



Natural resources governance in the Democratic Republic of Congo

Breaking sector walls for sustainable land use investments

Raymond Achu Samndong and Isilda Nhantumbo

Country Report

February 2015

Natural Resources

Keywords:

Forests, governance, natural resources, REDD+

About the authors

Raymond Achu Samndong is a PhD fellow at the Department of International Environment and Development Studies of the Norwegian University of Life sciences. He is conducting his PhD research on environmental governance and climate change focusing on the legitimacy of local REDD+ governance structure(s) in REDD+ pilot project development in the Democratic Republic of Congo (DRC).

Contact: raymond.samndong@nmbu.no/rayasboy@yahoo.com

Isilda Nhantumbo, IIED, UK.

Acknowledgements

Thanks to Guy Tshimanga; Rene Oyono, and Mpoyi Augustine; IUCN Kinshasa staff, particularly Colette Mavungu; the many resource persons, technical specialists and organisational representatives who met with the team in the DRC; and members of the local team: Mbandaka Vinny Nkoso, Roger Ngange and Clement Botefa.

Produced by IIED's Natural Resources Group

The aim of the Natural Resources Group is to build partnerships, capacity and wise decision-making for fair and sustainable use of natural resources. Our priority in pursuing this purpose is on local control and management of natural resources and other ecosystems.

Published by IIED, February 2015

Raymond Achu Samndong and Isilda Nhantumbo. 2014. *Natural resources governance in the Democratic Republic of Congo: Breaking sector walls for sustainable land use investments*. IIED Country Report. IIED, London.

<http://pubs.iied.org/13578IIED>

ISBN 978-1-78431-132-2

Printed on recycled paper with vegetable-based inks.

International Institute for Environment and Development
80-86 Gray's Inn Road, London WC1X 8NH, UK
Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
email: info@iied.org
www.iied.org

 @iied

 www.facebook.com/theIIED

Download more publications at www.iied.org/pubs

The Democratic Republic of the Congo (DRC) has immense natural wealth. Political stability and good governance, including strong resources rights to local communities and sustainable investments, can galvanise sustainable development and enable the Congolese people to benefit from that wealth. This report highlights both key provisions and major challenges of natural resource legislation in the DRC. It suggests potential ways in which local communities, particularly marginalised populations, can play a prominent role in shaping inclusive, sustainable and equitable development.

Contents

Summary	4	4 Seizing opportunities for change? Replacing piecemeal sector based implementation of policies	33
Key findings	4		
1 Introduction	8	5 Conclusions	36
2 Country context: natural resources endowment and drivers of land use change	10	5.1 Potential actions	40
2.1 State of natural resources	11	References	42
2.2 Sectoral and extra-sectoral causes of deforestation and forest degradation	12		
3 Natural Resource legislation: turning challenges into opportunities	18		
3.1 Land tenure and rights	19		
3.2 The Forest Code	23		
3.3 Agricultural policy	29		
3.4 The Mining Code	30		
3.5 Environmental law	32		

Summary

IIED started its engagement work in DRC in 2012 through an initiative funded by the UK Department for International Development (DFID), 'Inclusive REDD+'. The first step of this initiative was to review the available literature. Secondly, a scoping mission was undertaken to discuss the issues affecting the natural resources sector with relevant individuals at national and local level. This first report looks at the issues, challenges and potential future areas of work in the natural resources sector. A second report takes a more detailed look at REDD+.

Recently, the DRC has introduced policy and legislation to strengthen governance, use and control of forestry, mining and agriculture. Working with government, civil society and other stakeholders and donors, IIED could pursue several areas of research to help gather evidence for informed policy options to strengthen participation of local actors in natural resource management to galvanise inclusive, sustainable and equitable development.

The DRC has made progress in addressing pressing political, economic and social challenges since the end of the civil war. Multiple donor initiatives have emerged, largely due to the country's significant forest cover, biodiversity and interest in the post-Kyoto Protocol climate change mitigation regime. Likewise, private investments in extractive resources, agriculture as well as infrastructure, have also increased. While deforestation is low in the country, biodiversity, natural resources and ecosystems are under increasing pressure. The DRC needs to meet the basic needs of its growing rural and urban population, as well as respond to the international demand for various commodities. The clearing of some forest lands for timber, construction materials, charcoal, fuelwood, mineral extraction and agricultural expansion is inevitable. Economic development goals and aspirations are also inevitable. The challenge, however, is whether and how these activities can take place in an environment of good governance and institutional capacity that builds on secure land tenure, strong law enforcement including social and environmental safeguards. One that adopts an holistic landscape approach and a strategy to address the nexus between social equity, environment sustainability and economic development. Akin to the rest of the world, the DRC needs sustainable development together with climate stability. The fact that the country contains the world's second largest tropical forest, which can make a significant contribution

to the mitigation of climate change, adds another dimension of challenge to government, civil society and development agencies alike.

The government of the DRC has strived to develop legislative framework for natural resources and the environment, including the recent approval of community forestry law. This report looks at the provisions and challenges, with a view to highlight potential areas of work in both research and development.

Key findings

Security of resources tenure matters

Access and distribution of benefits from investments in land, forests and other key natural assets are fundamental for growing the wealth and stability of the population of the DRC. Clear resource tenure to enable private investment and secure local access and control of resources, however, is necessary for inclusive economic development opportunities.

Private sector actors, especially at the large scale, have distinct advantages, leaving the community lagging behind. They are able to access information about business opportunities; and they have the means and power to access decision-making bodies to secure access and clear rights over resources. To ensure an inclusive and equitable development pathway, therefore, partnerships between government, civil society organisations and development agencies can support community land resources rights and management programmes. This can entail mapping community resource rights, promoting community-based natural resources management based on the development of sustainable, viable, inclusive and equitable enterprises. Partnerships with private sector building on clear rights to resources can contribute to achieving this.

Local level institutions matters too

Equitable access to land resources has to rely on strong, transparent and accountable local institutions. For this, it is also essential to assess formal and customary institutional structures and evaluate options for more effective governance of land resources that harness the capacity and social legitimacy of customary and other local structures. It would, however, be erroneous to suggest that these structures are inclusive, transparent and accountable to local interests. Communities are not homogenous. Akin to elsewhere in the world, power and equity issues persist in the DRC. Affirmative action might be needed to ensure recognition and protection of the rights of women and minority populations. Strengthening local institutions should also contemplate reforming customary norms and practices that marginalise the powerless and voiceless.

A key challenge to address is in supporting communities, particularly those interested in small and medium enterprises, to capitalise on resources and establish sustainable business ventures that are paramount to drive the growth of local economies. Large-scale investment is important but can only do so much; investing in locally-led natural resources-based businesses is fundamental. The multiplier effect – jobs and revenue generated – of these cannot be overstated. This calls for a shift in emphasis by government and development agencies towards investing in education and capacity building that will bring local people to the mainstream of the economy and drive inclusive, sustainable and equitable growth.

Security of tenure and strengthening institutions and enterprises are necessary but not sufficient conditions for advancing livelihoods

Many agencies involved with forest resource issues in the DRC have identified the need to advance the livelihoods of natural resources-dependent communities through securing rights to land resources and developing mechanisms for community involvement in sustainable use and management of resources. Furthermore, as highlighted previously, developing enterprises is essential. Investment in community enterprise does not yield results in the short term, however, and there has been a misguided tendency to design short-term community development initiatives. These have been for five years at most, within which time they are expected to implement profound transformations in tenure regimes, decision-making

bodies, enterprises, resources management practices and beyond. Conversely, private sector investments – those well-established and at larger-scale than community enterprises – have access to long-term capital. The length of investment is dictated by the viability of the business derived from a cost-benefit analysis. Irrespective of the scale of the business, there are three phases that need to be considered regarding their sustainability: firstly, the investment phase that has negative discounted net returns; secondly, the growth phase, when these net returns are positive and reaching break-even point and beyond; and thirdly, the consolidation and reinvestment phase that strengthens the business.

The result of not following the same approach for community-based initiatives has been an accumulation of apparent 'failures'. The initiatives are destined to fail, however, as the goals set do not match the resources needed to succeed. Community development does not need to be about handouts but rather about investment in capacity development. An understanding of the value of money and investment opportunities needs to be supported with those in the community that demonstrate skills of entrepreneurship. This will drive change and create opportunities for employment and wealth generation.

The 'improved African hut' uses an analogy to define the following key aspects for natural resources management: i) the foundations are defined as the human capital necessary for transformative change to take place. As such, access to relevant information, education, training, exchange in knowledge and experience is a priority. ii) The five pillars of the hut include **secure rights** to resources; access to appropriate **technology** for transforming natural resources into goods and services of high market value; accountable and transparent **collective decision-making bodies** to govern and enforce sustainability in resources use and **strong enterprise organisation**; access to **finance and financial management literacy**; and access to **fair markets**. iii) The roof represents sustainably managed resources and the improved wellbeing of the people.

Working across these different areas to meet the necessary and sufficient conditions for inclusive, sustainable and equitable businesses requires the engagement of different stakeholders including the private sector, financing institutions, government, NGOs, development agencies, academia and research organisations. The question remains whether these institutions can coordinate an integrated intervention in a given landscape in the DRC.

The bigger picture – climate smart development is necessary but not simple

The DRC is reforming its agricultural sector. Aligning ambitions of developing this sector with REDD+ is essential for sustainable and climate smart development. With agricultural practices identified as a key driver of loss in forest land in DRC, there is a need to support agricultural development to increase productivity and production, and demonstrate the integration of food security into emissions reduction targets. Agricultural enterprises also require access to technologies, finance and markets to address current unsustainable practices. For communities to lead the transformation of the agricultural sector, there is also a need for substantial and sustained investment in developing technical support services – from government, private sector and NGOs alike – to help bridge the gap between knowledge and practice.

Biomass energy accounts for over 85 per cent of domestic energy in the DRC, and deforestation around urban areas for firewood and charcoal exerts a heavy toll on natural forests. Therefore, among other priorities, it is important to analyse the value chains of these products, and assess the viability of more efficient production options, as well as innovative licensing and forest management regimes. The devolution of resources to communities recently approved in the DRC offers some conceivable prospects of concessions for biomass energy production. These can be issued in forests with lesser value species that can be used for this purpose. This would, however, have to be done based on land use planning and zoning, and development of management plans, to avoid the proliferation of such concessions throughout the country. Furthermore, it is essential to tackle the demand side by analysing viable options for the sustainable consumption of biomass. Sustainable management of natural forests can also be complemented by the development of fast-growing tree plantations, such as woodlots in degraded areas and agroforestry systems, with the participation of local communities and entrepreneurs to meet rising demand.

Using the progressive, recently approved, legislation that provides for ‘community forest concessions’ of up to 50,000 hectares, communities have an opportunity to harvest a range of products and capitalise on the services these forests render.

While the Forest Code provides for benefit sharing with communities living around logging (and conservation) concessions, alternative livelihoods programmes are expected to support communities that live around strictly protected areas. Unfortunately, the few such programmes in the DRC have had limited success.

There is a need to conduct a value-chain analysis to identify those products and services with a greater potential for diversification and increasing household income. The analysis should also identify which elements along the value chain – from information and capital to market access – act as barriers to developing viable and sustainable alternative livelihoods. In addition, a range of incentives (social agreements, REDD+ performance based payments, payment for ecosystems services) to compensate land users for lost income due to conservation should be explored.

As is often the case, the Mining Code establishes that the State owns these assets. Due to the potential high revenue generated from licensing, exploitation and taxation, the exploration of mineral resources supersedes any other land use. In DRC, 90 per cent of the exploration of minerals is controlled by the artisanal sector. This presents an opportunity to organise the sector and build capacity, particularly that of local artisanal miners to exploit the resources sustainably, safely and profitably. The fact that the DRC government has adhered to EITI provides an added opportunity for improving transparency in both contract allocation and in the terms agreed, including the disclosure of taxes and other economic benefits associated.

Piece meal interventions have not yielded the desired results: an integrated and ‘landscape’ approach can deliver results but requires shacking off the ‘sector’ boundaries

From a brief consideration of the key natural resources mentioned above, it is clear that a pragmatic approach to development and implementation of legislation is necessary. Efforts to develop a national land-use planning policy and process have included: training public servants on land-use planning, consultation with interested parties, support of necessary technical, administrative and political processes, products and systems, and assistance with the drafting of guidance on the creation of land-use plans. Most of these supports are limited to the national level.

There is a need to ensure a participatory process through support to communities and national NGOs working with the local population. Integrated land-use planning and zoning at landscape level including customary land, for example, could help define suitable areas for investments according to potential. In addition, it can contribute to the goals of REDD+ and the implementation of sustainable investments.

While there are no silver bullet solutions to the natural resources investment and management challenges, there are a number of interventions that can make a difference. The DRC can capitalise on the already clearly identified landscapes across the country. The recent election of Mai Ndombe represents a key opportunity for a REDD+ programme to demonstrate a reduction of emissions and concomitantly implement the various sectoral legislation discussed in this report. The sector based, piecemeal interventions increase development transaction costs and are not delivering the expected results. The central element to this is building the capacity of government and civil society to bridge the gap between opportunities for and the actual change of land use towards sustainable, equitable and inclusive investments. To that end, land use planning and zoning within landscape and design sustainable investments across the sectors can pave the way for 'seeing' where development money goes and its impact.

Potential way forward

IIED's work on natural resources and sustainable markets encompasses agriculture, advancing land resources rights for inclusive businesses, strengthening producer organisations, artisanal mining, gender, biodiversity conservation, and governance of natural resources including a China-Africa initiative to examine and test ways in which investment in land use can be sustainable, serve the country and its people. Other key areas of work include REDD+ implementation approach at development corridor level, an approach which is characterised by a complex landscape composed of multiple drivers and opportunities for sustainable development; and investment in locally controlled forestry towards the development of mechanisms that deliver the devolution of high value forests to local communities. Based on this experience an integrated programme of work can be developed in collaboration with local institutions.

Introduction



A growing population coupled with intense international competition for natural assets to fuel domestic and foreign economic growth is putting pressure on forests in the DRC. Shifting cultivation, firewood collection and charcoal production, as well as commercial and artisanal logging and mining all – to some degree – cause deforestation and forest degradation. Insecure land and resource tenure also contribute to unsustainable land-use practices.

With forest cover of 232.9 million hectares (ha), the DRC has the second largest tropical forest area in the world. As such, it plays a key role in the management of carbon stocks and the reduction of deforestation in the Congo Basin, which will affect wider climate mitigation efforts beyond its boundaries. The country is part of the Congo Basin Forest Partnership. The Congo Basin Forest Fund, associated with this partnership, is one of the major financing mechanisms that supports sustainable forest management. The State of the Forests in the Congo Basin 2008 report identified 12 priority landscapes: the DRC contains seven of them, including four that occur only in the country. The land-use plans of these landscapes include forest protection, community-based natural resources management, forest and hunting concessions, mining, agriculture and infrastructure, including roads and settlements. The latter constitutes an important component of development and is likely to have a significant impact on emissions from land-use change.

The DRC also receives funding from the Forest Carbon Partnership Facility (FCPF) and UN-REDD with initial grants of US\$3.4 million and US\$5.5 million for the readiness process respectively. The country has identified seven areas for piloting REDD+, which are funded through the Congo Basin Forest Fund. It is also seeking additional funding from the World Bank's Forest Investment Programme (FIP), among others.

The DRC is rich in resources and multiple forest management systems, and has a complex policy and institutional landscape. Therefore, this study seeks to understand the country's forest and natural resource governance landscape. This background document aims to identify opportunities and to highlight a possible research and development agenda in which IIED can play a role.

Through an extensive literature review, policy analysis and interviews with key stakeholders undertaken from 2012, this report presents the context for natural resource governance in the DRC. It presents an overview of the status of forest and biodiversity conservation, analysing the threats to tropical forests and its biodiversity, as well as the policy and legislative framework for environmental management. To identify specific knowledge gaps and potential interventions, the report maps out key policy and legal instruments in the natural resources sector.

Country context: natural resources endowment and drivers of land use change



The DRC covers more than 2.3 million square kilometres (km²) of land, making it the second largest nation in Africa.

The DRC has been emerging from a decade of protracted violence. Today, most of the country is at peace and involved in economic reconstruction. Indeed, the government is rebuilding administrative systems and implementing economic reform programmes. New investment in labour, mining and forestry codes, for example, promotes greater transparency in these traditionally opaque sectors to attract reputable foreign investors (DRC, 2006; World Bank, 2009). The government has also decentralised many powers, although elected local governments at sub-regional levels have yet to implement their new responsibilities (Melmoth, 2007; Du Preez and Sturman, 2009; Samndong, 2011; Oyono, 2011a). The weakness of institutions at provincial and local level is evident both in terms of personnel (numbers and training) as well as infrastructural capacity.

For all its progress, the DRC remains a fragile post-conflict state with enormous reconstruction needs and daunting challenges (Karsenty, 2007; Huggins, 2010; Seyler et al., 2010). While the country's vast natural wealth presents huge opportunities, its economic prospects have sharply declined since 2008 due to the changing international financial environment (World Bank, 2008b). Recurring insecurity, including from illegal armed groups in the East, continues to displace large numbers of people and drive violence and human rights abuses. Some highlight that corruption and the lack of national capital investment hinder economic growth (Huggins et al., 2004; Mazalto, 2006; Ndela, 2008; Pelerin, 2010; Seyler et al., 2010).

2.1 State of natural resources

The DRC enjoys one of the planet's most important sources of natural wealth (Global Witness, 2007; World Bank, 2009; Trefon, 2009; USAID, 2011; Du Preez et al., 2011). The country has immense water resources and enormous mineral wealth, fertile soil and ample rainfall. It also contains the second largest block of tropical forest in the world (145 million ha, or approximately 62 per cent of its national territory) (Laporte et al., 2007b; Eba'a Atyi and Bayol, 2009; Yanggen et al., 2010). A critical livelihood source for about 40 million people, the forest provides food, medicine, domestic energy, building materials and cash income (De Merode, 1998; Mpoyi, 2005; Yamba, 2009; Taylor, 2011; Nelson et al., 2012). The

forest also plays an important role in regulating the regional and global climate, while commercial logging generates a great deal of state income (Debroux et al., 2007; Mbala and Karsenty, 2010; Musampa et al., 2012). The forest harbours an enormous amount of the world's biodiversity, and the DRC ranks as fifth among countries for its rich flora and fauna diversity (Musampa et al., 2012).

The forest represents nearly half of Africa's rainforest and comprise 11 forest types: swamp forest, tropical lowland rainforest, tropical sub-montane rainforest, three types of Afromontane forest, Zambezi forest (Muhulu), Zambezi woodland (Miombo), Sudanese woodland, coastal sclerophyllous forest and mangroves (Musampa et al., 2012).

The DRC forests contain vast plant and animal diversity and include five national world heritage sites (Yanggen et al., 2010; Musampa et al., 2012). It contains four different floristic regions (MECNT, 2009b):

- The Guineo-Congolian forest biomass covering the central basin
- A band of woody savannah that connects the Guineo-Congolian region with the Zambezi zone south of the equator
- A narrow band of woody and herbaceous savannah in the north
- The Afromontane forest region with a number of big lakes in the east of the country.

The Afromontane forest is a biodiversity hotspot, harbouring the largest numbers of endemic bird, mammal and amphibian species on the continent (Yanggen et al., 2010; Conservation International 2011). Iconic mammal species include okapi and white rhinoceros, the endangered bonobo and common chimpanzee and the two endangered subspecies of the eastern gorilla (mountain gorilla and eastern lowland gorilla). Despite the large number of species known to occur in the DRC, taxonomic inventories for the country are still far from complete (MECNT, 2009b).

The moist forest in the heart of the Congo Basin in the DRC is the country's core biodiversity conservation area. The USAID/Central African Regional Program for the Environment (CARPE) is the principal programme for a landscape approach to manage this critical area. CARPE supported 12 landscapes across seven central African countries in the Congo Basin. Member countries of the Commission des Ministères des Forêts d'Afrique Centrale (COMIFAC)¹ have ratified the landscape approach, while the CBFP has endorsed it as a long-term strategy (CARPE, 2009; Seyler et al., 2010;

¹ COMIFAC is a sub-regional institution created by the Paris Treaty in 1999 to harmonise forest policies between the Congo Basin countries (DRC, Congo, Cameroon, Central African Republic, Gabon, Equatorial Guinea, Rwanda, and Chad). See www.comifac.org for more information.

Yanggen et al., 2010). Six landscapes are either wholly or partially located in the DRC, including the following:

Ituri-Epulu-Aru landscape: This covers the upper basin of the Ituri River and the most northern part of the Congolese forest with its adjacent forest-savannah mosaic. The Ituri forests are exceptionally rich in mammals and nine species have been found in the central sector. The landscape contains populations of world importance for several species with a limited distribution, endemic or almost endemic to the DRC, including the okapi (*Okapia johnstoni*). It also has large populations of globally threatened species, such as the elephant (*Loxodonta africana cyclotis*) and the chimpanzee (*Pan troglodytes*).

Maiko-Tayna-Kahuzi-Biega landscape: In the eastern part of the DRC, this covers 67,121km², and includes the Kahuzi-Biega and Maiko national parks, as well as the Tayna Gorilla Reserve. Given its diverse habitats, the landscape is home to a rich variety of mammals, in particular the elephant (*L. africana*), the chimpanzee (*P. troglodytes*), the eastern gorilla (*Gorilla beringei*) and numerous other primates.

Salonga-Lukenie-Sankuru landscape: Covering 102,847km², this landscape lies in the heart of the central basin of the Congo River in the DRC, straddling the provinces of Equateur, Bandundu, Kasai-Occidental and Kasai-Oriental. It is centred on Salonga National Park, which has an area of 33,350km² and is the second largest area of protected forest in the world (divided into two separate blocks). The landscape is home to the bonobo (*P. paniscus*), a great ape endemic to the central Congolese forests ecoregion.

Lake Télé-Lake Tumba landscape: This is in the heart of the Congo Basin region, centred on Lake Télé in the Republic of Congo, and the Tumba and Mai-Ndombe lakes in the DRC. It extends over an area of 126,440km². The 54,001km² western section is in the Republic of Congo and the 72,439km² eastern section is in the DRC. It includes one protected area, the Lake Télé Community Reserve in the west. In the eastern section, primates are represented by the bonobo (*P. paniscus*) and the common chimpanzee (*P. troglodytes*). The western section is considered to be an important area for bird conservation, owing to the presence of large colonies of water birds.

Maringa-Lopori-Wamba landscape: This is limited to the basin of the Maringa and Lopori rivers in the districts of Equateur, Mongala and Tshuapa in Equator province. Covering 74,544 km², it is characterised by tropical forests and some inhabited strips along the rivers. At least 11 species of diurnal primates have been observed in the landscape. The dryas monkey (*Cerco pithecus*) is endemic to the basins of the Maringa and the Lopori and only two examples of the species are known. The

avifauna comprises over 400 species, and the density of the Congo peafowl (*Afropavo congensis*), is thought to be highest in the country. The landscape contains the Lomako-Yokokala Faunal Reserve.

Virunga landscape: This covers 15,155km² and includes two contiguous national parks, Virunga National Park in the DRC and Volcano National Park in Rwanda, as well as the Rusher Hunting Zone. Outside the landscape, the two national parks are also contiguous with the national parks of Semuliki, Queen Elizabeth, Rwenzori and Mgahinga in Uganda. Together, these six national parks constitute the largest transborder complex of protected areas in Africa. The landscape is home to the mountain gorilla (*Gorilla beringei beringei*) and has the highest species endemism rate in Africa.

2.2 Sectoral and extra-sectoral causes of deforestation and forest degradation

With support from external actors, the government is committed to conserving the country's rich biodiversity. However, threats, including deforestation and habitat degradation, illegal logging, poaching and invasive species persist. A decade of violent conflict seriously affected conservation while continuing armed conflict in eastern DRC renders conservation activities in these areas both difficult and dangerous (Hagen et al., 2011; Musampa et al., 2012).

A population projected to reach almost 110 million in 2030, coupled with intense international resource competition for raw material, places multiple pressures on the DRC's natural resource wealth (UNEP, 2011; USAID, 2011). Rich rainforest and biodiversity are under threat on a variety of fronts, including the clearing of land for agriculture to improve food security, reckless and illegal logging, and increased pressure from charcoal and fuel-wood consumption, poverty, displacement and conflicts (Duveiller et al., 2008; Seyler et al., 2010). Under these circumstances, the DRC's future is full of opportunities and challenges. If these pressures and trends are not coherently addressed, it will be difficult for the country to successfully pursue a sustainable development course and contribute to regulating the global environment (UNEP, 2011).

The current estimates of annual deforestation in the DRC is considered low but uncertain. The estimates range from 0.02 per cent (Wasseige et al., 2008) to 0.25 per cent (FAO, 2011; Norad, 2011) to about 0.4 per cent (Laporte et al., 1998; Laporte and Justice,

2001). The DRC estimated annual deforestation for 1990–2000 at 0.22 per cent and judges the current rate to be around 0.27 per cent² per year (DRC, 2012). This variation suggests that no reliable estimates exist for national deforestation rates in the DRC. The large forest biomass holds about 17 billion tonnes of carbon, making it the largest carbon stock in Africa (Laporte et al., 2007b).

Causes of deforestation vary across the country (Seyler et al., 2010). Direct causes include agriculture expansion as a result of shifting cultivation, firewood collection, charcoal production to meet urban demand, unsustainable commercial logging and illegal artisanal logging, as well as industrial mining and road construction in dense forest areas (Taylor, 2011). The impact of these factors varies greatly in accordance with geographic and demographic patterns. For instance, Kisangani, Kinshasa, Lubumbashi and Mbandaka have far higher population densities than their surrounding areas. They are thus more prone to intense shifting cultivation and firewood collection than commercial logging. As firewood and charcoal provide 85 per cent of the DRC's energy needs, the harvesting of trees for these uses becomes increasingly problematic as population density rises (Seyler et al., 2010).

Logging

Legal and illegal artisanal logging and cross-border trade linked to industrial logging concessions also has a direct impact on forest degradation in particular. A Forests Monitor report estimates that 8000 small-scale logging companies, known as “chainsaw operators”³, are currently working in the DRC. These operations are carried out by a range of groups from longstanding companies to a few local elites. A 2010 report by the DRC Ministry of Environment, Conservation of Nature and Tourism (MECNT) states that artisanal logging is the principal source of the DRC's national timber market. The market mainly consists of carpentry in urban areas, but also supplies many cross-border markets with Angola, Uganda, Rwanda, Burundi, Tanzania, Zambia and Sudan (Brown and Makana, 2010; Vundu and Kiyulu, 2010; Benneker et al., 2012). Most artisanal loggers operate at the edge of forests and therefore do not necessarily increase access to forests. Compared with neighbouring countries, artisanal operators in eastern DRC harvest timber in dense forests (Lescuyer, 2010; Benneker et al., 2012). Farmers often clear these areas once artisanal loggers have removed the largest trees and as such artisanal operations, followed by shifting agriculture, are now considered as major causes of forest loss (DRC, 2012).

The Forest Code does not govern artisanal logging (Trefon, 2008; Fétiveau and Mpoyi, 2009; Vundu and Kiyulu, 2010). In theory, only the MECNT can issue artisanal logging permits (maximum area of 50 ha). However, according to Forestry authorities, in practice provincial governments sign the licence at recommendation of the provincial office of environment and nature conservation. There is indication that customary authorities issue permits as well (Brown and Makana, 2010; Seyler et al., 2010). This might be a direct result of the fact that local chieftaincies do claim some rights to land including forests and they often lead decisions about social contracts in case of large scale timber harvesting activities. The MECNT has no accurate record of permits issued and no way to monitor artisanal sites. Furthermore, many artisanal operations are pre-financed by industrial concessions (Benneker et al., 2012). Information on these activities is vital to sustainable management.

Impact from industrial logging on the DRC's tropical forests appears minimal despite suggestions to the contrary by some advocacy NGOs.⁴ Industrial timber exports from DRC are modest; they recently represented less than 15 per cent of the exports of Gabon or Cameroon, which have only a fraction of the DRC's forest resources (Laporte et al., 2007a). Nonetheless, the extent of unsustainable harvesting calls for urgent action. A moratorium in 2002 and the enactment of the 2002 Forest Code and its implementation decrees greatly reduced the impact of commercial logging to the forest (Laporte et al., 2007b; Management of ITB Bikoro to authors December 2012). Given high transportation costs and other externalities, commercial timber operators are interested in cutting only high-value species at a rate of about 1–2 cubic metres per ha.⁵

Shifting cultivation

Many indigenous communities practise swidden agriculture (shifting cultivation) (Akwah and Yoko, 2006; Samndong et al., 2011b). This process involves cutting and burning small patches of forestland to be used for agriculture for a few seasons and then left to grow fallow, in a cyclical pattern. This form of subsistence, practised for generations, has placed little burden on the land and forest, yet is often scapegoated as a major cause of deforestation (Seyler et al., 2010; Taylor, 2011). In a traditional shifting cultivation system, only a small percentage of community agriculture lands are cultivated in any given year. Besides allowing for the regeneration of tree cover, fallows restore soil fertility and reduce weeds from crop lands. Traditionally, it

² This is a government estimate from the National REDD Strategy for 2013–2030.

³ Tropenbos's main project in Orientale province is to map out the value chain of artisanal logging in the region. An interview with the present director and project coordinator May 2012.

⁴ Rainforest foundation and Greenpeace international hold a strong view that industrial logging has a serious impact on the rainforest of Congo.

⁵ I observed selective logging of wagen species (high-value timber species) in the TIB concession in Bikoro Territory.

has been impractical to cultivate too much land as this increases soil infertility and weed problems, and requires more labour to produce crops (Yamba, 2009; Seyler et al., 2010). Thus, when practised on a small scale, in sparse population areas and suited to meet local demand, shifting cultivation may not significantly impact the forest.

Increased population density in certain areas, coupled with high urban demand for food and restricted access to land in logging concessions and protected areas has, however, reduced or eliminated fallows. This process is occurring around Kinshasa and the densely populated areas in eastern DRC.

Demographic pressures, civil strife and insecure land tenure regimes continue to threaten natural forests (Debroux et al., 2007; Seyler et al., 2010). It is important to acknowledge that unsustainable practices resulting from the prevalence of low technology and low-input agriculture systems limit the capacity of farmers to meet their food needs. This in turn limits their ability to supply the growing urban markets and in the process generate income and improvement in livelihoods. Tackling these practices will likely transform small-scale agriculture in a way that benefits the environment, as well as local and national economies.

Large scale agriculture

Future deforestation may be driven largely by the expansion of palm oil plantations into forest regions (Putzel et al., 2008; Karsenty, 2010a). Virtually all of the dense humid (high carbon) forests of the DRC are on soils and in climatic conditions that are suitable for palm oil production (Tollens, 2010). Indeed, many agriculture investment companies from Asia, including Chinese firms, pay about US\$300 per ha for forest lands that will be transformed into palm plantations.⁶ There are projects in the pipeline requiring a total of about 3 million ha for palm oil production. Although the cost of slowing the expansion of palm oil into dense forests may be higher than the costs of slowing shifting agriculture (Gregersen et al., 2010; Mpoyi, 2010), interventions towards sustainable agriculture need to tackle both in order to reduce emissions from land use effectively.

Demand for non-timber forest products

Non-cultivated lands supply diverse forest products, including bush meat (the main source of protein for the vast majority of these communities), fuelwood, wild food plants and medicinal plants, as well as plants that provide natural fibres and construction materials such

as building poles, thatch, rattan and raffia (Seyler et al., 2010; Samndong, 2011).

Protected areas are important for biodiversity conservation. Policing extensive protected areas is nearly impossible, stressing the need for an approach that includes forest communities and that provides incentives for healthy human-forest relationships (De Merode, 1998). Restricting the rights of indigenous groups that have had open access to areas for innumerable generations also presents normative (Nelson and Hossack, 2003; Colchester, 2007), as well as moral and ethical issues (Counsell et al., 2007; Taylor, 2011). Moreover, such restrictions are environmentally harmful and detrimental to their wellbeing (Nelson and Hossack, 2003; Taylor, 2011). Therefore, criminalisation of extraction of natural resources for subsistence may not be effective and often fosters corruption and lawlessness.

Payment for ecosystems services and other forms of incentives should be critically examined and explored. There is also a need to consider innovative financing mechanisms such as the appropriate use of the numerous taxes that resources users pay in the country.

Biomass energy

Fuel-wood consumption is undoubtedly a major cause of forest degradation, particularly for peri-urban forests (Seyler et al., 2010; Gray et al., 2011). Between 2001 and 2005, annual household fuelwood consumption increased from 12,935,000 to 14,507,874 cubic metres (m³), while industrial consumption increased from 66,080 to 71,066m³ during the same period (USAID, 2011). With the complete disappearance of forest land around Kinshasa, fuelwood and charcoal are now imported from distances of 400-500km (Gray et al., 2011). Fuelwood supply chains for Kinshasa extend well into the Central Congo Basin of Equateur province. For instance, in Bikoro territory, located on Lake Ntumba about 885 km from Kinshasa, charcoal production for Kinshasa is a major source of income for many households, including the indigenous people.⁷ Investment in transportation by a logging company (ITB) in Bikoro has helped reduce the cost of transportation of goods to Kinshasa. The company allows the local population to ship charcoal on its boat, which frequently brings large quantities of charcoal to Kinshasa. In Bikoro town nowadays, nearly every household has become a small-scale charcoal producer, with rows of white rice sacks stuffed with charcoal as they wait for the arrival of the ITB boat.⁸ This has helped create a boom for charcoal production in the region (Gray et al.,

⁶ In 2010 there was a wild rumour in the media that the Governor of Equateur province had allocated over 300,000 hectares of land to the Chinese for a palm oil plantation. A lot of advocacy NGOs criticised this allocation.

⁷ Field observation.

⁸ Field observation in Bikoro.

2011). While this service sustains livelihoods, creates employment and offers some dignity to the people involved, there is a need to ensure that production, transformation and consumption are more sustainable and efficient.

The recent community forest concession decree implemented in zoned landscapes offers an opportunity to evaluate the potential for the production of high value timber products as well as charcoal and non-timber forest products. Developing management plans with a range of uses in mind including the maintenance of biodiversity areas or watersheds can offer a variety of services that would depend on the forests standing rather than felled. Lessons on what works can be drawn from different countries; examples include the MICAIA inclusive business model for development of natural products in partnership between private sector and communities in Mozambique, and the ejidos experience in Mexico.

Mining

Industrial mining activities – without adequate environmental and social safeguards – continue to threaten the DRC's forests and biodiversity, given the overlap between the mineral resources and tropical forests and protected areas (Mazalto, 2006; USAID, 2011). If mineral exploitation continues to expand as expected, it could significantly affect biodiversity and forest cover, and by extension, affect global climate change. Reports indicate that China and the DRC will likely agree to deals worth approximately \$US9 billion (Seyler et al., 2010). China primarily wants more access to the enormous copper and cobalt deposits, for its own development. It is unclear whether the government has the capacity and political will to enforce environmental regulations under the new Mining Code (Seyler et al., 2010).

Artisanal miners produce about 90 per cent of minerals in the DRC. Estimates vary on their number: 500,000 to 2,000,000 diggers are thought to be actively and directly involved in extracting minerals (Seyler et al., 2010). With an average of four to five dependents for each digger, as many as 8 to 10 million people could depend on this activity for their livelihoods, or about 14 to 16 per cent of the DRC's total population (Seyler et al., 2010). Artisanal mining continues to have an impact on the DRC's forests and biodiversity, including on national parks and wildlife reserves. In 2002, a reported 10,000 artisanal miners moved into Kahuzi-Biega and 4,000 moved to the Okapi Wildlife Reserve (Brown, 2010; Seyler et al., 2010). Currently, the Ministry of Mines acknowledges that there are still many artisanal miners in the parks and reserves, but

cannot estimate the total number.⁹ In combination with the lack of any effective reclamation programmes for mined areas, artisanal mining has led to significant areas with decreased habitat, lower carrying capacity and increased erosion. However, the extent of this area is not known (Seyler et al., 2010). Biodiversity is affected by the change in habitat, water quality and land use after extraction. Artisanal mining has also reportedly aided the DRC's trade in endangered species through increased access to remote sites (Seyler et al., 2010).

There is an opportunity to organise the sector and build capacity, particularly that of local artisanal miners to exploit the resources sustainably, safely and profitably. Investment in locally controlled (Macqueen, et al 2012; Elson, 2012; Macqueen et al 2014; Nhantumbo et al 2013) land use, which developed from the need to strengthen forest enterprises, offers some entry points. Local control of land use is based on the underlying assumption that for small and medium enterprises to operate as viable businesses requires secure tenure and strong organisation structures for enterprises, access to financial resources and business proficiency as well as access to markets. The website Forest Connect offers several examples of how producer organisations have come together to produce at scale and benefit from better access to markets. Artisanal miners operating in isolation are likely to perpetuate the poverty of those involved in exploration while middlemen make high returns. Organised artisanal mining also has the potential to facilitate the implementation of environmental management and measures that mitigate against negative impacts such as the pollution of water resources.

The 'Improved African Hut' framework developed in early 2000 (UNDP Drylands Development Center, 2007¹⁰), and based on lessons from community based natural resources management also defines the key ingredients for achieving the sustainability of resources and wellbeing of the people (roof). The five pillars are:

- Control over resources through secure rights
- Access to technologies to transform natural assets into goods and services of higher economic value
- Strong institutions that make decisions on the use and management of the resources as well as enterprises
- Access to financial resources such as credit for long term investment
- Access to fair and reliable markets.

The foundation of this 'hut' is access to information (on rights and obligations towards natural resources, and on services available and markets), education (formal or informally acquired knowledge for sustainable

⁹ Interview with a senior official at the ministry of mines (December 2012).

¹⁰ Report written by Nhantumbo, Isilda

enterprises), and health (a healthy population is key for the availability of labour to extract resources). The latter is critical in the context of mining, where the use of rudimentary technologies for the extraction of resources has a negative impact on miners' health.

In addition, the fact that the DRC government has adhered to EITI provides an opportunity for improving transparency in contract allocation as the terms agreed include the disclosure of taxes and other associated economic benefits. Adequate levels of tax, corruption free tax collection and reinvestment in developing local economies is key to avoiding the depletion of natural resources as well as the impoverishment of the DRC. The continent remains rich in resources but poor in terms of its wealth. Poor governance of natural resources means that it exports its riches and thereby aids the growth of economies elsewhere while its own natural resources dependent population experience high levels of poverty and internal conflict.

Infrastructure

Connecting producers and consumers is an important part of development. Infrastructure is therefore necessary to enable access to services including markets. However, without the establishment of environmental and social safeguards, forests are at particular risk.

Road development in the Mobutu era was restricted in order to thwart potential rebels or invading armies (Makengo, 2010; Seyler et al., 2010). As peace and stability return to the DRC, improving the country's road network is absolutely essential for development. At the same time, roads fragment the forests, favour the growth of agriculture and facilitate hunting and trade in bush meat (Laporte et al., 2007a; Seyler et al., 2010). Road-related damage is usually a result of a lack of planning and non-compliance with laws (Seyler et al., 2010). In certain cases, roads have positive effects, allowing populations to pursue activities other than hunting and gathering. River transportation has been the major mode of access to remote forests in the DRC.¹¹ River boats have long transported bush meat from the forest to urban areas.

Zoning and land use planning are vital to minimising the negative impacts of infrastructure including that of roads, bridges, social services and human settlements.

Governance

The key underlying causes of deforestation and forest degradation in the DRC include: corruption and the lack of good governance, weak institutional capacity, weak law enforcement and insecure land and resource

tenure (Oyono and Nzuzi, 2006; Putzel et al., 2008; Fétiveau and Mpoyi, 2009; Du Preez and Sturman, 2009; DRC, 2010a; Seyler et al., 2010; Kiyulu, 2011; Norad, 2011; Aquino and Guay, 2013). Moreover, poor business practices, such as a lack of transparency in the awarding of forest and mining concessions, often in contravention of laws and regulations (Counsell et al., 2007; Trefon, 2007a), undermine the potential for sustainable and greener economic growth. This situation, along with growing formal and informal tax pressure on companies, is perhaps discouraging the long-term investments that are vital to improving the sustainability of the DRC's natural resources (Karsenty, 2004; Trefon, 2008). Poor governance also diverts part of the profits from the exploitation of natural resources and reduces equitable distribution of benefits among the DRC's population, particularly among rural communities. Therefore, improved governance is urgent if the country is to progress towards conservation and sustainable management of forest resources and biodiversity.

Institutional capacity

The institutions managing forest and conservation interests in the DRC have been under resourced (Trefon, 2008; Mbala and Karsenty, 2010) in terms of numbers, but also with respect to training and office equipment. Only a small percentage of employees have any educational training beyond secondary school. Access to civil service employment is based on political patronage. However low salaries which are paid late or irregularly weakens the motivation of employees and affects the quality of their work (Du Preez and Sturman, 2009). The consequence is rampant poor service delivery that affects conservation.

Weak law enforcement is a major challenge facing environmental protection and management in the DRC (Debroux et al., 2007; Trefon, 2008; Du Preez and Sturman, 2009). There are several reasons for this. First, the DRC's civil conflict, along with resulting shortages in travel budgets, supplies and equipment, have limited most government agencies from enforcing laws (USAID, 2010). When agencies do go on the field to monitor compliance, the entity under observation usually pays transport and expenses, creating a conflict of interest. Second, environmental agencies seem hesitant to enforce laws given current socio-political and economic interests and concerns (Greenpeace International, 2008; Tchoumba, 2010). Third, there is a gap between legislation and its deployment in practice; top-down approaches and limited consultations create legislation that is not always focused on addressing local-level challenges (Putzel et al., 2008; Oyono, 2010). Fourth, many communities and resource users

¹¹ Field observation during my field research.

are ignorant of the legislation (Lewis and Nelson, 2006; Lewis et al., 2008; Woodburne and Nelson, 2010). For example, most local authorities interviewed¹² stated that there is relatively little awareness about the details of the new Forest Code, particularly with regard to community and conservation forestry and the distribution of benefits (Mpoyi, 2005; Yamba, 2009). Major problems cited include a lack of understanding about rules and procedures on issues such as permitted land for logging, as well as a lack of clarity about local decision-making power dynamics for forest management (Rodgers, 2008; Oyono, 2010; Taylor, 2011).

Land and resources tenure

Insecure land and resource tenure is also cited as a major underlying cause of deforestation and forest degradation (De Witt, 2010; Seyler et al., 2010; Oyono and Barrow, 2011). Poverty, land resources and the environment are inextricably linked (Wily, 2011). The rural poor depend almost entirely upon land and other natural resources for their livelihoods, including food, fuel, shelter, water and medicines. Unequal access to, and ownership of land and other resources have contributed significantly to economic and political inequities and environmental degradation throughout the DRC's history, and have exacerbated tensions and conflict (Biebuyck, 1960a; Kalambay, 1970; Huggins, 2010). Existing land acquisition systems favour the wealthy and the elite (USAID, 2011). Women, in particular, have had limited land and resource rights (Akwah and Yoko, 2006). The need for land tenure policy and legislation is becoming increasingly critical, not only for the forestry sector but for the country's development as a whole (DRC, 2010a).

Non-lucrative alternative livelihoods

The few alternative livelihood programmes in the DRC have had limited success (Klaver, 2009; Seyler et al., 2010; Yanggen et al., 2010; O'Neil et al., 2011). Livelihood options through these programmes cannot compete with incomes gained from illegal logging, the bush meat trade or mining in the parks and reserves (Marcot and Alexander, 2004; Seyler et al., 2010). Alternative livelihood programmes are based on what communities 'want to do' rather than a value-chain analysis to identify products and services with the greatest potential for increasing household income, and what elements along the value chain – such as access to technical information, capital and markets – act as barriers to alternative livelihood development (Seyler et al., 2010). The problem is particularly apparent around the DRC's national reserves (Brown, 2010). According to the Forest Code, communities should receive 40 per cent of revenues from logging concessions (DRC, 2002b; CODELT, 2010). Communities that live around strictly protected areas, however, receive no compensation for the loss of rights to forest products; they are expected to make up lost benefits through donor-supported alternative livelihood programmes. However, as these programmes fail to generate income, communities continue to illegally log, hunt bush meat, and extract diamonds (Brown, 2010; Seyler et al., 2010). Understanding the value chain and the viability of alternative enterprises, as well as a long-term commitment to supporting such investments, are key to ensuring they are successfully adopted and have a positive impact.

¹²Interviews with customary chiefs and local administrators in Bikoro Territory, May and December 2012.

Natural Resource legislation: turning challenges into opportunities

3

The DRC has taken positive steps to define its land, forest and other natural resource policies. The provision of *cahier de charge* (social contracts) in the Forest Code or the enactment of legislation that provides for community concessions are examples of the positive provisions that allow for local communities to benefit from the resources they depend on. However, it is the implementation of the legislation that presents serious challenges. In addition, while there are no perfect policies some loopholes remain regarding land tenure security, governance and public participation, law enforcement, sustainable management and the equitable sharing of benefits.

3.1 Land tenure and rights

Although the terms land tenure and rights are usually used interchangeably, they are distinct concepts. Land tenure is the institutional arrangement (political, economic, social or legal) that determines how individuals or groups secure access to land and its resources (USAID, 2007). It defines how property rights (of use, control and transfer) are allocated within societies, and are often defined via statutory or customary laws. In some instances, they are well defined in these systems, but at other times they are open to misinterpretation and exploitation (Platteau, 1996). Land rights, on the other hand, refer to a bundle of rights on the use, control and transfer of land (USAID, 2007). Land rights as related to property rights are social conventions that reflect agreement about how land is held, used and exchanged (Platteau, 1996; Ojalampi, 2006). Land tenure in this context is the institutional framework within which decisions are taken about the distribution and use of land resources (Ellsworth, 2004; Kameri-Mbote, 2006; Oyono, 2011b). It reflects the complex relationships of men and women to land. The actual structure varies with the status of the economy and society at a given time (Wily, 2002; Cotula and Mayer, 2009). Land tenure is adapted to the economic and social conditions of the society (Bohannon, 1960; Unruh, 2004; Toulmin, 2008). Through this process of adaptation, several forms of land tenure arrangements have emerged, ranging from traditional communal tenure (a feature of tribal societies) to state ownership to private ownership (a feature of market exchange economies) (Wily, 2000; Knight, 2010).

Pre-independence era

In the DRC, land tenure complexities are rooted in the administrative and resource rights system of the colonial period (Biebuyck, 1960a; Harms, 1964; Kalambay, 1970; Kalambay, 1982; Jewsiewicki, 1980; Kouassigan, 1982; Salacuse, 1985; Mathieu and Kazadi, 1990; Mungangu, 1997; Leisz, 1998; Mamdani, 1999; Debroux et al., 2007; Yamba, 2009).

Before the creation of the Congo Free State in 1885, land tenure and rights were governed under customary tenure arrangements (Sohier, 1954; Biebuyck, 1960b; Kalambay, 1970; Yamba, 2009; Seyler et al., 2010; Oyono, 2011b). These varied between tribes and cultures and were adapted according to a society's ecological, demographic and socioeconomic attributes. Private land ownership in the European sense of the term was unknown as all lands belonged to the lineage group through its ancestors. Arable land, including wetlands, was considered communal property and accessible to all community members. These lands were under the direct control of customary chiefs and notables. Under this arrangement, group rights to land were inalienable and individual group members also had inalienable rights to access some land (Leisz, 1998). The local populations had user rights to land for gathering, hunting, grazing, fishing and cultivation. Women could not own or inherit land, but enjoyed limited access through affiliation to the male legates (father, husband, brother, uncle). The latter practice persists and thus any process that involves devolving or strengthening rights through the recognition of customary tenure needs to address the inequities embedded in the practice.

This land-tenure arrangement was altered when the King of Belgium (Leopold II) created the Congo Free State in 1885-1906 as his private land (Le Roy, 1982; Kalambay, 1989; Vlassenroot and Huggins, 2005). Ignoring traditional land-tenure practices, which were defined by customary law, the king decreed that all 'vacant' land was property of the state (Mamdani, 1999; Yamba, 2009). As a result, more than 27 million ha of land not clearly under cultivation or settled were turned into plantations and protected areas. After Belgium annexed the Congo Free State in 1907, these areas became the basis of the state's domain and were distributed as concessions to Europeans (Kouassigan, 1982; Salacuse, 1985; Mathieu and Kazadi, 1990; Leisz, 1998). King Leopold also decreed that local customs and traditions should govern the remaining lands occupied by the native population under the authority of their customary chiefs (Kalambay, 1970; Kouassigan, 1982). This dual legal system of land tenure continues to this day and is the main source of conflict over property rights and natural resources (Leisz, 1998; Huggins, 2010). The colonial land-tenure system remained in force following independence in 1960 and is made up of four broad categories: state-owned lands, individual and company lands, concessions, and lands occupied by the native population covered by customary law (Leisz, 1998).

Table 1: Key legislation on land and environmental management in the DRC

SECTOR	KEY LEGISLATION
Land	Land Law No. 73-021 of 20 July 1973 DRC, 2010. Journal Officiel de la RDC n° spécial. Code foncier. Kinshasa.
Forest	Law 011/2002 pertaining to the Forest Code passed in August 2002 <i>Arrêté</i> 023 adopted on 7 June 2010 by the MECNT
Agriculture	2003 Agricultural policy reform document
Mining	Mining Code enacted by Law No. 007/2002 of 11 July 2002
Environment	New Environmental Law, 2011 MECNT

Post-independence

After independence, the land-tenure system in the DRC underwent a number of changes. The Bakajika Law of 1966 suppressed all forms of private land ownership and an amendment of the Constitution in 1971 gave the state ownership of all natural resource wealth above and below the ground, ensuring the government could claim all public mineral rights (Yamba, 2009; Huggins, 2010; Seyler et al., 2010). The law rescinded individual and communal property rights to land (Pelerin, 2010). The General Land Law adopted in 1973, which is the main law regulating access to land today, stipulated that individuals can obtain rights to land and natural resources through the granting of either ‘perpetual concession’ or ‘ordinary concession’. The customary rights to land held by the native population were transformed into user rights regulated by an ordinance of the President of the Republic (DRC, 2005).

In response to external pressure, the DRC enacted a new Forest Code in 2002 (Counsell, 2006; Trefon, 2008). While the new code set out the framework for the country’s forest policy, it failed to regulate inconsistency in the land-tenure system (Seyler et al., 2010; Tchoumba, 2010). Moreover, the policy landscape has been further affected by incoherence among the Forest Code, Mining Code and agricultural policy that exacerbates land management challenges as well as competition for land and exploitation rights (Seyler et al., 2010; UNEP, 2011).

Current legislation

According to the Land Law No. 73-021 of 20 July 1973, the state has the exclusive, inalienable and imprescriptible ownership of the land (DRC, 2005). The law provides for state ownership of all land, subject to rights of use granted under state concessions. It permits customary law to govern use-

rights to unallocated land in rural areas (Leisz, 1998; Vlassenroot and Huggins, 2005; Reynolds et al., 2008; DRC, 2010b). Although the state owns all land in the DRC, the 2005 DRC Constitution provides that the country’s natural resources are for the enjoyment of all Congolese people, and that the state must ensure these resources are distributed based on equal opportunities. The government can grant concessions to land and other resources as authorised by law (DRC, 2005; Mpoyi, 2010).

Despite formal legislation governing land-use rights and the nationalisation of all land, a significant portion of land in the DRC remains, in practice, subject to customary law (Akwah and Yoko, 2006; Oyono and Nzuzi, 2006; Klaver, 2009; Samndong et al., 2011b). Traditional authorities such as customary chiefs, head of clans and notables continue to administer land on behalf of local communities in many areas, often in alliance with local government officials (local administrative chiefs).¹³ As rights have evolved and populations have increased over time, the existence of multiple layers of rights to govern specific areas of land and forest are common. Bantu agricultural communities recognise customary access rights to fixed territories. Rights of access to other natural resources, such as game and fish, may extend further. Groups of hunter-gatherers (pygmies) may recognise customary access rights to their territories in the range of 70–400 km²; they may also recognise rights based on the richness of the area’s flora and fauna (Leisz, 1998; Marcot and Alexander, 2004; Akwah and Yoko, 2006; Counsell, 2006; Zongwe et al., 2009).

According to the land law, Congolese nationals and entities desiring use-rights to land can either apply for concessions in perpetuity or standard concessions. Concessions in perpetuity (concessions perpétuelles) are available only to Congolese nationals; they are the only ones who can transfer and inherit land (DRC,

¹³Interview with customary chiefs in Bikoro territory, May and December 2012.

2005; USAID, 2011). However, the state can terminate concessions in perpetuity through expropriation. As in many other countries where the state owns natural resources, termination is said to be in the public interest, which often translates into infrastructure development or investment perceived to generate benefits to society. The state grants standard concessions (concessions ordinaires) to any natural person or legal entity, whether of Congolese or foreign nationality. Standard concessions are granted for specific time periods, usually up to 25 years with the possibility of renewal. Renewal is usually guaranteed so long as the land is developed and used in accordance with the terms of the concession (Musafiri, 2008). With respect to the standard concessions, the law provides extensive procedures for obtaining these concessions, beginning with an application to the provincial governor. The governor then authorises the district commissioner to arrange for a land survey that involves visual inspection, local interviews and a determination of existing uses. When the survey is complete, the application is sent to the governor who forwards it to the minister. Officials at district, provincial or central levels grant final approval based on the amount of land involved. It is unknown how often the process is followed and the extent to which concessions are freely transferable in practice (Leisz, 1998; Vlassenroot and Huggins, 2005; Huggins, 2010).

Application of the DRC's land law relating to concessions tends to be restricted to urban areas and large holdings of productive land in rural areas (Karsenty, 2010b; Oyono, 2011b). In most rural areas, customary law prevails. Under customary law, groups and clans hold land collectively and traditional leaders allocate use rights to parcels. Due to the changing dynamic of the rural economy and society, rural land for agricultural and residential purposes has become highly individualised in some areas over the years (Seyler et al., 2010; USAID, 2011). While community members can lend, lease for cash or sharecrop their individualised parcels of communal land, they cannot sell or permanently alienate communal land to people outside the community in most areas (Akwah and Yoko, 2006). Nevertheless, with the changes in the economic and social conditions in the rural arena and the introduction of market exchange economies, prohibitions against selling land to outsiders has reduced (Leisz, 1998; Vlassenroot and Huggins, 2004; DRC, 2005; Musafiri, 2008).

Most Congolese acquire land through inheritance, customary land-allocations from chiefs or concessions from government officials (Huggins, 2010).

Concessions are most common in urban and peri-urban areas and agricultural areas with large commercial landholdings (USAID, 2011). Customary tenure arrangements dominate in rural areas and in informal settlements in urban and peri-urban areas. In some cases, particularly areas affected by conflict and natural resource extraction, the state government has established local representatives who impose taxes on locals and business interests. In many areas, most traditional leaders have retained their authority to land by creating alliances with government officials (local administrative chiefs, local government administrators and provincial governors) to allocate land, often in exchange for political loyalty and without reference to requirements of the formal law. Particularly in regions with inadequate numbers of government officials (e.g. Equateur province)¹⁴, local administrative chiefs may serve as local representatives, blurring the distinction between formal and customary authority. Most of the land concessions issued through this mechanism have no established forms and no procedures for recording the documents¹⁵ (Leisz, 1998; Coutsoukis, 1993; Vlassenroot and Huggins, 2005).

Under customary law, traditional chiefs continue to grant rights to forestland for hunting and gathering in many areas, and community members may obtain rights to forestland through clearing the land for agriculture. In some areas where communities are structured around reciprocity and the exchange of social capital as opposed to ethnicity or lineage (the northern part of Equateur province), newcomers may be able to integrate into communities and obtain individualised land allocations available to community members; those who do not integrate into a community can often rent land from community members for cash. In other areas such as the southern part of Equateur province, however, traditional authorities may deny immigrant access to land based on ethnicity, lineage or gender (Leisz, 1998; WCS, 2003; Vlassenroot and Huggins, 2005; Musafiri, 2008). This presents another challenge of customary tenure as Congolese, of all ethnicities, should enjoy the same rights irrespective of where they live within the national boundaries. Yet, the reality is that the notion of 'migrant' discriminates among people of the same nation and fuels socioeconomic marginalisation and conflict.

Although the DRC's constitution makes provisions for gender equality and prohibits discrimination on the basis of sex, many formal laws still discriminate against women (Huggins, 2010; Seyler et al., 2010). In practice, women in rural areas do not have direct access to land. A married woman must obtain her

¹⁴ During my field research, I observed that Equateur province is rather isolated by the administration in Kinshasa and has insufficient government officials, with no logistic or office equipment; the few government officials work for months without a salary.

¹⁵ Most local administrators and customary chiefs issue local permits for artisanal logging without the consent of the provincial coordination unit of the Ministry of Environment and the governor of the province.

husband's permission to purchase or lease land, open a bank account and accept a job (Vlassenroot, 2006; Peach Brown, 2011). Husbands have a right to their wives' property, even if the couple enters into a contract to the contrary. Generally speaking, women and girls have low literacy rates (55 per cent, compared to 76 per cent for men) and sexual violence against women and girls is high (USAID, 2011). Women's access to justice is limited by their lack of education, financial resources, information and assistance (Huggins, 2004; Zongwe et al., 2009). This means that the rights of the 95 per cent of rural women who work in agriculture and dominate agricultural production in rural areas are not acknowledged. Women represent 60 per cent of agricultural labourers, 73 per cent of farmers, and produce 80 per cent of food crops for household consumption. Roughly 25 per cent (0.5–2.0 ha) of all land in the DRC is considered to be held by women, with the majority of those landholders either single, widowed or divorced (USAID, 2011).

Although matrilineal systems dominate in the south, most women only have use-rights to land and access these rights through their husbands or a chief. A marriage presumes that husbands will provide wives with enough land to grow food for the family. Women can often decide how to cultivate this land and how to harvest it, but are not considered owners. In most areas, male family members retain ultimate authority over the land (Leisz, 1998; Huggins et al., 2004). With the rise of social movements, many rural women are organising into groups to fight for gender equality and are increasingly vocal about personal security and food security. Recently, various civil society organisations (CSOs) and donors have increased support to these rural women groups (Trefon et al., 2004; USAID, 2011).

Gender equality in access and control of natural and productive assets must be pursued to empower women economically and to promote local development.

Key challenges

The legislative framework for land ownership remains incomplete as key decrees have not yet been adopted (Vlassenroot and Huggins, 2005; Musafiri, 2008; Huggins, 2010; Mpoyi, 2010; Pelerin, 2010; Oyono, 2011b). Inconsistencies between written and customary laws have not been formally reconciled (Leisz, 1998). Forest ownership and user rights are now subject to the 2002 Forest Code (Trefon, 2008; Sayler et al., 2010; Oyono and Barrow, 2011). This code does not modify the 1973 Land Law, but continues to assert state ownership over all areas of forest land (Counsell, 2006; Du Preez and Sturman, 2009; Fetiveau and Mpoyi, 2009; Yamba, 2009; CODELT, 2010; Taylor, 2011).

The land tenure legislation has several implications for forest and natural resource management in the DRC:

- The legal dualism of the land-tenure regime has resulted in relatively secure statutory land tenure and property rights for natural resources accruing to a small percentage of the population with permanent private concessions. Most of the population receives more insecure customary land tenure and property rights (Vlassenroot and Huggins, 2005; Musafiri, 2008). While this dualism may have been intended to retain traditional management systems, it has often resulted in confusion: lands with legal titles intersect with those managed under customary use rights, while the growing population and drive for economic development increases pressure on land resources (Huggins et al., 2004; Vlassenroot and Huggins, 2005; Musafiri, 2008; Huggins, 2010). Land tenure and property rights for certain segments of the population, particularly Pygmies,¹⁶ women and other disadvantaged groups, have been significantly impaired by the constraints that stem from this dualistic system. They may be further eroded as the DRC enjoys greater political stability and potentially a more formalised system of land tenure and property rights (Mpoyi, 2005; Hoare, 2006; Dkamela et al., 2009; Methot and Thompson, 2009; Seyler et al., 2010). The Forest Code, deals with forest products and services, but does not transfer any rights concerning the land itself. Forest concessions and land concessions are distinct from one another. A forest concession deals exclusively with the forest and rights to harvest timber and other products, but does not give rights to own the land. It is a rental contract with no transfer of ownership (Seyler et al., 2010).
- The current land-tenure system may affect the ability of communities to benefit from any payment from Reducing Emissions from Deforestation and forest Degradation (REDD+) (Dkamela et al., 2009; Rainforest Foundation UK, 2009). In a multi-country assessment of tenure issues related to REDD+, Cotula and Mayer (2009) argue that security of local land and forest-use rights is a key issue in the DRC; they state the DRC's "weak local tenure on paper and in practice" could undermine the formal value of customary rights and expose local people to dispossession as outside interests (in gaining REDD benefits) 'muscle in'. They conclude that insecure tenure for local communities combined with revenue management issues such as corruption and rent-seeking, as well as limits in the government's enforcement capacity, could be major stumbling blocks for REDD+ implementation in the DRC. Others have expressed similar concerns (Oyono, 2010;

¹⁶The term Pygmy is pejorative in some contexts. It is used in this report because it is well known by the people in this region and clearly indicates a specific group. The Pygmies in this region belong to the ethnic group Batwa and they are also referred to as *Peuples Autochtones (PA)* in French, which means indigenous people.

Woodburne and Nelson, 2010; Karsenty and Ongolo, 2011; Taylor, 2011; Nelson et al., 2012).

Despite these challenges, international organisations and donors have launched initiatives to address land issues in the DRC.

- The CARPE focal point has noted USAID plans for a US\$4.7 million grant to UN-Habitat in support of land dispute mediation and a process to reform land-tenure laws (National Coordinator of CARPE to authors, December 2012).
- In 2009, the International Development Research Centre (IDRC) initiated a three-year project to help the government develop participatory mechanisms for good governance of natural resources. It focuses on encouraging the emergence and reinforcement of female leadership and promoting the rights of women and displaced households to access and use natural resources.
- The International NGO Citizens' Network for Justice and Democracy (Réseau des Citoyens pour la Justice et la Démocratie (RCN)) has supported training for the judiciary on the land laws (IDRC, 2009).
- Two national NGOs in the DRC (RRN and CEDEN) with support from Rainforest Foundation UK and Norway, Forest People Programme, Forest Monitor and Global Witness have begun participatory mapping of communities and customary claims of indigenous people to land in different provinces. These maps help advocate for the recognition of these communities in forest management and other forestry interventions such as REDD+.¹⁷
- WWF has supported local communities in Bikoro to produce village maps of their ancestral land and land-use patterns under their community-based natural resource management (CBNRM) project in Lac Ntumba. These communities can use the maps to negotiate social agreements with logging companies.

There is a need to build stronger support for land delimitations and stronger rights as well as strengthen local institutions to improve governance and advance gender equality.

3.2 The Forest Code

The Forest Code of 2002 promotes participatory governance, but offers no guidelines for the negotiation of social agreements between logging companies and communities. Following approval of the government's model for social contracts in 2010, multilateral and bilateral donors, as well as development partners, have contributed to building greater capacity in the DRC for equitable forest management.

The main legislation governing forest resource management in the DRC is the 2002 Forest Code (DRC, 2002), which replaced the colonial Forest Code dating from 11 April 1949. The new code, Law 11/2002, dated 29 August 2002, was published in DRC's Journal Officiel in November 2003 and ended the moratorium on new concessions (Barume, 2003; Counsell, 2006; Global Witness, 2007; Debroux et al., 2007; Greenpeace, 2008; Seyler et al., 2010). Among other issues, the Forest Code deals with forest concessions, defined as rental contracts without transfer of ownership. Of the 38 regulations or implementing decrees deemed necessary to implement the 2002 Forest Code, 35 have been published and 3 – regulations for the *cahier des charges* (social agreements) and artisanal logging – are being developed (Barume, 2003; Seyler et al., 2010). A decree on community forest concessions (number 14/2014) has been recently approved, paving the way for greater control at local and active participation in generating economic benefits from the resources. Clear guidance and planning of the processes including strengthening local community structures so as to maximize local benefits have to be in place. This will minimize elite capture, strengthen local control of forests and enable the beneficiaries to forge partnerships with serious logging companies.

According to the Forest Code (DRC, 2002b), the state owns all forests. Article 2 describes its objective to “foster rational and sustainable management of forest resources with a view to increasing their contribution to the economic, social and cultural development of today's generations, while preserving forest ecosystems and forest biodiversity for future generations”.

Regulatory framework

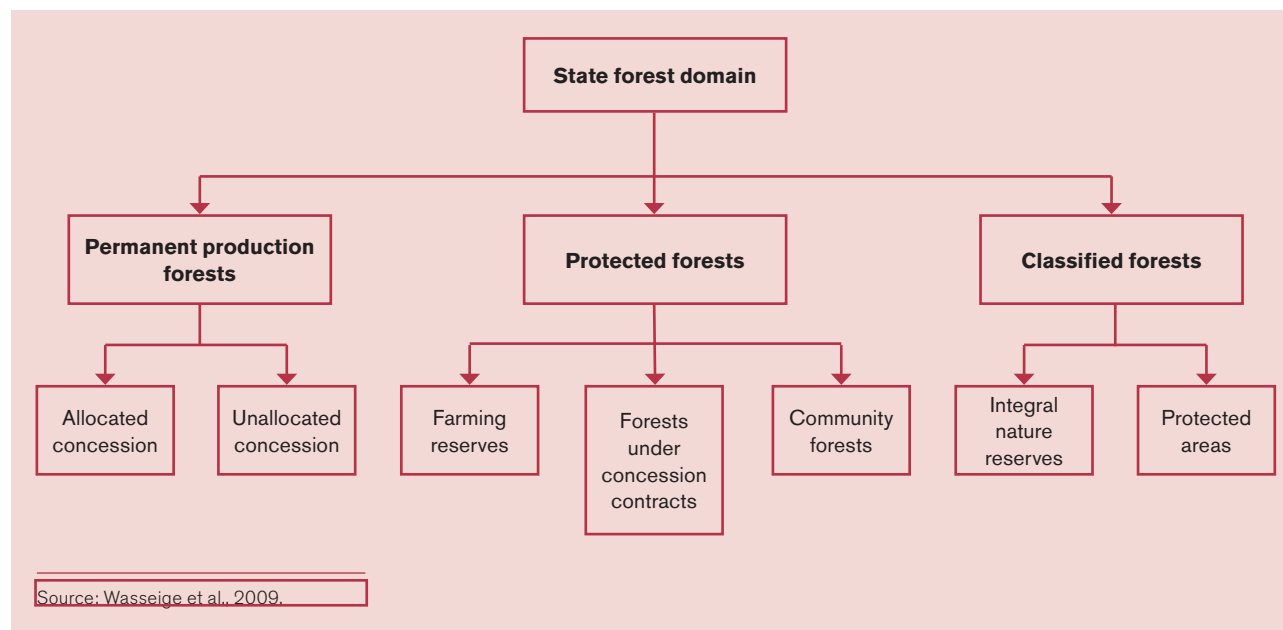
Article 10 classifies DRC forests in three broad categories: classified forests or ‘gazetted forests’, protected forests, and permanent production forests (See Figure 1).

The classified forests or ‘gazetted forests’ are designated for environmental protection and may include nature reserves, forests located in national parks, botanical and zoological gardens, wildlife reserves and hunting areas, biosphere reserves, recreational forests, arboretums, urban forests, and protected areas.

Protected forests are subject to less restrictive user and exploitation rights than classified forests. These forest lands are held under customary land rights, as recognised and reinforced by the 2006 Constitution. In practice, protected forests can be converted to other uses including activities such as small-scale

¹⁷ Interview RRR, CEDEN.

Figure 1. Legal forest classification in the DRC according to the Forest Code of 2002



farming. They may, however, also be granted as logging concessions, as long as contracts do not exceed 25 years. Protected forests may serve as community forests as they can be granted to communities upon request.

The recent community forest concessions grant rights in perpetuity which is key to investment in sustainable management.

Permanent production forests are designated for the allocation of logging concessions and forests already used for timber production and are identified through a public survey process (Art. 23). Industrial logging concessionaires have committed to institute sustainable forest management in these forests.

There is no national zoning plan to define the geographical extent of the three categories (Hoare, 2006; Cassagne and Nasi, 2007; Debroux et al., 2007; Hoare, 2007; Greenpeace, 2008; WRI, 2010). The 'Arrête Ministériel No. 107/CAB/MIN/ECN-T/15/JEB/09 of August 20, 2009 on the creation, composition, organisation and functioning of a National Forestry Zoning Steering Committee' is critical to improving land-use and land-use planning in the DRC (Seyler et al., 2010; Sidle, 2010). Composed of government, private sector, civil society, international NGOs and research organisations, the committee assists the MECNT with forest zoning issues, and is specifically tasked with:

- Providing orientation on forest zoning in relationship to other government priorities.

- Providing a forum for exchanging and harmonising different points of view from different sectors with regard to zoning.
- Harmonising the needs and interests of different parties who are concerned with space utilisation and natural resources.
- Proposing reforms to resolve legislative conflicts.
- Advising on the limits of proposed forests for zoning and assuring these limits are not in conflict with other potential uses.
- Developing a national-scale tenure map of categories of forests, mining sites, agro-industrial plantations, hydro-electric projects and other infrastructure.

In September 2009, le Service Permanent d'Inventaire et d'Aménagement Forestier (SPIAF) prepared an operational guide for forest zoning standards with assistance from the World Bank, USAID/CARPE, US Forest Service (USDAFS), FAO, WWF, the Rainforest Foundation and International Union for Conservation of Nature (IUCN) (MECNT, 2009a; Seyler et al., 2010). The absence of a forest zoning plan in the DRC is a key challenge for the effective implementation of sustainable land-use practices and for REDD+ at the regional and sub-regional level (Hoare, 2007; Laporte et al., 2008; Seyler et al., 2010; CODELT, 2010; Greenpeace, 2010). A series of participatory land-use mapping projects¹⁸ have been conducted, but none have been officially approved for public use.

¹⁸RRN has produced many land-use maps with local communities but the government has yet to endorse them for official uses. Interview with the director Kinshasa, December 2012.

Concessions and permits

According to Articles 83, 85 and 86 of the Forest Code, a concession allocation system should be based on transparent auctions rather than arbitrary decisions. Article 122 transfers 40 per cent of concession fees to provincial governments. The Forest Code provides for two principal types of logging titles: long-term titles for industrial purposes and short-term titles for artisanal logging.

Long-term titles established under the former legislation are being converted to forest concessions, as provided for in the Forest Code (Barume, 2003; WRI, 2011). The conversion process incorporates a comprehensive review of existing titles to judge their legal validity.

The DRC government adopted conversion of logging titles in its 2002 priority agenda. Many logging contracts signed before and during the war were problematic; most were speculative, without consideration of the real value of the resource and without consultation (Debroux et al., 2007).

In 2006, an inter-ministerial commission considered the validity of 156 logging concessions, covering over 22 million ha of forest. Those deemed valid would be converted and the rest cancelled. At the end of this process, 65 titles covering just over 9 million ha were deemed convertible. Recent information indicates the existence of just over 50 concessions of which about half are operational. The conversion process was lengthy due to heated debate on the moratorium for granting new forest titles that was also adopted in 2002. Despite criticism from some CSOs, however, the overall review process was generally deemed positive (Counsell, 2006; Global Witness, 2007). Most stakeholders felt it was a transparent process and viewed it more positively than the mining title review process (Trefon, 2008; Fetiveau and Mpoyi, 2009; Seyler et al., 2010).

Despite the moratorium on granting new forest titles, the DRC still has a vast area of untapped rainforest and its timber resources are poorly developed (Laporte et al., 2007a; Duveiller et al.; 2008; Hansen et al., 2008; WRI, 2011). Compared to other countries in the Congo Basin (Gabon and Cameroon) and the two other main rainforest blocks (the Amazon and Southeast Asia), formal timber production (500,000 m³ of annual log production) is negligible (Karsenty, 2004; Seyler et al., 2010; USAID, 2011).

Discussions with government officials indicate a general feeling that the moratorium is damaging as it is leading to a loss of revenue for the state and benefits for local people. Civil society organisations highlight the fact that

the moratorium has promoted a change of industrial concessions with artisanal logging companies, with a resulting negative impact on environmental sustainability and social safeguards.

Benefit sharing

The major innovation in the 2002 Forest Code has been the promotion of participatory forest governance through: the maintenance of all traditional user rights, the involvement of indigenous people, the implementation of forest management plans in all production forests including the production of wildlife, the recognition of the rights of local communities to manage forests owned under customary rights, the return of 40 per cent of the area fee to provinces and territories, the implementation social contracts, consultation with local people before assigning a forest to conservation or production, the allocation of production forest through transparent methods, the targeting of 15 per cent of the country's area under protection status, and the promotion of environmental services (Trefon et al., 2004; Oyono and Nzuzi, 2006; Trefon, 2007a; Trefon, 2008; Fetiveau and Mpoyi, 2009; Klaver, 2009; MECNT, 2009a; Oyono, 2009; Hoare, 2010; Oyono, 2010; Tchoumba, 2010; Kiyulu, 2011; Oyono 2011a; Oyono and Barrow, 2011; Davis et al., 2012).

- Article 15 states: "Gazettement takes place by Ministerial Order after due notification from the Provincial Forest Advisory Council based on prior consultations with local populations".
- Article 84 states: "Forest concession contracts shall be preceded by a public inquiry. The inquiry aims to establish any rights third parties might have on the forest to be granted for the purposes of compensation, if any".
- Article 44 states: "Populations neighbouring a forest concession shall continue to exercise their traditional users' rights on said concession insofar as it is compatible with forestry exploitation, with the exclusion of agriculture. The concession holder shall not claim any sort of compensation following the exercise of such rights".
- In the case of indigenous people, Article 84 calls for inquiries to determine any 'third party' rights that might be compensated.
- Articles 71, 99 and 100 refer to sustainable forest management plans in all production forests with the latter stipulating that "loggers must comply with the legal provisions pertaining to nature protection, hunting and fishing".

- Article 14 states that “Gazetted forests must account for at least 15 per cent of the national territory’s total area”. In several articles, the Forest Code refers to a system of consultation including provincial forest advisory councils and regular public information on forest allocations and concessions. It refers numerous times to the inclusion of the private sector, local communities and NGOs in consultations. The Code also makes explicit reference to conservation concessions, biological prospecting, tourism and environmental services (see Seyler et al., 2010).
- Article 89 makes provision for the ‘cahier de charge’ (social contract with local communities) mandatory. The social contract is a component of forest concession agreements in Central Africa to compensate local communities living around logging concessions for the logging operation. Social contracts vary from country to country, but generally urge the logging company to build social infrastructure that benefits local communities and could include roads, bridges, schools, health clinics, etc.
- Article 22 presents some possibilities for forest management by local communities. It raises an important issue in terms of participatory forest governance: the recognition of community forests in the DRC (Mpoyi, 2005; Oyono, 2009; Gray et al., 2011). According to this Article, “local community may request and obtain forest concession among the forests properly owned according to custom”. The Forest Code defines ‘local communities’ as “people organised in a traditional manner according to custom and united by bonds of tribal or parental solidarity that establish its internal consistency. A local community is further characterised by its attachment to a specific territory” (MECNT, 2009a). The August 2014 decree on forest community advances clear provisions for communities to have concessions of up to 50,000 ha.

Benefit-sharing arrangements are stipulated in Article 175 of the 2006 Constitution: provincial governments are entitled to 40 per cent of national revenue they collect. In practice, provinces have covered government and administration operational costs (Oyono and Nzuzi, 2006; Melmoth, 2007; Seyler et al., 2010; Davis et al., 2012). The Article has not yet been fully applied, as the Treasury (central government) continues to centralise the collection of revenues generated by the exploitation of forests and mining through export taxes (Government

interviewee at Equateur province, May 2012). There seems to be weak information management systems on the number of operators, volume harvested and ultimate tax revenue. Such information is essential to effective law enforcement and overall management of the sector.

In addition to this constitutional provision, the 2002 Forest Code introduced two important innovations specific to the forestry sector:

- The Treasury transfers 40 per cent of the annual area tax on logging concessions to the provinces where the concessions are located, with the specific mandate to use these funds for public interest works and infrastructure (Forest Code, Article 122) and
- Industrial logging companies must sign a negotiated social agreement with local communities adjacent to their concessions, indicating what benefits and services the companies will provide to the communities, such as roads, health and education centres, or transportation services (Forest Code, Article 89) (MECNT, 2009a).

It is clear that the Forest Code (Article 89) and implementing regulations require logging companies to contribute to the development of populations living in areas riparian to forestry concessions. The Code defines ‘riparian communities’¹⁹ as a “cohesive group traditionally organised by customary rules, bound by clan or parental solidarity and attached to a specific territory” (DRC, 2002b). Social agreements are part of the forest management plan and provide a model for these agreements by defining what should be negotiated between the parties and, to a certain extent how the negotiations should be carried out (*Arrêté* 028, 2008) (MECNT, 2009a).

The 2002 Forest Code and the *Arrêté* 028 of 2008 did not provide guidelines for the negotiation of the social contract (Seyler et al., 2010), which was essentially a discretionary practice of the logging companies; local communities had limited legal rights in the process. Under the pressure of local communities and NGOs, the *Arrêté* 023²⁰ adopted on 7 June 2010 by the MECNT provides the model for the negotiation of the social contract. In 2011, the Ministry of the Environment launched a request for proposals for consultants to disseminate information on the new regulation to communities located near active logging concessions and to support communities in the negotiation of these agreements.²¹

¹⁹ 2002 Forest Code, Article 1, al. 17. The notion of riparian community is specific to the Forest Code: decentralisation laws adopted subsequently do not identify communities as an administrative unit (the smallest unit being the village, which does not have judicial personality). The loose definition of the Forest Code therefore provides significant flexibility for communities to identify and define their boundaries, without going through any administrative process to be recognised as a community.

²⁰ This *Arrêté*, as well as approximately 30 other implementing regulations to the Forest Code, was drafted in workshops gathering international, national NGOs and the MECNT. National NGOs proposed whole sections of the regulations, which the MECNT adopted against the recommendation of the head legal advisor to the Minister on important aspects (e.g., registration rules for community concessions).

²¹ Interview with a senior official at the Ministry of Environment, December 2012.

The new model requires a local committee (CLG) to manage a newly created local development fund (FDL). The CLGs are comprised of one representative from the logging company and at least five elected representatives of local communities or indigenous populations whose territory (under customary tenure) overlaps with the logging concession. Traditional authorities of these communities supervise the CLG president, who is an elected member of the local community or indigenous population. A CSO can attend CLG meetings as an observer (Davis et al., 2012). The contract must indicate the percentage of the FDL to be allocated to initial investment versus maintenance throughout the five years of the contract. The CLG agrees where funds shall be kept, such as with the logging company or a third party (e.g. church or micro-credit unit).

The *Arrêté* 023 requires a local oversight committee (CLS) to monitor implementation of the social contract. The CLS, presided over by the head of the territorial administration, is comprised of one logging company representative and three representatives of local communities or indigenous peoples. In addition, one NGO can become a full member of the CLS upon agreement by all other members.

Designation of beneficiaries: The Forest Code and regulation identify beneficiaries as neighbouring communities who have recognised customary claims overlapping with the forest concession (Davis et al., 2012). A concession holder identifies these communities through a legally mandated socio-economic survey. The concession holder has to negotiate with all communities whose customary claims overlap with areas being logged within the concession. Negotiations take place while concession holders prepare the management plan. The negotiation guide, officially endorsed by the Ministry of Environment, states that the socio-economic survey should identify the legitimate authorities. The guide also requires affected communities to set up a 'negotiation committee' that represents all community members (including women, youth and indigenous people). Community members can ask an NGO or any individual (e.g. mayor, parliamentarian, expert) to take part in the negotiation sessions as an observer²² (see also Davis et al., 2012).

Design of benefit-sharing rules: The law is clear that the beneficiaries are communities and not individuals within communities. Article 89 of the 2002 Forest Code provides a list of 'socio-economic infrastructure and services' to be provided by logging companies: "construction of roads, renovation and construction of hospitals and schools, and facilitation of transportation services for people and goods." While this list is not

exhaustive (local management committees can add other benefits), it does frame the type of benefits to be provided. In practice, it also eliminates the question of how benefits will be shared within a given community. This model addresses the current needs of local communities such as social services and infrastructure. However, it does not provide guidance for how to distribute benefits once these relatively short term needs have been met. Community needs are dynamic and shaped by social and economic realities. Long term management of forests requires profound and sustained changes in behaviour and practices by land users. Therefore, other direct benefits to individuals and households need to be considered, which can become incentives for the transformative change that will deliver emissions reduction. These might include creation of funds to support investment in land uses that increase the productivity, efficiency and sustainability of resources.

The question of benefit-sharing between communities neighbouring the same concession remains unresolved since one social contract can apply to more than one community. While the law specifies that decisions within local oversight committees are based on consensus, it does not provide any rules for how decisions should be made within the negotiation committee or CLGs.

Delivery of benefits: *Arrêté* 023 lists each and every infrastructure and service to be provided by the logging company, together with the blueprint of any building, the exact location of any road and a financial estimate for each of these elements. In addition, the social contract must describe how maintenance costs will be covered after the contract period. Finally, it identifies what costs should be covered by the state (e.g. teachers' salaries, hospital operating costs). The logging company is responsible for delivering benefits that fall under its remit, and manages the local development fund with local communities through the CLG (*Arrêté* 023). The CLS monitors implementation of the social contract and the CLG's activity. *Arrêté* 023 creates permanent institutions at the local level to ensure that local communities are involved in the choice, management and delivery of benefits.

The composition of CLGs and CLSs is intended to ensure that community representatives are the majority in these forums. In this way, combined with the possibility of communities receiving external support from NGOs and elected officials, these committees are intended to rebalance social and economic powers between villagers (who often lack formal education and adequate information) and logging company officials or state authorities.

²² Field notebook with interview with the director of the Fédération des Industries du Bois (FIB) Kinshasa, December 2012.

The new model of the social contract has not yet delivered its intended benefits to local communities. A NGO researcher²³ in the Bikoro territory observed that village elites with economic and political connections have captured the CLG, making the process non-representative. In addition, it is the clan members with customary claim to that portion of the forest to be logged, and not the entire community, who directly benefit.

Key challenges

Although most of the Forest Code's implementing decrees have been drafted and finalised, many provisions have not yet been applied on the ground for several reasons, including:

- Scaling-up the dissemination of the Forest Code has been delayed, leaving a large majority of the forest population unaware of its existence.²⁴ Several advocacy NGOs are translating elements of the code into local languages and sensitising local communities on their rights and responsibilities (Counsell, 2006; Global Witness, 2007; Greenpeace, 2008).
- The conflict between the central and provincial governments around the new division of powers presents a major challenge.²⁵ Decentralisation reforms require the transfer of forest royalties and artisanal operations to the provinces, but the central government is reluctant to relinquish these powers (Oyono and Nzuzi, 2006; Melmoth, 2007).
- The weak judiciary has been unable to clarify irregularities in the legislation. This observation contrasts somewhat with the government's commitments in terms of the Africa Forest Law Enforcement and Governance (AFLEG) process enforcement, the Forest Law Enforcement, the Governance and Trade (FLEGT) action plan of the Commission des Ministères des Forêts d'Afrique Centrale (COMIFAC) convergence plan and other international agreements (Seyler et al., 2010).

The Forest Code, via the social contract, provides for community compensation in timber concession areas. The rural population that live around strictly protected areas receive no compensation for the loss of rights to forest products. They are, however, expected to make up the difference through government and donor-supported alternative livelihood programmes (WCS, 2003; Brown, 2010; Yanggen et al., 2010). Unfortunately, the few alternative livelihood programmes in the DRC have had

limited success because they cannot compete with incomes gained from illegal logging, the bush meat trade or artisanal mining. The government needs to explore options for compensating communities around strictly protected areas, using either existing government resources or a conservation trust fund (Seyler et al., 2010). There are also opportunities to capitalise on performance-based payments under REDD+ and other payments for ecosystem services.

Article 112 of the Forest Code specifies that local communities have the right to exploit their forest, either by themselves or through a written agreement with private artisanal operators. The provincial governor must approve a proposal from the local forest administration before private artisans can operate in local communities. Although the text on artisanal operations is still being written, some are concerned it will not address linkages between illegal artisanal operators and the addition of new logging concessions noted above (Brown and Makana, 2010; Lescuyer, 2010; Benneker et al., 2012).

Article 22 of the Forest Code specifies that a local community may obtain part or all of a forest owned by the community by virtue of custom as a forestry concession. Two presidential decrees for this Article have been in draft form for some time. The first lays down procedures for the award of concessions to local communities the second outlines modalities for the management and exploitation of local community forests (Trefon et al., 2004; Mpoyi, 2005; Rodgers, 2008; Hoare, 2010). However, conflict in reconciling the two draft texts has caused significant delays in approval. The first text is being developed by FORCOM (le Projet de la Foresterie Communautaire en RDC) and the second under Forest Monitor's 'Modes de gestion des forêts des communautés locales en contribution à la lutte contre la pauvreté' programme (Seyler et al., 2010). The decree on community forest concessions was finally approved in August 2014, and brings about the new challenge of implementing the decree to meet its intended objective.

The World Bank, FAO and the World Wildlife Fund have provided technical assistance to the government on forest policy, as well for the development and implementation of the Forest Code. The FAO alone has funded dozens of diverse forest projects in the DRC, including those focused on sustainable forest use, fisheries, food security and forest management plans and strategies.

²³ Interview with a WWF DRC researcher working with local communities in Bikoro who presented his field observation on the implementation of the new Arrêté 023. This regulates the negotiation of the social contract between logging companies and the local people around the ITB concession in Itipo, Bikoro Territory.

²⁴ Interview with local authority in Bikoro Territory December, 2012.

²⁵ Interview with the technical adviser of the Ministry of Environment, Equateur province, Mbandaka, May 2012.

Between 2010 and 2015, the World Bank is investing US\$70 million in the Forest and Nature Conservation Project. This project was designed to increase the capacity of the MECNT and the Congolese Nature Conservation Institute (ICCN). It also seeks to increase coordination and collaboration among government institutions, civil society and other stakeholders so they can manage forests sustainably and equitably for multiple uses in pilot provinces. Specifically, it aims to improve the institutional capacity of the MECNT's provincial offices, increase local community and civil society participation in forest management, as well as support the management of protected areas to help rehabilitate Maiko National Park. The World Bank is also supporting two other initiatives: a Multi Donor Trust Fund for Forest Governance, financed by Belgium, the European Union, France, Germany, Luxembourg and the Netherlands and a Global Environment Facility (GEF) project to build capacity of the ICCN and rehabilitate Garamba and Virunga national parks (Counsell, 2006; FAO, 2009; World Bank, 2009).

Between 2005 and 2013, GTZ funded a biodiversity and forest management project, implemented by the MECNT. The project provided scientific and organisational advice to improve the government's capacity to preserve the forest and its biodiversity (GTZ, 2009).

Greenpeace has been actively investigating logging practices and advocating for transparent procedures and the development of new mechanisms, including REDD+ mechanisms, to protect biodiversity and support local communities. Local civil society groups engaged in advocacy, awareness-building, and forest management and conservation projects include the Network of Partners for the Congo Environment (Reseau des Partenaires pour l'Environnement au Congo), the Forestry Working Group (Groupe de Travail Forêts), the Natural Resources Network (Reseau Ressources Naturelles) and the Cercle pour la Defense de l'environnement (CEDEN). In 2009, the NGO Forest Monitor began an 18-month project in Bas-Congo, Ituri and Equateur to investigate local land and forest resource use and help the government design its community forestry programme (Forests Monitor, 2009).

3.3 Agricultural policy

The decentralisation of the agricultural sector is comprised of two reform processes. Key elements include a focus on domestic production and the creation of local councils to develop agricultural strategies. These reforms, which have built high expectations,

are inspiring other sectors to pursue decentralisation as well.

With 80 million ha of arable land, the DRC is second only to Brazil in terms of large potential arable land, and ranked seventh in the world in terms of agricultural potential (CARG, 2009; Ragasa et al., 2011). Agriculture accounted for 45 per cent of the DRC's gross domestic product (GDP) in 2011 (DRC, 2011), and is the main source of livelihood, especially among the poor. Agriculture and agro-industries employ 70–75 per cent of the active population (World Bank 2010b). If agricultural yields could match those of the world's technologically advanced countries, the DRC could be one of the world's largest agricultural-producing countries (Tollens, 2004).

The country, however, has experienced little growth overall or in agricultural GDP in the past two decades. Between 1990 and 2006, it averaged less than a one per cent growth rate (Fan and Saurkar, 2008; Huart and Makala, 2008), while public investment in agriculture remains at less than one per cent of the national budget (SADC, 2009; UNEP, 2011). This represents much less than the ten per cent target established by AU 2003 Maputo Declaration on Agriculture and Food Security.²⁶

The government has embarked on several reform processes to increase economic development through rebuilding its agricultural sector. These include more demand-driven, inclusive, and evidence-based policymaking and planning (Kwadwo, 2008; Ragasa et al., 2011). Two reform processes simultaneously affect the agricultural sector: decentralisation, as part of an overall administrative reform and the reform of Ministry of Agriculture to fit the overall public-sector administrative reform.²⁷

The implementation of the reform plan began in April 2008. The overall institutional reform is built around the national plan of agricultural recovery, which calls for the decentralisation of agricultural services and strengthening of central and provincial institutional capacity, environmental compliance and safeguards in the context of the Strategy Document on Growth and Poverty Reduction, design, implementation and enforcement of effective land legislation, partnership with the private sector, and establishment of financial services, including microcredit institutions to serve farmers, fishermen and livestock breeders (Ragasa et al., 2011). According to key informants and programme documents,²⁸ the Ministry of Agriculture's restructuring process, initiated in 2005, is characterised by strong ownership of all stakeholders and by high expectations of the people.

²⁶ <http://www.nepad.org/nepad/knowledge/doc/1787/maputo-declaration>

²⁷ Interview with a senior official at the Ministry of Agriculture, Kinshasa, December 2012.

²⁸ Interview with a senior researcher of IFPRI, December 2012.

As a key element of the reform process, the fiscal regime was revamped in favour of domestic production generally and of production inputs and equipment destined for the agricultural sector in particular.²⁹ The number of tariff classes was drastically reduced, duties were sharply reduced to 5 per cent for agricultural inputs (e.g. seeds and fertiliser), the 13 per cent excise tax for agricultural exports was abolished, and duties on food imports were raised to 10 per cent for most commodities and up to 20 per cent for frozen fish and meat (World Bank, 2010b). With these positive changes in the sector, the government's decentralisation programme is using reforms in the Ministry of Agriculture to inform reform processes in other sectors.

As part of the reform process, the government has set up Agricultural and Rural Management Councils (CARGs) – platforms for discussion, information sharing and developing local agricultural strategies – in its territories and provinces (Ragasa et al., 2011). The CARGs involve various actors in rural areas, including members of local assemblies and governments, private sector, unions and associations of producers, universities and research centres, and civil society at large. In June 2010, the DRC launched the CAADP agenda, which calls for a six per cent annual agricultural growth rate and an allocation of ten per cent of the overall government budget to the agricultural sector (Ragasa et al., 2011).

Allocation of resources to the agriculture sector, particularly in training personnel such as extension officers, needs to be coupled with investment in technologies, financial services to support small- and medium-sized farmers, and access to markets. Such investments have the potential not only to propel increases in yields and improve the contribution of agriculture to local and national economies, but also to pave the way for sustainable practices and the reduction of emissions from land use and land-use change.

3.4 The Mining Code

Poor governance including corruption, political interference, lack of capacity to enforce the law and obstacles to private sector investment have hindered the DRC's mining sector. Despite progress on these issues, the country needs more action to ensure good governance, transparency and accountability from both government and mining companies. In this way, local communities could benefit more equitably from the country's vast mineral resources.

The main legislation governing mining activities is the Mining Code, enacted by Law No. 007/2002 of 11 July 2002 (DRC, 2002a). The Mining Regulation, enacted by Decree No. 038/2003 of 26 March 2003, provides for implementation of the Code (Mazalto, 2006). The parliament and executive branch have also passed or issued other related national legislation and regulations affecting the sector. Core legislation includes environmental norms that apply to mining activities throughout the country (Ndela, 2008; World Bank, 2008; Dumont et al., 2009).

The Mining Code and Regulations govern the prospecting, exploration, exploitation, processing, transportation and sale of mineral substances, and extend to the artisanal exploitation and sale of minerals. Artisanal mining zones are yet to be established, which will likely lead to conflict between artisans operating in concession areas that industrial companies wish to develop (and for which they hold the mineral rights) (Global Witness, 2007; Pact, 2009).

The DRC is a signatory of the 2003 Kimberley Process, which established a certification system to reduce trade in conflict diamonds. The Kimberley Process, that applies to both rough and cut diamonds, requires participating governments to ensure that each shipment of rough diamonds is exported and imported in a secure container. These containers must be accompanied by a uniquely numbered, government-validated certificate stating that the diamonds are from conflict-free sources. In general, the DRC's compliance has been low: most artisanal miners and small traders in diamonds are unregistered and unregulated, and record keeping is poor to nonexistent. Diamonds pass from miners to mine-site buyers to larger buyers in town without government knowledge or oversight and the government has inadequate information and capacity to monitor diamond exports (Global Witness, 2007; Yager, 2010).

Mining rights and title

Ownership title to mineral resources in the soil and subsoil is reserved for the state (DRC, 2002a). Holders of surface rights have no right to mineral resources within their surface right area. The Mining Code and Regulations allow those persons or entities with mining and quarry rights issued in accordance with the code to explore and exploit mineral substances. Rights are granted for established perimeters, an extent of land mapped by the ministry that cannot exceed 400km². Perimeters are demarcated surface areas with indefinite depth, composed of quadrangles or squares that are registered in the chronological order of their filing.

²⁹ Interview with a senior researcher of IFPRI, December 2012.

Holders of mineral exploitation rights obtain the right to occupy the land necessary for mining activities, to use the underground water, excavate canals, and establish means of communication on the land (USAID, 2011).

Exploration licences are granted by perimeter for four years (precious stones) and five years (other minerals); they are generally renewable for two additional terms. Companies cannot hold more than 50 exploration licences and are limited to rights over a total of 20,000km² within the DRC. Exploitation licences are available for mining operations for 30-year periods, with multiple 15-year renewals available (DRC 2002a; Dumont et al., 2009).

Artisanal exploitation of minerals is limited to Congolese nationals with annual artisanal miners' cards issued by the Ministry of Mines. Artisanal mining is permitted in areas where technical and economic factors make industrial or semi-industrial exploitation of the minerals impossible but allow for artisanal mining. A ministerial order creates artisanal mining areas, and the provincial Division of Mines sets terms of licences. Artisanal miners can only sell their products to traders, exchange markets, trading houses or government-approved entities. Small-scale exploitation licences are available for up to ten years, including renewals, and are granted by perimeter. The Mining Code permits a holder of an exploitation licence to mortgage the right, with advance approval of the minister (DRC, 2002a).

Holders of mining and quarry rights must exercise them within six months of receipt or risk forfeiture. Exploitation permits are subject to prior approval of an environmental impact study and an environmental management plan (EMP). Exploration operations must have an approved mitigation and rehabilitation plan backed by a financial guarantee. Mining and quarry rights can be lost for infringing the Mining Code and terms of licence, failure to pay the surface-rights fee and failure to provide required reports (DRC, 2002a; Dumont et al., 2009). Small-scale exploitation permits are subject only to codes of conduct and not the Mining Code itself.

A title holder must also comply with specific rules including protection of the environment, cultural heritage, health and safety or construction and planning of infrastructure. Holders of research permits may request an exploitation permit provided they demonstrate, among others, the existence of an economically exploitable deposit. Further, to obtain an exploitation permit, the applicant must establish that he or she is the holder of a valid research permit covering the mining perimeter for which the exploitation permit is applied.

Key challenges

Poor governance in parastatal mining companies, lack of institutional capacity, and policies limiting private sector investment in mining have been the major challenges in the mining sector in the DRC (USAID, 2011). Some contracts do not give fair market-value for mineral assets. Others permit transfers of rights to minerals when the state cannot retrieve its interest in the minerals and operations due to bankruptcy or other circumstances that adversely impact mining operations.³⁰ In 2008, a government-appointed commission, which reviewed mining contracts signed during the civil war, recommended cancelling one-third of all contracts and renegotiating the balance. In 2009, the Council of Ministers concluded that First Quantum Minerals Ltd. must transfer the Kolwezi Project exploration permit, held with Kingamyambo Musonoi Tailings SARL (KMT), to the state-owned mining company, Gécamines. While First Quantum and its partners disputed the decision, a court action by the state resulted in a US\$12 billion judgment in favour of Gécamines, the Mining Registry and the state (USAID, 2011). Meanwhile, a 2009 Carter Center review of renegotiated contracts concluded that some renegotiations did substantively change the performance of the mining contracts.

The continued controversies suggest that further action is needed to ensure good governance, transparent operations, accountability from both government and mining companies so that the sector benefits the entire population, and local communities in particular (USAID, 2011). The Extractive Industries Transparency Initiative (EITI), supported by governments, civil society and private industry, has led these efforts. EITI aims to create a foundation for improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining. EITI accepted the DRC as a candidate country in 2008, and the government submitted its first EITI Validation Report in December 2010.³¹

On a parallel track, the World Bank has invested US\$90 million in the DRC government's Growth with Governance in the Mineral Sector Project (2010–2015). The project seeks to strengthen the capacity of key institutions to manage the minerals sector, improve conditions for increased investments in, and revenues from, mining, and help increase the socio-economic benefits from artisanal and industrial mining in project areas. It includes components to improve the policy, legal and regulatory framework, develop the country's geo-data infrastructure, build sector management capacity, enhance transparency and accountability,

³⁰ Interview with a senior official at the Ministry of Mines, Kinshasa, December, 2012.

³¹ Interview with a senior official at the Ministry of Mines, Kinshasa, December, 2012.

streamline and reinforce government tax administration, and strengthen tax collection and revenues (World Bank, 2010a).

USAID is supporting Pact Congo on conflict management and mitigation, especially where artisanal miners and large-scale mining operations share a mining area. Pact Congo helps mining companies incorporate artisanal miners into their operations by assisting with the negotiation of agreements and alternative economic options for artisanal mining communities (Pact, 2009).

3.5 Environmental law

This is a cross sector policy that aims to ensure any sectoral investments emanating from the implementation of legislation discussed in the previous sections promote social and environmental sustainability. Environmental impact assessments are important instruments for that purpose. Box 1 outlines what the law aims to protect.

The specific investments conducted for the EIA are important for identifying impacts and mitigation measures at the micro-level scale defined by the frontiers of that investment. A macro-level overview of environmental impacts is also necessary, especially where a landscape approach, integrated planning and zoning of resources is promoted, as is suggested in this report and will be discussed in the following section. Conducting strategic environmental assessment can offer the DRC an opportunity to better align development needs and set up structures to manage adverse impacts. This is necessary to keep a tab on how investments in land use are carried out so as to enforce the government's pursuit of climate smart development and emissions reduction.

BOX 1. ENVIRONMENTAL LAW

The MECNT enacted a new environmental law (DRC, 2012), where Chapter 10 provides for the protection of wildlife and flora:

- Article 66 protects spaces and natural landscapes, maintains biological balances of flora and fauna and protects natural resources against all causes of degradation.
- Article 67 conserves and manages fauna and flora, and establishes protected areas.
- Article 68 establishes compensation to local communities when protection of fauna and flora directly affects their livelihoods.
- Article 69 prohibits bush fires, and the seizing of wood and other plants in protected areas, while Article 70 excludes prescriptive and other forms of preventive fires.
- Article 71 tolerates traditional fires and fires for clearing areas to plant crops or for the development of pastoral areas subject to conditions determined by the department.
- Article 72 stipulates fines not exceeding 6 million to 120 million Franc Congolese (about US\$6000–120,000) and to imprisonment for three to six months, for an infraction of Articles 69 to 71 above.
- Article 80 creates a public establishment of 'industrial and commercial nature', with civil personality and financial autonomy, referred to as the National Environmental Protection Agency.

Seizing opportunities for change? Replacing piecemeal sector based implementation of policies

4

While this report does not discuss institutional issues in detail it has so far highlighted that strengthening institutions is essential to the meaningful implementation of the provisions of the legislative instruments and to addressing some of the challenges discussed. The Ministries of Lands, Agriculture, Mining, Environment, Nature Conservation and Tourism are the central bodies in developing key land resources legislation and are responsible for its enforcement. However, sustainable, equitable and inclusive investments in land use require analysis of other policies and coordination with institutions. These include the planning and development sector that sets key macroeconomic goals for the medium and long term, the finance sector responsible for adequate budget allocation and optimal tax revenue collection as well as ministries dealing with energy, infrastructure, support to local small and medium enterprises to be the engines of growth.

As is in many other countries, coordination across government institutions in the DRC can benefit from improvement. As the economy grows and new agriculture and mining concessions are awarded, coordination becomes increasingly important. Typical examples that illustrate the need for improved collaboration include:

- Logging and mining on the same tract of land, and the separation of mining claim holders and forest concession holders.
- Competing uses considered by different government agencies for land proposed as protected areas, and the absence of a common land use policy between the MECNT, the Ministry of Agriculture and the Ministry of Mines as well as the granting of agricultural concessions (e.g. oil palm) without or with limited provision of environmental safeguards required by the MECNT.

Apart from a lack of coordination, some departments have overlapping mandates. The MECNT's Direction of Human Establishments and Environmental Protection, for example, monitors environmental protection, including the development of spaces, the evaluation of effects of human activities, and the prevention of activities that pollute air, water and soil. Specifically, the Directorate is charged with environmental rehabilitation in mining areas, as well as the conduct of environmental assessments, the Ministry of Mines Environmental Department has a similar mandate. It is unclear how the new environmental framework law will address this issue (Seyler et al., 2010).

Coordination between international NGOs and the government has improved. Many international NGOs intervening in the DRC sign formal Memorandums of Understanding, including terms of reference. However, key international NGOs and donors often collaborate informally – processes that leave out the government. In most processes, efforts to engage national and local staff in strategic planning remain limited.

These examples reinforce the need to break the imaginary walls that set institutions apart and thereby deliver an integrated approach and climate smart development pathway. The government must take the lead.

Weak control and inadequate law enforcement has been a key challenge to the institutional framework of forest and natural resource management in the DRC (Hoare et al., 2007; Trefon, 2008; Greenpeace, 2010). Ministerial services are poorly equipped (in terms of communications, travel means, etc.) to fulfil their mandates to control Forest and Mining Code infractions, and to combat illegal exploitation and fraud. Control officers are poorly and irregularly paid and their few control missions are usually paid for by the concession owners or operators. In these conditions, no real control or law enforcement is possible. However, innovative measures could be introduced. For example, the devolution of forest resources to communities could help develop a sense of ownership and stewardship and thus, if complemented by capacity building, contribute to strong monitoring and enforcement of law by the local communities.

Confronting the status quo within government and the civil society organisations and institutions supporting development, as well as the huge size of the DRC, are among the challenges that remain. It would be naive to suggest that there will be any institution at the supranational level that addresses all resource issues. Instead, the aim is to carry out the coordination of policy implementation through integrated land use planning and zoning at a landscape³² level in a way that addresses the multiple drivers of change that have been discussed. Land users draw livelihoods from different resources; while compartmentalisation might serve the macro institutional mandates, they may be unconstructive at the micro level.

³² Capitalising on the already well defined landscapes in the Congo Basin and in DRC

Integrated land use plans and zoning at the landscape level would also assist the implementation of strategic environmental and social assessments. This would set a framework for managing key macro level in addition, implementing innovative land use identified in the macro plans needs to draw on existing tools and experience. The example of the locally controlled land use and the foundations and pillars of the 'Improved African Hut' offer some insights on the key elements that must be taken into account. There are various models and experiences to draw from when defining what could work for the DRC. Some of these include natural products development through inclusive businesses in Mozambique, decades of local control and development of enterprises in Mexico, and access to mainstream markets to Nepal with forest user groups.

The current discussions on the post-2015 development agenda present an opportunity to examine what the agenda means for the DRC and how economic, social and environmental indicators of change arenas can be best captured within the landscapes where coherent development plans are implemented.

Conclusions

5

The DRC has strengthened management, use and control of natural resources, and has made significant progress in laying the groundwork for sustainable land use and for REDD+ (to be discussed in a forthcoming report). However, significant challenges remain. Along with other actors, IIED aims to conduct research on issues such as land rights, community participation in the governance of natural resources investments and alternative sustainable, inclusive and viable livelihoods. Development must be achieved through a platform of integrated land use plans at the landscape level throughout the country.

The government has developed a sound legislative and institutional framework to govern the management, use and control of the DRC's tropical forest and natural resource assets. Yet a number of cross cutting and sectoral issues still need to be addressed. A statutory land tenure law co-exists with a complex customary tenure that differs considerably across regions; this has several implications for management of the country's natural resource wealth. The current land-tenure system may affect the ability of communities to benefit from land resources investments and any payment for ecosystems services arrangements, including those under REDD+. Scaling-up of information dissemination of the various legislations to local level is urgent.

Below are some findings based on the literature review and an analysis of the various pieces of legislation:

Security of resources tenure matters

Access to and the distribution of benefits from investments in land, forests and other key natural assets are fundamental to increasing wealth and stability for Congo's population. Clear resources tenure to enable private investment and secure local access and control of resources, however, is necessary for inclusive economic development opportunities.

While the private sector has the advantage of accessing information on opportunities as well as the means and power to access decision making bodies in order to secure access and clear rights over resources, it is often the community that lags behind.

Therefore, to ensure an inclusive and equitable development pathway, partnerships between actors (government, civil society organisations and development agencies) should support community land rights and resources management programmes. This can entail mapping community resource rights and promoting community-based natural resources management based on development of sustainable and viable enterprises. Communities are not homogenous. like elsewhere in the world, power and equity issues prevail in the DRC. Recognition and protection of the rights of women and minority populations demands proactive affirmative action.

Local level institutions matters too

As development proceeds, disputes are likely to escalate and may lead to unsound natural resource management practices, resulting from unresolved disputes, the continuation of rich equitable settlements and the failure to settle claims in a transparent manner. The DRC needs functioning institutions to manage natural resources and these institutions must be built with a solid understanding of existing natural resource and land-management systems, the effects of war and migration, and the emergence of democratic *decision-making*.

Equitable access to land resources relies on strong, transparent and accountable local institutions. For this, it is also essential to assess formal and customary institutional structures and evaluate options for more effective governance of land resources that harness the capacity and social legitimacy of customary and other local structures. It would, however, be erroneous to suggest that these structures are necessarily inclusive, transparent and accountable to local interests. There is a need to strengthen institutions by also reforming the customary norms and practices that exclude traditionally marginalised groups such as minorities and women.

A key remaining challenge relates to supporting communities, particularly those interested in small and medium enterprise so that they can capitalise on resources and establish sustainable business ventures as these are vital to driving the growth of local economies. Large scale investment is important, but can only achieve so much. Investing in locally-led natural resources based businesses is fundamental and yet their 'multiplier effect' in terms of jobs and revenue is understated. This calls for a shift in emphasis, of government and development partners alike, towards investment in education and capacity building that will give local people skills and capabilities to enter the mainstream economy and drive inclusive, sustainable and equitable growth.

Security of tenure, strengthening institutions and enterprises are necessary but not sufficient conditions for advancing livelihoods

Many agencies involved with forest-resource issues in the DRC have identified the need to advance the livelihoods of natural resources-dependent communities through securing their rights to land resources and developing mechanisms for community involvement in sustainable use and the management of these resources. As highlighted above, developing community enterprises is essential.

However, investment in community enterprise does not yield results in the short run. Short term community development initiatives of five years at most, are unlikely to be successful. Extensions limit the planning cycle to negligible short term results and yet within the designated time frames the implementation of profound transformations on tenure regimes, decision making bodies, enterprises, resources management practices and so on are expected. On the contrary, larger scale, well-established entities within the private sector have access to long term capital. Cost-benefit analysis determines the viability of the business and dictates the length of investment. All business follow three key phases: first, the initial investment phase characterised by negative discounted net returns; second, the growth phase, when these net returns are positive but come to reach and then surpass a breakeven point; three, the consolidation and reinvestment phase that reinforces the sustainability of the business.

The result of not following the same approach for community based initiatives has been an accumulation of apparent 'failures'. Yet, the initiatives are designed to fail as the goals set do not match the resources required to succeed. Community development need not be about hand-outs; rather investment in capacity development is necessary. Understanding the value of money and investment opportunities must be cultivated with the people in the community who can lead entrepreneurship and thus drive change by creating opportunities for employment and generation of wealth.

The concept of the 'Improved African Hut' defines the key elements for sustainable businesses. The ultimate goal of inclusive and equitable land resources is the improved management of the resources and the wellbeing of the people. This is the roof of the hut. The pillars of the hut are comprised five elements:

- Secure rights to resources to invest in long term use and management.
- Accountable and transparent collective decision bodies to govern and enforce sustainability in resources use and strong enterprise organisation.
- Access to appropriate technology for transforming natural resources into goods and services of high market value.
- Access to finance and financial management literacy to purchase the technology and add value to natural resources.
- Access to markets that offer fair deals for land use including a premium for sustainable management.

Finally, the foundation is formed with human capital. Access to relevant information, education, training, knowledge exchange and experience for the target groups is also fundamental for transformative changes to take place.

Working across these different areas requires the engagement of different stakeholders including the private sector, government, NGOs, development agencies, financial institutes, academia and research organisations. Can these institutions coordinate an integrated intervention in a given landscape in DRC?

The bigger picture – climate smart development is necessary but not simple

The DRC is in the process of reforming its agricultural sector. Aligning ambitions of developing this sector with REDD+ is essential for sustainable and climate smart development. With agriculture practices identified as a key driver of loss of forest land in the DRC, markets need to foster positive links with ongoing REDD+ processes if agricultural development is to increase productivity and production for food security. As previously indicated, access to technologies, finance and markets are some of the key ingredients needed to address current unsustainable agriculture practices. For communities to lead the transformation of the agricultural sector, massive and sustained investment is needed to develop technical support services (from government, private sector and NGOs) and help bridge the gap between knowledge and practice.

Biomass energy accounts for over 85 per cent of domestic energy in the DRC, and deforestation around urban areas for firewood and charcoal exerts a heavy toll on natural forests. Therefore, among other priorities, it is important to analyse the value chains of charcoal and firewood, assess the viability of more efficient production options, as well as develop innovative licensing and forest management regimes. The devolution of resources to communities offers the possibility of introducing concessions for biomass energy production. Forests characterised by low timber value can be used for this purpose. This would, however, have to be done based on adequate land use planning and zoning in order to avoid the proliferation of such concessions throughout the country. Furthermore, tackling the energy demand side by assessing viable options for sustainable consumption of biomass is essential. Again, improved technology has a role to play. Sustainable management of natural forests can also be complemented by the development of fast-growing tree plantations, such as woodlots in degraded areas and agroforestry systems, with the participation of local communities and entrepreneurs to meet rising demand.

Using the very progressive devolution legislation that provides for 'community forest concessions' of up to 50,000 ha, can also offer communities the opportunity to benefit from the exploitation of high value products and services. This is so despite some of the risks highlighted in the Rainforest Foundation UK September 2014 briefing.

While the Forest Code provides for benefit sharing with communities based around logging and conservation concessions, alternative livelihoods programmes are expected to support communities that live around strictly protected areas. Unfortunately, the few such programmes in the DRC have had limited success. Cost-benefit and value-chain analysis can be used to establish the viability of business and the key actors. The analysis should also identify what elements along the value chain – from information and capital to market access – act as barriers to developing viable and sustainable alternative livelihoods. Exploring a range of incentives (social agreements, REDD+ performance based payments, payment for ecosystems services) can help devise premiums to land users for their contribution to conservation and the sustainable management of resources. Incentives provide greater potential for the diversification of land uses and increase land users' benefits.

As is often the case, the Mining Code establishes that the State owns these assets. Exploration of mineral resources supersedes any other land use due to the potential high revenues that such exploration offers. Adequate licensing, exploitation and taxing can bring such benefits. In the DRC 90 percent of the business is controlled by the artisanal sector. This presents an opportunity to strengthen the organisation of the sector and to build the capacity, particularly that of local artisanal miners, to exploit the resources sustainably and safely. The implementation of environmental management plans is also necessary for large scale mining companies.

The fact that the DRC government has adhered to EITI affords another opportunity for improving transparency in contract allocation and the terms agreed including disclosure of taxes and other associated economic benefits. Both the government and the companies need to abide by these practices.

Research and informed dialogue on social contracts can contribute to the effective engagement of communities in good forest governance. Formulae for equitable benefit distribution should be devised to cater not only for local elites but for the community at large. Such measures are also relevant for payment for ecosystems services and the potential performance based payments from REDD+ delivery.

Piece meal interventions have not yielded results: an integrated 'landscape' approach can deliver results but requires shacking off the 'sector' boundaries

From a brief consideration of the key natural resources mentioned above, it is clear that a pragmatic approach to the development and implementation of legislation is necessary. Efforts to develop a national land-use

planning capacity and process have included: training public servants on land-use planning, consultation with interested parties, support of necessary technical, administrative and political processes, products and systems and assistance with the drafting of guidance on the design of land-use plans. Most of this support, however, has been limited to the national level.

While there are no silver bullet solutions to the natural resources investment and management challenges, there are a number of interventions that can make a difference. The DRC can capitalise on the already clearly identified landscapes across the country. The election of Mai Ndombe represents a key opportunity for a REDD+ programme to demonstrate a reduction of emissions and concomitantly implement the various sectoral legislation discussed in this report.

The sector based, piecemeal interventions increase transaction costs and is not delivering the expected results. Instead, building the capacity of government and civil society to bridge the gap between opportunities for and the actual change of land use towards inclusive, sustainable and equitable investments is central to tackling natural resources investment and management challenges.

Potential way forward

IIED's work on natural resources and sustainable markets encompasses agriculture, advancing land resources rights for inclusive businesses, strengthening producer organisations, artisanal mining, gender, biodiversity conservation, and governance of natural resources including a China-Africa initiative to examine and test ways in which investment in land use can be sustainable, serve the country and its people. Other key areas of work include REDD+ implementation approach at development corridor level, an approach which is characterised by a complex landscape composed of multiple drivers and opportunities for sustainable development; and investment in locally controlled forestry towards the development of mechanisms that deliver the devolution of high value forests to local communities. Based on this experience an integrated programme of work can be developed in collaboration with local institutions.

Addressing research and development challenges requires strong partnerships. As collaboration through strong partnerships is IIED's primary mode of operation, IIED would seek to form alliances with government and other parties to work on areas where there are collective commitments to deliver change.

5.1 Potential actions

1. Securing land-resources rights

Land, forests and trees represent wealth and stability and are thus vital assets for the rural Congolese population. Yet, the lack of clear governance and tenure systems for these assets impede the ability of rural Congolese to take advantage of economic development opportunities

Piloting community land-rights programmes coupled with the implementation of the decree on community forest concessions is necessary to test more inclusive land-use models in the DRC. These will provide sound and equitable governance of land and forest resources, which rural Congolese need in order to reduce poverty. Such programmes should also incorporate the realisation of other objectives such as better access to markets, financial services and technologies to diversify sources of income. A legal and institutional framework that allows rural Congolese to make productive investment in their lands and forests is a cornerstone of rural development. More secure rights will lead to careful stewardship of forests and other natural resources, if accompanied by a clear delineation of responsibilities, capacity building for community enforcement and sustainable economic growth opportunities. In addition, formal and customary land dispute mechanisms in the DRC face significant challenges to their effective implementation. This is especially true with respect to protecting the rights of populations who now live in forest and agricultural areas subject to REDD+ considerations and of populations displaced through conflict and continuing violence. Formal and customary institutional structures need to be assessed and options evaluated to create a more effective and accessible dispute resolution system for land issues in a way that harnesses the capacity and social legitimacy of these customary structures. Understanding how customary institutions can be reformed for accountability and equity is particularly urgent.

2. Promotion of the effective participation of communities in the governance of forest areas to pave the way for sustainable development and REDD+

Numerous agencies have assisted the DRC with forest-resource related issues over the last several years. Most have identified the need to advance the livelihoods of forest-dependent communities, help secure their rights to land and resources, develop mechanisms for community involvement, map community forest resources and develop forest management plans. Since community forestry is one bridge to more secure

tenure for rural people, combining experience with lessons learned from community forest interventions in the DRC and from other countries can further support initiatives that engage communities effectively in forest governance. Based on emerging experience in the DRC and other Basin countries, research and development actors can help support community resource mapping, community-based forest management plans and recognition of the rights of women and minority populations to use forest resources. The pilot programme experience, along with models and tools, would help develop and implement forest policy for both the DRC and the Congo Basin region. Pilot projects to implement social contracts with logging companies can further strengthen the community's voice in benefit-sharing decisions. What are the models for equitable distribution that are based on local context and that also incorporate lessons from elsewhere?

3. Support the development of alternative livelihood programmes in protected areas

USAID/CARPE coordinates the landscape approach that has been successful in identifying high-priority conservation targets and supporting adequate habitat conservation needs in the Congo Basin region. The approach has been ratified by COMIFAC member countries and endorsed by the Congo Basin Forest Partnership (CBFP) as a long-term vision/strategy for sustainable forest management in Central Africa. Six of these landscapes are located in the DRC and are beginning to achieve some legal recognition. However, the linkages between the landscapes and the DRC's local administrative structures are generally weak. This limits the ability of the local population to benefit from critical conservation-development initiatives such as alternative livelihoods and the strengthening of local environmental governance programmes.

In addition, while the Forest Code provides compensation for communities living around logging concessions via social contracts with logging companies, communities that live around strictly protected areas receive no compensation for loss of rights to forest products. These communities are expected to be compensated by government and donor supported alternative livelihoods programmes. Unfortunately, the few such programmes in the DRC have had limited success; the limited livelihood options presented to communities coupled with restrictions against traditional practices may not end the practices. Rather, traditional practices may continue in a way that is environmentally harmful and even more detrimental to the community wellbeing.

Research and development of viable alternative livelihood programmes is necessary and should build on local control over natural assets combined with the strengthening of enterprises through capacity development, access to finances, technologies and markets. It should consider a value-chain analysis to identify products and services with greater potential for increasing land users' income. The analysis should also identify what elements along the value chain – from information and capital to market access – act as barriers or enabling factors to alternative livelihood development. There is also need to explore options for compensating communities around protected areas for the loss of livelihoods. Payment for ecosystems services and other performance based mechanisms such as REDD+ should be examined and include lessons learnt from the implementation of the *cahier de charge* or social contracts.

Alternative financing mechanisms include using the number of taxes that have been instituted to create a fund to support payment for ecosystems services and to invest in sustainable land use practices.

4. Assessing innovative finance mechanisms

The lack of financial resources and poor financial management literacy is one of the key bottlenecks to the implementation of good governance in the natural resources sector, and the incorporation of local entrepreneurs in the adoption of good management practices and investment in sustainable business. As is also highlighted in this report, the expectation of 'quick fixes' and 'quick wins' explains the failure to build robust small and medium scale businesses.

Financial institutions, both commercial and microfinance, as well as development agencies should jointly design long term financing mechanisms that treat small and medium sized enterprises (SME) at the large scale when it comes to accessing capital, running viable businesses and paying back investment within a time period determined by their economic viability.

5. Development of land-use planning and zoning at landscape level

Many agencies support the MECNT's Forest Inventory and Management Department and the inter-ministerial and multi-stakeholder National Forestry Zoning Steering Committee. Their efforts to develop a national land-use planning policy and process have taken many forms: the training of public servants on land-use planning, consultation with various interested parties, support of necessary technical, administrative and political processes, products and systems; and assistance with the drafting of guidance on the creation of land-use plans. Most of this support is limited to the national level. Land-use planning capacity and enforcement of plans requires local-level involvement in the process. Capacity development of communities and national NGOs working with the local population can pave the way towards local engagement, buy-in and participation in monitoring the implementation of the plans. This will also permit greater government accountability at different levels relating to land allocation decisions.

Land use plans can, therefore, enable implementation of inclusive, sustainable and equitable enterprises in the context of a wider sustainable and climate smart development agenda. Documentation of lessons is therefore important for informing national policy processes. Many countries recognise the importance of land use plans as a tool for the adequate allocation of land resources for investments and for the maximisation of those investments when implemented in areas with greater land potential. However, implementation has been a challenge. Lessons from that process could inform a wider audience.

There is a need to capitalise on the current discussions regarding sustainable development goals in order to establish national level indicators that can be tracked at landscape level.

This is by no means an exhaustive list, but it highlights some areas where collective actions from researchers and development agencies might pave the way for the creation of models that improve the governance of investments in natural resources and contribute to sustainable development.

References

- Akwah, G., Yoko, A. 2006. *Gestion locale des ressources forestières et halieutiques autour du Lac Ntomba: Etude Exploratoire des Dynamiques en Cours et des Perspectives pour la Conservation et le Développement*. USAID-IRM project report. International Programs, United States Department of Agriculture (USDA) Forest Service, Washington, D.C.
- Aquino, A., Guay, B. 2013. Implementing REDD+ in the Democratic Republic of Congo: An analysis of the emerging national REDD+ governance structure. *Forest Policy and Economics* 36 71–79. See <http://dx.doi.org/10.1016/j.forpol.2013.04.003>.
- Barume, A. *Le nouveau code forestier congolais et les droits des communautés des forêts. Document préparé pour le Séminaire sur La société civile de la RD Congo, le nouveau code forestier et les normes d'application*, Kinshasa, 17-19 octobre 2003.
- Becker, A. 2010. *Congo-Kinshasa: To DRC, With Trouble*. Forum on China-Africa Cooperation. See www.focac.org/eng/mtsy/t693712.htm.
- Benneker, C. et al. (eds). 2012. *Le bois à l'ordre du jour. Exploitation artisanale de bois d'oeuvre en RD Congo: Secteur porteur d'espoir pour le développement des petites et moyennes entreprises*. Tropenbos International RD Congo, Wageningen.
- Biebuyck, D.P. 1960a. Le problème des terres du Congo dans ses rapports avec les systèmes fonciers traditionnels. *Synthèses* 14 78–90.
- Biebuyck, D.P. 1960b. African Agrarian Systems. Introduction. *Etudes présentées et discutées au Second Séminaire International Africain, Université du Lovanium, Léopoldville, 22–25 Janvier 1960*, 1–19.
- Bohannon, P. 1960. *Land, Tenure and Land Tenure. African Agrarian Systems*. Oxford University Press, Oxford.
- Brown, E.L. 2010. Case Study 1: Okapi Faunal Reserve, Ituri-Epulu-Aru Landscape, Democratic Republic of Congo. In: Yanggen, D., Angu, K., et Tchamou, N. (eds). *Landscape-Scale Conservation in the Congo Basin. Lessons Learned from the Central African Regional Program for the Environment (CARPE)*. International Union for Conservation of Nature, Gland.
- Brown, E., Makana, J.R. 2010. *Experience From a Pilot Project to Improve Forest Governance in the Artisanal Logging Sector in Northeastern Democratic Republic of Congo*. Field Report, Wildlife Conservation Society (WCS). United States Agency for International Development (USAID) – Central African Regional Program for the Environment (CARPE), Kinshasa.
- CARG (Agricultural and Rural Management Council). 2009. *Le journal des CARG*. CARG, Kinshasa.
- CARPE. 2009. *Priority Conservation Landscapes of the Congo Basin*. Central African Regional Program for the Environment, Kinshasa.
- Cassagne, B., Nasi, R. 2007. Sustainable development of production forest in the DRC: Progress and Prospects. In: BTC-CTB (ed.) *What Does the Future Hold for the Forests in the Democratic Republic of Congo? Innovative Tools and Mechanisms for Sustainable Forest Management*. Reflection and Discussion Paper. Belgian Technical Cooperation (BTC CTB), Belgian Development Co-operation, Africa Tervuren, Center for International Forestry Research (CIFOR) and Agricultural Research for Development (CIRAD), Brussels.
- CODELT (Conseil pour la Défense de la Légimité et de la Traçabilité). 2010. *Les Codes Verts. Textes Juridiques de la République Démocratique du Congo en matière de l'Environnement et des Ressources Naturelles. Tome 1*. Textes Juridiques en matière des Forêts, Pretoria.
- Colchester, M. Beyond tenure. Rights-based approach to peoples and forests. Some lessons from the Forest Peoples Program. Paper to the International Conference on Poverty Reduction in Forests: Tenure, Market and Policy Reforms, Bangkok, 2–3 September 2007. See www.forestpeoples.org.
- Conservation International. 2011. *Biodiversity Hotspots: Eastern Afromontane*. Conservation International, Washington DC.
- Cotula, L., Mayer, J. 2009. *Tenure in REDD—Start-point or afterthought?* Natural Resource Issues No. 15. International Institute for Environment and Development (IIED), London.
- Counsell, S. 2006. *Forest Governance in the Democratic Republic of Congo: An NGO Perspective*. FERN, Utrecht.
- Counsell, S., Long, C., Stuart, W. 2007. *Concessions to Poverty: The Environmental, Social and Economic Impacts of Industrial Logging Concessions in Africa's Rainforests*. Combined Report. Rainforest Foundation UK and Forests Monitor, London.

- Coutsoukis, P. 1993. *Democratic Republic of the Congo: National Land Law System*. See http://www.photius.com/countries/congo_democratic_republic_of_the/economy/congo_democratic_republic_of_the_economy_national_land_law_sy~12033.html.
- Davis, C. *et al.* 2012. *Analysis of institutional mechanisms for sharing REDD+ benefits, Case studies: Property Rights and Resource Governance Project (PRRGP)*. United States Agency for International Development (USAID), Washington, D.C.
- Debroux, L. *et al.* 2007 (eds). *Forests in Post-Conflict Democratic Republic of Congo: Analysis of a Priority Agenda*. Center for International Forestry Research, World Bank, *et al.*, Bogor.
- De Merode, E. 1998. Protected areas and livelihoods. Contrasting systems of wildlife management in the RDC. PhD dissertation. University College, London.
- De Witt, P. 2010. *DRC Scoping Mission. Opportunities in the Current Forest and Land Tenure Landscape to Advance Community Tenure Rights. Report*. Rights and Resources Initiative, Washington, D.C.
- Dkamela, G.P. *et al.* 2009. *Voices from the Congo Basin: Incorporating the Perspectives of Local Stakeholders for Improved REDD Design*. Working Paper. World Resources Institute (WRI), Washington, D.C.
- DRC (Democratic Republic of the Congo). 2002a. Mining Code. Law No. 007/2002 11 July 2002. Constituent and Legislative Assembly, Transition Parliament, President of the Republic, Kinshasa.
- DRC (Democratic Republic of the Congo). 2002b. Forest Code. Law No. 1 1/2002 29 August, 2002. Constituent and Legislative Assembly, Transition Parliament, President of the Republic, Kinshasa.
- DRC (Democratic Republic of the Congo). 2005. Constitution de la République Démocratique du Congo. See www.eisa.org.za/WEP/drc5.htm.
- DRC (Democratic Republic of the Congo). 2006. Poverty Reduction and Growth Strategy Paper. Government of DRC, Kinshasa.
- DRC (Democratic Republic of the Congo). 2010a. Ministry of Environment, Nature Conservation and Tourism. Readiness Plan for REDD (2010–2012). See www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/Documents/PDF/Jul2010/RPP_V3.1_English_July2010.pdf.
- DRC (Democratic Republic of the Congo). 2010b. *Journal Officiel de la RDC n° spécial*. Code foncier. Government of DRC, Kinshasa.
- DRC (Democratic Republic of the Congo). 2011. Loi n° 11/022 du 24 décembre 2011 portant principes fondamentaux relatifs à l'agriculture (85 art.), Government of DRC, Kinshasa.
- DRC (Democratic Republic of the Congo). 2012. Stratégie-Cadre Nationale REDD+ de la République Démocratique du Congo. Version finale. CN-REDD, FCPF, UN-REDD, Kinshasa.
- Dumont-Andre, H., Carbonez, G. 2009. Democratic Republic of the Congo. In: Farrell, S., and McDermott, R. (eds). *Mining 2009: The Regulation of Exploration and Extraction in 31 Jurisdictions Worldwide*. Law Business Research Ltd., London. See www.mcguirewoods.com/newsresources/publications/international/mining-drcongo.pdf.
- Du Preez, M., Sturman, K. 2009. *Seeing the Wood for the Trees: Forest Governance in the DRC*. SAILA Research Report 4. South African Institute of International Affairs, Johannesburg.
- Du Preez, M. *et al.* 2011. *REDD Integrity: Addressing Governance and Corruption Challenges in Schemes for Reducing Emissions from Deforestation and Forest Degradation (REDD)*. U4 Report 1: Bergen, CMI, Norway 2011.
- Duveiller, G. *et al.* 2008. Deforestation in Central Africa: Estimates at regional, national and landscape levels by advanced processing of systematically-distributed Landsat extracts. *Remote Sensing of Environment* 112 1969–1981.
- Eba'a Atyi, R., Bayol, N. 2009. The Forests of the Democratic Republic of Congo in 2008. In: de Wasseige, C. *et al.* (eds). *The Forests of the Congo Basin – State of the Forest 2008*. Publications Office of the European Union, Luxembourg.
- Ellsworth, L. 2004. *A Place in the World. A Review of the Global Debate on Tenure Security*. Ford Foundation, New York.
- Elson, D. (2012), *Guide to investing in locally controlled forestry*, Growing Forest Partnerships in association with FAO, IIED, IUCN, The Forests Dialogue and the World Bank. IIED, London, UK.
- Fan, S., Saurkar, A. *Strategic agricultural growth options for poverty reduction in Africa and implications on the Democratic Republic of Congo. Paper presented at Achieving Food and Nutrition Security in DRC: Immediate Actions and Long Term Investments in Agriculture*, Kinshasa, 17–18 September 2008.
- FAO (Food and Agriculture Organization of the United Nations). 2009. *Projects, Democratic Republic of Congo*. See www.fao.org/countryprofiles/index.asp?lang=en&iso3=COD.

- FAO (Food and Agriculture Organization of the United Nations). 2011. *The State of Forests in the Amazon Basin, Congo Basin and Southeast Asia. A report presented to the Summit of the Three Rainforest Basins, Brazzaville*, 31 May–3 June, 2011.
- Fétiveau, J., Mpyoi Mbunga, A. 2009. *L'économie politique du secteur forestier en République Démocratique du Congo*. Rapport final. Banque Mondiale, Kinshasa.
- Forests Monitor. 2009. *Developing Community Forestry in DRC*. See www.forestsmonitor.org/en/community_forestry_drc.
- Global Witness. 2007. *Agenda for Reform in the Natural Resource Sector of the Democratic Republic of Congo*. Global Witness, Washington, D.C. See www.globalwitness.org/media_library_detail.php/532/en/opportunity_for_the_new_congolese_government_to_fundamentally_reform_the_natural_resource_sector.
- Gray, I., Laporte, N., Bush, G. 2011. *REDD+ Strategies in the Democratic Republic of Congo: Strengthening sub-provincial institutional capacity for governance*. Draft Policy Brief for COP 17, Woods Hole Research Center (WHRC), REDD+ Project, Kinshasa. WHRC, Boston.
- Gray, I. 2012. *Carbon Finance, Tropical Forests and the State: Governing International Climate Risk in the Democratic Republic of Congo*. Master's thesis. Massachusetts Institute of Technology.
- Greenpeace International. 2008. *DRC Logging Review: The Carving up of the Congo Continues*. Greenpeace International, Amsterdam. See www.greenpeace.org/international/press/reports/DRC-logging-sector-briefing.
- Greenpeace International. 2010. *Turning REDD into Green in the DRC: Can a National REDD Plan in the Democratic Republic of Congo set a New Course for the Protection of Forests, People and Global Climate?* Greenpeace International, Amsterdam.
- Gregersen, H. et al. 2010. *Does The Opportunity Cost Approach Indicate the Real Cost of REDD+? Rights and Realities of Paying for REDD+*. Rights and Resources Initiative (RRI), Washington, D.C.
- GTZ (German Agency for Technical Cooperation). 2009. *Conservation of Biodiversity and Forest Management Project*. GTZ, Bonn. See <http://www.gtz.de/en/praxis/16089.htm>.
- Hagen, R. et al. 2011. *Conserving Biodiversity for Sustainability, Livelihoods and Prosperity*. CARPE II Evaluation Report. ECODIT, Arlington.
- Hansen, M.C. et al. 2008. Humid tropical forest clearing from 2000 to 2005 quantified by using multitemporal and multiresolution remotely sensed data. *Proceedings of the National Academy of Sciences* 105(27) 9439–9444.
- Harms, R. 1964. *Land tenure and agricultural development in Zaïre*. LTC Paper 99. Land Tenure Center, Madison.
- Hoare, A.L. 2006. *Resource Rights and Timber Concessions: Integrating Local People's Land Use Practice in Forest Management in the Congo Basin*. Rainforest Foundation UK, London. See www.rainforestfoundation.org.
- Hoare, A.L. 2007. *Clouds on the Horizon: The Congo Basin's Forests and Climate Change*. Rainforest Foundation, London.
- Hoare, A.L. 2010. *Community-Based Forest Management in the Democratic Republic of Congo A Fairytale or a Viable REDD Strategy?* Forests Monitor, Cambridge.
- Hoare, A.L. et al. 2007. *Towards Sustainable Management and Financing of the Democratic Republic of Congo's Forests*. Research report. See www.chathamhouse.org.uk.
- Huart, A., Makala, P. 2008. *Institutional Context of Agriculture and Reform of Democratic Republic of Congo*, Ministry of Agriculture and Rural Development. International Food Policy Research Institute (IFPRI), New York.
- Huggins, C. 2004. Preventing Conflict through Improved Policies on Land Tenure, Natural Resource Rights, and Migration in the Great Lakes Region. *African Center for Technology Studies: Eco-Conflicts* 3(1) 1-4
- Huggins, C. 2010. *Terre, Pouvoir et Identité. Les Causes Profondes des Violents Conflits dans l'est de la République Démocratique du Congo*. International Alert, London.
- Huggins, C. et al. 2004. *Land, Conflict and Livelihoods in the Great Lakes region: Testing Policies to the Limit*. Ecopolity Series No. 14. African Centre for Technology Studies, Nairobi.
- IDRC (International Development Research Centre). 2009. *Project Proposal: Promoting Good Governance of Natural Resources in Post Conflict Societies*. See www.idrc.ca/en/ev-83038-201_104649-1-IDRC_ADM_INFO.html.
- Jewsiewicki, B. 1980. African Peasants in the Totalitarian Colonial Society of the Belgian Congo. In: Klein, M.A. (ed.) *Peasants in Africa: Historical and Contemporary Perspectives*. SAGE, Beverly Hills.

- Kalambay, G. 1970. Les droits fonciers coutumiers à travers la législation de la République : La tenure foncière et forestière en République Démocratique du Congo [RDC]: Une question critique, des vues centrifuges Démocratique du Congo. *Revue Juridique et Politique* Indépendance et Coopération 4 1175–1185.
- Kalambay, G. 1982. Le nouveau droit foncier congolais. *Cahiers Économiques et Sociaux* 19 1–5.
- Kalambay, G. 1989. *Droit civil: régime foncier et immobilier*. 2ème Edition, Presses Universitaires du Zaïre, Kinshasa.
- Kameri-Mbote, P. 2006. Gender issue in land tenure under customary law. In: *Land Rights for African Development – From Knowledge to Action*. CAPRI (Collective Action and Property Rights), Washington, D.C. See www.capri.cgiar.org.
- Kamitatu Etsu, O. 2010. *Rapport Pays 3: République Démocratique du Congo, Suivi des Principes d'engagement international dans les États fragiles et les situations précaires*. Organisation for Economic Co-operation and Development (OECD), Paris.
- Karsenty, A. 2004. Enjeux des réformes récentes de la fiscalité forestière dans le bassin du Congo. *Bois et Forêts des Tropiques* 281 51–60.
- Karsenty, A. 2007. Overview of possible finance mechanisms for alternative forest-use models. *What Does the Future Hold for the Forests in the Democratic Republic of Congo? Innovative Tools and Mechanisms for Sustainable Forest Management*. Reflection and Discussion Paper 1. Belgian Technical Cooperation (BTC CTB), Belgian Development Co-operation, Africa Tervuren, Center for International Forestry Research (CIFOR) and Agricultural Research for Development (CIRAD), Brussels.
- Karsenty, A. 2010a. *Large-Scale Acquisition of Rights on Forest Lands in Africa*. Rights and Resources Initiative, Washington, D.C.
- Karsenty, A. 2010b. The new economic 'great game' in Africa and the future of governance reforms in the forest sectors. In: German, L. et al. (eds). *Governing Africa's Forests in a Globalized World*. Center for International Forestry Research, Bogor.
- Karsenty A., Ongolo, S. 2011. Can 'fragile states' decide to reduce their deforestation? The inappropriate use of the theory of incentives with respect to the REDD mechanism. *Forest Policy and Economics* (2011).
- Kiyulu, J. 2011. *Forest governance in the Democratic Republic of Congo*. Policy Brief 33. Governance of Africa's Resources Programme, South African Institute of International Affairs, Johannesburg.
- Klaver, D. 2009. *Multi-stakeholder design of forest governance and accountability arrangements in Equator province*. Democratic Republic of Congo Capacity Development and Institutional Change Programme, Wageningen.
- Knight, R.S. 2010. Statutory recognition of customary tenure rights in Africa. An investigation of best practices in law making and implementation. *FAO Legislative Study* 105. Food and Agriculture Organization of the United Nations (FAO), Rome.
- Kouassigan, G. 1982. Objet et évolution des droits fonciers coutumiers. In: Kouassigan, G. (ed.) *Encyclopédie Juridique de l'Afrique (Tome cinquième: Droit des Biens)*. Les Nouvelles Editions Africaines, Abidjan and Dakar.
- Kwado, A.O. 2008. *Revitalizing Agricultural Research and Extension for Growth, Poverty Reduction and Development in the Democratic Republic of Congo*. International Food Policy Research Institute (IFPRI), New York.
- Laporte, N. et al. 1998. A new land cover map of central Africa derived from multi-resolution, multi-temporal AVHRR Data. *International Journal of Remote Sensing* 19(18) 3537–3550.
- Laporte, N., Justice, C. 2001. *Deforestation in Central Africa: Significance and Scale of Deforestation*. Issue Brief No. 6. Central African Regional Program for the Environment (CARPE), Washington, D.C.
- Laporte, N. et al. 2007a. Expansion of Industrial Logging in Central Africa. *Science* 316 1451.
- Laporte, N. et al. 2007b. *Reducing CO₂ Emissions from Deforestation and Degradation in the Democratic Republic of Congo: A First Look*. Woods Hole Research Center, Falmouth.
- Laporte, N. et al. The foundation for REDD in the Democratic Republic of Congo. In: *Proceedings of the workshop on alternative management models and finance mechanisms for sustainable forest use in the Democratic Republic of Congo, Kinshasa, 23-24 June 2008*
- Leisz, S. 1998. Zaïre. Country Profile. In: Bruce, J.W. *Country Profile of Land Tenure: Africa, 1998*. Research Paper 130. Land Tenure Center (LTC), Madison.
- Le Roy, E. 1982. Les objectifs de la colonisation française ou belge. In: Kouassigan, G. (ed.) *Encyclopédie Juridique de l'Afrique (Tome cinquième: Droit des Biens)*. Les Nouvelles Editions Africaines, Abidjan and Dakar.
- Lescuyer, G. 2010. *Economic Analysis of Artisanal Forest Exploitation in Orientale Province, the Democratic Republic of Congo: A Brief Assessment*. Forests Monitor, London.

- Lewis, J. and Nelson, J. 2006. *Logging in the Congo Basin: What Hope for Indigenous Peoples' Resources, and their Environments?* Indigenous Affairs. Logging and Indigenous Peoples. International Work Group for Indigenous Affairs (IWGIA), Copenhagen.
- Lewis, J., Freeman, L., Boreill, S. 2008. *Le consentement libre, informé et préalable et la gestion forestière durable dans le Bassin du Congo*. Rapport d'étude. Intercoopération, Berne.
- Macqueen D., C. Buss and T. Sarroca (2012). In *Locally Controlled Forestry. A Review of TFD's Initiative on Investing in Locally Controlled Forestry 2009–2012*. The Forests Dialogue. New heaven, USA.
- Macqueen, D. (ed.), Andaya, E., Begaa, S., Bringa, M., Greijmans, M., Hill, T., Humphries, S., Kabore, B., Ledecq, T., Lissendja, T., Maindo, A., Maling, A., McGrath, D., Milledge, S., Pinto, F., Quang Tan, N., Tangem, E., Schons, S. and Subedi, B. 2014. *Prioritising support for locally controlled forest enterprises*. IIED, London.
- Makengo, N.A. 2010. *Les institutions politiques de la RDC. De la République du Zaïre à la République démocratique du Congo (1990–à nos jours)*. L'Harmattan, Paris.
- Mamdani, M. 1999. Preliminary Thoughts on the Congo Crisis, *Social Text* 60 53–62.
- Marcot, B.G., Alexander, R. 2004. *Exploratory Trip to Democratic Republic of the Congo, 20 August – 15 September 2004*. Report for International Programs Office. USDA Forest Service, Washington, D.C.
- Mathieu, P., Kazadi, C. 1990. Quelques aspects des législations et pratiques foncières au Zaïre: ambiguïtés et enjeux pour les politiques agricoles. *Mondes en Développement* 18(69) 55–61.
- Mazalto, M. 2006. La Réforme du Secteur Minier en République Démocratique du Congo : Enjeux de Gouvernance et Perspectives de Reconstruction. *Afrique Contemporaine* 227(3) 53–80.
- Mbala, S.M., Karsenty, A. 2010. Forest Revenue Decentralization and Profits Redistribution in the Democratic Republic of Congo. In: German, L., Karsenty, A., and Tiani, A-M (eds). *Governing Africa's Forests in a Globalized World*. 8. Earthscan, London.
- MECNT (Ministère de l'Environnement, Conservation de la Nature et Tourisme). 2009a. *Potentiel REDD+ de la RDC*. December. MECNT, Kinshasa.
- MECNT (Ministère de l'Environnement, Conservation de la Nature et Tourisme). 2009b. *Quatrième rapport national sur la mise en oeuvre de la Convention sur la Diversité Biologique*. MECNT, Kinshasa.
- MECNT (Ministère de l'Environnement, Conservation de la Nature et Tourisme). 2012. *Synthèse des études sur les causes de la déforestation et de la dégradation des forêts en République Démocratique du Congo*. Août. MECNT, Kinshasa.
- Melmoth, S. 2007. République Démocratique du Congo: Décentralisation et sortie de crise. *Afrique Contemporaine* 2007(1) 75–85.
- Methot, P., Thompson, S. 2009. *Protecting Forests and Community Rights in DRC*. World Resources Institute, Washington, D.C. See www.wri.org/stories/2009/09/protecting-forests-and-community-rights-drc.
- Mpoyi, A. 2005. *Les forêts, la loi et les communautés locales en RD Congo. Une analyse des droits fonciers locaux dans le processus de planification de l'utilisation des terres dans le segment RDC du paysage forestier Lac Télé-Lac Tumba*. Rapport d'étude. Innovative Resources Management/Congo Basin Forest Partnership, Kinshasa.
- Mpoyi, A. *Les dimensions sociales et environnementales des projets d'acquisition à grande échelle des droits fonciers en République Démocratique du Congo. Communication écrite*. Conférence sur les politiques et l'administration des terres, Washington D.C., 26–27 April 2010.
- Mungangu Matabaro, S. 1997. *La gestion foncière rurale au Congo (Zaïre), réformes juridiques et pratiques foncières locales*. L'harmattan et Bruylant, Bruxelles.
- Musafiri, P.N. 2008. *The Dispossession of Indigenous Land Rights in the DRC: A History and Future Prospects*. Land Rights and the Forest Peoples of Africa: Historical, Legal and Anthropological Perspectives. No. 3. Forest Peoples Programme, Morton-in-Marsh.
- Musampa Kamungandu, C. et al. 2012. *Cartographie des bénéfices potentiels liés à la biodiversité dans le cadre de REDD+*. République Démocratique du Congo. Préparé par UNEP-WCMC, Cambridge, Royaume-Uni; Ministère de l'Environnement, Conservation de la Nature et Tourisme de la RDC et l'Observatoire Satellitaire des Forêts d'Afrique Centrale. Programme ONU-REDD, Kinshasa.
- Ndela, J. 2008. *Les activités minières et la fiscalité: Cas de la République Démocratique du Congo*. PhD dissertation. Université de Paris I.
- Nelson, J., Hossack, L. 2003. *Indigenous Peoples and Protected Areas in Africa*. Rapport Technique. Forests Peoples Programme, Moreton-In-Marsh.

- Nelson, J., Kipalu, P., Vig, S. *The Forest Dialogue: Field Dialogue on Free and Informed Consent. Bas Congo and Kinshasa the Democratic Republic of Congo. Background Paper*, Forest Peoples Programme, Moreton-in-Marsh, 21-25 May 2012.
- Nhantumbo, I, D. Macqueen, R. Cruz, A. Serra (2013). Investing in locally controlled forestry in Mozambique Potential for promoting sustainable rural development in the province of Niassa. IIED, London, UK
- Norad (Norwegian Agency for Development Cooperation). 2011. *Real-Time Evaluation of Norway's International Climate and Forest Initiative Contributions to National REDD+ Processes. 2007-2010 Country Report: Democratic Republic of Congo*. Norad, Oslo.
- Ojalampi, S. 2006. *Contested Lands: Land Disputes in Semi-arid Parts of Northern Tanzania. Case Studies of the Loliondo and Sale Divisions in the Ngorongoro District*. Department of Geography, University of Helsinki.
- O'Neil, E. et al. 2011. *WWF in Democratic Republic of Congo. Conservation Program Audit. Final Report*. WWF, Gland and Kinshasa.
- Oyono, P.R. 2009. *La cartographie des droits communautaires aux forêts en RD Congo. Perspectives stratégiques, légales et politiques*. Note de Discussion 3. Forests Monitor et Rights and Resources Initiative (RRI), Kinshasa.
- Oyono, P.R. 2010. *Décentralisations et gestion des forêts locales en RD Congo. Document Compréhensif*. Forests Monitor et Rights and Resources Initiative (RRI), Kinshasa.
- Oyono, P.R. 2011a. *Etat, Transitions Démocratiques et Ressources Naturelles : Une Economie Politique des Décentralisations en Afrique Centrale Document de Recherche*, Ouagadougou, Center for International Forestry Research (CIFOR).
- Oyono P.R. 2011b. *La Tenure Foncière et Forestière en République Démocratique du Congo. Une Question Critique, des Vues Centrifuges. Revue Compréhensive de la Littérature*. Rights and Resources Initiative (RRI), Washington, D.C.
- Oyono, P.R., Lelo Nzuzi, F. 2006. Au sortir d'une longue «nuit» institutionnelle», perspectives de destion décentralisée des forêts et des bénéfices en RD Congo post-conflit. *Afrique et Développement* 31(2) 185–216.
- Oyono, P.R., Barrow, E. 2011. *Mapping forest tenure in Central Africa in the dawn of the new century: Transitions or hidden-status-quo?* Working Paper. Program of Land and Agrarian Studies, University of Western Cape, Cape Town.
- Pact. 2009. *Pact Congo: March 2009 Status Update*. Pact, Washington, D.C. See www.pactworld.org/cs/africa/democratic_republic_of_congo.
- Peach Brown, H.C. 2011. Gender, climate change and REDD+ in the Congo Basin forests of Central Africa. *International Forestry Review* 13(2) 163–174.
- Pèlerin, E. 2010. *Etude sur la problématique foncière au Nord Kivu – RDC*. Rapport final. GRET, Nogent sur Marne.
- Platteau, J.-P. 1996. The evolutionary theory of land rights as applied to sub-Saharan Africa: A critical assessment. *Development and Change* 27 (1) 29–85.
- Putzel, J., Sefan, L., Schouten, C. 2008. *Drivers of Change in the Democratic Republic of Congo: The Rise and Decline of the State and Challenges for Reconstruction*. Working Paper No 26, Destin Development Studies Institute, London
- Ragasa, C., Buba, S.C., Ulimwengu, J. 2011. *Institutional and Capacity Challenges in Agricultural Policy Process: The Case of the Democratic Republic of Congo*. Discussion Paper 01066. International Food Policy Research Initiative (IFPRI), Washington, D.C.
- Rainforest Foundation UK (2014) *New Community Forest Decree in the Democratic Republic of Congo Opportunities, Risks and Implications for Forest Governance*. Briefing paper. Rainforest Foundation UK, London.
- Rainforest Foundation UK. 2009. *Avoidable Deforestation Forest Sector Reforms and REDD in the Democratic Republic of Congo*. Background Report. Rainforest Foundation UK, London.
- Reynolds, T.H., Arturo, A.F. 2008. *The Democratic Republic of the Congo: Foreign Law Guide*. Brill, Leiden. See www.foreignlawguide.com/.
- Rodgers, H. 2008. *Connecting Community Forests in the Democratic Republic of Congo with the International Market: Some Initial Ideas*. Rapport d'étude. Forests Monitor, Cambridge.
- SADC (Southern African Development Community), 2009. *SADC Regional Agricultural Policy (RAP) – National review report: Democratic Republic of Congo*. Draft unpublished report.
- Salacuse, J.W. 1985. *The National Land Law System in Zaïre*. Rapport d'étude. Land Tenure Center et United States Agency for International Development (USAID), Madison et Kinshasa.
- Samndong, R.A. 2011. *Linking food security and REDD+: Lessons from REDD+ pilot project in RDC*. Woods Hole Research Center (WHRC), REDD+ Project, Kinshasa. WHRC, Boston.

- Samndong, R.A., Laporte, N., Bush, G. 2011a. *Designing local governance structure(s) for REDD+: Lessons from REDD+ pilot area in the DRC*. Draft Policy Brief Paper for COP 17. Woods Hole Research Center (WHRC), Boston.
- Samndong, R.A., Laporte, N., Bush, G. 2011b. *Strengthening local institutions and social capital to facilitate REDD+ implementation at the local level*. Lessons from REDD+ project sites in the RDC. Woods Hole Research Center (WHRC), REDD+ Project, Kinshasa, WHRC, Boston.
- Seyler, J.R. et al. 2010. *Democratic Republic of Congo: Biodiversity and Tropical Forestry Assessment (118/119)*. Final Report. United States Agency for International Development (USAID)/Democratic Republic of the Congo, Washington, D.C.
- Sidle, J. 2010. *Mission to Support Forest Zoning, Ministry of Environment, Conservation of Nature, and Tourism Democratic Republic of Congo. 1 July – 31 December 2009*. US Forest Service Office of International Programs Report. See
- Sohier, A. 1954. *Traité élémentaire de droit coutumier du Congo Belge*. Editions Internationales, Bruxelles.
- Taylor, B.N. 2011. *Forest Policy and Community-Based Conservation in Democratic Republic of the Congo*. CMC Senior Theses. Paper 118. http://scholarship.claremont.edu/cmc_theses/118.
- Tchoumba, B. 2010. *Cartographie des institutions et acteurs de la gouvernance forestière en République Démocratique du Congo*. Rapport d'étude. Rights and Resources Initiative (RRI), Forests Monitor, Kinshasa.
- Tollens, E. 2004. *Les défis: Sécurité alimentaire et cultures de rente pour l'exportation – principales orientations et avantages comparatifs de l'agriculture en R.D. Congo*, Table Ronde sur l'Agriculture en RDC, Working Paper No 86, Département d'Economie Agricole et de l'Environnement, Katholieke Universiteit Leuven, Belgique.
- Tollens, E. 2010. *Potential Impacts of Agriculture Development on the Forest Cover in the Congo Basin*. World Bank, Washington, D.C.
- Toulmin, C. 2008. Securing land and property rights in sub-Saharan Africa: The role of local institutions. *Land Use Policy* 26 10–19.
- Trefon, T. 2005. Industrial logging in the Congo: Is a stakeholder approach possible? *South African Journal of International Affairs* 13(2) 101–114.
- Trefon, F. 2007a. Industrial logging in Congo: Is a stakeholder approach possible? In: BTC-CTB (ed.) *What Does the Future Hold for the Forests in the Democratic Republic of Congo? Innovative Tools and Mechanisms for Sustainable Forest Management*. Reflection and Discussion Paper. Belgian Technical Cooperation (BTC CTB), Belgian Development Cooperation, Africa Tervuren, Center for International Forestry Research (CIFOR) and Agricultural Research for Development (CIRAD), Brussels.
- Trefon, T. 2008. La réforme du secteur forestier en République Démocratique du Congo : Défis sociaux et faiblesses institutionnelles. *Afrique Contemporaine* 227(3) 81–93.
- Trefon, T. 2009. *Réformes au Congo (RDC). Attentes et Désillusions*. L'Harmattan, Paris.
- Trefon, T., Lelo Nzuzi, F., Oyono, P.R. 2004. *Appui à la société civile pour la gestion participative et communautaire des forêts et des aires protégées en République Démocratique du Congo*. Rapport d'étude. CARE International, Kinshasa.
- UNDP Drylands Development Center (2007). *The Global Drylands Imperative. Devolving Resource Rights and the MDGs in Africa*. UNDP Drylands Development Centre. Nairobi.
- UNEP (United Nations Environment Programme). 2011. *The Democratic Republic of the Congo. Post-Conflict Environmental Assessment. Synthesis for Policy Makers*. UNEP, Nairobi.
- Unruh, J.D. 2004. *Post-conflict Land Tenure. Using a Sustainable Livelihoods Approach*. LSP Working Paper 18. Food and Agricultural Organization of the United Nations (FAO), Rome.
- USAID (United States Agency for International Development). 2007. *Land Tenure and Property Rights: Volume 1: Land Tenure and Property Rights Framework*. USAID ARD Report. Washington, D.C.
- USAID (United States Agency for International Development). 2011. *Country Profile: Democratic Republic of Congo*. LTPR Country Profiles Series. USAID, Washington, D.C. See <http://usaidlandtenure.net/>.
- Vlassenroot, K. 2006. *Household Land Use Strategies in a Protracted Crisis Context: Land Tenure, Conflict and Food Security in eastern DRC*. Conflict Research Group, University of Ghent. See www.fao.org/documents/pub.
- Vlassenroot, K., Huggins, C. 2005. Land, Migration and Conflict in DRC. In: Huggins, C., and Clover, J. *From the Ground Up: Land Rights, Conflict and Peace in Sub-Saharan Africa (Part Two: Land Reform)*. African Centre for Technology Studies (ACTS), Nairobi. See www.iss.org.za/pubs/Books/GroundUp/Contents.htm.
- Vundu, V.D.M., Kiyulu, J.N. 2010. Chainsaw milling and poverty reduction in the Democratic Republic of Congo. *ETFRN News* 52.

- Wasseige C. de, et al. (eds). 2008. *Congo Basin Forests – State of Forests 2008*. Congo Basin Forest Partnership (CBFP), Washington, D.C. See www.cbfp.org/Stateoftheforest.html.
- WCS (Wildlife Conservation Society). 2003. *Democratic Republic of Congo Environmental Analysis: Final Report*. WCS and United States Agency for International Development (USAID), Washington, D.C. See www.encapafira.org/documents/biofor/DRC%202003%20ETOA_Final_Report.pdf.
- Wily, L.A. 2000. *Land Tenure Reform and the Balance of Power in Eastern and Southern Africa*. Natural Resources Perspectives. No. 58. Overseas Development Institute (ODI), London.
- Wily, L.A. 2002. Getting the process right: Land administration as governance discourse on the political economy of land tenure management. *Proceedings of the Land Policy Conference in Africa, 29 April – 2 May 2002*. Kampala, Uganda
- Wily, L.A. 2011. *Customary Land Tenure in the Modern World. Rights to Resources in Crisis: Reviewing the Fate of Customary Tenure in Africa*. Brief 1 of 5. Rights and Resources La Tenure Foncière et Forestière en République Démocratique du Congo: Une Question Critique. Vues Centrifuges Initiative, Washington, D.C.
- Woodburne, O., Nelson, J. 2010. *Sauvegarder les droits communautaires dans le programmes de protection du climat et des forêts en République Centrafricain*. REDD Briefing. Forest Peoples Programme, Moreton-in-Marsh. See http://archive.forestpeoples.org/documents/forest_issues/car_redd_briefing_jul10_fr.pdf.
- World Bank. 2008. *Democratic Republic of Congo: Growth and Governance in the Mining Sector*. Report No. 43402-ZR. World Bank, Washington, D.C.
- World Bank. 2009. *DRC: Forest and Nature Conservation Project*. World Bank, Washington, D.C. See <http://web.worldbank.org/external/projects/main?pagePK=64312881&piPK=64302848&theSitePK=40941&Projectid=P100620>.
- World Bank. 2010a. *DRC: Projects and Programs*. World Bank, Washington D.C.
- World Bank. 2010b. *Democratic Republic of Congo: Agriculture Rehabilitation and Recovery Support Project*. World Bank, Washington, D.C.
- WRI (World Resources Institute). 2010. *Atlas Forestier Interactif de la République Démocratique du Congo – version 1.0: Document de Synthèse*. World Resources Institute, Washington, D.C.
- WRI (World Resources Institute). 2011. *Concessions forestières de la République Démocratique du Congo*. Direction des Inventaires et Aménagement Forestiers (DIAF), Ministère de l'Environnement, Conservation de la Nature et Tourisme, Kinshasa.
- Yager, T.R. 2010. The Mineral Industry of Congo (Kinshasa) [Advance Release February 2010] In: *United States Geological Survey (USGS) Minerals Yearbook 2008*, 11.1–11.9. See <http://minerals.usgs.gov/minerals/pubs/country/2008/myb3-2008-cg.pdf>.
- Yamba, P.K., 2009. *Congo Basin-DRC: Case study on the Ngiri-Tumba-Maindombe Wetland Landscape Environmental Security*. Institute for Environmental Security, The Hague.
- Yanggen, D., Angu, K., Tchamou, N. 2010. *Landscape-Scale Conservation in the Congo Basin: Lessons Learned from the Central African Regional Program for the Environment (CARPE)*. International Union for Conservation of Nature (IUCN), Gland.
- Zongwe, D., Butedi, F., Phebe, C. 2009. *The Legal System and Research of the Democratic Republic of Congo*. Hauser Global School Programme, New York University. See www.nyulawglobal.org/globalex/Democratic_Republic_Congo.htm.

The Democratic Republic of the Congo (DRC) has immense natural wealth. Political stability and good governance, including strong resources rights to local communities and sustainable investments, can galvanise sustainable development and enable the Congolese people to benefit from that wealth. This report highlights both key provisions and major challenges of natural resource legislation in the DRC. It suggests potential ways in which local communities, particularly marginalised populations, can play a prominent role in shaping inclusive, sustainable and equitable development.

IIED is a policy and action research organisation. We promote sustainable development to improve livelihoods and protect the environments on which these livelihoods are built. We specialise in linking local priorities to global challenges. IIED is based in London and works in Africa, Asia, Latin America, the Middle East and the Pacific, with some of the world's most vulnerable people. We work with them to strengthen their voice in the decision-making arenas that affect them – from village councils to international conventions.



International Institute for Environment and Development
80-86 Gray's Inn Road, London WC1X 8NH, UK
Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
email: info@iied.org
www.iied.org



Knowledge
Products