime is vulnerable to authoritarian drift (Matti 2010).

The recent DRC Development Strategy aims for the DRC to become a developed country by 2050. Intermediary objectives of this vision are outlined in National Strategic Development Plans, which aim to make the country an intermediary income country by 2021, and an emergent country by 2030. However, previous versions of strategies for poverty reduction have not produced effective results. Table 12 shows changes over time in these documents, since the first document was released in 2001 with the support of the International Monetary Fund and the World Bank. Early documents were published as the Strategic Document for Poverty Reduction (*Document de Stratégie de Réduction de la Pauvreté*, DSRP); subsequent versions were named the National Strategic Development Plan (*Plan National Stratégique de Développement*, PNSD). It is clear from the evolution of the objectives that the vision of the newly-elected president is different from that expressed by the previous government. The new government revised the 2017–2021 PNSD,

which focused on agriculture development, and proposed a more integrated political economy approach for 2019–2023. The results of the implementation of the 2017–2021 PNSD have not been yet evaluated.

DSRP refers to the documents named 'Strategic Documents for Poverty Reduction' or Documents de Stratégie pour la Réduction de la Pauvreté; PNSD refers to the documents named 'National Strategic Development Plan' or Plan National Stratégique de Développement.

It is in this context, marked by political instability, that the REDD+ process has developed and continues to evolve in the DRC. Despite all, the DRC remains at the forefront of Congo Basin countries engaged in the process of setting up an institutional framework for REDD+.

Most of the population in the DRC lives in forested areas or in areas that have been created by clearing forests. Local livelihoods are strongly connected to the exploitation of natural resources. Forest resources constitute 70% of the population's subsistence, which is based on small-scale agriculture and non-timber forest products. A breakdown of net revenue between the four main categories of actors by Lescuyer et al. (2014) shows that rural population earn more than 50% of their revenue from working in sawmills that clear timber from forests in the DRC. Because of a lack of infrastructure (roads, seaports, navigable waterways) and the biophysical configuration of the country, most forested spaces in the DRC cannot be exploited (Mpoyi et al. 2013), meaning the informal sector dominates forest-related activities. Figures provided by these authors in 2014 no longer reflect the reality in 2019, and are likely to have increased. Lescuyer et al. (2014) report that consultation meetings were held in 2013 and 2014 in Kinshasa and the former Orientale and Nord Kivu Provinces to discuss formalizing the sector. Actors agreed on the need for short- and/or medium-term revision of small-scale chainsaw milling regulations, to capture the reality on the ground, improve producer practices and ensure legally-produced wood was traded on national markets. Since these meetings were held, no major decision regarding these revisions has happened. The charcoal sector is facing similar issues; around 90% of the local population depends on charcoal for cooking (Schure et al.

Table 12. Evolution and performances of the DRC's strategy for development

Document	DSRP-I (Intermediary)	DSRP-1	DSRP-2	PNSD	PNSD
Implementing period	2002–2005	2006–2010	2011–2016	2017–2021	2019–2023
Objectives	Stabilization, transition and reconstruction	Governance and relaunch of pro-poor growth	Growth, job creation and impact on climate change	Becoming an intermediary income level country by 2021	Governance, peace, state capacity to ensure the rule of law, economic diversification, sustainable growth, and natural resources management
Strategic pillars	<ul style="list-style-type: none"> • Restoration and peace consolidation • Macro-economy stabilization • Community dynamics 	<ul style="list-style-type: none"> • Good governance • Peace and institutional development • Macro-economic stability • Access to social services and vulnerability reduction • Fight against HIV-Aids • Community development 	<ul style="list-style-type: none"> • Governance and peace • Economic diversification • Growth acceleration and job creation • Improved access to basic social services and human capital • Environment and climate change 	<ul style="list-style-type: none"> • Transform agriculture • Increase agricultural productivity by helping primary sectors • Develop agro-industrial parks and integrated development centers to attract multiple investors in the agriculture sector 	<ul style="list-style-type: none"> • Optimizing human capital and social and cultural development • Improving good governance, state restoration, and peace consolidation • Consolidation of economic growth, diversification and transforming the economy • Land-use planning and infrastructure modernization • Environment and equitable sustainable development
Performance	The country reached the highly indebted poor country (HIPC) decision point in 2003	The country met the HIPC completion point in 2010	Stability of the macro-economic environment		

Source: UNDP (2015)

2012). Mpoyi et al. (2013) highlight that there are significant numbers of informal workers on low salaries across all sectors. As the low salaries of these informal workers leave them vulnerable to criminal and paramilitary activities, this has negative impacts on forest cover in the DRC, as authority is weak in central and decentralized authorities that govern over these activities and dynamics.

4.3 A forest policy driven by economics

Forest regulation in the DRC is clearly oriented toward providing the international market with timber products. Various internal and external factors have led to revision of the 2002 Forest Code. From an internal perspective, the

objective was to balance the forest's ecological and social functions, for forest administration to "substantially contribute to national development" and for local communities to actively participate in forest management and ensure legitimate benefits from forests. From an external perspective, the Code was revised to comply with international environmental framework requirements. This was largely supported by international partners who acknowledged the neopatrimonial management of the country's forests during the Mobutu regime (Debroux et al. 2007; Sakata 2007; Trefon 2008), which led to abusive exploitation of forest resources, biodiversity and financial losses by both local communities and the State. For many actors, the reform led to a legal framework where the focus of forest resource management is now more on the distribution of forest revenue rather than on biodiversity protection (Karsenty 2005, 2006; Greenpeace 2007, 2010b).

The 2002 Code brought a new dynamic to the forest economy by providing a political framework for forest management. This framework has been strengthened by the signing of Order No. 025/CAB/MIN/ECN-DD/CJ/00/RBM/2016 of 9 February 2016, on community forestry in the DRC. By introducing a sustainable management system, public authorities are trying to reconcile goals that are usually contradictory, in terms of the ecological, economic and social roles of forest resources. This vision is visible in the distribution of forest into domains with specific roles, as described earlier.

Today, the industrial forestry sector is competing with the informal sector in the DRC. The latter supplies both the growing domestic demand, and that of certain neighboring countries (Benneker 2012; Lescuyer et al. 2012). In this situation, it is difficult to carry out a clear evaluation of the production of artisanal forest operations. As a result, there is an information gap on the real economic value of forest in the country. However, Lescuyer et al. (2012) estimated it at over 2.4 million m³ of wood per year. This figure is over six times the volume produced by the formal sector.

Population movements described by Mpoyi et al. (2013) from Katanga to Kasai, and the hinterland east to west displacements, along with increasing population growth (Table 13) also continue to put pressure on forest resources.

4.4 Sectoral policies leading to deforestation

Agriculture, energy and mining policies all have significant impact on forests, and if not aligned with forest policy objectives, can lead to deforestation and forest degradation.

4.4.1 Agricultural policy

Current agricultural policy in the DRC has developed over many years and remains highly connected to the national rural development policy. Nowadays, agricultural policy is the responsibility of the Ministry of Agriculture, which is separate from the Ministry in Charge of Rural Development, although both were previously under the same ministry, the Ministry of Agriculture and Rural Development.

The agricultural sector in the DRC has decreased in importance in recent years. Agricultural GDP per inhabitant dropped by 40%, although it still accounts for 40% of GDP and employs 70% of the population (Mpoyi et al. 2013). The ambitious agricultural sector objectives of the 2017–2021 PNSD have since been replaced by the revised 2019–2023 PNSD. The strategy of the 2013 National Agriculture Investment Plan (*Plan National D'Investissement Agricole/PNIA*), implemented between 2013–2020, is based on five programs: (1) promotion of sustainability across the agricultural sector and agri-business; (2) management of food and nutritional security and strategic reserves; (3) agricultural research development, dissemination, and professional training for various actors; (4) governance, gender, human and institutional capacity building within agriculture; and (5) adaptation to climate change (MeAdD 2013). The PNIA aligns to the

Table 13. Population growth between 2010 and 2015

Year	2010	2011	2012	2013	2014	2015
Total	72,884,000	75,259,000	77,817,000	80,462,000	83,197,000	85,026,000

Source: INS (2015)

provisions of Law No. 11/022 of 24 December 2011 which sets the reference framework that all agricultural activities must align and comply with. The objectives this law sets for the agriculture sector are to: (1) facilitate the optimization of potential; (2) stimulate agricultural production through the introduction of a special customs and tax regime; (3) revive agricultural exports to generate significant resources and new investments; (4) stimulate the domestic agricultural processing industry; and (5) attract new renewable energy technology.

Two institutions have been established to support rural development initiatives. The first, created in 2017, is a national agency for establishing and coordinating the centers for integrated development; the second, created in 2018, is the Pilot Committee of the Territorial Development Project. The objective of the Pilot Committee is to ensure coordination of government interventions at the provincial level and avoid any overlap and duplication of state actions. The national agency is more focused on the coordination of rurally-implemented initiatives that are related to natural resources exploitation. At the time of our data collection, these institutions were not fully operational, and so results remain to be seen.

4.4.2 Energy policy

Energy policy in the DRC is split into electrical and domestic energy. Electrical energy largely relies on the country's enormous hydroelectric potential while domestic energy relies mostly on fuelwood and charcoal, with 99% of the population using wood and charcoal for cooking (Kengoum 2014). As highlighted by Mpoyi et al. (2013), energy demand in the DRC was estimated to be 8 million tons of oil equivalent in 2007, almost entirely supplied through four energy sources: (1) wood, 85%; (2) electricity, 6%; (3) petroleum products, 8%; and (4) charcoal, 0.1% (Kasemuana 2009). Management of these sources is distributed between two different ministries: the Ministry in Charge of Energy and the Ministry in Charge of Environment and Sustainable Development.

The DRC's electricity potential is based on the capacity of the Congo river. This is estimated at over 100,000 MW, distributed across 780 sites in 145 territories and 76,000 villages (Table 14). This potential represents 66% of Central Africa's

potential, 37% of the Africa's, and 6% of the world's total potential (ANAPI 2016). Despite this potential, access to hydroelectricity within the DRC is very low (9.6%).

As one of the cleanest forms of energy, the hydroelectricity potential of the DRC, if well governed, has great potential to reverse the curve of population pressure on the forest, in terms of its demand for wood energy. The vision of the DRC's energy policy is to provide the entire country with hydroelectricity. According to the program ending in 2030, in which renewable sources of energy are promoted, a total of 55 hydroelectric sites will be developed at a cost of USD 650 million. According to Mpoyi et al. (2013), the DRC could replace much of the DRC's 85% fuelwood energy use with hydroelectricity, to reduce pressures on forest resources. Promoting the energy sector within the framework of REDD+ in the DRC is then key to achieving national emissions reduction objectives.

4.4.3 Mining policy

The DRC is richly endowed with important mineral resources. Mining operations and mineral production in the DRC contribute a significant amount to national GDP and have increased over time (Table 15). Mining area expansion due to increasing interest and capacity (Jackson 2001; Heydenrich 2008; International Alert 2009; Jacquemot 2009; Geenen and Stefaan 2016) might put further pressure on forests.

In 2002, the country adopted a Mining Code, with the support of the Bretton Woods institutions (Mazalto 2008). The preamble explains changes to the old law of 2 April 1981, and clearly states that the state regulator will incentivize private investment in the mining sector (Mazalto 2009). This Code sets up financial incentives to increase the security of investments in the sector. Yet, less than a decade after its adoption, the Code was reformed to lead to a new Mining Code in 2018. Before this new Code was promulgated, the country developed a strategic plan for mining sector development over 2016–2021. Revision to the last Mining Code was justified by a number of observations, made by both government and the World Bank (2016). Observations included: (i) weaknesses in the legal and institutional framework; (ii) poor sector contribution to GDP, despite its immense potential; (iii) significant

Table 14. Distribution of the DRC's energy capacity across former provinces, by source

Former province	Energy situation
Kinshasa	Solar potential: Average solar radiation of 3.22 and 4.89 kWh/m ² /day Wind potential: Average wind speed of 1.3 m/s measured at 10 m height Electrification rate: 44.1%
Katanga	Solar potential: 6.5 kWh/m ² /day Wind potential: 5 m/s Electrification rate: 567 MW installed against 900 MW demand (including 600 MW for mining sector)
Bas-Congo	Hydroelectric potential: 64,000 MW/annum with 44,000 MW (69%) from Inga alone Wind potential: No data Electrification rate: No data
Province Orientale	All sites identified represent a potential of 7200 MW Electrification rate: 3.6%
Kasai Oriental	Solar potential: 4.4 and 5.14 kWh/m ² /day Wind potential: No data Electrification rate: 0.5%
Kasai Occidental	Hydroelectric potential: 103 MW Solar potential: 5.16 kWh/m ² /day and 5.26 kWh/m ² /day Electrification rate: 1%
Nord Kivu	Hydroelectric potential: 240.3 MW Solar potential: 4 and 5.5 kWh/m ² /day Biomass potential: Can reach 76.583,74 MWh per annum Natural gas: 57,00 billion Nm ³ Electrification rate: 3.1%
Sud-Kivu	Hydroelectric potential: 1,050,00 MW Biomass potential: Can reach 109 878. 88 MWh/annum Natural gas potential: 57.00 billion Nm ³ Solar potential: 5 kWh/m ² /day Wind Potential: Under 5m/s Electrification rate: 7.9%
Maniema	Solar potential: Between 3.5 and 6.75 kWh/m ² /day Wind potential: No data Electrification rate: 3%
Bandundu	Hydroelectric potential: 104 MW Solar potential: Between 4.5 and 7 kWh/m ² /day Wind Potential: No data Electrification rate: 0.6%
Équateur	Solar potential: 5 and 5.5 kWh/m ² /day Biomass potential: The province accounts for about half of the country's forests. Electrification rate: 1.5%

Source: ANAPI (2016)

national energy deficit; (iv) weaknesses in governance of the sector; (v) poor knowledge about the country's mining potential; (vi) lack of a framework for the development of small-scale and artisanal mining exploitation; (vii) issues relating to the environmental and corporate social responsibility of mining companies; (viii)

configuration of the mining value chain and its implications; (ix) termination or reduction in the production of certain minerals; (x) lack of trained human resources; (xi) poor contribution to the state budget; (xii) the environmental consequences of abandoned sites and illegal activities; (xiii) the absence of real time strategic information for

Table 15. Volumes of mine production between 2005 and 2015 (1st semester)

Year	Copper (tons)	Cobalt (tons)	Zinc	Diamond (1000 carat)	Gold (kg)	Coltan (tons)	Cassiterite (tons)	Contribution of the sector to GDP (%)	Contribution of the sector to economic growth (%)
2005	28,462	16,242	15,110	35,207	2,244			10	
2006	98,585	15,384	33,784	28,949	254			11	27
2007	96,391	17,886	33,809	28,270	122			10	2
2008	335,066	42,487	15,318	20,953	150	630	19,189	10	14
2009	309,181	56,122	13,765	17,880	220	464	15,512	12	59
2010	497,537	83,873	10,362	16,963	178	279	16,963	18	114
2011	499,198	95,478	14994	18,598	414	383	18,598	21	64
2012	620,515	86,324	11571	21,755	2,813	586	18,981	22	29
2013	919,588	76,517	12,114	16,899	4,900	697	7,567	22	26
2014	1,030,129	75,560	12,737	16,699	23,937	1,217	7,186	24	45
2015	518,445	40,752	6,314	7,290	16,015	Not Available	Not Available	25	33
2016	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
2017	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
2018	1,225,227	109,402	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
2019	1,420,386	77,964	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Source: MINFINRDC (2016)

decision making; and (xiv) illegal administrative practices, including corruption, and their impact on the business environment.

The preamble of the 2018 Code states that “the boom of the mining sector, expected to bring back to the State substantial revenues for its economic and social development, did not meet these expectations.”

Measures have been announced to achieve the objectives of the 2018 Mining Code: (i) the Code excludes individuals from the business of mining, reserving the activity for mining companies; (ii) the Code increases state participation in the social capital of these mining companies; (iii) the Code provides incentives to provinces that face infrastructure deficits to allow their economic growth; (iv) the Code ensures mining companies contribute to the social improvement of neighboring communities; (v) the Code provides for the intervention of other sectoral ministries in mining decision making, due to the trans-sectoral nature of mining. Putting in place conditions to allow for intensive mining activities suggests that there will be more pressure on forest resources if law enforcement is not effective. For now, mining permits are concentrated in less forested areas. Changes in land use that correlate with mining activities are difficult to control, and reforestation after mining is not always undertaken by mining companies. It is not clear yet how effective the

new measures will be. However, the new Code will have consequences for the way REDD+ land uses interact with mining operations in forested areas.

4.5 Pressure from international demand

Developed countries are working hard to secure their supply of raw products. The DRC has a vast reservoir of natural resources, and must deal with multiple competing demands from international companies. Exports provide the DRC with the resources needed to achieve its development objectives. Dependence of the DRC on the international market remains relatively high, increasing from 11% in 2000 to 36% in 2013 (World Bank 2015). The mining sector (including oil), represents 90% of exports from the DRC (Direction Générale du Trésor 2020).

Most exported natural resources are directly exploited by foreign companies that are granted titles. Today, European companies compete with Chinese companies, with Chinese companies importing half the DRC's stocks of cobalt production in 2016. It is expected that China will continue investing in the DRC to secure the market (MINFINRDC 2016). The export value of mining products in the DRC has grown in recent years as data from 2005 to 2015 shows (Table 16).

Table 16. Value of mineral exports (million USD) from the DRC between 2005 and 2015

Year	Copper (in tons)	Cobalt (in tons)	Zinc	Diamond (1000 carat)	Gold (kg)	Coltan (In tons)	Cassiterite (in tons)	Total exports income
2005	118	585	21	1,158	0		0	1,882
2006	469	524	227	875	3		0	2,097
2007	2,040	2,310	111	828	4		18	5,310
2008	2,458	2,541	25	675	7		136	5,842
2009	1,649	1,710	31	234	6		113	3,743
2010	3,107	3,793	20	310	6		134	7,372
2011	4,103	3,693	42	365	10		134	8,347
2012	4,531	2,661	21	293	103		61	7,669
2013	7,938	1,964	23	207	185		70	10,387
2014	7,874	2,202	38	228	816		127	11,286
2015	2,748	1,223	11	109	479			4,570

Source: MINFINRDC (2016)

The generation of hydroelectric power also affects forest cover. The Inga 3 Dam project, named Grand Inga, began in 2009 with financial support from the African Development Bank and European Investment Bank. Feasibility studies are still ongoing. The project, meant to be the biggest hydroelectric generator in the world, will involve building a network of dams by 2025 to provide 40,000 MW of electricity. It will thus provide the equivalent of 40% of Africa's current electricity needs. The energy produced by the Grand Inga is meant to be distributed across Africa and potentially Europe (International Rivers 2019). There is no exhaustive information about the environmental impacts of both the dams and the project's transportation infrastructure, but environmentalists highlight the risks of population displacement, reduced forest cover and biodiversity loss (International Rivers 2019). Construction of Inga 3 could however bring in USD 749 million to the DRC (Beaulieu 2018), even before the energy is sold and related benefits collected.

International demand is also putting pressure on the forest resources. There is growing discourse about the 2002 moratorium. Some actors suggest that it has weakened the contribution of the wood sector to the national economy in the DRC. A recent debate regarding timber exportation, reported by Radio France International, discussed a National Investigation Agency interdiction on the export of unprocessed timber logs (Fages 2017). This interdiction did not comply with the 2002 Forest Code. The 2002 moratorium has reduced timber exports from the DRC, and it is expected that lifting this moratorium will increase timber demand from the international market. Recent developments in the DRC are marked by a failed attempt to reform the Forest Law, with the ultimate goal of lifting the moratorium on the allocation of new forest titles. Pressures on the DRC's forests are increased by Chinese companies trying to take hold of the mining, agriculture and forestry sectors. These pressures add to difficulties in the VPA–FLEGT negotiations between the DRC and European Union.

In summary, the biggest threat to forest cover is through its conversion to other land uses such as mining, agriculture and energy. Neglecting to consider these land uses may hinder successful

implementation of REDD+ in the country. When looking at the political economy of deforestation and forest degradation, there appear to be conflicting objectives between the REDD+ mechanism and sectoral policies that promote investment and economic development over biodiversity conservation and sustainable forest management. This highlights a lack of intersectoral coherence and coordination. This situation makes for challenges in the establishment and implementation of REDD+: for REDD+ to succeed in the DRC, considerable investment is needed in mining and the energy sector so as to change the energy profile of the country, as well as in the agriculture sector to encourage practices which contribute to REDD+ activities. These sectors do not fall under the responsibility of the Ministry in Charge of the Forestry Sector, and the present level of intersectoral cooperation and participation in REDD+ is insufficient to induce the needed changes.

4.6 Forest companies and corporate social responsibility

Forestry revenues for local and indigenous communities are not limited to those from community forestry. The development of local and indigenous communities also depends on the contribution of forestry companies, through negotiated corporate social responsibility investments that directly benefit nearby communities. The 2002 Forest Law, Article 89 outlines “a special clause relating to the construction of socioeconomic infrastructures for the benefit of the local communities, especially: i) construction, road development; ii) repair, equipment of sanitary and school facilities; and iii) facilities for the transport of persons and goods.” The practicalities of this clause are specified in Article 17 of Ministerial Order 036/CAB/MIN/ECN-EF/06 of 05 October 2006, which lays down procedures for drawing up, approving and implementing management plans for timber forest concessions. The text states that the concessionaire must consult local communities, with a view to reaching an agreement on the specifics of the social obligations, or other elements of the management plan that directly concern the local population.

Such a clause is important for people-centered forest governance. When implementation conditions are fulfilled, it allows a more equal relationship between forest concessionaires and communities bordering exploited titles. A study

carried out by Tsanga et al. (2020), which looked at 19 forest concessions, highlighted an absence of conflicts relating to forest companies' compliance with the social obligations set out in the 2002 Forest Law.

5 The REDD+ policy environment: Actors, events and political processes

A decade after the DRC committed to REDD+, REDD+ implementation has tested the country's capacity to reinvent natural resource management policy. It is particularly challenging to coordinate the actions of diverse actors, from national to local level, on complex issues in a country marked by political instability.

5.1 REDD+ actors, events and political processes

5.1.1 REDD+ governance structure

According to the 2009 Prime Minister's Decree No. 09/40 of 26 November 2009 on REDD+ in the DRC, implementing structures for REDD+ in the DRC include the following:

- A National Committee composed of 14 members, presided over by the General Secretary of the Ministry in Charge of Environment, which includes forests. Apart from the president's representative and the prime minister's cabinet, only three ministries are represented in this Committee: MEDD, which is in charge of environment and forests; the Ministry of Agriculture; and the Ministry in Charge of Decentralization. It also includes representatives of CSOs, research NGOs, international businesses (the Wood Industry Federation, *Fédération des Industriels du Bois*, FIB), national businesses (the Congo Federation of Businesses, *Fédération des Entreprises du Congo*, FEC) and the National Institute for Agricultural Research (INERA). The role of this National Committee is to define REDD+ orientations and decide on actions to be implemented. It also approves the working plan of the Inter-ministerial Committee and national REDD+ coordination. It puts in place the national REDD+ fund and defines the management options.

- An Inter-ministerial Committee, consisting of the ministries in charge of the environment, agriculture, land tenure, urbanization, rural development, land-use planning, finance, mining and energy. Together they plan implementation of the National Committee's decisions and share responsibilities. This Committee is also in charge of identifying and recruiting national and international expertise for the successful implementation of REDD+.
- The National Coordination team, which is headed by a National REDD+ coordinator. Their role is to manage REDD+ on a daily basis, formulate propositions for experts and recruit as necessary. They coordinate the process and ensure coherence with other existing initiatives and donors to facilitate a participative approach to the REDD+ process.

The same 2009 Decree places REDD+ in the DRC under the Ministry in Charge of Environment and Sustainable Development, primarily under the Division of Sustainable Development (DDD). Under the DDD, the national REDD+ coordination is structured as in Figure 7.

The financial mechanics of REDD+ in the DRC is built around the National REDD+ Fund, which is part of the National REDD+ Strategy. Under the Ministry in Charge of Finance, this fund channels REDD+ investments, payments for environmental services and financial resources from REDD+ carbon credits. The structure of the Fund is as presented in Figure 8.

5.1.2 REDD+ actors

Nationally, REDD+ policy in the DRC involves various groups of actors:

The DRC government. Close to 20 ministries participate in the REDD+ mechanism, led by MEDD. Thirty thematic working groups have

Figure 7. Decentralized structure of national REDD+ coordination in the DRC

Figure 8. The management and governance structure on the National REDD+ Fund

Source: GoDRC 2012

been established with responsibility for making analyses and proposing practical measures that can contribute toward the national REDD+ strategy. These groups are multi-stakeholder initiatives, supervised by ministry representatives. They ensure that their proposals are in line with the government's directives for each ministry concerned. Table 17 lists the ministries involved.

Although these ministries are part of thematic working groups, their specific role as far as REDD+ is concerned remains unclear, as no framework, including the National REDD+ Framework Strategy, gives a clear indication. These thematic working groups are an innovation in the policy environment. They seek consensus about the National REDD+ Strategy through a consultative process where stakeholders discuss and formulate norms and recommendations that can only be challenged via the same consensual process. This platform was established with the intention of building trust among actors in the policy domain.

MEDD oversees REDD+ activities in the DRC via the General Secretary for the Ministry in Charge of Environment and the National REDD+

Coordination. However, coordinating government action remains challenging as far as REDD+ is concerned. These challenges have increased more recently; the legitimacy of the National REDD+ Coordination in overseeing REDD+ daily activities is questioned by the REDD+ community, and the Minister in Charge of Environment rarely intervenes. The change in government has led to changes in both government structures and individuals. It is hoped that the newly-appointed government will be able to collaborate with the coalitions set up by the former president to meet REDD+ objectives.

Civil society. Civil society involvement in REDD+ has undergone many transformations over the years. Representatives were originally involved in the Climate-REDD Working Group (RCWG), which has now evolved to become the Renewed Climate-REDD Working Group. The group aims to structure and support CSO participation in REDD+ and the country's negotiations on climate change, as well as to monitor compliance with international and national REDD+ models (Mpoyi et al. 2013). There are many influential civil society networks in the DRC; these include networks of

Table 17. Ministries involved in REDD+

No.	Ministries
1	Ministry of the Environment and Sustainable Development
2	Ministry of Planning
3	Ministry of Agriculture, Fishery and Livestock
4	Ministry of Finance
5	Ministry of Budget
6	Ministry of Land Affairs
7	Ministry of Transport and Communications
8	Ministry of Social Affairs
9	Ministry of Mines
10	Ministry of the Interior
11	Ministry of Commerce and Small- and Medium-Sized Enterprises
12	Ministry of Industry
13	Ministry of Urbanism and Habitat
14	Ministry of the Economy
15	Ministry of Decentralization and Territorial Organization
16	Ministry of Public Service
17	Ministry for Scientific Research
18	Ministry of Gender, Family and Children
19	Ministry for Rural Development

indigenous peoples, which are distinct from other CSO networks. The Network of Indigenous and Local Populations for the Sustainable Management of Forest Ecosystems in the DRC (*Réseau des Populations Autochtones et Locales pour la Gestion Durable des Écosystèmes Forestiers en RDC*, REPALF) represents indigenous organizations in the face of the government, as far as REDD+ is concerned.

Civil society dynamics are not challenge free. Conflicts around finances remain at the center of many observed disagreements, including those that split the RCWG. Similarly, as Kabamba (2017) highlights, civil society in the DRC is characterized by the rapid proliferation of new organizations, which is a clear obstacle to any attempt to coordinate action throughout a territory as vast as the DRC. However, networks of indigenous peoples' organizations – like REPALF and the National League of Associations for the Indigenous Pygmy of Congo (*Ligue Nationale des Associations*

des Autochtones Pygmées du Congo, LYNAPICO) – mobilize their own funding. Since 2013, REPALF has received USD 2 million from the World Bank through VERITAS, an organization which represents REPALF because they lack proof of their financial capacity to manage such significant financial resources.

Financial partners. In its early phases, REDD+ in the DRC benefited from the financial support of the United Nations-REDD Programme (UN-REDD+) via specialized institutions working closely with the World Bank and Forest Carbon Partnership Facility (FCPF); these institutions included the UNDP, the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP). The main donor at this stage was the Norwegian Government. Today, CAFI funding of USD 200 million is the main resource supporting REDD+ in the DRC. Many organizations, such as the WWF, working in the field have their own funding sources that are additional to the official support to the government.

The emergence of other financial partners. In the investment phase of REDD+, certain financial partners like the UNDP emerged to support the implementation of projects to test tools developed by the National REDD+ Coordination, under the National REDD+ Framework Strategy. Six governments provided financial support in the REDD+ investment phase in the DRC, under the CAFI initiative: this totaled totaling USD 200 million, which comprised of USD 190 million through the Fund's financial mechanism, and USD 10 million of additional financing, including USD 4 million from the French Development Agency (AFD). Of the back of this, CAFI supports eight integrated REDD+ projects in the provinces of Mai Ndombe, Kwilu, South Ubangi, Équateur, Mongala, Bas Uele, Tshopo and Ituri (FONAREDD 2018).

The main role of UN agencies. The role of UN agencies in REDD+ in the DRC has changed over time. From having an extensive role in the early phase of the process, these bodies are less visible in the policy arena today. Since 2015, the FAO, UNDP, UN-Habitat and the World Bank have been the main fiduciary units of CAFI funds, as previously described.

Technical partners. This category mainly includes international NGOs, and national and international research organizations. Some are based in the DRC and some work remotely. Although previously there were numerous actors specifically focused on REDD+, their interventions are now less visible. Only organizations such as the WWF, WRI, Central Africa Forest Satellite Observatory (*Observatoire Satellital des Forêts d'Afrique Centrale*, OSFAC) and JICA/JAFTA are still heavily involved in producing forest cover maps and other types of land-use data, or helping to revise the REDD+ homologation decree in the case of WRI. Research institutions, such as CIFOR, are carrying out research on REDD+ at both national and project level, as well as provide scientific analysis of the process. Work from national research institutions on REDD+ is less visible.

Private sector. During the REDD+ preparation phase, two industrial corporations were involved in REDD+: the Wood Industry Federation (FIB) and the Congo Federation of Businesses (FEC). However, as the process moved on, these actors did not invest in REDD+ as expected. Only Ecosystem Restoration Associates Inc. (ERA-Congo), a subsidiary of Wildlife Works Carbon (WWC), have invested in a REDD+ project. WWC is specialized in investing in the carbon market, but it is not a company with the same profile as the companies represented by the FIB and FEC.

5.1.3 Main events

The DRC initially planned its REDD+ calendar in four phases (Figure 9). These phases were aimed at achieving coordination, providing overall supervision, education, information, communication and consultations, mobilizing communities and implementing REDD+. The DRC has now completed the phases of initialization (Phase 0) and readiness preparation

(Phase 1), and is anticipating Phase 2, the investment phase, with implementation of the Mai-Ndombe Jurisdictional REDD+ Project, validated by the FCPF in 2016.

5.1.3.1 Events in the initialization phase (2009–2012)

See Table 18.

5.1.3.2 Events in the readiness phase (2010–mid-2012)

See Table 19.

The REDD+ preparation phase in the DRC was supposed to lead to the design of a set of tools to support REDD+ implementation (Kabengele 2017). Some of these tools have been completed: the National REDD+ Fund, the Forest Investment Plan, and the National Forest Emission Reference Level document. However, other tools are incomplete, because the National REDD+ Coordination, which is overseeing development, lacks funding. This is the case for the safeguard information system, the national REDD+ registry, the national forest monitoring system, the complaint and grievance mechanism, the benefit-sharing mechanism, the social and environmental safeguards and the final national REDD+ strategy. Currently, the country is operating with a National REDD+ Framework Strategy.

5.1.3.3 Events in the investment phase (2011–2015)

The investment phase was initially planned for 2011–2015. However, the process which began with the two missions presented in Table 20, was extended beyond the two-phase process anticipated. The first phase was a joint Forest Investment Program (FIP) mission between 2011 and 2013. The second phase, between

Figure 9. Calendar for the REDD+ process in DRC

Source: National REDD+ Coordination in Mpoyi et al. (2013)

Table 18. Events in the REDD+ initialization phase

Event	Date	Objectives	Participants
First joint UN-REDD/World Bank mission	January 2009	Exploratory mission for launching REDD+ in the DRC	UN-REDD, World Bank, FAO, UNEP, FCPF
First financial allocation	May 2009	USD 1,883,200 to: <ul style="list-style-type: none"> • install and structure stakeholders • produce a REDD+ readiness preparation plan • build capacity and establish the technical phases of REDD+ 	UN-REDD+, FCPF
Establishment of the REDD National Coordination	May 2009	With the aim of overseeing the daily activities of REDD+ in the DRC and report to the DDD	UN-REDD, MECNT
National education, training and information campaign	August 2009–March 2012	Nationwide education and information campaign in five (former) provinces: Orientale (Kisangani), South Kivu (Bukavu), Bas-Congo (Matadi), Katanga (Lubumbashi), Équateur (Mbandaka)	
Readiness Preparation Proposal (R-PP) pre-validation and validation workshops	February 2010	<ul style="list-style-type: none"> • Formulating R-PP • Pre-validating R-PP for implementation in the next three years 	All stakeholders
R-PP finalization, approval and publication	March 2010	<ul style="list-style-type: none"> • R-PP approval by the UN-REDD+ policy board and FCPF participant committee • R-PP published on 15 July 2010 	All stakeholders

Source: Adapted from Mpoyi et al. (2013)

Table 19. Events in the REDD+ readiness phase

Event	Date	Objective	Key stakeholders
Studies		<ul style="list-style-type: none"> • Studies on drivers of deforestation and forest degradation • Study on the potential for REDD+ in the DRC • Feedback on experiences, to find suitable alternatives to deforestation and forest degradation that can alleviate poverty • Socio-environmental standards in REDD+ projects • Analysis of sectoral programs • Framework for benefit sharing • Carbon regulation 	Overseen by the National REDD+ Coordination
Experiments	27 June–1 July 2010	<ul style="list-style-type: none"> • Generate data to inform the design of the National REDD+ strategy • Launch of the sectoral pilot projects • Launch of the integrated regional pilot projects 	AfDB, FFBC, National REDD+ Coordination Other stakeholders
Second joint UN-REDD/World Bank mission	18–25 May 2009	<ul style="list-style-type: none"> • Provide support for the launching of UN-REDD+ and FCPF programs • Update of the 2009–2010 REDD+ work plan • Implementation mechanisms of the UN-REDD program and update of the REDD+ process 	UN-REDD, FAO, UNDP, UNEP, FCPF, Congo Basin Forest Fund (CBFF), AfDB
Launching Phase 2 of the UN-REDD program	June 2010	<ul style="list-style-type: none"> • Launch the Phase 2 of the UN-REDD 2.5-year program • Six projects launched: South Kivu, Luki Reserve, Isangi, Mambasa, Maringa-Lopori, North Kivu 	NOVACEL/SPRL, UN-REDD, WWF, OCEAN, Wildlife Conservation Society (WCS), AWF

Source: Adapted from Mpoyi et al. (2013)

Table 20. Events in the investment phase

Event	Date	Objective	Key stakeholders
First joint FIP mission	21–27 February 2011	<ul style="list-style-type: none"> • Scoping mission to enter into discussions with the government and main stakeholders • Plan preparatory activities • Discuss FIP program activities • Align FIP with REDD+ readiness activities • Identify types of activities for FIP • Formulate Terms of Reference for the join mission 	Norway and CBFF representing the multilateral development banks Observers UN-REDD+, government, Other stakeholders.
Second joint FIP mission	9–13 June 2011	<ul style="list-style-type: none"> • Assist the DRC in preparing the FIP investment strategy • Examine how far scoping mission recommendations had been implemented • Examine and discuss the early draft of the investment strategy • Discuss FIP financial conditions and the role of the private sector and National REDD+ Fund in the program implementation • Discuss expectations from the FIP investment strategy with stakeholders, including CSOs and indigenous peoples • Discuss the monitoring of the FIP investment strategy and program • Discuss the vision of the REDD+ National Committee and REDD+ Inter-ministerial Committee • Field visit to the Ibi Batéké afforestation project 	All stakeholders

Source: Adapted from Mpoyi et al. (2013)

2014 and 2017, targeted implementation of measures to address the drivers of deforestation and forest degradation.

REDD+ has resulted in the ongoing implementation of investment projects to tackle direct and indirect drivers of deforestation and forest degradation in the DRC. These investments include sectoral projects with a national footprint, and integrated projects at province level. In both cases, they focus on land-use planning to sustainably manage forest resources and reduce poverty. The discovery of large swamp areas in the DRC could change perspectives. The DRC, Congo and Indonesia have launched the International Tropical Peatland Center, based in Indonesia. A National Peatland Coordination was established by the Ministry of Environment to coordinate all peatland-related activities. A national road map on peatland was developed, but still needs to be implemented.

Funding for this phase is USD 60 million under Forest Investment Program (FIP); USD 200 million under CAFI; and USD 6 million under The Dedicated Grant Mechanism for Indigenous

Peoples and Local Communities (DGM) (Kabengele 2017). As of the end of 2019, this investment phase is ongoing and results from the field are still expected. Reasons this phase has not been completed include issues relating to the coordination of governmental action, and a lack of available study results from the National REDD+ Coordination, needed to complete the required REDD+ tools so the DRC can move from a National Framework REDD+ Strategy to a full National REDD+ Strategy.

5.1.3.4 Result-based payment phase

The result-based payment phase is where actors' efforts to reduce emissions from deforestation and forest degradation are rewarded. The position of the DRC government in this respect is that carbon is not a royalty but the result of action measured, notified and verified. For the 2018–2019 phase, payments are based on performance recorded in Certified Emissions Reduction Units, issued with reference to a baseline emission level. Carbon credits are thus negotiated on a specifically identified market. The forward-looking payments will come from the World Bank's Carbon Fund

and the regulated or free market. It is expected that, for the period 2018-2020, a profit-sharing plan will be designed, which also considers non-carbon benefits. Private-sector investors' share of these benefits is capped at 25% under the DRC's Emission Reductions Payment Agreement (ERPA), but this will not be the case for all projects. A complaints and grievance mechanism is also planned, which will be backed by a National REDD+ Registry (Kabengele 2017).

5.2 Participation in and access to REDD+ information

Participation in REDD+ in the DRC is organized to ensure both governmental and non-governmental actors are consulted on the various phases of the process. Participation has evolved over time and a comprehensive assessment of participation in REDD+ related events across the whole territory is not possible. However, after the Readiness Plan Idea Note (R-PIN) was designed without the consultation of stakeholders (Mpoyi et al. 2013), stakeholder participation in all REDD+ decision-making stages has been made a key condition for the validation of early phase documents, such as the R-PP, the National REDD+ Framework Strategy and the idea notes of sector-based and integrated projects testing REDD+ options. As such, ensuring a consultative process is largely dictated by the need to comply with the international requirements of environmental democracy. Globally, there has been an increase of stakeholder participation in national REDD+ events (Kengoum 2019). Two concerns remain, however: the efficacy of this participation; and access to REDD+ information by actors. In the current situation there are four scenarios for information sharing: (1) information exists but is not always accessible to most actors; (2) information does not exist and needs to be produced, e.g. socio-anthropological data, statistics, studies; (3) there is inconsistency in access to information; and (4) mechanisms to access information are neither effective nor efficient, and there is no transparent system for disseminating information. Participation is a big challenge in a country where the State has always excluded actors like CSOs from policy making (Mpoyi et al. 2013).

Since validation of the National REDD+ Framework Strategy, it has been noted that although processes are now participative, many actor groups show insufficient capacity to effectively contribute to policy making.

CSOs and indigenous organizations primarily participate in the REDD+ process through two networks: the RCWG, created in 2009, and the more established REPALEF. These two bodies were each granted via the CAFI initiative USD 2 million to build the institutional and organizational capacity of their networks. Key outcomes of their participation, as reported by Grounded and Ndobe (2013) and UNDP-RFN (2018), include their bringing important issues into the REDD+ policy debate, from tenure rights for local and indigenous communities, to participatory land-use planning, community land management and good governance. Four challenges still face civil society in its participation in REDD+, however:

- the diversity of civil society both at national and province levels, and the subsequent need to build capacity;
- a lack of clear vision and objectives for civil society's participation in the process of defining policy options, for example during development of the R-PP and the National Strategy, as well as during strategic studies like on the drivers of deforestation;
- weak governance, as seen through all meetings being held in Kinshasa, for example, which left organizations from the inner provinces feeling excluded from the process.
- lack of technical capacity and poor communication, with the existence of two networks making report coordination even more difficult.

A lack of financial autonomy and insufficient funding from independent sources seem to be the underlying reasons for most of these shortcomings. This is the major factor diverting the considerable existing expertise away from national CSOs toward international NGOs and other institutions, which offer more attractive remuneration. The USD 2 million that was granted to RCWG and REPALEF for institutional and organizational capacity building of their networks is expected to help overcome these challenges as the capacity building programs are still underway.

5.3 Future options for REDD+ policies and processes

Preparation of the DRC's National REDD+ Strategy, initiated in 2012 following endorsement of the REDD+ Framework Strategy, is conditional on all the activities described above being successfully implemented. These activities are expected to generate the information needed to develop the REDD+ policy options. In the absence of a finalized strategy paper, the different already documents produced on the various aspects of REDD+ outline future options for REDD+ policies and processes. Here we outline these policies and processes using the following categories: eligible activities, funding options, monitoring systems, benefit sharing, participation mechanisms and institutional arrangements.

5.3.1 REDD+ eligible activities

The National REDD+ Framework Strategy was endorsed in November 2012 as part of the DRC's Development Strategy. It is built on seven intervention pillars that address the drivers of deforestation and forest degradation: governance, land tenure, energy, demography, forests, agriculture and territory development planning (Table 21).

Pilot programs are implemented to test certain activities at scale. They aim to provide information and feedback to enrich the strategy on specific issues. The DRC FIP outlines some priority intervention zones. A total of eight integrated programs are now being implemented throughout the DRC, in Maï-Ndombe, Kwilu, Ituri, Bas Uele, Tshopo, South Ubangi, Mongala and Équateur. These are an integral part of the programming cycle approved in 2016 by the National REDD+ Steering Committee.

5.3.2 Funding REDD+

The DRC has developed a REDD+ Investment Plan. The first edition of this plan covered 2013–2016 with a primary aim of resourcing the fund. The country has now committed to several financing mechanisms to realize its REDD+ potential. Provincial-level integrated REDD+ programs were endorsed in 2013, and the Investment Plan was revised earlier in 2015 to serve as a programmatic framework for REDD+ investments in the DRC. The primary objective of the investment plan is now to invest USD 1 billion during 2016–2020, through a 'portfolio' approach to implementation, which will resource both national sector-based programs and integrated sub-national programs. A fundamental characteristic

Table 21. REDD+ strategy pillars and their objectives

Pillars	Pillar objectives
1. Agriculture	Reduce the impact of agriculture on the forest, while contributing to food security and making agriculture a pillar of the DRC's economic growth.
2. Energy	Reduce the contribution of unsustainably produced fuelwood, while continuing to respond to the national energy demand.
3. Forest	Sustainably manage forests to respond to the timber product demands of domestic, regional and international markets, while minimizing the impact on the ecosystem services provided by these forests.
4. Governance	Ensure good governance of the REDD+ process for an effective, cross-cutting, transparent, responsible, pragmatic, equitable and sustainable REDD+ that is based on results, information, consultation, appropriation and participation of all stakeholders.
5. Demography	Control the high rate of population growth to reduce pressure on forest ecosystems and actively contribute to national economic and sustainable development.
6. Land-use Planning	Promote an intersectoral land-use plan and design population activities, equipment and communication plans to effectively contribute to sustainable development with reduced impact on forests.
7. Land tenure	Support the coordination of policy design and implementation and land access security to attract REDD+ investments and contribute to permanent reduced emissions for all stakeholders, including project stakeholders and rural households.

of REDD+ funding in the DRC is that it is dominated by international grants. Domestic resources have been particularly scarce in previous phases (Johns 2015). To date, most funding has been concentrated on preparedness and investment activities, to prepare the strategy papers that will facilitate the REDD+ mechanism becoming established across its various levels of intervention.

The main funding partners for REDD+ in the DRC are the CBFF, FCPF, UN-REDD Program, European Union and the Forest Investment Program, as well as CAFI in later phases of the national process to establish REDD+. NOVACEL and WWF also provided funding for their on-site activities.

CAFI was launched on 19 September 2015, in a side meeting of the United Nations General Assembly. Its aim was to support six Congo Basin forest countries, including the DRC, to act on the drivers of deforestation in an integrated and cross-cutting way. CAFI funding supports a National Investment Plan, carried out by a government entity in charge of the coordination of funding and reforms. CAFI's commitment in the DRC is USD 200 million: USD 190 million through the National REDD+ Fund and USD 10 million through additional financing. The first payment of USD 120 million had been made by 31 December 2018. However, the second share has not yet been disbursed because it is subject to the mid-term evaluation of activities financed by the first payment. The secured resources were divided into 15 programs, approved in 2016 by the REDD+ National Steering Committee (Table 22).

The National REDD+ Fund (FONAREDD+) oversees the financial aspects of REDD+ implementation in the DRC with the functions of: mobilizing and collating the different sources of funding; coordinating and ensuring transparency and national ownership; and preparing the country to access the Green Climate Fund. Funds mainly support stakeholder involvement, clarification of tenure rights, safeguards, the planning of forest carbon projects, and improved forest and land governance (Mbot'ekola and Michel 2015).

However, given the current governance context, donors, and more specifically CAFI, have chosen a different financing model, which is based on financial resources being managed by United Nations agencies. Contracts are awarded after a call to tender for the implementation of

Table 22. Funding portfolio already planned by the Central African Forest Initiative (CAFI)

Calls to tender	Programs	Amount (million USD)
CT 1	Integrated program – Mai-Ndombe	30
	Integrated program – Kwilu	5
	Integrated program – Ituri	15
	Integrated program – Bas Uele	12
	Integrated program – Tshopo	6
	Integrated program – Sud Ubangui	7
	Integrated program – Mongala	7
	Integrated program – Équateur	6
CT 2	Sustainable management of agriculture	3
CT 3	National forest monitoring system	10
CT 4	Sustainable management of forest	12
CT 5	Land planning reform	14
CT 6	Land tenure reform	3
CT 7	Civil society	2
CT 8	Indigenous peoples	1.6
Total across the portfolio		122.6

Source: Kabengele (2017)

integrated REDD+ projects, and recruited agencies are awarded the financial resources that they manage. The National REDD+ Fund oversees procedures for the selection of the projects and approves payments before they are disbursed to the beneficiaries. This is the model chosen for the management of the USD 200 million allocated by CAFI to the DRC. As of June 2017, a total of nine programs were being implemented, with funds managed by contracted UN agencies (Table 23). The Ministry of Finance, which coordinates FONAREDD+, does not manage its financial resources. Despite these advances, defining strategies to mobilize the private sector and other donors remains difficult, and it is challenging to identify alternative funding for FONAREDD+. The involvement of Active Women for Sustainable Development (*Femme Active pour le Développement*, FAD), private investments and indirect financing were expected, but these sources now appear to be slow to commit.

5.3.3 The MRV system

Monitoring, reporting and verification (MRV) are key conditions both for the evaluation of performance and for future payments. A robust but flexible system at both national and sub-national levels is a condition for an effective REDD+, and the definition of a reference level is key to this.

The DRC proposed an MRV action plan for 2015–2018, with the objective of providing details of the activities the country intends to develop within the framework of its National Forest Monitoring System, following IPCC recommendations for REDD+. This monitoring system is based on five pillars (Figure 10).

Feeding into the DRC's National Forest Monitoring System, the National GHG Inventory will combine forest soil monitoring data and a national carbon forest inventory. The National GHG Inventory for the 'Agriculture, Forestry and Other Land Uses' sector will follow the reporting requirements of UNFCCC Annex 1. To support sub-national implementation, a 'wall-to-wall' operating system based on remote-sensing satellite data will be put in place. The National GHG Inventory will be integrated with a community-level inventory (Kayembe 2017). Finally, to enable verification and transparency, results and data will be distributed using a dedicated web portal.

There is a clear link between the National Forest Monitoring System and the GHG inventory. The National Forest Monitoring System covers

MRV activities within REDD+ projects; however, these activities can be linked to the National GHG Inventory, which includes emissions and absorptions from the forest and other sectors.

The UNFCCC did not clearly differentiate between the concepts of 'Forest Reference Emission Level' (FREL) and 'Forest Reference Levels' (FRL); the DRC initially felt FREL was a better measure to focus solely on REDD, as it integrates all REDD+ activities. As such, in January 2018, the DRC submitted a national document to the UNFCCC on its FREL; a level from which the DRC's future emissions reductions from deforestation would be calculated. This document was developed by DIAF, with technical support from FAO, JICA and WCS among other partners.

The FREL is the result of the cross-fertilization of three tools: the satellite land monitoring system, the National Forest Inventory, and the National GHG Inventory. Although due to a lack of comprehensive data this national document does not include forest degradation, it is complete and operational on deforestation. The year 2000 is taken as reference year because of the availability of converging data on deforestation; this year is also chosen by the DRC as the reference year for the NDC. Carbon dioxide (CO₂) is the only GHG retained within the framework of this first reference level document, in which an operational definition for 'forest' is proposed. Sovereign data from aerial and biomass surveys was used in the calculation of the CO₂ emissions and absorptions (MEDD 2018).

Table 23. Programs approved by the REDD+ National Steering Committee as of June 2017

No.	Programs	Amount planned	Amount disbursed	Contracted UN agency
1	Integrated program – Mai-Ndombe	30,000,000	20,000,000	World Bank
2	Integrated program – Orientale	33,000,000	0	UNDP
3	Integrated program – Sud Ubangui	7,000,000	4,000,000	World Bank
4	National forest monitoring system	10,000,000	6,001,241	World Food Organization
5	Land planning reform	4,000,000	3,000,000	UNDP
6	Land tenure reform	3,000,000	3,000,000	ONU-HABITAT
7	Civil society	2,000,000	1,101,970	UNDP
8	Indigenous peoples	2,000,000	1,000,000	World Bank
9	FONAREDD secretariat	6,400,000	1,588,210	UNDP
Total planned and disbursed as of June 2017		97,400,000	39,691,421	

Source: Kabengele 2017

Figure 10. Five pillars of the DRC's national forest monitoring system

Source: Kayembe (2017)

Based on the extrapolated data, the DRC's FREL is estimated at 1042 MtCO₂e for 2015, 1113 MtCO₂e for 2016, and 1184 MtCO₂e for 2017. It is then projected at 1255 MtCO₂e for 2018 and 1,326 MtCO₂e for 2019 (MEDD 2018).

It is difficult to confirm the projections given in the FREL, as differences in contexts and methodological considerations could influence some indicators used in the calculation. To address this, the FREL will be revised in the medium term to: (1) reduce errors around activity data; (2) increase the number of plots to improve biomass estimates by forest layer; (3) integrate other reservoirs such as litter, dead wood and soil organic carbon; and (4) explore the possibility of integrating forest degradation (MEDD 2018). National experts in this process, including DIAF staff within the MEDD, have benefited from numerous training sessions. The ongoing support of technical and financial partners is essential, however, given the high technology costs involved and the low level of national funding for REDD+.

Provincial-level use of the MRV system is currently weak. Many projects (mainly CAFI-integrated projects) are implemented at provincial level, but several relating to reducing deforestation are

not integrated into a provincial MRV system. With the current creation of new provinces, a new administration system will be needed to monitor forest resources. A big challenge for the DRC is thus gradually putting in place provincial institutions that can feed into the MRV system, either contributing to the national system directly or monitoring forest resources and GHG flux at provincial level.

Another important aspect in terms of the sustainability of the MRV system is how to strengthen universities' capacity to contribute to the MRV process. The University of Kisangani, for example, is working with FAO to generate MRV information. However, the country needs to strengthen links between universities and the national institutions in charge of the MRV so they can be useful, for example, in assessing peatland areas: the University of Kisangani and the University of Kinshasa are currently working on mapping the extent of the peatland coverage.

5.3.4 Benefit sharing

The DRC has not yet defined a consensual mechanism for sharing revenue from the implementation of REDD+. It is expected that

such a mechanism will be based on experiences and lessons learned from the country's integrated REDD+ programs. Once fully implemented, the Mai-Ndombe REDD+ Project, for example, will provide insight into future options.

One potential benefit-sharing plan was discussed during a participatory consultation held in Kinshasa on 25 January 2017. The revenue-sharing mechanism proposed is largely influenced by the nature of the funding it receives, which comes from public sources (PIF, CAFI), private sector and the FCPF Carbon Fund. This revenue-sharing plan foresees that a certain amount will be reinvested into the activities of the Mai-Ndombe program, while another portion will be redistributed among the project's various beneficiaries. The involvement of the World Bank, which wishes to buy part of the reduced emissions so that their revenues also benefit local and indigenous communities, justifies a 25% cap on the share allocated to holders of large-scale private projects (Kabengele 2017). Payments will be made in both cash and in-kind carbon credits, and only actors whose activities are implemented to the social and environmental standards of REDD+, will be entitled to benefits. In-kind carbon credit payments to private project sponsors could be freely marketed on available markets/platforms.

Several points still need to be clarified in this REDD+ benefit-sharing mechanism (Mpoyi et al. 2013): (1) clear definition is needed on the legal status and ownership of carbon, especially forest carbon; (2) stakeholders in REDD+ projects and initiatives must be identified; (3) nonmaterial contributions, and their incorporation in the project cost, should be assessed; (4) the definition of distributable REDD+ revenue needs to be clarified; and (5) ways are needed to transfer benefits to the communities, so as to have a positive impact, reduce negative effects and avoid elite capture. Discussions on national REDD+ benefit-sharing options are ongoing. Projects are still lagging and have not delivered the data needed to design options that integrate the various situations faced by the country.

The FCPF's methodological framework provides guidelines and requirements for effective and equitable performance-based payments for REDD+. Each pilot project should include a benefit-sharing plan; transparency and

participation; the acknowledgment of the regulatory framework; and incorporation of non-carbon benefits (Donteville 2014). The Mai-Ndombe REDD+ Jurisdictional Project meets with these requirements. In the Emission Reduction Project Idea Note, the agreed principles were to use FPIC and transparency, to base payments on performance, to stratify REDD+ revenues, to take into account previous contractual arrangements, to allocate revenues to direct and indirect drivers of deforestation and to anticipate (ex-ante) payments. As the key critical issue to be tackled in designing an effective, efficient and equitable REDD+ benefit-sharing mechanism in the DRC, Donteville (2014) highlights the costs and benefits for each stakeholder in each strata and scenario, including for under- and over-performance; the balance between performance and financing enabling activities; and taking into account existing benefit-sharing arrangements. She suggests that local development funds are a social obligation of companies within the framework, and should be included in the forest management plan. Local development funds should be considered for channeling benefits to local communities as: they are the most advanced benefit-sharing mechanisms; they are managed by a multi-stakeholder committee; they link various levels of governance; they are entitled to receive other sources of funding; and they have been tested. They thus provide a bottom-up approach to developing the REDD+ benefit-sharing mechanism.

The 2018 World Bank appraisal report of the Mai-Ndombe Emission Reduction Program stressed that the benefit-sharing mechanism legal framework is dependent on the Ministerial Homologation Decree for REDD+ projects. The report describes how this benefit-sharing mechanism is based on the Local Development Fund scheme, and identifies three categories of beneficiaries: (1) institutions involved in governing the Emission Reduction Program (ERP), such as national and provincial governments, and national and decentralized institutions; (2) local communities and Indigenous Peoples; and (3) the private sector. There are two forms of payment: those independent of performance, and those that are performance based. The benefit-sharing mechanism is established as a distinct institution within the jurisdictional program, reflecting its origins in the Local Development Fund.

From a legal perspective, there is little information or visibility on how carbon markets revenues, including those from REDD+, will be shared. Discussions are ongoing. The REDD+ Procedures Manual for the Approval of REDD+ Projects, established through Order No. 004 of 15 February 2012, is under revision by the National REDD+ Coordination to include observations from CSOs. This revision is benefiting from technical support from the Council for Environmental Defense through Legality and Traceability, a CSO, and the WRI, an international research institute. The revised version will indicate the minimum social standards required from project operators for their projects to qualify for national approval, as well as include benefit sharing.

In conclusion, the result-based payment element of REDD+ has not yet been implemented, and there is no evidence that this will be possible in the near future given the current political conditions, marked by power transitions and governmental debate as political parties divide into new coalitions.

5.3.5 Proposed participatory mechanisms

As already highlighted, the governance structure for REDD+ must ensure the participation of all stakeholders. The main challenge for effective participation in the DRC is decentralization of the process to the provinces, and therefore ensuring effective participation of all stakeholders in the field. The configuration of ministries at provincial level is totally different from that at national level, and an understanding of how responsibilities are distributed is key to ensuring all actors participate. Yet the National REDD+ Coordination, in charge of overseeing the process, lacks decentralized units in all provinces. Some provincial coordinators have been appointed, but not all provinces have a coordinator. No policy options for participation have been developed and tested at scale as yet, and experiences from ongoing field projects have not been assessed. The main consensus, for the moment, is about the importance of free, prior and informed consent for the participation of local and indigenous communities. A framework for the FPIC in REDD+ in the DRC has been developed by the National REDD+ Coordination, and was validated in 2015. It provides a 13-step process document submitted to the FCPF. However, according to REDD+ actors participating in the

national consultation workshop, the participation of sectoral agencies at province level is a key issue that remains to be solved.

5.3.6 Policies and institutions

Many sectoral reforms have been initiated with the objective of aligning sectors that have an impact on forest cover with REDD+. These reforms do not involve all areas of land use, or all those that directly affect the use of wood resources. Some reforms that have been completed, while some are underway or under consideration. This section assesses their implications for policy coherence and actions targeting reduced forest emissions in the DRC.

Major sectoral reforms are key to achieving REDD+ and these have been under discussion. The following sectors are under consideration: sectors related to land use, including land tenure, agriculture, land-use planning, rural development, mining, hydrocarbons; and sectors that have a direct effect on the use of wood resources, including energy, economics and industry. The ongoing sectoral reforms in the DRC aim to: (i) integrate the DRC climate change commitments within all sectors and harmonize the political, legislative, regulatory and institutional frameworks of all sectors; (ii) put in place mechanisms to ensure effective and enhanced cooperation to respond to the challenge of coordinating cross-cutting issues. Land reform in the DRC led to the design of a national land policy document, with financial support from UN-HABITAT/GLTN. However, the process is still to deliver its results, as consultants have not yet been recruited. It is still unclear what options have been adopted to meet the challenges of the current policy, legal and institutional framework. Land insecurity therefore persists.

Despite the evolution of the DRC policy environment to include REDD+, the conclusion to this section is the same as that of the first edition of this study by Mpoyi et al. (2013). Actors in the REDD+ policy domain in the DRC still have different objectives, intentions, interests and agendas. There is a fear that REDD+ in the DRC is a 'prisoner's dilemma' game. Ostrom (1990) conceptualized the 'prisoner's dilemma' in game theory, as a non-cooperative game in which all players have incomplete information. In this

specific case, the most complete information about a sector is kept by the sectoral ministries; this is not always shared with other sectoral decision makers. By avoiding individualistic strategies, government

actors may become an important enabling factor for implementation of a successful REDD+ mechanism.

6 3Es (effectiveness, efficiency, equity) and co-benefits of REDD+

6.1 Effectiveness

The many achievements and reforms initiated across sectors between 2012 and 2018 have led the DRC to be viewed as a model for REDD+ in the Congo Basin. This is the case for forestry, agriculture, energy, mining, land-use planning and, more recently, land tenure. When the process started, many observers supported the idea that there was sufficient national expertise and capacity for effective MRV in the DRC (Eba'a Atyi and Bayol 2009; COMIFAC 2012), and there are now projects in the field which will provide insights to inform the design of a final version of the National REDD+ Strategy. However, development over years has also revealed some weaknesses, related to the complexity of REDD+ as it has evolved. The main drivers behind deforestation and forest degradation are known, despite weak consensus about their respective importance. However, addressing these drivers is challenging because many of the main drivers, like mining, play an important role in bolstering national GDP and economic growth. Secondly, governance of the REDD+ process in the DRC is organized around a hierarchical structure, with a National REDD+ Committee, an Inter-ministerial Committee and the National REDD+ Coordination at the top, as the frameworks for political consultation. Their mission is to discuss and resolve cross-cutting issues. However, at this highest level the REDD+ governance structure does not contribute to governmental coordination of initiatives for REDD+. The absence of many ministries, such as the Ministry of Rural Development, or the Ministry of Finance that oversees the National REDD+ Fund, is problematic. For instance, the absence of the Ministry of Finance in the National Committee may at least partly explain the difficulties in collaboration between the National REDD+ Fund and the Ministry of Environment. This fragmented collaboration can also be seen

from the National REDD+ Coordination being excluded from the Technical Committee of the National REDD+ Fund, which selects projects to be implemented within the framework of CAFE funds, despite the National REDD+ Coordination institutionally managing REDD+ on a daily basis. Another issue pointed out by stakeholder interviewed was that of weak sectoral collaboration and power plays amongst government agencies. For example, it is challenging for the Ministry in Charge of Environment to influence policy decisions on REDD+ as far as other sectoral policy reforms are concerned. MEDD had great difficulty resisting government will, particularly that of the Ministry of Hydrocarbons, to declassify Virunga Park so as to allow the exploitation of oil.

The National REDD+ Coordination also faces difficulties in carrying out its mission because of an absence of sustainable financial resources. It is short of funding, and has had to reduce its team by more than 70% since December 2016. This situation has had a significant impact on progress for the REDD+ process, as the Coordination oversees strategic studies. Institutional arrangements have an obvious impact on this. According to some governmental actors interviewed, the institution was created with a view to preparing the country for REDD+, and since the country has gone through this phase, subsequent phases correspond more closely to the mandate of FONAREDD+, which is responsible for monitoring the implementation of activities related to the investment phase of the process. There is an urgent need to reassess the role of these institutions if REDD+ is to move forward in the country.

The level of progress with regards to administrative decentralization does not favor REDD+ either. The newly installed provinces have not yet been endowed with the means and infrastructure needed for smooth operation. This does not support

processes like REDD+, whose financial results are not meant to be immediate. Faced with difficult access to funding from the central government, the governments of these provinces might leverage other income sources, which could have an impact on forest cover. Provincial REDD+ institutions also still require resources (information, capacity, logistic) to fully operate. Delays persist and impede the functioning of projects implemented at local levels, since the connection with initiatives at national level is weak and inconsistent in some cases. The recruitment of provincial coordinators has so far not allowed the DRC to ensure both local participation and horizontal REDD+ coordination. The available levers, including the Provincial Governors' Conference, have not been mobilized in the context of REDD+. Governors' services are currently only active in a few provinces where large-scale projects are being implemented, like Mai-Ndombe. Meanwhile, they are still trying to put in place the minimum infrastructure to operate in the newly-created provinces.

As far as land tenure is concerned, despite efforts to establish the coexistence of legal and customary rights over land and resources, state administrators and local leaders still face difficulties in understanding the issues at stake, leading to land-tenure insecurity and conflicts over property. Institutionalizing and implementing legal pluralism over land management is key to ensuring success in the implementation of REDD+. The objective is securing permanence in REDD+ results, as carbon rights and benefit-sharing mechanisms depend on how property over land and resources is interpreted and understood.

The availability of data is also a critical issue for REDD+ effectiveness in the DRC. The Directorate of Inventory and Forest Management (DIAF) benefits from the support of international cooperation for its operations, especially from JICA and other institutions such as the Observatory for Central African Forests, OSFAC and WRI. However, the levels of investment, and levels of preparation and deployment of human resources, are still far below the real needs of the country for an efficient and effective forest inventory. There lacks an identifiable authority in charge of statistics, and there is low availability of adequate human resources for the production of national data. As a consequence, from the beginning of the REDD+ process, there has been a lack of robust

data on which to build national and local capacity for the Greenhouse Gas Inventory. Development of the DRC's national forest emissions reference level document also encountered this difficulty. This absence of related data is used by the authors as justification for the limitations of the document, and its exclusion of degradation. Combined data are not available at the national level, as the existing data are mostly fragmented, limited to specific projects, area or provinces. As such, if improvements to the forest reference emission level document are not made, MRV capacity will be limited to deforestation. In doing so, the potential to evaluate the produced benefits and co-benefits of REDD+ will be limited. In this context, there will be difficulties in demonstrating REDD+ results.

In conclusion, REDD+ in the DRC is not yet able to tackle the drivers of deforestation and forest degradation. However, it has already learned many lessons on how to move forward with the process and avoid the mistakes of early phases.

6.2 Efficiency

FONAREDD+ is in charge of managing international payments for emission reductions in the DRC. It controls the use of resources for REDD+ through the different fiduciary agencies selected by the donors. Donors have expressed reservations about the country's capacity to ensure effective governance of resources for REDD+ in the DRC. This insufficient capacity encompasses providing national contributions; meeting international management standards like fiduciary safeguards; transparency mechanisms at all disbursement levels and within operations; government involvement at all levels, including civil society and local and indigenous communities; and independent verification mechanisms.

Though hundreds of millions of dollars have been disbursed to nationals and international organizations to support implementation of the early phases of the REDD+ process in the DRC, neither the State nor any national organizations have yet had the opportunity to build and test their revenue management capacity for such a mechanism, thus raising fears about the country's fiduciary governance capacity. In the absence of an evaluation of funding already received, stakeholders interviewed claimed that there is still

no proof that the country can effectively manage REDD+ funds and ensure equitable benefit sharing of REDD+ costs and revenues. For these reasons, donors, and more specifically CAFI, have chosen a different financing model, which is based on financial resources being managed by United Nations agencies. Contracts are awarded after a call to tender for the implementation of integrated REDD+ projects, and recruited agencies are awarded the financial resources that they manage. The National REDD+ Fund oversees procedures for the selection of the projects and approves payments before they are disbursed to the beneficiaries. This is the model chosen for the management of the USD 200 million allocated by CAFI to the DRC.

Studies have been conducted by the National REDD+ Coordination with the aim of determining a benefit-sharing mechanism that considers cost and benefit options, but these have not yet tested on the ground. Stakeholders interviewed also claimed that the unclear legal framework on carbon ownership, rights and profit sharing might hamper REDD+ implementation in the DRC. REDD+ project proponents in the DRC each apply cost-sharing and benefit-sharing mechanisms in their respective projects, which they define themselves in consultation with project stakeholders, including government agencies, and local and indigenous communities. Experiences from projects that are underway will ultimately be of great value to determine future REDD+ policy options.

Socioeconomic advantages resulting from the implementation of REDD+ projects remain limited to investments in project areas, such as building schools, hospitals and other infrastructure. However, these are not directly related to the financial flows that result from the trade of carbon due to reduced emission or enhanced absorption. There is no evidence that communities, or even provincial entities, have the capacity to handle these if project holders stop their funding. Appropriation and the long-lasting effect of this infrastructure on local socioeconomic development thus remains uncertain.

6.3 Equity

REDD+ has brought a new dimension to the relationship between the State, civil society, and local and indigenous communities of forest areas. The development of a FPIC tool, and the requirement from donors to consult these communities as a condition for the validity of projects and funding, has built more of a culture of consultation. Some issues with this remain, however, and several CSO interviewees pointed out their limited involvement, mostly in the validation of policy documents in order to legitimize their content and processes with donors.

The development of tools to ensure participation in REDD+ in the DRC focused on both vertical and horizontal aspects. Tools for participation are related to environmental and social safeguards and specific frameworks, as well as the Safeguards Information System and the Complaints and Grievance Mechanism. However, the concerns of local communities described by Resosudarmo et al. (2012) remain relevant. Communities are not interested in REDD+. The discourse is mainly focused on forest, and the ongoing projects do not provide enough information on how they will compensate revenue loss by these communities during REDD+ project implementation. There are inconsistencies in information as the local populations are mainly informed by REDD+ project holders in a context where CSOs do not have the means to carry out large-scale information campaigns. As a consequence, local communities are informed enough to ensure their equitable participation in negotiations about the conditions of REDD+ projects and revenue sharing, but most communities in REDD+ project sites do not know what the opportunity cost of the project implemented in their area is.

The position of indigenous communities is also unclear and uncertain. There are several policies acknowledging their claims but in practice, they remain marginalized and their claim to the forest resources on which they depend for a living is precarious at best.

7 Conclusion

The DRC has engaged in REDD+, with the aim of tackling the main drivers of deforestation and forest degradation, for a decade. However, addressing the drivers of deforestation and degradation is challenging because the main drivers of deforestation and degradation are driven by global trade investment as well as national demand to increase economic growth. Stakeholders from national to local level have participated in REDD+ and the process has evolved against considerable political uncertainty. Lessons have been learned from what has been achieved, in terms of assessing the causes of deforestation and forest degradation, achieving intersectoral integration and coherence of land-use legal frameworks to address drivers, and sharing benefits among all stakeholders.

Realizing REDD+ entails putting together and implementing a mix of both technical, sociological, legal and political parameters. The different phases of REDD+ (preparation, investment and implementation) in the DRC have not been implemented as initially planned. There are many reasons that studies to identify policy options have not been completed. These include difficulty in accessing data, a lack of financial resources for the National REDD+ Coordination in charge of

overseeing the preparation phase of the process, and political and governance challenges linked to transitions in government. As such, the 2012 National REDD+ Framework Strategy has not been transformed into a full strategy. Achieving reforms to ensure legal intersectoral integration and coordination on land-use to tackle drivers of deforestation and forest degradation is difficult, through a mixed top-down and bottom-up approach with the current decentralized administrative model. Implementation suffers from weak governance; the absence of State authority in certain areas of the territory; insufficient domestic capacity to trigger sectoral policy reforms consistent with REDD+ objectives; and a lack of autonomous human, material and financial resources. There is also limited analysis and evidence on REDD+ funding and REDD+ payment distribution, and their impact on both forest cover and household incomes. Future research is required to address these knowledge gaps. REDD+ in the DRC will not be quick, but this does not mean REDD+ in the DRC is dead. REDD+ is progressing and the country is learning from the challenges of the initial phases of this new and complex mechanism.

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DRC has committed to reduce its emissions effectively, efficiently, and equitably from deforestation and degradation (REDD+). The country experiences complex relationships between drivers, agents, and institutions of deforestation nationally. The REDD+ policy arena is influenced by both governmental and non-governmental actors whose number have increased in the policy arena over the years; however, weak coordination among these actors remains an issue. Since 2009, the DRC has announced several reforms relating to land tenure, land-use planning and agricultural policy, to create an institutional environment that motivates the implementation of REDD+ in the DRC. By 2019, none of these reforms had materialized, due to both political changes and a lack of finance, capacity, and political will. Between 2013 and 2019, little progress has been made on REDD+ in the DRC, as a result of conflicting interests among actors both at national and decentralized levels; information asymmetry; elite capture and corruption; and the pre- and post-election situation. To date, the effectiveness of REDD+ activities in the DRC remain unclear, due to the absence of rigorous impact assessment. However, efforts can be observed on the field where there is increased number of participants to forest policy process compared to REDD+ early years; and several ongoing projects are testing policy options within and across levels. If these efforts are sustained, they can contribute in putting in place conditions to achieve REDD+ objectives.

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