



Chinese trade and investment and the forests of the Congo Basin

Synthesis of scoping studies in Cameroon, Democratic Republic of Congo and Gabon

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Cover photo by FairPhone (www.fairphone.com). Artisanal small-scale mining is common in the Congo Basin region. A significant proportion of exported ores and minerals are extracted by individuals and families such as those shown here washing copper and cobalt ore by hand in a river in DR Congo's Katanga province.

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Table of contents

Acknowledgements	vi
Executive summary	vii
Sommaire	ix
1 Introduction	1
2 Methodology	4
2.1 Selection of countries for preliminary scoping	4
2.2 Scoping methodology	4
3 Overviews	7
3.1 China's economic and political relations with Cameroon, Gabon and DRC	7
3.2 Sectoral overviews: forestry, mining, and agriculture in Gabon, Cameroon and DRC	8
3.3 Investment promotion in Cameroon, DRC and Gabon	12
3.4 Trends in Sino-African trade and investment in commodities by sector in Cameroon, DRC and Gabon	13
4 Activities of Chinese companies in the forestry sector	19
4.1 Gabon	19
4.2 Cameroon	21
4.3 DR Congo	22
5 Chinese activities in the mining sector	24
5.1 DRC	24
5.2 Gabon	28
5.3 Cameroon	29
6 Chinese activities in the agricultural sector	31
6.1 Cameroon	31
6.2 DR Congo	33
7 Conclusion: Implications for further research	34
8 References	37

List of figures and tables

Figures

1	Chinese trade and investment in the Congo Basin region	1
2	Chinese propaganda poster from 1975 depicting Chinese agricultural aid to Africa	7
3	Timber exports to China from Gabon, Cameroon and DR Congo	14
4	Main mineral exports from Congo Basin to China, 2000–2008	15
5	Chinese overseas foreign direct investment in Cameroon, Gabon and DR Congo, 2003–2009	17
6	June 2010 map showing the area and distribution of timber concessions belonging to Chinese companies	20
7	Proportion of forest cover in mining concessions	24
8	2009 satellite image of Sicominex' Dikulwe-Mashamba concession area	26
9	Chinese joint-venture small cobalt mining site near Kasamfu, Katanga Province, DR Congo	27
10	Overlaps between mining exploration permits and forestry concessions and national parks in the area of South East Cameroon	29
11	Agricultural map of Cameroon, showing the location of Nanga Eboko	32

Tables

1	Extent of forest cover and forest cover change 2005–2010, Congo Basin countries	5
2	Focus and locations of field scoping in Congo Basin countries	5
3	Chinese bilateral aid and lending to the DR Congo from 2010 state budget	8
4	Contribution of forestry sector to tax earnings and GDP	9
5	DR Congo mineral exports	10
6	Cameroon agricultural exports	11
7	Government promotion of the Gabon Special Economic Zone	13
8	Summary of main hypotheses drawn from sector overviews and trade and investment figures	18
9	Ranking of concession holdings by national origin of concession holders	21
10	Annual timber production, Cameroon total and Hong Kong group	21

Abbreviations

ACIDH	Association contre l'impunité pour les droits humains (DRC human rights group)
ANAPI	Agence nationale pour la promotion des investissements (DRC investment promotion agency)
APIP	Agence de promotion des investissements privés (Gabon investment promotion agency)
CAR	Central African Republic
CB	Congo Basin
CdC	Cahier des charges
CFA franc	Central African franc
CFAD	Concession forestière sous aménagement durable (forest concession under sustainable management)
CICMH	Compagnie Industrielle et Commerciale des Mines Huazhou
CIF	Cost, insurance and freight
CIFOR	Center for International Forestry Research
CITIC	China International Trust and Investment Corporation
CNY	Chinese yuan
CPAET	Provisional convention of management, exploitation, and transformation (Gabon)
DGF	Direction générale des forêts (forestry department under Ministry of Environment, DR Congo)
DIMA	Dikulwe-Mashamba mining concession in Kolwezi, DR Congo
DRC or DR Congo	Democratic Republic of Congo
FAO	Food and Agriculture Organization of the United Nations
FC	Congolese franc
FDI	Foreign direct investment
FMU	Forest management unit
FOB	Free on board
FSC	Forest Stewardship Council
GDP	Gross domestic product
Gécamines	Général des carrières et des mines (state-owned mining company, DR Congo)
GEEC	Groupe d'études environnementales du Congo
ICRAF	World Agroforestry Centre
MOFCOM	Ministry of Commerce, China
MoU	Memorandum of understanding
OFDI	Overseas foreign direct investment
PFA	Forestry associates permit
PGG	Over-the-counter permit
PMURR	Multisectoral emergency program for reconstruction and rehabilitation, DR Congo
RAID	Rights and Accountability in Development
ROC	Republic of Congo
SCC	Sino-Congolese convention
SEZ	Special economic zone
SME	Small or medium enterprise
SOE	State-owned enterprise
TTRECED	Technical Training Centre for Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
VAT	Value added tax

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Executive summary

Over the past decade, since the implementation of China's 'going abroad' policy, mainland Chinese State-owned and private companies have significantly increased their interests in the resources and investment opportunities of the Congo Basin (CB), bringing new opportunities as well as potential social and environmental costs. This report is a synthesis of some main findings of preliminary scoping studies conducted by CIFOR and partners in Cameroon, Democratic Republic of Congo (DRC) and Gabon. It focuses on how Chinese trade and investment in the forestry, mining and agricultural sectors might impact forests and forest-dependent communities in the heavily forested region. The report also relies on studies of trade and investment data and Chinese policies conducted by partners working remotely from China and Germany. All studies were conducted under the CIFOR project 'Chinese trade and investment in Africa: Assessing and governing trade-offs to national economies, local livelihoods and forest ecosystems',¹ initiated in 2010.

Cameroon, DRC and Gabon were selected for this study primarily because of the growing importance of the Chinese market for logs and sawnwood in Cameroon and Gabon; and, in DRC, a dramatic growth in mineral exports to China as well as a comparatively high dependency on Chinese investment. The scoping exercise included collection and review of documents and available statistics, key informant interviews and field visits to locations where Chinese projects of interest had been identified. It is a preliminary work, and primarily an exercise to develop and refine hypotheses to be tested through selection of specific sites for in-depth research.

The scoping studies yielded useful results, including an increased understanding of the main trends in natural resources trade between the target countries and China, and the major land-based productive sectors targeted by Chinese investors. The studies also considered the role of national agencies tasked with promoting investment and overseeing corporate adherence to environmental and social requirements,

and provided a better understanding of the informal processes surrounding investment and acquisition of land and other resources. The degree to which the report answers quantitative questions (extent of deforestation, jobs created, etc.) is limited and will require more targeted data collection. Future research phases, in which specific cases will be selected for in-depth study, will permit a more comparative assessment of Chinese vs. non-Chinese trade and investment in selected locations than was possible during the preliminary scoping stage.

Preliminary observations reveal that current Chinese investments in the CB region dwarf all prior figures and are likely to greatly expand material trade flows. In DRC, the Sicomines deal, a USD6 billion investment, will bring major infrastructure developments in return for rights to mine a major copper deposit; however, the activities of small- to medium-sized Chinese companies engaged in small-scale mining and buying from the informal sector are currently of greater concern for environmental and social impacts. In Gabon, Chinese companies in 2010 owned 121 concession permits to manage and log 2.67 million ha of forestland, which is more than 10% of Gabon's dense forest area; however, their development and implementation of management plans to ensure sustainability and social responsibility has been slow. In contrast, in DRC, Chinese companies have not managed to adapt to changes in the Forest Law and have been excluded from the granting/renewal of concessionary rights. In DRC and Cameroon, Chinese agribusiness companies have recently been negotiating for parcels of agricultural land of 10 000 to 100 000 ha, for food and palm oil production projects. The initial land deals associated with these developments may not be in the best interest of local farmers with informal or customary tenure and usufruct rights over the same lands.

In general, the preliminary studies found that:

1. The involvement of Chinese companies, particularly in the small-scale and artisanal mining segments of the mining sector, is potentially a significant source of deforestation and especially forest degradation in areas that attract large numbers of migrant diggers.

¹ See China's trade and investment in Africa, CIFOR, Bogor, Indonesia. www.cifor.cgiar.org/China-Africa (May 2011).

2. In the forestry sector, Chinese companies have acquired substantial concessionary holdings in Gabon, some of which border on national parks. Our overview suggests that the activities of Chinese companies on the ground in Gabon need more in-depth study. The companies vary greatly in their compliance with legislation and other responsibility norms in their activities within the forest, and in their development and implementation of sustainable management plans. In all three countries, further study is needed of the articulations between Chinese companies and the informal timber sector, and a comparative approach is needed to determine the relative effects of the Chinese market and Chinese companies vs. other markets and non-Chinese companies.
3. In the agricultural sector, Chinese investment has not yet reached a level where a substantial impact is to be expected. However, such investments are planned for the future, and may materialise over the next few years.

Further research is needed to measure the economic returns on Chinese investments, and systematically to assess their relative costs and benefits compared to other investors, including European, North American, South African and Australian companies. Initial results point to a need to better understand the efficacy of national, provincial and local laws and institutions and customary systems in ensuring the highest returns to society on investments while reducing and mitigating environmental and social costs. Further studies would include, for example, land and resource laws, investment promotion agencies and environmental oversight bureaus, and officials and local chiefs with authority to allocate land. In addition, the responsibilities of investors in CB countries need to be better defined, including banks, corporations, and, where relevant, foreign governments, in order to form and implement guidelines on responsible finance and project implementation.

Sommaire

Au cours de la dernière décennie, depuis la mise en œuvre de la politique d'expansion extérieure, qui vise à favoriser l'investissement chinois à l'étranger, l'intérêt des entreprises chinoises — tant publiques que privées — pour les ressources naturelles et d'autres opportunités d'investissement dans le Bassin du Congo a considérablement augmenté. Ce rapport est une synthèse de trois études de cadrage menées par le CIFOR et ses partenaires sur les activités de commerce et d'investissements chinois dans les secteurs forestier, minier, et agricole au Cameroun, en République Démocratique du Congo (RDC) et au Gabon. Les impacts potentiels de ces activités sur les forêts et les communautés riveraines sont également passés en revue. Des études menées par des partenaires en Chine et en Allemagne viennent compléter les diagnostics établis dans les trois pays concernés. Toutes ces études ont été menées dans le cadre du projet du CIFOR intitulé « *Chinese trade and investment in Africa: Assessing and governing trade-offs to national economies, local livelihoods and forest ecosystems* », lancé en 2010.

Cette étude a sélectionné le Cameroun, la RDC et le Gabon pour les raisons suivantes:

- l'importance croissante du marché chinois dans le secteur et le commerce du bois d'œuvre au Cameroun et au Gabon;
- une augmentation spectaculaire des exportations de minerais de la RDC vers la Chine ainsi qu'une dépendance relativement élevée de ce pays des investissements chinois dans ce secteur.

L'évaluation s'est faite par le truchement de collecte et d'examen des documents et des statistiques disponibles, des interviews des principaux informateurs, et des visites sur le terrain là où des projets chinois majeurs ont été identifiés. Il s'agit d'un travail préliminaire pour développer et affiner les hypothèses que le projet testera dans une seconde phase par une recherche en profondeur dans une sélection de sites stratégiques dans les trois mêmes pays.

Ces études préliminaires ont ressorti plusieurs informations utiles et contribuent à une meilleure compréhension des principales tendances liées au commerce des ressources naturelles entre les pays cibles et la Chine, des principaux secteurs économiques ciblés par des investisseurs chinois, du rôle des agences nationales dans la promotion de l'investissement et chargées de contrôler l'adhésion des entreprises aux exigences environnementales et sociales, ainsi que des processus informels jouant sur l'investissement et l'acquisition de terres ou d'autres ressources. Ces informations demeurent toutefois essentiellement qualitatives et mériteront d'être complétées par une collecte de données plus ciblées. La future phase de recherche se basera sur des études approfondies pour un petit nombre de sites stratégiques et permettra une évaluation comparative des effets liés au commerce et à l'investissement chinois et non-chinois dans ces zones.

Les observations préliminaires révèlent que les investissements chinois dans la région du Bassin du Congo ont beaucoup augmenté, ce qui se traduira probablement une croissance considérable des flux de ressources naturelles vers l'Asie. En RDC, l'accord Sicominex, un investissement de 6 milliards de dollars visant l'exploitation d'un important gisement de cuivre, devrait apporter une amélioration considérable des infrastructures. Cependant, les activités des PME chinoises travaillant dans des mines à petite échelle et/ou achetant des minerais provenant de l'extraction informelle, sont préoccupantes en termes d'impacts environnementaux et sociaux. Au Gabon, les entreprises chinoises détiennent actuellement 121 concessions forestières, ce qui représente des droits d'exploitation sur environ 2,67 millions d'hectares, soit plus de 10% de la superficie de forêt dense du Gabon. Néanmoins, l'engagement de certaines de ces sociétés dans l'élaboration et la mise en œuvre de plans d'aménagement forestier pour assurer leurs responsabilités sociale et environnementale est encore assez lent. En revanche, en RDC, les entreprises chinoises n'ont pas réussi à

s'adapter aux changements du code forestier et ont été exclues de l'octroi ou de la reconversion des titres de concession. En RDC et au Cameroun, des sociétés agro-industrielles chinoises ont négocié le droit d'exploiter des parcelles de terres agricoles à l'ordre de 10.000 à 100.000 hectares pour développer des cultures vivrières ou des palmeraies. Les transactions associées à ces projets agricoles ne sont pas toujours dans le meilleur intérêt des communautés locales occupant ces terres de façon formelle ou informelle.

En général, les études préliminaires ont permis de constater que:

1. La participation des entreprises chinoises dans le secteur informel ou artisanal de l'exploitation minière à petite échelle est potentiellement une source importante de déforestation et/ou de dégradation des forêts, en particulier dans les zones qui attirent un grand nombre de mineurs migrants.
2. Dans le secteur forestier, les entreprises chinoises ont acquis des concessions importantes au Gabon, dont certaines jouxtent des parcs nationaux. Notre aperçu suggère qu'il y a une nécessité d'effectuer une étude plus approfondie de leurs activités, qui varient considérablement au regard de leur conformité à la législation et aux normes d'aménagement forestier durable. Dans les trois pays, il est nécessaire de poursuivre l'étude des liens entre les entreprises chinoises et le secteur informel du bois. Dans cette

perspective, une approche comparative est nécessaire pour déterminer les effets relatifs des commandes et des activités chinoises par rapport à leurs concurrents.

3. Dans le secteur agricole, les investissements chinois n'ont pas encore atteint un niveau où un impact substantiel est à prévoir. Toutefois, des investissements importants pourraient se concrétiser au cours des prochaines années.

D'autres recherches sont nécessaires pour mesurer les retombées économiques des investissements chinois et évaluer leurs coûts et avantages relatifs par rapport à d'autres investisseurs européens, américains, sud-africains et australiens, entre autres. Deux facteurs contextuels doivent être davantage analysés pour améliorer le rendement des investissements chinois sur la société, tout en mitigant leurs coûts environnementaux et sociaux : d'une part, l'application effective de la législation nationale, provinciale et locale et, d'autre part, le système institutionnel qui combinant structures formelles et systèmes coutumiers. En outre, il existe un besoin de mieux définir les responsabilités des investisseurs – comme les banques, les sociétés publiques et privées, et, le cas échéant, les gouvernements étrangers – dans les pays du Bassin du Congo dans l'élaboration et la mise en œuvre de lignes directrices sur le financement responsable et la mise en œuvre des projets de développement.

1. Introduction

Over the past decade, in line with trends throughout Africa, the magnitude of Chinese interest in Congo Basin (CB) resources and investment opportunities has soared, and the now familiar debate about the economic benefits to Africans of cooperation with China vs. the potential environmental and social costs of working with the colossal newcomer are applicable here, as they are in other regions of the continent. However, certain features of the CB and China's interests there lead to a particular set of questions relevant to the future of the region's forests and the wellbeing of forest-dependent people.

The most prominent feature of interest to international forestry researchers is the extent of remaining natural forests in the region (Figure 1).

Together, Cameroon, Congo-Brazzaville, Central African Republic (CAR), Democratic Republic of Congo (DRC), Gabon and Equatorial Guinea contain nearly 162 million ha of dense humid tropical forest and ca. 30 million ha of miombo woodlands (Eba'a Atyi *et al.* 2010). The forest ecosystems throughout the greater central African region are the main source of food, produced on forest farms, for more than 30 million people, while more than 50 million people depend in one way or another on non-timber forest products (Justice *et al.* 2001). The most obvious rationale for the present study is that 70% of Africa's log exports to China are from the CB, and in 2009, Gabon was China's fifth largest supplier of logs (Huang *et al.* 2010).

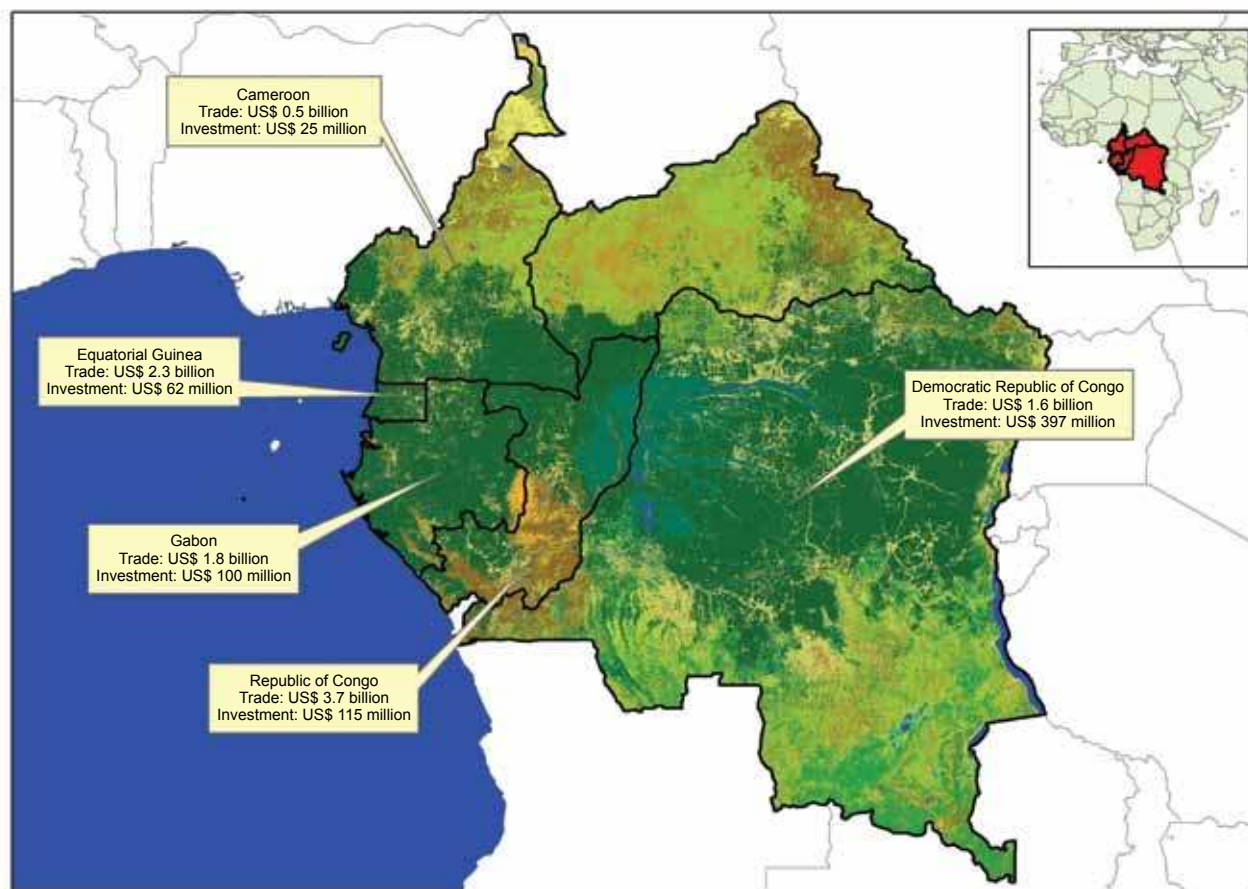


Figure 1. Chinese trade and investment in the Congo Basin region. Map of the Congo Basin region, with forest cover and figures by country showing trade and investment volumes.

Sources: Landcover map, GlobCover (2008); trade and investment figures, Engelhardt (2010)

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However, while the timber industry may be the industrial sector with the most obvious direct relationship to forest management, other sectors often occupy the same spaces and also have great impacts on forest extent and quality. Mining and agriculture require tree and soil removal and therefore have their own direct impacts in forested zones. In DRC, with its great mineral endowment and heavy economic reliance on mining, many concessions are located within forested areas (Bélanger and Mertens 2011). China's already substantial interests in CB minerals are set to expand greatly with multibillion dollar mining investments agreed between China and the region's governments.

Chinese agricultural imports from Africa, with the exception of cotton from Cameroon's drier north, are mostly sourced from other parts of Africa. However, a number of pilot projects and planned investments with Chinese capital suggest the oncoming development of land to grow palm oil, rice and other products. With a growing population and complicated land tenure involving overlapping legal and customary systems, the means through which foreign companies acquire rights to occupy and develop lands is central to the future wellbeing of people in the region.

Forestry, mining and agricultural development in the heavily forested CB region requires new transportation and energy infrastructure. Throughout the region, with both multilateral (e.g. World Bank) and Chinese development funds, Chinese contractors are active in road, railroad and hydroelectric construction. While certainly crucial to the region's economic development, improved access to resources and land is associated with deforestation, and the movement of people following new routes is associated with particular social problems which require planning and mitigation.

CIFOR worked with national researchers to produce three preliminary scoping reports. The reports provided a basic understanding of the scope and magnitude of Sino-African trade and investment in the three focal countries, and an initial impression of the potential associated ecological and social effects. In Gabon, research was conducted and processed by researchers from Brainforest, an environmental NGO; in Cameroon, CIFOR researchers worked with a local consultancy, the Technical Training

Centre for Development (TTRECED); and, in DRC, a CIFOR researcher worked with a colleague from the University of Kinshasa, with essential field assistance and orientation from the Association contre l'impunité pour les droits humains (ACIDH), a human rights NGO in Katanga Province with a background of work on mining issues.

This synthesis draws loosely from those three reports, as well as from reports produced by project partners, the University of Leipzig's African Studies Institute and the World Agroforestry Centre (ICRAF)—China and East Asia Node. University of Leipzig's report is an overview of trade and investment data drawn from international databases, and the Beijing reports are overviews of Chinese data on trade and investment to Africa as well as the policies governing them. Initial observations derived from these studies include the following points.

Chinese investment and aid is important to the economies of the target countries, but still represents a small proportion of overall foreign investment. Much Chinese aid appears to be politically motivated, since it is targeted to projects identified by the head of State and it is often also the executive branch that negotiates with China for large deals. In the forestry sector, Chinese companies have acquired large concessions in Gabon, some of which border on national parks; this requires more study of activities within the forest with the development and implementation of sustainable management plans. Throughout the region, more attention needs to be paid to companies' engagement with the informal sector. In mining, Chinese companies' involvement in small-scale and artisanal extraction is potentially a significant source of deforestation and especially forest degradation in areas that attract large numbers of migrant diggers. In the agricultural sector, Chinese investment has not reached a level where a substantial impact is to be expected. However, such investments are planned for the future, and may materialise over the next few years.

Chinese trade has a tendency to interface with small-scale local actors, such as artisanal miners and loggers, which means the direct benefits may therefore be distributed relatively widely. However, those benefits come with increased costs in the form of potential labour and even human rights abuses associated with vulnerable people being involved

in dangerous industries conducted on a small scale with little oversight. In this regard, Chinese trade is likely not different from other foreign ethnic groups engaging with the region's informal sectors. Chinese investment, meanwhile, is increasingly subject to similar types of social and environmental safeguards employed by Western companies. Increasingly, Chinese investment banks require approved environmental and social assessments as well as mitigation plans. However, in other studies specifically targeting Chinese actors, cases of poor labour practices such as low wages, long hours and

bad working conditions abound. The ability and will of Chinese vs. national producer country institutions to govern the investment impacts need to be more deeply explored.

The next section will describe the methodology of the country selection (Cameroon, Gabon and DRC) and initial commodities of interest for the scoping exercise, followed by a brief historical overview of Chinese involvement in those countries. Finally, the main findings of the exercise will be presented and discussed.

2. Methodology

2.1 Selection of countries for preliminary scoping

In order to select three CB countries for preliminary scoping exercises, the project team reviewed available data on trade and investment between CB countries and China. The countries initially considered included Cameroon, CAR, DRC, Equatorial Guinea, Gabon and Congo-Brazzaville. The countries were examined according to various criteria, including forest cover and forest cover change (Table 2), total trade with China, dependency on Chinese trade, key commodities exported to China as a share of total exports to China and current investment dependency (the percentage of Chinese foreign direct investment (FDI) as a share of total FDI stock). Based on the overview of these data, the team selected Cameroon, DRC and Gabon for inclusion in the scoping studies.

Initially, the project team inspected data on all top commodities exported from the CB countries to China, and discussed which were likely to be of interest in their impact on forests. The top commodities in value exported from the region to China are mineral fuels (oil), mineral ores and metals (including copper, cobalt and iron), wood products and cotton. However, because oil is mostly produced offshore² and cotton is produced in the dry northern agricultural lands of Cameroon,³ these two commodities were not used to select countries for field assessments.

After initial inspection, CAR was excluded from the initial study due to its apparently low level of investment and procurement activity from China.⁴ Equatorial Guinea was also excluded because oil represented more than 90% of its exports to China

2 See e.g. 'Where the oil is.' <http://mappery.com/map-of/Sub-Saharan-Africa-Oil-Map> (25 February 2011).

3 See e.g. Agricultural map of Cameroon, <http://www.fao.org/ag/AGP/agpc/doc/Counprof/cameroon/figure7.htm> (25 February 2011).

4 From available international data sources, compared to its CB neighbors, CAR apparently has fewer Chinese residents, less direct Chinese investment, and less trade with China. See e.g. <http://www.rfi.fr/afrique/20101026-chinois-afrique> for a useful interactive map giving an overview of Chinese activities in Africa (25 February 2011).

and because, since implementing a logging ban in 2007 (Mugnier and Martinez-Plaza 2010), its timber exports had fallen behind Gabon, Congo-Brazzaville and Cameroon. Of the four remaining countries, Gabon was selected because of its relatively high economic dependency on both China trade and investment as well as the forestry sector's obvious importance and Chinese involvement therein. Cameroon and DRC were selected over Congo-Brazzaville for the following reasons:

1. DRC has the largest extent of both humid and dry dense forest in the region.
2. DRC's dependency on Chinese investment is higher than the Congo-Brazzaville.
3. The high volume of ores and metals exported from DRC to China provides more opportunities in having a diversity of cases from different sectors.
4. Cameroon's timber exports to China have been increasing, compared to those from Congo-Brazzaville, which have been declining.
5. The presence of CIFOR's regional office in Cameroon, and existing partnerships in Cameroon and DRC, would help to maximise project resources.

2.2 Scoping methodology

Country-level scoping involved three main activities, including collection and review of documents and available statistics; key informant and stakeholder interviews; and, field visits to locations where specific Chinese projects of interest had been identified through the prior two activities. Documents included, for example, national legislation pertaining to investment in the three sectors of interest, news articles, government reports and project reports by various institutional actors. Statistics included internationally available trade and investment statistics and statistics provided by national government agencies.

Among the stakeholders interviewed in-country were staff and officials of the relevant government ministries and agencies with oversight in the relevant

Table 1. Extent of forest cover and forest cover change 2005–2010, Congo Basin countries

Country	Dense forest cover ^a	Annual change	
	ha (millions)	% ^b	ha/yr ('000s)
Cameroon	-17	-1.07	-220
CAR	5	-0.13	-30
Congo	20	-0.05	-12
DRC	127	-0.20	-311
Equatorial Guinea	2	-0.71	-12
Gabon	21	0	0

Sources: FAO (2010), Eba'a Atyi *et al.* (2010)

a Including both humid and miombo ecotypes

b Rate of gain or loss in percent of the remaining forest area each year within the given period

Table 2. Focus and locations of field scoping in Congo Basin countries

Country	Sector		
	Forestry	Mining	Agriculture
Cameroon	General situation surrounding logging in the southern part of the country, with a focus on Cameroon-China timber exports trends	General situation of mining sector as derived from official documents and interviews	Chinese investment in production of rice, manioc and maize in Nanga Eboko (Central Region)
DRC	General situation surrounding logging in Mbandaka, Equateur Province, and timber processing/trade in Kinshasa	Chinese investment in copper and cobalt mining trade in and between Lubumbashi, Likasi and Kolwezi, Katanga Province	Chinese agribusiness in N'djili (Kinshasa) and the Bateke Plateau
Gabon	Chinese investment in logging around three villages in Ogooué-Ivindo Province	General situation of mining sector as derived from official documents and interviews	

sectors (e.g. investment, environment, forestry, mining, lands) and civil society members including NGO representatives and private sector personnel. In DRC, 72 interviews were conducted, including 47 in Kinshasa and 25 in Katanga Province. In Cameroon, 30 interviews were conducted, while in Gabon, a total of 33 interviews were undertaken, with 21 in Libreville and the remainder in Ogooué-Ivindo Province. The selection of sites for field visits was based on the research teams' best judgment, based on the review of initial information obtained from the literature and from initial interviews at the national level, as well as practical considerations such as budgetary constraints in this initial phase of the project. The locations selected thus were mainly centred around mining in southern DRC, with short day visits to observe aspects of Chinese agribusiness near Kinshasa and the general logging situation in Mbandaka, Equateur Province. In Cameroon, where CIFOR has already done substantial work on Chinese logging, field scoping for this project covered Chinese agribusiness in the Central Region.

In Gabon, our team visited villages in and around Chinese logging concessions in Ogooué-Ivindo Province (Table 3).

During field visits, local perspectives were obtained through interviews with local officials, residents and employees of relevant companies. These different methods of enquiry were semi-structured around the following main research questions:

- What are the main forest resources, agricultural commodities, and mineral exports to China?
- What are the economic sectors (excluding the oil sector) which attract the majority of investments from the Chinese Government or private sector?
- For a sample of three commodities purchased or invested in by Chinese Government/companies, what is the scope, scale and characteristics of current and planned Chinese and non-Chinese investments and/or sourcing practices for commodities of interest in forestry, agricultural and mining sectors?

- Who are the corporate actors involved?
- To which locations are these investments channelled? From which locations are the commodities sourced?
- What corporate policies, national, legal and institutional frameworks, bilateral agreements and informal processes currently govern foreign direct investment and the corporate practices of Chinese and non-Chinese actors?
- How do key experts assess the nature of societal benefits (e.g. revenue generation, job creation, infrastructure) and costs (e.g. competition with domestic industries) of Chinese and non-Chinese investments in the commodities or sectors of interest?
- What kind of local social, economic and environmental impacts may be observed from key informant interviews and field-based scoping of select Chinese investments/concessions in commodities of interest? Is there evidence of widespread deforestation?
- What projections may be made about likely deforestation from planned investments?

The scoping exercise yielded useful results, including an increased understanding of the main trends in natural resources trade between the target countries and China; the major land-based productive sectors targeted by Chinese investors; the role of national agencies in promoting investment and overseeing corporate adherence to environmental and social requirements; and, to some degree, a better understanding of the informal processes surrounding investment and acquisition of land and other resources. The research team has obtained information on the specific actors involved in the sectors and countries of interest, which will be useful in conducting subsequent specific case studies. The degree to which the study answers quantitative questions (e.g. extent of deforestation, actual jobs created, etc.) is limited and will require more targeted data collection in the project's next phase. Future phases, in which specific cases will be selected for in-depth study, will permit a more comparative assessment of Chinese vs. non-Chinese trade and investment in selected locations than was possible during the broad rapid scoping stage.

3. Overviews

3.1 China's economic and political relations with Cameroon, Gabon and DRC

In this century's first decade, especially after Beijing implemented its 'going abroad' policy (Luo *et al.* 2010) with many new advantages for Chinese businesses operating internationally, flows of natural resources from Africa to China and of investment (and people) from China to Africa ballooned. An intense and ongoing international debate in many disciplines about the potential benefits vs. the social and environmental costs of China's Africa policy was sparked by the combination of bullish trendlines published in business magazines, news of increasingly frequent official visits and subsequent aid and loan

packages, the formation in 2006 of the Forum on China-Africa Cooperation, and occasional reports of illegal timber trading and human rights abuses associated with Chinese companies.

However, although it was with 'going abroad' that China's involvement in Africa began to explode, the history of Sino-African diplomatic relations, aid and investment in Africa as a whole and in our focal countries is not new. China's official relations with Cameroon, Gabon and DRC go back to the early 1970s, when China was courting a host of African countries to gain more global influence in a landscape dominated by competition between the West and the Soviet Union (Brautigam 2009, Shinn 2008) (Figure 2). With the establishment of diplomatic ties,



Figure 2. Chinese propaganda poster from 1975 depicting Chinese agricultural aid to Africa

Chinese engagements in the Congo Basin and on the African continent in general proliferated in the 1960s and 1970s. Many early development assistance projects from China were agricultural projects, such as the one featured in this 1975 propaganda poster, captioned 'Revolutionary friendship is as deep as the ocean'.

Source: Collection International Institute of Social History, Amsterdam. Designer: Guo Hongwu. Publisher: Shanghai Renmin Chubanshe, 1975.

Table 3. Chinese bilateral aid and lending to the DR Congo from 2010 state budget

Sector	Specific budget line	Commitment (US\$)	% of total sector funding	Loan or gift
Transport	Railroads	195 400 916	99%	Loan
Infrastructure	Road construction/rehabilitation	396 642 159	78%	Loan
Agriculture	500 tractors	26 405 529	76%	Loan
Energy	Water sector	211 244 233	28%	Loan
Energy	Electricity sector	190 088 699	25%	Loan
Defense	Military assistance	2 313 124	7%	Gift
Public health	Hospital rehabilitation (all territories)	15 315 207	6%	Loan

Source: DRC (2010)

Beijing immediately began offering aid and technical assistance. For example, in 1973, President Mobutu Sese Seko visited Beijing and returned with promises of US\$100 million in agricultural aid (Young 1978). Over the next several decades, the nature of China's aid ranged from the practical (such as agricultural investments as well as hospitals), to the symbolic (e.g. stadiums and monumental buildings) to the outright strategic, extending to the provision of arms to DRC and Cameroon and training for their military personnel in China (see, e.g. Shinn 2008).

Current Chinese investments in the CB region dwarf all prior figures and are likely to greatly expand material trade flows. In DRC, there is the Sicomines deal, a USD6 billion investment in which USD3 billion is earmarked for mining operations and USD3 billion for infrastructure development such as railways, roads, bridges and energy, including hydroelectric dam construction. In return, China receives mineral rights over a potential 7 million tonnes of copper (Tambwe K.'a Mwimba 2010). In Gabon, Chinese companies currently own 121 concession permits to manage and log 2.67 million ha of forestland (Bilogo Bi Ndong and Banioguila 2010) which is more than 10% of Gabon's dense forest area. In DRC and Cameroon, Chinese agribusiness companies are negotiating for parcels of agricultural land ranging from 10 000 to 100 000 ha for large food and palm oil production projects (TTRECED and CIFOR 2010, Brautigam 2009).

Chinese financial engagements in Africa represent a hybrid of aid, concessionary and conditional loans and direct investment packages, often backed by loans from Chinese banks to Chinese State and private corporations, and with a focus

on 'win-win' forms of engagement with high returns on investment (German and Schoneveld 2011). In DRC, which highly depends on Chinese investment, money comes mostly in the form of concessionary loans targeting very specific and practical development sectors (Table 3). While China continues to give gifts, which may also be of a practical nature, they tend to be of a political nature in their timing (during State visits by Chinese officials to DRC or vice-versa) and in terms of their substance (projects requested by the president).⁵

3.2 Sectoral overviews: forestry, mining, and agriculture in Gabon, Cameroon and DRC

The forestry sector

The timber industry is a major contributor to the economies of the Congo Basin (Table 4), especially those of Gabon and Cameroon, and to a lesser degree DRC. Sector development is particularly important in Gabon, where timber is the largest employment sector after the government, providing jobs to an estimated 14 000 people (just under 1% of the population), and where it is seen as a potential source of compensatory revenue to make up for declining oil resources (Chevalier *et al.* 2009). In Cameroon, the formal sector is estimated to employ some 13 000 people (ca. 0.07% of the population), but indirect employment from the sector has been estimated at more than 160 000 jobs, or 0.8% of the population (MINEF 2006).

⁵ CIFOR interview with a Kinshasa-based Chinese diplomat, 11 August 2010.

Table 4. Contribution of forestry sector to tax earnings and GDP

Country	Recorded wood exports, year (roundwood equivalent, m ³)	Contribution to tax earnings (million EUR)	Contribution to GDP (%)
Cameroon	968 000 (2007)	62.1	6.00
Gabon	2 414 000 (2007)	31.3	4.30
Equatorial Guinea	579 000 (2007)	13.8	0.22
Congo-Brazzaville	999 000 (2007)	10.0	5.60
Democratic Republic of Congo	249 000 (2008)	1.7	1.00
	1 077 000 (2007)		

Source: Eba'a Atyi *et al.* (2010)

Forestry sector governance has seen major reforms in all three countries over the past decade. New legislative instruments introduced over the last two decades have centred around concession systems and requiring more elaborate forest management planning. In Gabon, the new law is designed not only to promote sustainable forest management and involvement of local communities, but also the sector's industrialisation.⁶ The new law, eventually backed up by enforcement of a log export ban in 2010, is expected to result in major changes in the segmentation of Gabon's timber exports and development of the processing industry (Ndjimbi 2010). In Cameroon, a log export ban has been in effect since 1999, although there is a yearly quota for log exports. In 2001, a decree was issued aimed at increasing the efficiency of per-area harvesting by requiring that management plans include a minimum of 20 species representing at least 75% of the standing volume inventoried in the forest management unit (Cerutti *et al.* 2011). In DRC, a new forest law in 2002 was followed by a series of activities aimed at correcting, institutionalising, and relaunching the forestry sector.

Currently Gabon is in the process of developing more than 10 million ha of forest under its new legislation, which is intended to promote sustainable management. Under the new legislation, an investor must enter into a 'provisional convention of management, exploitation, and transformation' (CPAET), and provide a management within three years of signing (Gabon Forest Law, Article 23). This system has three types of logging permit: the sustainable management forest concession (CFAD), the forestry associates permit (PFA) reserved for Gabonese nationals, and the over-the-counter permit

(PGG). As of mid-2010, Gabon had 7 million ha under CPAETs, 3.4 million ha under CFAD with approved management plans, and six concessions belonging to three companies under Forest Stewardship Council (FSC) certification, totalling 1.8 million ha.

In DRC, reform of the sector has resulted in a process of title conversion in which many pre-existing concession titles have been suspended. At the time of writing, there was a moratorium on allocating concessions and the sector was still in a process of reorganisation; this resulted in a crash in timber exports (see Table 4). By mid-2010, no companies holding concession titles had an approved management plan, and the concessions that had been allocated were concentrated in the hands of fewer actors; two-thirds of converted logging concessions had been awarded to just two corporate actors (du Preez and Sturman 2010).

After an unsuccessful attempt to introduce FSC certification in Gabon in 1996, seven companies in Gabon, Cameroon and Congo-Brazzaville, holding concessions totaling around 3 million ha, rapidly obtained FSC certification between 2006 and 2008. Another certification, Keurhout, previously certified around 1.2 million ha in Gabon but this is now being phased out and replaced by FSC. ISO 14001 environmental management certification and certifications of legality or sustainable forest management are also used in Gabon, although to a lesser extent (Eba'a Atyi *et al.* 2010). In DRC, the issue of whether to extend FSC certification to logging companies has been greatly controversial, in part due to the sector's incomplete reorganisation and the tendency of candidate companies to expand their operations prior to satisfaction of the new law's basic

⁶ Gabon's forest law, Loi 016/2001.

Table 5. DR Congo mineral exports

Commodity	Export Value 2008–2009 average (1000 US\$)	Export revenues (%)
Base metal ores and concentrates nes	853 762.00	23.90
Copper	609 758.00	17.10
Copper ores and concentrates	559 901.00	15.70
Misc non-ferrous base metals	467 023.00	13.10
Pearls, precious, semiprecious stone	332 412.00	9.30
	2 822 856.00	79.10

Source: UNCTAD (2010)

nes = not elsewhere specified

requirements (see for example, Greenpeace 2011). However, by the end of 2010, several companies were progressing towards certification and one had been awarded chain-of-custody and controlled wood certificates (FSC 2011).

The new legal arrangements governing the allocation of forest concessions and the processing and trade of timber are based on principles of sustainable management, rent maximisation, and value-adding to the countries' resource base. In reality, implementation has encountered obstacles, often due to inconsistencies between national legislation and customary practices or subnational rules. For example, it has been found that in Gabon many high government officials have been beneficiaries of concession allocations, and have also failed to pay the requisite taxes under the new forest law. Another controversial practice in Gabon has been the subcontracting to foreigners of concessions in the coastal zone, technically reserved to Gabonese nationals, to the benefit of local officials (FSC 2011). Recently in DRC, a provincial governor issued an edict blocking timber transport from the province by companies with legal concessions and national government approval, in an attempt to apply a set of conditions, including provincial-level payments, apparently in contradiction of the national forest law.⁷

The mining sector

After independence, most African countries nationalised mining, but over the past 20 years, and

⁷ CIFOR interview with a director of a Kinshasa-based international conservation NGO, 30 July 2010.

especially in the 2000s, many countries liberalised the sector through new legislation aimed at attracting foreign investment, stimulating exploration and increasing export revenues (McMahon 2011). Mining is the mainstay of DRC's export market, representing nearly 80% of national export revenues worth about US\$2.8 billion (Table 5). Gabon is an important producer of manganese and has substantial iron reserves; the sector accounts for 8–10% of export revenues (\$550–600 million). In Cameroon, the sector is still nascent but expected to gain importance with the opening of bauxite reserves in the north as well as iron reserves near the Gabon border (Tieguhong *et al.* 2009).

The DRC Mining Law of 2002 (Code minier) and the associated Mining Regulations of 2003 (Règlement minier), as well as ministerial decrees, instituted major reforms in the mining sector's governance, with the stated purpose of attracting investment. The reforms represent a liberalisation of access by new actors (whereas before the sector was dominated by a State-owned monopoly, the Général des carrières et des mines, or Gécamines) while, at the same time, modernising the institutions and guidelines for granting land and managing environmental and social impacts.⁸ The new law brought several new agencies under the Ministry of Mines, including an environmental department of mines, a cadastral department and an agency devoted to formalisation and control of small-scale and artisanal mining. These new agencies were created to manage the spatial allocation of mining

⁸ DRC Mining Law: Loi No. 007/2002 du 11 juillet 2002 portant Code minier. DRC Mining Regulations: Decret No. 038/2003 du 26 mars 2003 portant Règlement minier.

as well as its associated environmental impacts and the social problems associated with artisanal mining, which is at once a key livelihood activity for hundreds of thousands in several DRC provinces⁹ and also a notorious arena for conflict and human rights violations (Global Witness 2010). Under the new rules, artisanal miners are required to belong to cooperatives and hold permits, and buyers must also be registered.

Cameroon's mining legislation also contains provisions governing small-scale and artisanal mining, which must be licensed, in part to protect the interests of the 10 000 or so independent diggers active in the country (Global Witness 2010). Both the DRC and Cameroon have had development projects to systematise artisanal mining; however in the DRC, there have also been (unsuccessful) efforts to stop the practice and demobilise miners (see for example, Global Witness 2011a).

The agricultural sector

The industrial agricultural sector in Cameroon is comparatively well developed, with substantial exports of cacao, cotton, coffee and rubber. The sector is less well developed in Gabon, while in DRC the sector is in recovery after years of deterioration due to conflict, which destroyed key infrastructures.

Cameroon has about 9.3 million ha of land suitable for agriculture, or 15% of the total land area, of which only 26% is cultivated (OECD 2006). The agricultural sector is an important contributor to the Cameroonian economy, comprising 14.7% of the country's GDP in 2008 (ADB 2008). In addition, the sector employs nearly 70% of the workforce, and is a source of significant export revenues (Table 6). Cameroon's principal agricultural exports include cocoa, cotton, coffee, bananas, and rubber. Although production of palm oil has been increasing over the past decade, Cameroon's rank among producers hovers between 12 and 14 and remains one order of magnitude behind the volumes of Nigeria and Thailand and two orders of magnitude behind Indonesia and Malaysia (FAOSTAT 2011).

⁹ Estimates of the numbers of artisanal miners in the DRC run to 700 000 individuals. See for example: Global Witness and Partnership Africa Canada 2004.

Table 6. Cameroon agricultural exports

Commodity	Export value 2008–2009 average (1000 US\$)	Export revenues (%)
Cocoa	406 589	10.2
Cotton	160 696	4.0
Coffee and coffee substitutes	111 715	2.8
Fruit nut (excl. oil), fresh or dried	74 212	1.9
Natural rubber, latex, gum, etc	74 037	1.9

Source: UNCTAD (2010)

As part of its overall economic strategy, Cameroon is promoting private foreign investment in the agricultural sector, towards which the Government allocates substantial funds in various programs (MINADER 2006). Multilateral aid projects funded by the United Nations Development Program (UNDP) and Food and Agriculture Organisation (FAO) largely target poverty reduction and food security, which is an area of concern: in February 2008 there were demonstrations over rising food prices, causing concern about the State's stability (Crisis Group 2010).

The agricultural development strategy includes seeking investment projects such as construction of a chemical fertiliser factory; increasing competitiveness in producing maize, plantain, oil palm, rice, poultry, and pork; support for expanding cash crops such as cocoa and coffee; and mechanisation of rice and maize production.

Gabon is endowed with potentially arable land of almost 15.2 million ha, of which only 495 000 ha are currently exploited. In 2005, Gabon had a total population of 1.38 million, with only 15% living in rural areas (National Investment Report, Gabon 2008). Agricultural sector development has been hampered by numerous structural factors including rural exodus, rural population ageing, and poor transportation infrastructure. Policies generally favour the development of large-scale agribusinesses such as rubber, oil palm, cocoa, coffee, beef and poultry. Gabon is not an agricultural country, despite the presence of fertile areas generally located in the valleys.

With support from FAO, the Government of Gabon formulated its Strategy for National Agricultural Development—Horizon 2015 which is organised around two main axes, namely increasing the capacity of rural household producers and development of private sector agribusiness, with a focus on supporting village operations and small to medium sized farms. Policies are oriented towards expanding and diversifying the production of cash crops (FAO 2011).

DRC's agricultural sector is in recovery and is the target of World Food Program 'protracted relief and recovery operations' aimed at reducing hunger, saving lives and protecting livelihoods during post-conflict transition. Programs include handover strategies to local institutions as well as local purchase of relief provisions for food distributions (Agrifeeds 2011). Nonetheless, DRC is again starting to attract investor interest in cash crops such as oil palm and rubber, and has commissioned studies under its Multisectorial Emergency Program for Rehabilitation and Reconstruction (PMURR). However, with a transportation infrastructure still badly damaged by conflict and an extremely vulnerable rural population, the DRC has a long way to go (see for example, Agrer-Earth 2005).

3.3 Investment promotion in Cameroon, DRC and Gabon

In order to promote private sector investment, the three countries have all instituted some form of legislation and an agency to implement it. Gabon's Investment Charter was passed in 1998, followed by the institution of the private investment promotion agency APIP (Agence de promotion des investissements privés) in 2000. In DRC, a new Investment Law (Code des investissements) was passed in 2002 and the national investment promotion agency ANAPI (Agence nationale pour la promotion des investissements) was formed. Cameroon's Investment Charter was passed in 2002 but its implementation was delayed, and it was not until 2010 that the investment promotion agency ANPI was put in place (Fankam 2010).

The purpose of these agencies is to promote investment by advertising the benefits offered by the State shepherding companies through the application process. The approach is referred to

as a '*guichet unique*' (single window). Companies entering through the investment agencies benefit from various exonerations on taxes and custom duties. Each country's terms vary somewhat, but are similar in principle. For example, in DRC, as explained by an ANAPI official,¹⁰ according to the Investment Law, investors with approved projects are entitled to customs advantages, and fiscal advantages designed to encourage stabilisation and reinvestment. Customs advantages are structured such that, for importation of materials such as machines and excluding consumables, the investor pays 5% of cost, insurance and freight (CIF) value to the Director General of Customs. Similarly, on exported items, i.e. transformed products, they also pay 5% of 'free on board' (FOB) value. In terms of fiscal advantages, whereas taxes on profits are 40%, for approved investors, taxes are 100% exonerated for 3–5 years depending on economic region. Land taxes (*Impots Fonciers*), which are calculated according to whether the land is developed or not, are similarly exonerated, as are taxes associated with capital improvements and taxes on company stocks.

While the investment promotion agencies are designed to attract new investment, a good deal of incoming foreign investment passes them by. For example, in DRC, ANAPI explicitly does not cover the mining, banking or commercial sectors, which are covered under different legislation. In addition, most Chinese direct investment is agreed directly between the executive branch and the company or agency in China from which it comes.¹¹

In Gabon, investment promotion has jumped to a new level with the planned development of a Special Economic Zone (SEZ), which is jointly managed by the Gabon Government and Olam, a Singapore-based agribusiness and logging giant with 400 000 ha of timber concessions in Gabon, now actively marketing the SEZ in Asia (see for example, Singapore Business Review 2010). Offering a suite of special terms to investors, the SEZ is especially targeting timber companies for investment in the processing industry; in-country processing, as previously mentioned, is now a requirement for foreign companies logging in Gabon and forms a strategy for value adding along with the log export

10 CIFOR interview with a staff member of the DR Congo investment promotion agency (ANAPI), 30 July 2010.

11 CIFOR interview with a staff member of the DRC investment promotion agency (ANAPI), 30 July 2010.

Table 7. Government promotion of the Gabon Special Economic Zone

Gabon SEZ, strategically located at Nkok, offers optimum logistic advantage by way of multiple connectivity to port Owendo 30 km from the site, nearest rail connectivity from Ntoum and Owendo, nearest national highway RN 1 connecting just 500m away from northern boundary of the site.

Fiscal incentives

- Income tax holiday for 10 yrs and then concessional tax of 10% for next 5 yrs
- Complete waiver on import of material and export of manufactured product
- Duty exemptions on import of plant and machinery and spares
- Exemption of VAT (Value Added Tax)

Relaxations and waivers

- 50% concession on power tariff
- 100% repatriation of funds
- Relaxed labour laws
- Up to 5% DTA sales permitted without any tax implication

Common infrastructure

- Water treatment plant
- Sewage and effluent treatment plant
- Common log park
- Common dry kiln facility
- A 15 MW capacity ecofriendly co-gen power plant to generate power from the wood waste generated in the zone.

Forest concessions offered to the units

The forest concession under sustainable management which can cover a surface area between 50 000 ha and 200 000 ha.

A single logging company can be granted many CFADs, however the cumulative area granted to one company cannot exceed 600 000 ha.

Regulatory and statutory clearances

Gabon SEZ would facilitate to obtain all such necessary regulatory and statutory clearances required for setting up an industry in Gabon SEZ from various government departments of Gabon by way of single window clearance approach, simplifying the process in granting speedy approvals to the units.

Source: Government of Gabon and OLAM's partnership website, 'Advantage Gabon SEZ'. <http://www.gabonadvance.com/HTML-Website/advantage-gabon-sez.html> (17 March 2011)

ban (Table 7). It will be important to understand several aspects of the benefits offered to companies under the SEZ incentives, including what is meant by 'relaxed labour laws'.

In terms of governance of environmental and social impact, the investment promotion agencies do not play a great role: these are decentralised by sector, with the relevant ministries governing mining and forestry managing their processes for approving management plans and environmental and social impact assessments. At most, the investment promotion agencies review the documentation of projects to see if they fulfill the requirements of the relevant ministries. In DRC, one more centralised agency is under the Ministry of Environment: the Environmental Study Group (*Groupe d'études environnementales du Congo*, or GEEC) which was given a broad mandate but still is only likely receive projects funded by development banks requiring environmental and social impact assessments,

generally road projects; the Ministry of Mines has its own environmental department.¹²

3.4 Trends in Sino-African trade and investment in commodities by sector in Cameroon, DRC and Gabon

3.4.1 Trade

In value and volume, Chinese imports from Congo Basin countries are largely composed of wood products and certain minerals such as copper and manganese. With the exception of cotton from Cameroon, which is excluded from this study because it is not produced in a region with important forest cover, China imports minimal agricultural projects from the Congo Basin, and we will not cover those in the trade overviews. There are some interesting pilot

¹² CIFOR interview with an agent of the Groupe d'études environnementales du Congo (GEEC), 11 August 2010.

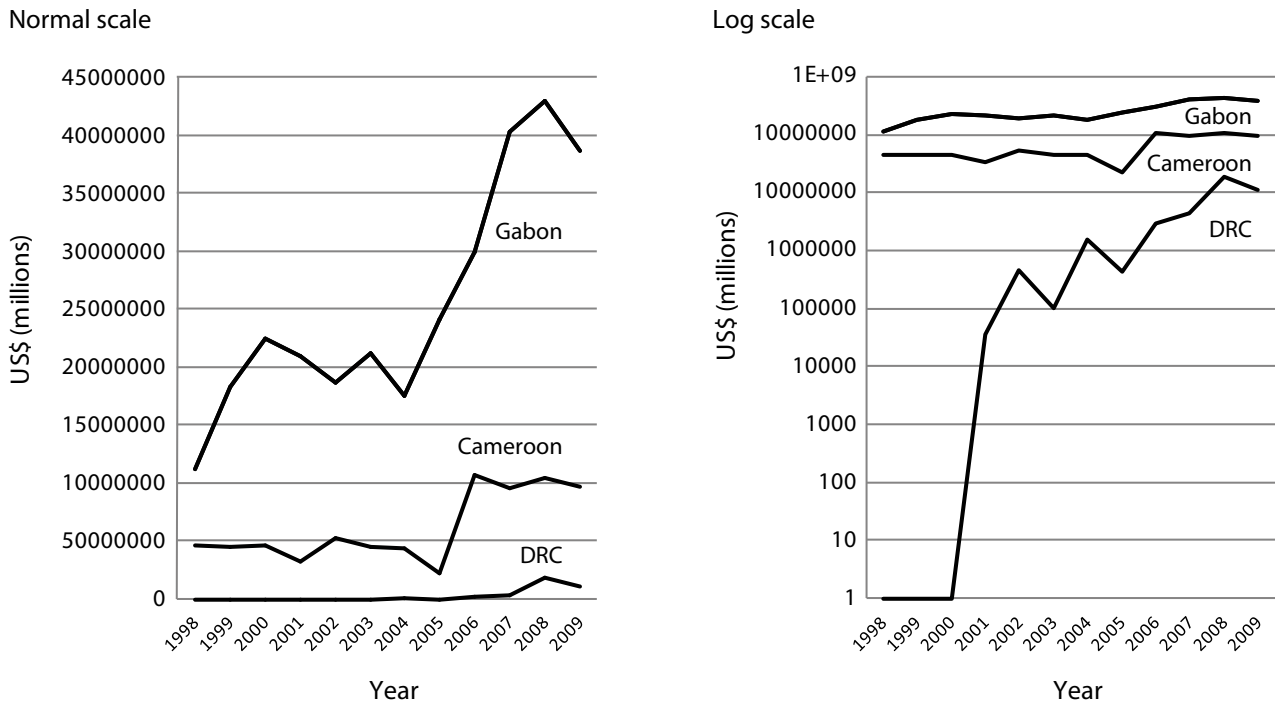


Figure 3. Timber exports to China from Gabon, Cameroon and DR Congo. While the volume from Gabon far surpasses the others, the increase from both Cameroon and DR Congo, as highlighted in the log scale representation on the right, is also notable.

Source: Engelhardt (2010)

projects in rice and maize, and some indications of new Chinese interest in palm oil production, which will be mentioned later. This section provides an overview of developments in the CB–China forest products and mineral trade.

3.4.1.1 The China–Congo Basin forest products trade

For more than 10 years, Gabon has been the largest African supplier of logs to China, followed by Congo-Brazzaville and Equatorial Guinea, and Cameroon (Figure 2). Several CB countries historically have low processing rates and export substantial volumes of timber: notably, in 2007, national forestry ministries reported processing rates of 34% for Gabon compared to 75% for Cameroon (Eba’a Atyi *et al.* 2010). This difference is explained by the implementation of a 1994 law in Cameroon phasing out log exports over a 5-year period, except for a permitted quota. Gabon, on the other hand, continued to export high volumes of logs until 2010, when a log export ban was abruptly implemented, reportedly resulting in a sudden decline in exports (see for example, ITTO 2010). The effect of Gabon’s log export ban on China’s imports of Gabonese timber has yet to be examined.

According to international trade figures, the DRC remains a relatively minor source of timber to China. In comparison to exports from Gabon and Cameroon, which peaked at US\$400 million and \$100 million respectively in 2008, DRC’s official exports to China remain at less than \$20 million. However, DRC’s timber sales to China have been trending sharply upward since 2002 (Figure 3), and the volumes of timber illegally shipped through bordering countries have not been quantified, making the DRC timber sector a case worth closer investigation.

3.4.1.2 The China–Congo Basin minerals trade

From 2000 to 2009, China’s imports of ores and minerals from Africa increased in value from around \$350 million per year to more than \$7 billion. The most notable imports from Congo Basin countries were manganese from Gabon, and copper and cobalt from DRC and Congo-Brazzaville. By 2007, exports to China of copper and cobalt from DRC were increasing substantially, while those from Congo-Brazzaville were on the decline (Figure 4).

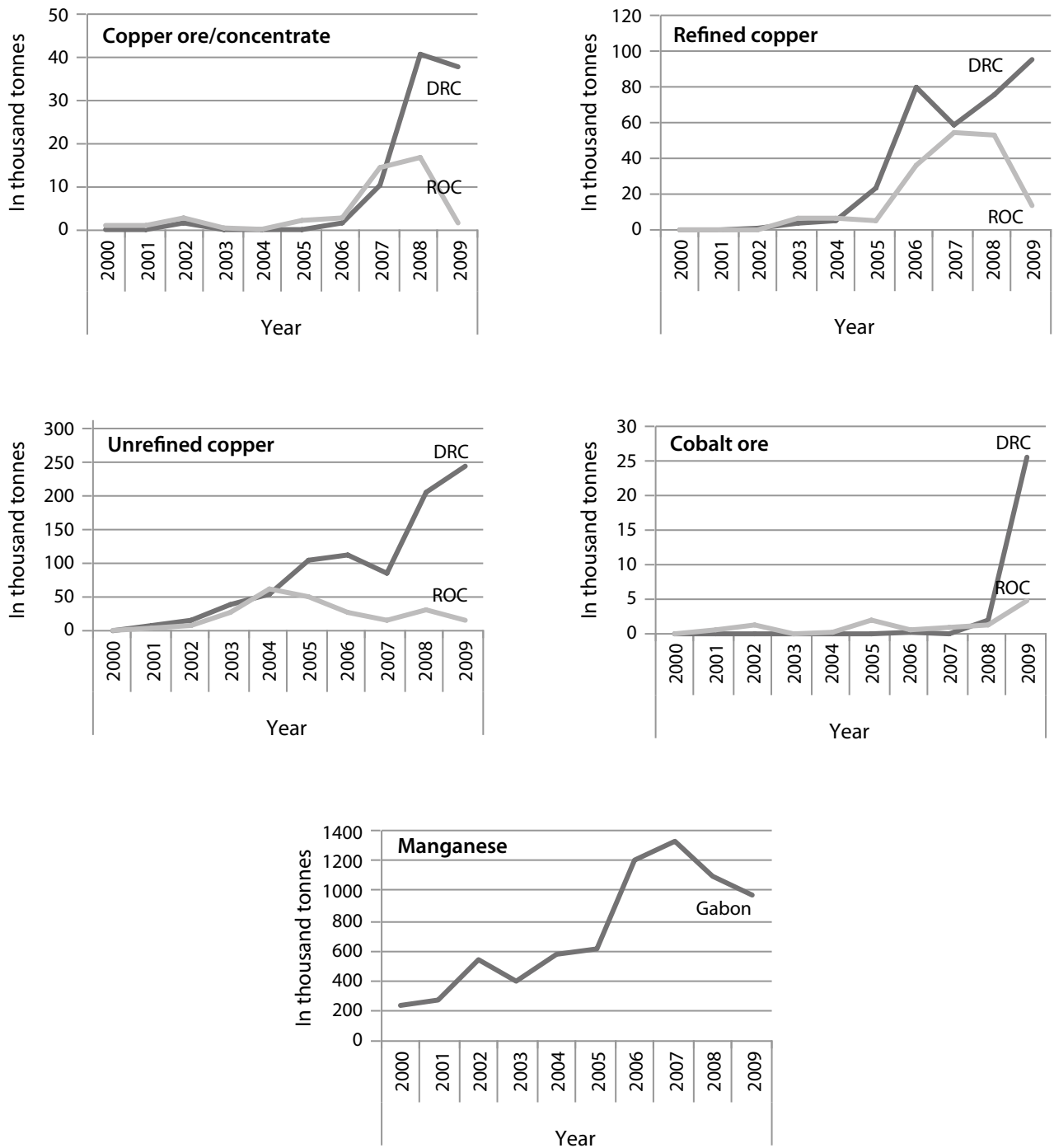


Figure 4. Main mineral exports from Congo Basin to China, 2000–2008. Note that copper from Congo-Brazzaville is being replaced by copper from DR Congo, and the increasing exports of processed copper compared to ore.

Source: Zhang Hua (2010)

3.4.2 Investment

Overall FDI from China to the CB region increased steadily in the 2000s, reaching total stocks of US\$25 million in Cameroon and \$100 million in Gabon in 2009. FDI into the DRC far surpassed other countries in the region, rising to nearly \$400 million by 2009 in line with the growth of Chinese interests in Congolese minerals (Figure 5).

A project report by the World Agroforestry Centre, 'Analysis of Chinese companies investing in the mining, agriculture and forestry sectors', examines the trends and the major investment destination of Chinese companies based on the Ministry of Commerce (MOFCOM) China Companies Overseas Investment Database,¹³ which contains the approved list of Chinese companies planning to make overseas investments in land-based productive/extractive industries from 1983 to 2010. The analysis focuses on the period 2002-2010, during which the number of investment applications grew dramatically at an annual average rate of 250%. Prior to 2002, MOFCOM recorded fewer than 10 applications per year, increasing to 388 in 2010. Although the records do not state the intended financial magnitude of investments nor indicate whether those investments were realised, in fact they are nonetheless a useful piece of supporting information because they correlate strongly with the trade data already presented. Between 2002 and 2010, targeting Africa as a whole, Chinese companies submitted 154 applications related to planned mining investments, 36 applications to invest in the forestry sector, and 37 applications towards the agricultural sector.

In the forestry sector, Gabon appeared most frequently, accounting for 25% (n=9) of the total planned investments throughout Africa. In the Congo Basin, the next most frequently appearing destination was Congo-Brazzaville, albeit with only three records, and Cameroon had one potential Chinese investor in forestry in 2010. Compared to applications to invest in other regions, the applications towards the CB were more geared towards timber extraction, as opposed to processing which was more prevalent in other regions. The largest destination for planned mining investments was DRC, with 24% of records (n=37), followed closely by Zambia (23%) and Tanzania (6%). Several companies also planned to invest in Gabon (n=4), Congo-Brazzaville (n=3) and Cameroon (n=2). Of the 37 planned investments targeting the agricultural sector, only five targeted the Congo Basin; three were bound for Cameroon and one for Gabon. However, of the planned investments in Cameroon, only one was agribusiness, while two were for poultry production. Zambia was by far the destination of greatest interest for Chinese agricultural investments.

Based on the indicators shown in Table 3, which summarise the hypotheses that can be drawn from official data, in the following section we shall order the presentation of our results from investigating the detailed configurations of Chinese corporate activity in the target countries as follows: forestry (Gabon, Cameroon, DRC); mining (DRC, Gabon, Cameroon) and agriculture (Cameroon, Gabon, DRC).

¹³ The database reflects companies applying to invest in Africa, but does not imply that all these companies eventually made actual investments either in Africa or in the sectors that they applied under. In addition to the direct investments in to Congo Basin countries approved by MOFCOM, Chinese companies are also involved in mergers and acquisitions of international corporations, many of which are involved in mining; these are not reflected in this analysis.

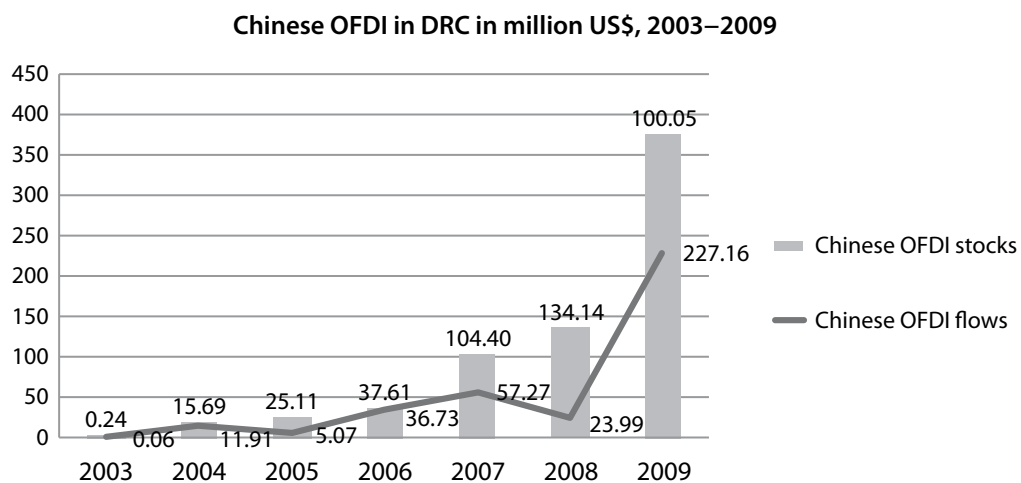
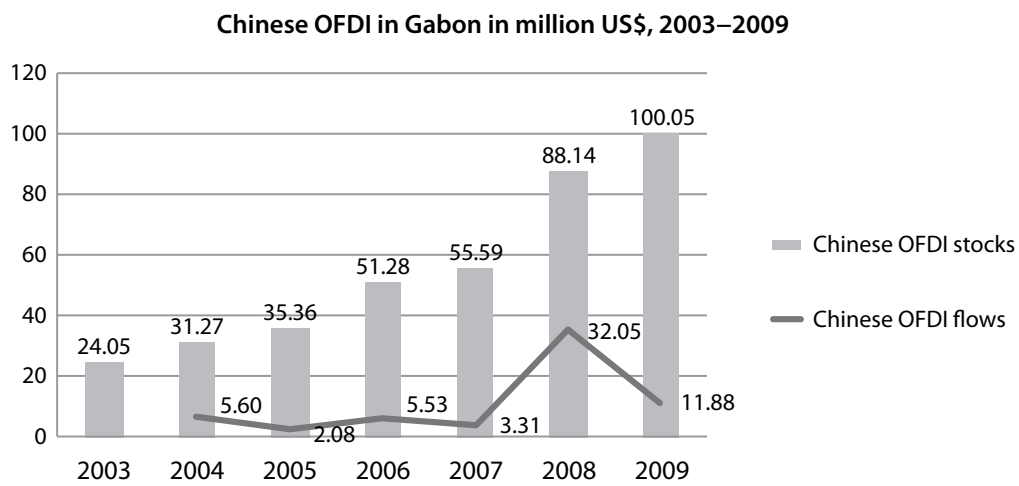
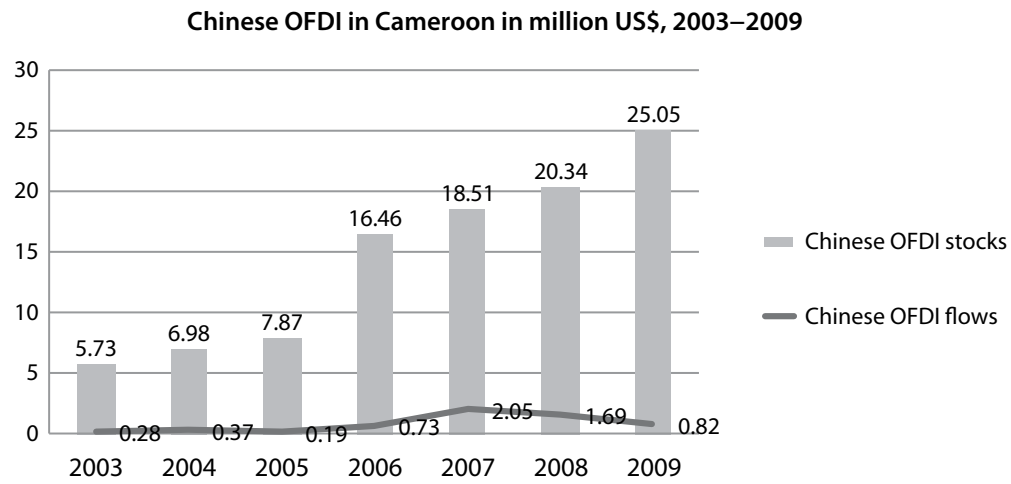


Figure 5. Chinese overseas foreign direct investment in Cameroon, Gabon and DR Congo, 2003–2009

Source: Engelhardt (2010)

Table 8. Summary of main hypotheses drawn from sector overviews and trade and investment figures. These indicators are derived from official statistics only, and do not take into account informal trade or indirect investments.

Sector and qualification	Country			
	Cameroon	DRC	Gabon	
Forestry	Economic contribution	High	Low (due to sector reform, lack of transport infrastructure)	Very high
	Exports to China	Medium (and increasing)	Low (and increasing)	Very high
	Planned direct investments from China	1 (2010)	0	9
Mining	Economic contribution	Underdeveloped	Very high	Medium
	Exports to China	Low (except aluminum only processed in Cameroon)	Very high	Medium
	Planned direct investments from China	2	37	4
Agriculture	Economic contribution	High	Low (post-conflict, lack of infrastructure)	Low
	Exports to China	High (cotton produced in non-forest region)	Low	Low
	Planned direct investments from China	1 (rice)	1*	1

4. Activities of Chinese companies in the forestry sector¹⁴

4.1 Gabon

By one popular account, the involvement of Chinese timber companies in Gabon dates back to the late 1980s, when Gabon's Minister of Foreign Affairs, Jean Ping (now Chairperson of the Commission of the African Union), who is of Chinese and Gabonese descent, invited a relative from China to come to Gabon and develop the lumber industry (Michel and Beuret 2009). Since then, many entrepreneurs from China have arrived and found many lucrative opportunities to access Gabon's rich timber resources. Now, Chinese-owned companies currently directly hold rights to around 25% of Gabon's forests, more than half of which belong to just five companies (Bilogo Bi Ndong and Banioguila 2010). In addition, other companies are backed by Chinese capital, and together these companies ship more than 1 million m³ per year, or 70% of the country's timber exports (Belligoli 2010). Chinese logging companies operate throughout Gabon (Figure 6), with a somewhat denser concentration of Chinese-owned forest concessions in the Ogooue Ivindo Province, which is particularly rich in timber. It is important to note, however, that Chinese investments in the timber sector are by private companies and individuals, rather than State-owned enterprises (SOEs), and are not known to be backed by Chinese development banks (Jansson *et al.* 2009).

As previously mentioned, Gabon's forest law now requires investors to have a provisional convention of management, exploitation and transformation (CPAET) and defines three types of extraction permits: a permit for 'concessions under sustainable management' (CFAD), granted by the Ministry of Water and Forests; an over-the-counter permit (PGG); and a 'forestry associates permit' (PFA), a small-scale permit reserved for Gabonese nationals, which entails fewer administrative and forest management requirements. According the Brainforest scoping report conducted under the CIFOR project, Chinese companies use diverse ways to obtain

logging rights, sometimes in ways that do not seem compatible with the spirit, if not the letter, of the forest law. However, the report also recognises that Chinese companies are not alone in failing to comply with the new law. Nonetheless, the particular strategies described are interesting.

When, following the passage of the 2001 law, the per-area tax increased from 8 francs to 600 francs per hectare, driving many Gabonese PFA holders out of the market, many Chinese companies were able to acquire rights to harvest using PFA permits through legal loopholes allowing them to be transferred, rented, or even sold. In 2007, the Forestry Department's cartographic division produced an analysis of these permits (DGEF 2007), whereby the number of titles held by Chinese companies increased without their having to meet the more stringent management standards of the CFAD permit.

While some Chinese companies have acquired rights to harvest many small-scale forests through multiple PFAs, others have opted to buy larger, established companies. Notable examples were the 2009 purchase of the group Leroy Gabon (Plyrosol) by the Chinese company Honest Timber (DGEF 2007) and, more recently, the purchase of Gabon Export Bois by the Shengyang group. In another case, a Chinese company is renting rights from two French companies, a practice not permitted under the new law, in anticipation of a planned acquisition of those companies.¹⁵

In mid-2010, Gabon had issued 579 permits, of which 73 were under review and inactive; of these, 121 permits for a total of 2.67 million ha (25% of the forest area) were held by Chinese-owned companies (Bilogo Bi Ndong and Banioguila 2010).

In addition to the large companies registered by the national Trade Registry, around 10 more Chinese-owned companies have registered with the private investment promotion agency, APIP, since 2008. In comparing lists of companies between APIP and the

¹⁴ The purpose of this report is not to identify companies active in the three countries, although a few companies are mentioned by name. For lists of companies, see Gabas *et al.* 2010.

¹⁵ Brainforest interview with a representative of a Chinese timber company.

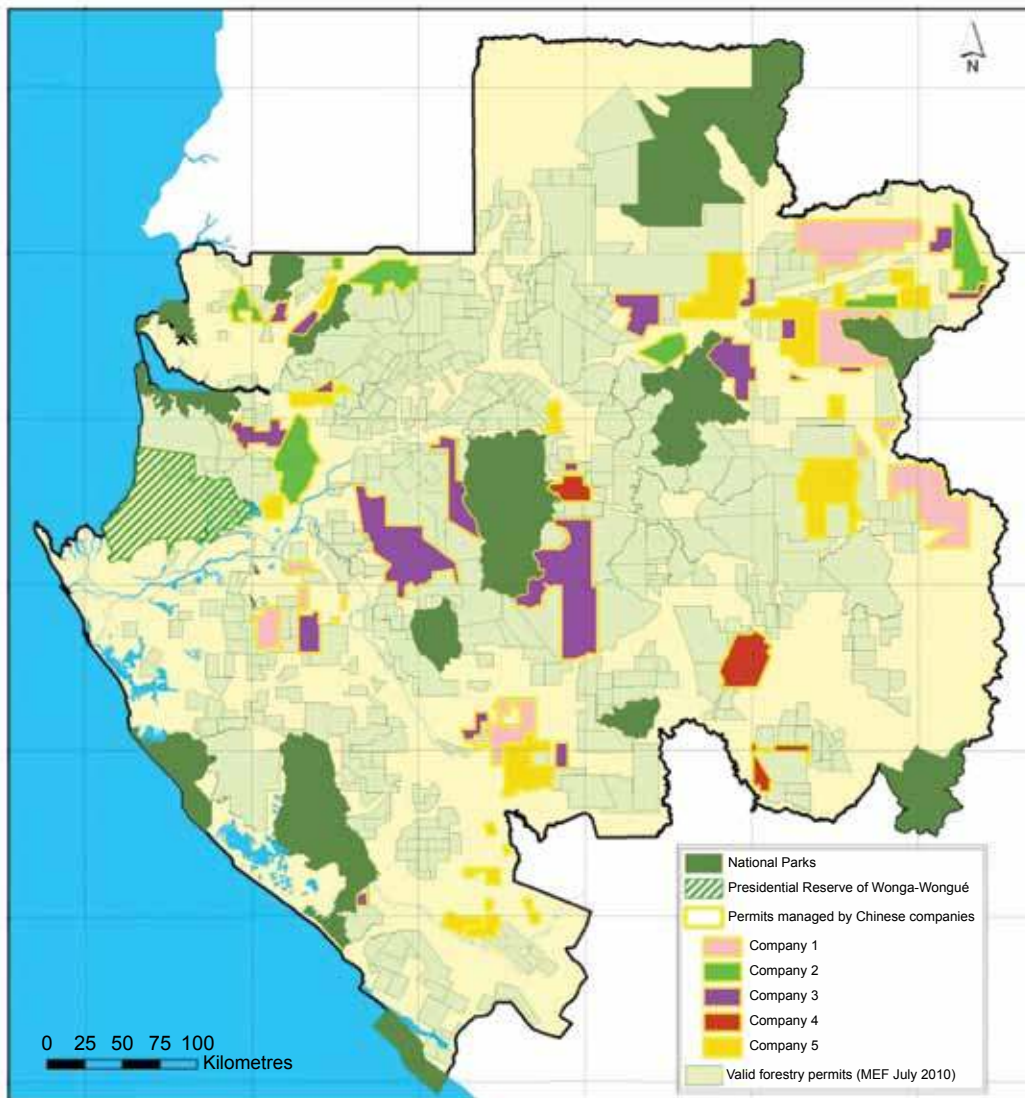


Figure 6. June 2010 map showing the area and distribution of timber concessions belonging to Chinese companies (outlined in yellow)

Source: Projet des petits permis forestiers gabonais (PAPFFG), in Bilogo Bi Ndong and Banioguilu (2010)

Ministry of Water and Forests, Brainforest found that companies registered with the former are not recorded by the latter, which suggests that APIP registration could be used as a strategy by companies to legitimise their status without joining systems that incorporate sustainable forestry instruments.

In addition to the potentially questionable ways in which some Chinese operators have obtained logging rights, the Brainforest report notes more straightforward violations, including failure to pay area taxes, illegal logging of national parks adjacent to concessions, logging of trees below the legal minimum diameter, improper documentation of timber, absence of the required hammer mark used to

verify the legality of felled trees, and incorrect listing of volumes on waybills.¹⁶

Chinese enterprises and social sustainability

Throughout the Congo Basin, part of the process of obtaining a concession and extraction permits

¹⁶ To substantiate many of these allegations, Brainforest relies on a particular report by a researcher Obame Ondo, who also suggests that Chinese operators are intentionally delaying preparation of management plans while hurrying to extract as much timber as possible before the defaulting on their CPAETs. The full citation is Obame Ondo, A. P. pour l'UICN 2010, 'Etude sur le poids et les impacts de l'activité des entreprises à capitaux chinois dans la filière bois gabonaise'.

is to inform local stakeholders and negotiate a corporate social responsibility agreement (*Cahier des charges*, CdC) to promote the rights of workers and local communities and ensure some level of benefit sharing. Gabon's forest law (Law 016/2001, Article 251) requires, as part of the CdC, a financial contribution from concession owners to support community development activities. However, in Gabon the CdC is integrated in the management plan; if the latter is not in effect the CdC is not necessarily implemented, which seems to be the case with a number of Chinese companies.

On the other hand, in the village of Ikobey, one of the subnational scoping sites visited by Brainforest, residents recognise one major Chinese company which makes efforts to conform to social responsibility standards by regularly making its financial contributions to the communities surrounding its concessions. However, an interesting observation by one resident was the tendency of Chinese company staff to 'do everything themselves', including hunting, fishing and gardening, thereby 'impeding the economic development of the village'.

In terms of access to forest resources, according to Brainforest interviews with villagers in Mékob, Ikobey and Mayiboth, located within and near a Chinese concession, the company allows free access to the forest for subsistence activities. On the other hand, the company does not have a management plan, whereby it would be required by law to set aside areas for community usufruct rights.

4.2 Cameroon

Over the past decade, China has become a major market for Cameroonian timber, especially since 2006 when the value of exports jumped from US\$50 million to \$100 million (Figure 3). Only one Chinese logging company is active on the ground: a Hong Kong-headquartered private company operating through numerous subsidiaries. In 1997, this company acquired a French company and its subsidiaries that had been active in Cameroon for more than 20 years. Through these subsidiaries, the Hong Kong company operates nine Forest Management Units (FMUs) in six forest concessions, as well as a number of sawmills. Besides the Hong Kong group, several small, ethnic Chinese-owned furniture companies and exporters, mainly located

in Douala, are very active in the small-scale, informal sector.

With almost 570 000 ha of forest concessions—approximately 10% of the total area of concessions granted in Cameroon—the Hong Kong group ranks first among the timber companies in the country. It is immediately followed by groups whose majority shareholders are from EU countries including France, Italy, and the Netherlands (Table 9).

All the FMUs and main primary processing factories of the Hong Kong group are located in the Eastern Region, the largest forest region of Cameroon. Seven of the nine FMUs are located in the extreme southeast, and of these, two are adjacent to protected areas, namely the Nki Boumba Bek National Park and the Lobéké National Park.

Despite its large holdings, the Hong Kong group's annual production has been irregular over the past several years (Table 10).

In general, the practices of ethnic Chinese investors in the forestry sector have been found to be not discernibly different from their competitors, although

Table 9. Ranking of concession holdings by national origin of concession holders

Rank	Headquarters or majority shareholders	concession holdings (ha)
1	Hong Kong	570 000
2	France	555 103
3	Italy	411 872
4	Netherlands	383 407
5	Cameroon	238 192

Table 10. Annual timber production, Cameroon total and Hong Kong group

	2006	2007	2008	2009
Cameroon total (m ³)	2 289 416	2 086 244	2 166 363	1 875 460
Hong Kong Group total (m ³)	185 959	89 433	157 314	71 717
Share of Hong Kong Group (%)	8.1	4.3	7.3	3.8

Source : TTRECED and CIFOR (2010)

strong demand from the Chinese market does change company practices regardless of their national origin (Cerutti *et al.* 2011). This finding is explained by the fact that the logging industry in Cameroon is controlled by a legal regime that does not permit free riding by a particular company. The Hong Kong group is no exception. While illegal practices may often be attributed to this group, in fact these practices can be seen to arise from factors related to the general national context, through which investors of any national or ethnic background might (and do) profit.

4.3 DR Congo

With the reallocation of concession titles in 2008, no Chinese-owned company received a concession, and therefore all Chinese companies in DRC are operating outside the formal industrial sector. Prior to the reconversion process, one Chinese-owned company held a concession, albeit granted during the moratorium. The concession was not renewed because several conditions were not met, including failure to legally register as a logging company or timber processing company, failure to pay land area taxes, lack of a business plan, and lack of milling facilities. According to an official from the DGF, before reconversion of titles, two to three Chinese companies came to negotiate for concessions, but none were entertained.¹⁷

Now, during the moratorium, two Chinese-owned companies are cutting with artisanal permits granted by the Ministry of Environment's Department of Forestry (DGF).¹⁸

Company A

Area and volume permitted: 50 ha, 350m³
Equateur, Bikoro territoire, Lieu Foret Kalamba, Secteur Elanga

Company B

Area and volume permitted: 50 ha, 350m³
Species: Wenge (*Millettia laurentii*)
Location: Equateur, Territoire Lukolela, Lieu Boleli, Secteur Mpoka

¹⁷ CIFOR interviews with an official of the DRC Fédération des industries de bois, 6 August 2010 and with an official of the Direction générale des forêts, DRC Ministry of Agriculture, 17 August 2010.

¹⁸ CIFOR interview with an official of the Direction générale des forêts, DRC Ministry of Agriculture, 17 August 2010.

Company A is the same company that lost its concession title in the conversion process. Although the company has a presence online and a telephone number in Beijing, it is difficult to locate its office in Kinshasa. An attempt to find the address listed with the Department of Forestry was unsuccessful.

Company A is apparently the sole subsidiary of a holding company based in Hong Kong and both companies are controlled by the same individual. These companies are in turn part of a group with a Beijing address, which advertises itself as having access to forests, rare minerals and scarce resources such as oil and gas in DRC.

According to the Beijing group's website:

[Company A] is a company engaged in industrial, forestry, harvesting, processing and sales and related equipment import and export, and incorporated in July 2001 in Kinshasa, DRC. In DRC, Company A has a 25-year logging concession of 188 672 hectares, which is valid until February 2032 and renewable without conditions for an additional 25 years. This concession is located in Ingende District, Equateur Province, and contains a standing timber volume of 5000 million m³, of which 760 million m³ are valuable species, and has the capacity to produce 20 million m³ of timber per year.¹⁹

Despite Company A losing its concessionary rights before January 2009, the Hong Kong holding company managed a listing on the Euronext Stock Exchange in November 2009, with a disclosed equity capital of HKD 5 million, an opening share price of EUR 0.30 for an initial offering of 25 million out of a total 250 million shares.²⁰ Since then, the company's stock has lost much of its value.

Company B is a small, little-known company, which has recently moved from the address listed with the DGF. While it was possible to track down the Kinshasa address of Company B's office, access was not granted. It is partly because many small Chinese-owned companies maintain such a low profile that one timber company manager said they appear to be 'pirate' companies, whether or not they are engaged in illegal business.²¹

¹⁹ Author's translation.

²⁰ This information is available on the website of the Euronext exchange, accessed 23 February 2011.

²¹ CIFOR interview with a Kinshasa timber company manager, 17 August 2010.

For the most part, timber is exported to China by formal DRC timber companies, including those owned by European companies, and small ethnic Chinese exporters. One such company is one of the few Chinese-owned companies to invest formally through ANAPI, and reportedly intended to spend US\$280 000 to build a sawmill in 2009. That company, according to its web publicity, specialises in sales of wenge, a high value hardwood popular for flooring in China, and afrormosia (*Pericopsis elata*).²² Such companies buy locally from timber companies

and from the Kinshasa river port. There they receive prepaid orders of up to 500 m³, mostly of specialty woods such as wenge, sapelli (*Entandrophragma cylindricum*) and sipo (*Entandrophragma* spp.); the highest current demand is for wenge.²³ It seems Chinese buyers have difficulty dealing with large, industrial companies. According to one company, Chinese buyers approach them but they never manage to close a deal.²⁴ This is explained by the supplier as a lack of the desired species, but it may also be due to pricing problems.

22 The company website was accessed by the main author on 23 February 2011.

23 CIFOR interview with an official of the DRC Fédération des industries de bois, 6 August 2010.

24 CIFOR interview with a Kinshasa timber company manager, 17 August 2010.

5. Chinese activities in the mining sector

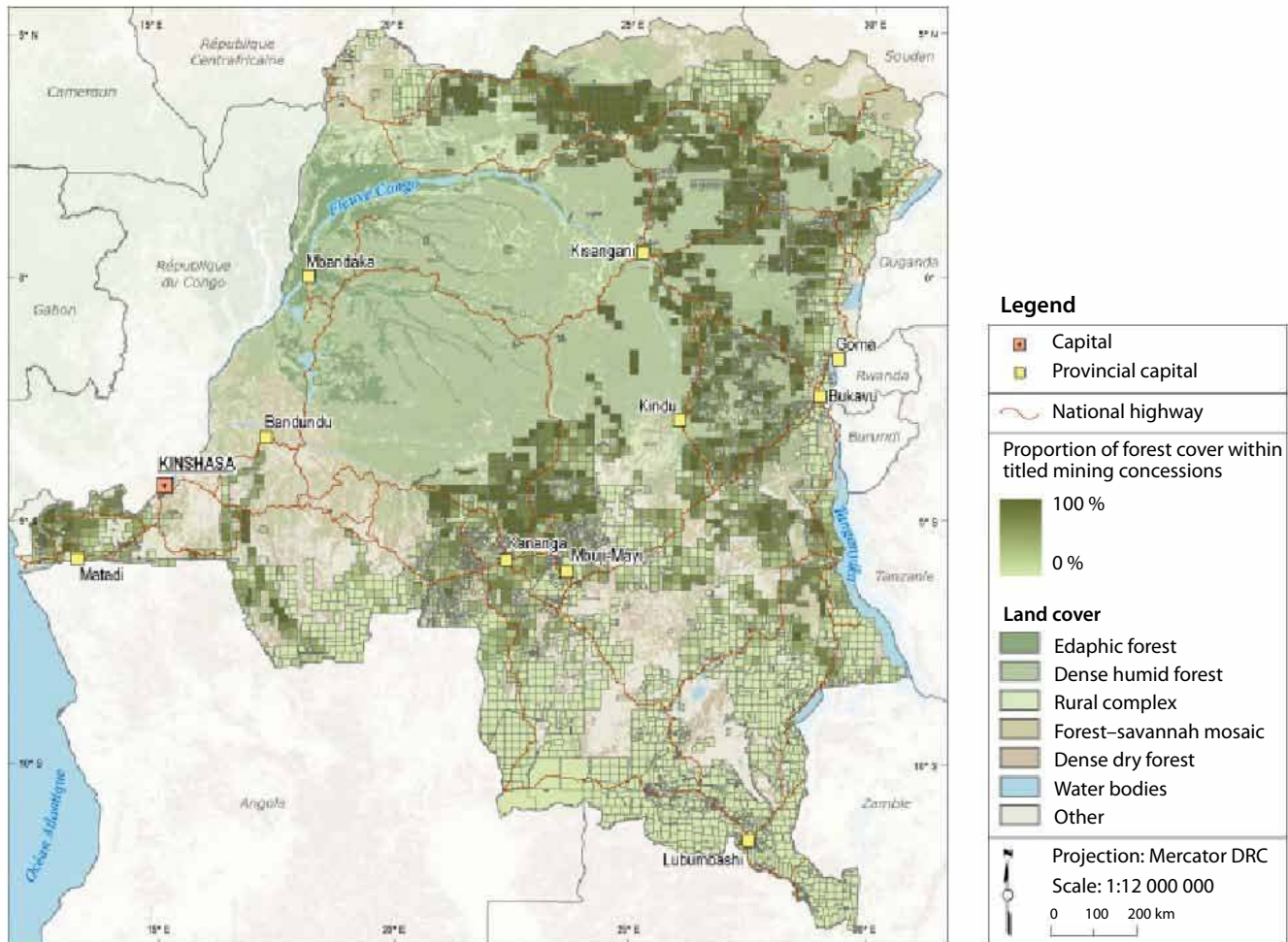


Figure 7. Proportion of forest cover in mining concessions

Source: Translated from Bélanger and Mertens (2011)

5.1 DRC

The DRC mining sector is of interest to forestry in part because of the high degree of overlap between mining concessions and forested areas, including national parks, and because little systematic study has been undertaken of the effects of the national mining industry on forest cover and quality (Figure 7). At least three main types of mining are in DRC: large-scale industrial mining, which entails major infrastructure investments and requires a large permanent work force; small-scale and medium-scale mining, which can be carried out without major initial investments and relies more on casual labour; and artisanal mining, in which individuals and families, often migrating long distances and settling

in camps, work alone, in cooperatives, or on behalf of companies.

The interest of Chinese companies as well as the central government in DRC's mineral resources are obvious, and the modalities of obtaining those resources mirror the diversity of business models prevalent in the region, from large-scale investment in industry such as that embodied in the Sino-Congolese Convention of 2008, to small-scale private investments in small-scale mining joint ventures, to independent comptoirs in mineral-rich areas in several provinces.²⁵ As actors of other nationalities

²⁵ CIFOR interviews with a director of the DRC investment promotion agency (ANAPI), 2 August 2010 and with an agent from an artisanal mining cooperative, Kolwezi, 30 November 2010.

come under scrutiny, such as applied by Global Witness to the UK Government and UK companies, and the controversy surrounding Anvil Mining, a Canadian company that engaged military assistance to suppress a popular uprising resulting in 70 deaths (CBC 2010), Chinese companies are there to take over and modify supply chains. Thus, where coltan and cassiterite from the Kivus was once shipped through Rwanda by UK and US companies (among others), now Chinese companies are beginning to source these rare minerals from Katanga, where they may now be being extracted by displaced artisanal diggers from the Kivus.²⁶

Chinese industrial-scale mining: the Sicomines deal

Increasingly, major mining investments in DRC are governed by 'conventions' rather than contracts, which seems to highlight their national importance and complexity. Such is the case with the American mining company Tenke Fungurume Mining (TFM) investment, as well as the new Sicomines investment, which is sketched out in the Sino-Congolese Convention (SCC) of 2008. Originally, the SCC was drafted as a US\$9 billion investment, with \$3 billion for mining infrastructure and \$6 billion for national infrastructure such as energy and transportation. However, after the International Monetary Fund raised concerns about the impact of the new loans on DRC's external debt, the value of the deal was revised to \$6 billion. The deal includes mining rights for Sicomines in the Gécamines-owned Dikulwe-Mashamba (DIMA) concession near Kolwezi, one of the world's largest confirmed copper reserves, for which \$850 million of the package was used to purchase rights belonging to a company owned by the Belgian tycoon Georges Forrest.²⁷

Reportedly, the DIMA concession contains 10 million tonnes of copper and cobalt, which presumably will be shared according to allocated shares in 68:32 ratio between China and DRC. However, in reality, the terms of the deal are not known, except for the very general terms unofficially leaked in various documents (Global

26 CIFOR Interview with an agent from an artisanal mining cooperative, Kolwezi, 30 November 2010.

27 CIFOR interview with a researcher from the Kinshasa Centre d'études pour l'action sociale (CEPAS), 2 August 2010 and with two Lubumbashi-based experts on mining and human rights, 28 November 2010.

Witness 2011b). What is certain is that, with China entering large-scale mining in DRC, a domain previously dominated by European, Canadian and US multinational companies, the details around implementation of the Sino-Congolese deal will be closely scrutinised.

Regarding Sicomines' social and environmental responsibility, the DIMA concession is located largely within longstanding Gécamines pits, and therefore most of the associated deforestation occurred long ago (Figure 8), and little incremental impact on forests is therefore likely. However, according to one informant, new quarries are to be developed,²⁸ and Sicomines has already begun prospecting activities.²⁹ Whether or not Sicomines will be opening new areas to mining, the law requires the preparation and approval of an environment mitigation and rehabilitation plan, an environmental impact assessment, a project environmental management plan including assessments, and plans for the 'sociological' environment. It is not clear whether the Sicomines deal was preceded by any assessments or plans, and it is unclear who should be responsible for environmental due diligence given the joint venture's ownership structure and the fact that the DIMA concession is a Gécamines holding.³⁰ While environmental impacts may mostly have already occurred, around 12 000 local people are permanently living in DIMA,³¹ and there are many artisanal extractors; therefore, the management of the social impacts of Sicomines should not be overlooked.

Even in this preliminary prospecting phase, according to a local cooperative, Sicomines has destroyed people's fields and disturbed local schools, resulting in complaints. However, it is possible that corruption occurred causing local authorities to ignore these complaints.³² According to a local resident and former Gécamines employee, around

28 CIFOR interview with a Kinshasa-based Chinese diplomat (2), 11 August 2010.

29 CIFOR interview with an agent from an artisanal mining cooperative, Kolwezi (2), 30 November 2010.

30 CIFOR interview with an official from the Ministry of Mines Environmental Department, Kolwezi, 30 November 2010.

31 CIFOR interview with local resident, village near DIMA concession, 1 December 2010.

32 CIFOR interview with an agent from an artisanal mining cooperative, Kolwezi, 30 November 2010.



Figure 8. 2009 satellite image of Sicomines' Dikulwe-Mashamba concession area. Prominent in the lower centre of this image is a workers' town built by Gécamines, where about 12 000 people live permanently.

Source: Google Earth (2011)

200 local residents were at one point displaced and given plastic sheeting, but no compensation.³³ Also, according to local informants, the Sicomines deal has already caused delocalisation of artisanal miners, which is executed by the *Service des mines*.³⁴ When this occurs, diggers receive no compensation, since their presence is illegal, although they may have been allowed to remain for some time 'for social reasons'. In all, several thousands of people will be affected by delocalisation and loss of access to the resource.³⁵

After the 3-year prospecting phase, during which some open pits that have filled with water will be drained, Sicomines will become operational in 2014.

33 CIFOR interview with local resident, village near DIMA concession, 1 December 2010.

34 CIFOR interview with an official from the Ministry of Mines small scale mining oversight agency, SAESSCAM, Kolwezi, 30 November 2010.

35 CIFOR interview with an agent from an artisanal mining cooperative, Kolwezi (1), 30 November 2010.

Sicomines is expected to employ 10 000 workers, but a high percentage is expected to be Chinese. Currently, in this prospecting phase, there are ca.20–30 Chinese employees working in the DIMA concession, as well as Congolese casual laborers, who earn FC 8000 (US\$8.85) per day.³⁶

Chinese small-scale mining and engagement with the artisanal sector

After the liberalisation of the mining sector, the number of small Chinese comptoirs and several extractive companies increased greatly in 2004–2005. By 2007, Chinese mining small and medium enterprises (SMEs) in Katanga Province numbered around 60, and were mostly located in and between

36 CIFOR interviews with a Lubumbashi expert on mining and human rights, 28 November 2010, an agent from an artisanal mining cooperative, Kolwezi (2), 30 November 2010, and a group of artisanal miners near DIMA concession, 1 December 2010.

Lubumbashi, Kolwezi, and Likasi in the Katanga copper belt. Most of these companies are small joint ventures with DRC partners, but the Chinese counterpart is sometimes a large multinational with financial backing from Chinese banks.³⁷

In 2009 Rights and Accountability in Development (RAID) issued a report on working conditions in Chinese companies in Katanga, a topic of continuing investigation by local rights experts. Overall, the RAID report found that in the view of Congolese workers, Chinese companies ranked lowest, along with DRC companies, in terms of general workplace conditions. European and US companies rated highest, but companies from Canada, South Africa and Australia were not rated highly. It appears that Chinese companies may have a lower sense of social and environmental responsibility, and tend to operate without a CdC, and they can be difficult to follow, because of shifting locations and lack of permanent offices.³⁸

In terms of salary, where large Western companies paid US\$300 per month, the RAID reports that Chinese SMEs paid \$150–\$220 per month for full-time labourers. These ranges correspond with our observations in November–December 2010. At a small Chinese joint venture mine near Kisamfu, Katanga, labourers reportedly earn \$200–\$250 per month, but with no days off and no contract.³⁹ This is slightly lower than a neighbouring Israeli-owned mine, where employees earn a monthly \$250–\$300. Chinese skilled employees, by comparison, earn CNY7000–8000 (about \$1200). At Sicomin's concession, casual workers earn about \$220 per month.⁴⁰

The RAID report also documents instances of severe ill-treatment of employees by Chinese managers, and such accounts continue to be mentioned by local human rights experts, though some are the same events already mentioned in the 2009 report.

37 CIFOR interviews with several informants, supported by RAID (2009) Chinese mining operations in Katanga, Democratic Republic of Congo. Rights and Accountability in Development. Available at: www.raid-uk.org.

38 CIFOR interview with an official from the Ministry of Mines small scale mining oversight agency, SAESSCAM, Kolwezi, 30 November 2010.

39 CIFOR interview with a Chinese and Congolese employee of a Chinese mining company near Kawama, Kolwezi, 2 December 2010.

40 CIFOR interview with a group of artisanal miners near DIMA concession, 1 December 2010.



Figure 9. Chinese joint-venture small cobalt mining site near Kasamfu, Katanga Province, DR Congo

Source: Google Earth

- A. Material from the mine is washed on site, using water from a stream that crosses the site. Although there are holding ponds, the runoff is not properly contained, which is potentially causing contamination of the stream.
- B. Although the mine is located in a heavily wooded area, little damage to the forest is visible in the vicinity of the mine itself.
- C. The company uses labour from a local camp of transient miners 3 km from the mine, which is similar to the camp of artisanal miners in nearby Kawama, and presumably entails similar levels of per-capita forest degradation.

The report suggests that such abuses may not be typical, but are probably also underreported, since official pursuit of cases against ordinary workers is unlikely. Cases mentioned in 2010 included a case in which artisanal miners working in open pits were accidentally buried by a Chinese company's machines, sparking protests resulting in the shooting of 10 people. While there are no known cases of Chinese bosses shooting workers themselves, there are reported cases of grave abuses, some of which have led to court cases, including a manager stabbing a worker in the temple with a screwdriver, a manager whipping four employees, a manager urinating on a worker, and dismissal of injured workers without sufficient medical attention or compensation.⁴¹

In terms of forest impacts, Chinese comptoirs that only buy and sell ores are not directly linked to deforestation; however, they may be linked to some deforestation and more significant degradation through their business dealings with the artisanal mining sector. On the other hand, companies that process copper may be linked to deforestation if they use wood charcoal in their processing. Small companies such as the Chinese mine we visited near Kasamfu, between Kolwezi and Likasi in Katanga Province, are responsible for significant albeit probably very localised environmental damages (Figure 9). While these damages may not include direct and obvious deforestation, they are likely to include contamination of local water sources. Where casual labour is employed, worker's camps result in forest degradation.⁴² In the case of the Chinese mine near Kasamfu, the responsibility is shared between the Chinese and DRC owners, as well as with a larger Israeli industrial mining company that holds a nearby concession and employs workers from the same camp.

5.2 Gabon

As of 2010, only two Chinese planned mining investment projects were in Gabon, both still in a negotiation or preparation phase, namely the Comibel iron mining deal and the Huazhou manganese mining deal.

⁴¹ CIFOR interview with a Lubumbashi expert on mining and human rights, 28 November 2010.

⁴² Personal observation and comparison of high-resolution satellite images, described in Putzel and Kabuyaya's detailed scoping report conducted for this project.

The Comibel deal (Belinga deposit)

In 2006, a large iron mining concession located in the Belinga mountains in northeast Gabon was awarded to the Chinese joint-venture Comibel (Compagnie minière Bélinga) over a Brazilian bidder. The concession is for 25 years and when the mine is in operation, it is expected that production will reach 30 000 tons annually. According to the Gabonese Government, the decision to choose Comibel was motivated by two factors: 1) Chinese financing was seen to be more stable, as it was coming from a State bank; and 2) the Comibel package included more infrastructure development, including a shipping port, a railway and a hydroelectric dam.

Apart from these official reasons, many rumours circulated. One allegation was that bribes of several million CFA francs were delivered every week to senior government officials. It was also alleged that former French president Jacques Chirac spoke in favour of the Chinese to prevent the Brazilians from taking the market in Gabon (Jansson *et al.* 2009).

Initially the project, including the infrastructure investments, was worth US\$3 billion in the form of conditional loans from China Eximbank. However, after Comibel finished preliminary technical studies in 2009, the price tag for the mine and infrastructure development had ballooned to \$5.9 billion. This was considered excessive by President Bongo, who in May 2010 made a new proposal during a visit to China⁴³ and negotiations started anew (Jansson *et al.* 2009).

Environmentally, the Gabonese Government's decision to install the hydroelectric dam at Kongou Falls has been criticised by national and international civil society groups; a 2008 study found that the dam would likely have negative environmental impacts as well as causing displacement of some villages and damage to sources of subsistence such as fishing and hunting areas (Lebas 2010). As the deal is renegotiated, the inclusion of a dam and its eventual location are of interest, though it would be important to clarify whether populations vulnerable to displacement or other impacts are indeed located in the immediate vicinity of these falls

⁴³ CIFOR interviews with an official of Gabon's Ministry of Mining in Libreville 31 May 2010 and with a Chinese agent 7 June 2010.

The Huazhou manganese mining deal (CICMH)

The Sino-Gabonese joint venture CICMH (Compagnie Industrielle et Commerciale des Mines Huazhou), whose majority shareholder is the Chinese state company CITIC (China International Trust and Investment Corporation), has been awarded a manganese concession in Ndjolé which is expected to produce 1 million tonnes of manganese annually. CICMH is also currently building a plant in Ndjolé where 50% of the extracted ores will be processed. The remainder will be processed in factories in China.

This project has been about to start since 2008. In accordance with relevant regulations, the CICMH commissioned an environmental impact study by a consultancy firm located in Libreville. The findings of this study are available at the Directorate General for Environment. On 21 October 2010, the Government of Gabon and the Compagnie

Industrielle et Commerciale des Mines Huazhou proceeded to sign the convention to initiate operation of the mine, but the exact date of operations was not announced (L'union 2010).

5.3 Cameroon

In Cameroon, despite a high mineral potential and great geological diversity, the mining sector is underdeveloped. While the national media reports that the mining sector has been growing for a decade, this dynamic has yet to significantly impact the overall economy of the country: excluding oil, the contribution of mining to GDP is only 0.13% (Cameroon Tribune 2010a). Despite the existence of a mining code and favourable legislation, the sector faces numerous constraints, including conflict between the mining and forestry sectors, insufficient financing and technical capacity (MINIMIDT 2008).

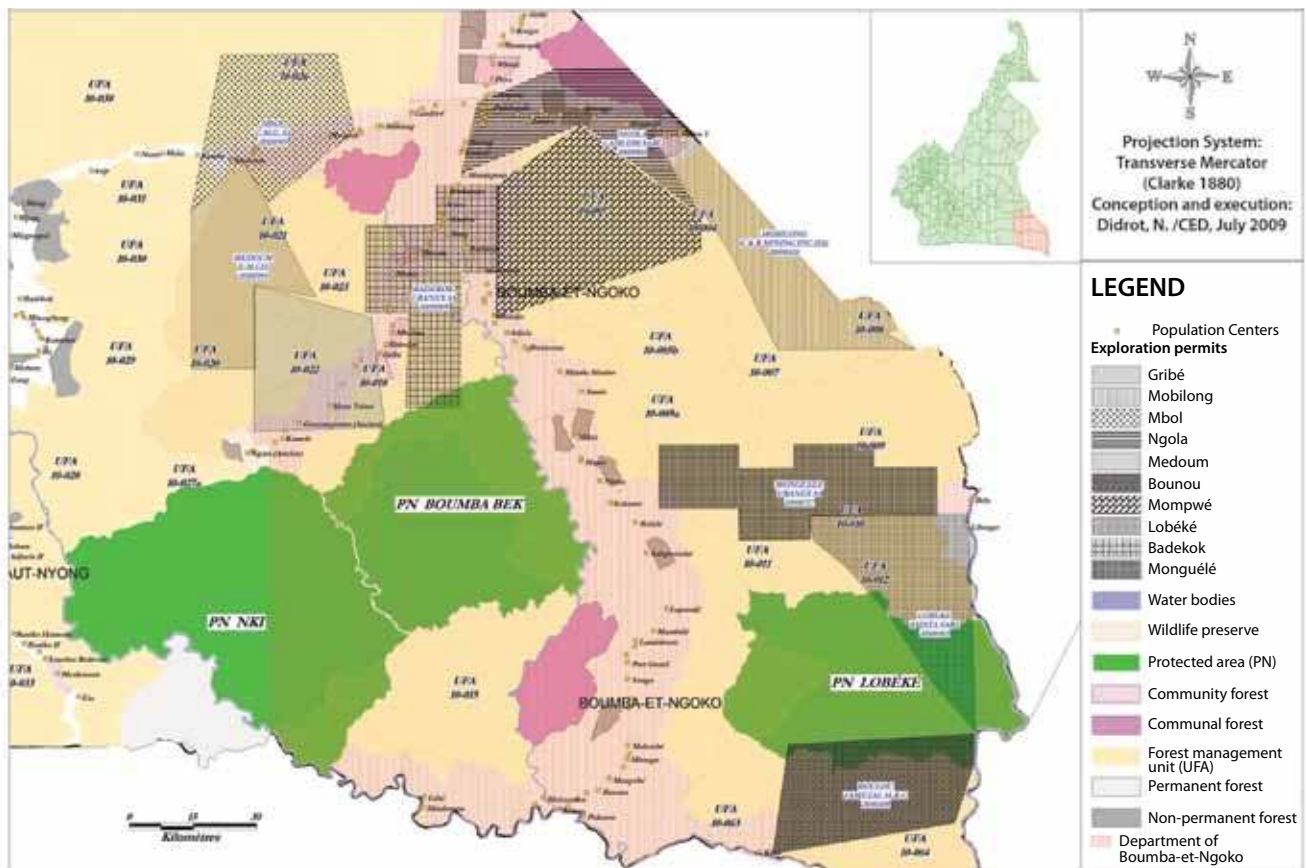


Figure 10. Overlaps between mining exploration permits and forestry concessions and national parks in the area of South East Cameroon. Eight out of 10 mining exploration permits overlap with forest.

Sources: TTRECED and CIFOR (2010)

Since 2003, the number of permits has grown from only one to 91; however, 87 are for exploration only and only four are for exploitation, and overall 40% of permits are inactive (Cameroon Tribune 2010b). Industrial mining is mostly carried out by around 20 Cameroonian and foreign companies with complex financial arrangements. Among these, major investors are an Australian investor in iron mining, Korean gold and diamond miners, British gold miners and US uranium miners. Artisanal mining is mostly focused on mining precious stones and gold, unlike in DRC where artisanal miners dig for raw ores which are then consolidated in large quantities.

Chinese exploration in the South Region

The forested South Region of Cameroon is of particular interest to this study, in part because of the many overlaps between mining concessions and forestry concessions or national parks (Figure 10), and also because of the presence of two Chinese companies with exploration permits for iron and

gold, respectively. In this region, the majority of foreign investments and financial packages are joint ventures. During the period 2006–2009 and on the basis of an analysis of 31 exploration permits targeting the southern Cameroon forest, the total cost of investments in mineral exploration for 10 products amounted to 25 billion CFA francs (US\$50.6 million), of which half is directed towards iron ore mining, and of which half the capital is Australian. The Chinese investment comes in much lower at an estimated 0.9 billion CFA francs (\$1.845 million).

The influence of Chinese investment cannot yet be determined in this exploratory phase which should lead to the certification of reserves, impact and feasibility assessments and negotiation of mining agreement within in the next two years. According to an official from the Ministry of Mines, as measures to prevent damage to the forest, holes caused by cores extracted are required to be filled with concrete, and the area allocated for exploration was initially reduced.⁴⁴

⁴⁴ TTRECED interview with a team from MINIMIDT September 2010.

6. Chinese activities in the agricultural sector

To date, Chinese investments in agriculture in the three countries have been limited to demonstration projects funded as part of China's development assistance, relatively minor private agribusiness investments, generally of a pilot nature, and small farms belonging to individual Chinese expatriates. All three countries import significant volumes of food, and hunger is a continuous problem in DRC, while Cameroon is vulnerable to food price shocks; these resulted in civil unrest in 2008 (Crisis Group 2010). Thus, development is a priority, a fact that Chinese policy makers have long been aware of. Food security has been a key feature of Chinese development assistance since the 1970s. Now, companies interested in agribusiness development have started to enter the region.

6.1 Cameroon

In 2006 the Government of Cameroon signed an MoU with a Chinese multinational which got its start farming Namibian ostriches in Shaanxi Province, China, for development of a concession of 10 000 ha of land for development and production of rice, cassava and maize crops in Haute Sanaga, Cameroon. A second MoU was signed 10 January 2008 in Yaoundé between the authorities of both countries. That agreement covers the construction of a pilot project in the town of Nanga Eboko (Jansson 2009) (Figure 11). The following account is based on a field visit to the area by TTRECED and CIFOR.

Sino-Cameroonian Nanga Eboko project

The MoU signed in 2006 between the State of Cameroon and the Chinese businessman Wang Jianjun, majority owner of a Chinese group, promises a concession of 10 000 ha near Nanga Eboko. The implementation of this MoU began in 2008 in Bifogo, a village located 4 km from the

town of Nanga Eboko on a preliminary 120 ha site, where the company has tested rice varieties on what was once a Taiwanese farm, shut down in 1971 with the normalisation of Sino-Cameroonian relations. The current yield is estimated at 10 tonnes/ha. The current phase of implementation created jobs for about 60 Chinese and 100 nationals. Part of that labour was allocated to the construction of buildings to house an agricultural school. The rice produced by the company is sold in downtown Nanga Eboko.

To date, the concession has not been granted although the procedure for requesting a land grant was initiated. According to the local Ministry of Agriculture, the review of the concession request is at an advanced stage and topographic surveys have been done in two main sites, one of which will be used for maize and cassava and the other for rice.

It appears that the current 120 ha site had already been registered as State land during its use by the Taiwanese farm, and had been taken over by the Ministry of Agriculture. It appears that the State of Cameroon has now given away its private property to the Chinese agribusiness company. However, the question of compensation to local communities remains for the expropriation of the land that they were occupying. Some local residents interviewed believed that they had not received fair compensation, and were unwilling to abandon the graves and sacred grounds of their ancestors.

The local Ministry of Environment claimed to have been refused access to the site to perform an environmental impact study, required by legislation. The various sites identified by the company are located mainly in gallery forests along the Sanaga River. In total, it has been estimated unofficially that investment in the Nanga Eboko project will total nearly US\$60.5 million.

6.2 DR Congo

There has been a certain amount of Chinese investment in agricultural research and development through the years, the more famous of which include the above mentioned riziculture project, a fertiliser factory, and investment in the presidential model farm in N'Djili. Recently, there have been concerns about potential demands from Chinese investors for large-scale agricultural development, especially for biofuel production; however, such deals are often not as large nor as certain as they are rumoured to be (Brautigam 2009). The most famous such deal is the ZTE Agribusiness deal.

ZTE Agribusiness

In 2007, a contract was signed between the Chinese telecommunications giant ZTE and the DRC Ministry of Agriculture to develop oil palm plantations, reportedly in abandoned plantations in Bandundu and Equateur.⁴⁵ Rumours quickly spread that the deal was a US\$1 billion investment for 3 million ha. However, in reality the agreed area is 100 000 ha, which the Ministry of Environment has yet to locate.⁴⁶ One informant from an environmental NGO speculated that ZTE might be interested not just in oil palm, but may also be interested in acquiring some forest land in order to profit from timber sales prior to developing the plantations;⁴⁷ however, this was not confirmed. There is evidence, however, that ZTE Agribusiness is serious about developing agriculture in DRC: it is one of the few Chinese companies to have invested through ANAPI in 2009, with US\$4.4 million for 'farming'. Of this, the majority was likely invested to start a maize and soybean farm on the Plateau de Bateke and to conduct a pilot riziculture project at the presidential farm in N'sele.⁴⁸

The ZTE Plateau de Bateke project near Kinshasa is a 256 ha farm producing maize on relatively degraded land. This year, it produced 2.7 tonnes per ha and sold it to the World Food Program. It also produced 10 tonnes of soy. The farm also produces meat, poultry and eggs, which are sold locally and in Kinshasa. All inputs and equipment are imported from China, including fertiliser, tractors, plows, harvesting machines, husking machines and flour mills.⁴⁹

In our visit to the project, we were told that the land ZTE obtained is a 20-year contract between the company and the customary chief, who is also the chef de quartier, which prevents land conflicts. Some farms had been there before, and the villagers who lost their fields were not compensated; however, they were given new fields and allowed to harvest their crops before moving. The price paid to the chief was US\$500 per ha as well as a package of goods called 'customary rights' (droits coutumiers).⁵⁰

ZTE pays \$2 per day for part time labour and up to \$3.50. A driver might earn up to \$180 per month. Doctors' bills are paid if an employee gets sick or is injured on the job. Compared to other employers, this might be considered low compensation; according to workers on a farm nearby, payment for clearing land, by the hectare, is around \$50. The company engages some 100 workers on a casual basis. Originally there were more workers (up to 150) to initially clear the land prior to the arrival of heavy equipment, but now there are likely only 20 to 25, along with around seven Chinese employees. Child labour is not used. At the beginning of the project about half of 15 drivers hired lost their jobs after two weeks with no pay because they could not produce a driver's licence.⁵¹

45 CIFOR interview with a Kinshasa-based US donor, 27 July 2010, among others.

46 CIFOR interviews with a director of a Kinshasa-based international conservation NGO (1), 30 July 2010 and with a Kinshasa-based Chinese diplomat, 11 August 2010.

47 CIFOR interview with a director of a Kinshasa-based international conservation NGO (1), 30 July 2010.

48 See 'Les chinois reprennent le site de la N'Sele L'Avenir', 3 March 2010. Available at: <http://www.afriqueredaction.com/article-agriculture-les-chinois-reprennent-le-site-de-la-n-sele-47588654-comments.htm>.

49 CIFOR interview with a DRC-based staff member of a Chinese state company, 17 July 2010.

50 CIFOR interviews with six informants, including former employees and people with knowledge of the details of the land deal, near the ZTE farm on the Plateau de Bateke, 17 July 2010.

51 Ibid.

7. Conclusion: Implications for further research

The purpose of this study was to gain a better understanding of the overall trends of Chinese trade and investment in the forestry, mining, and agricultural sectors of the Congo Basin. In order to achieve this, we selected Cameroon, DRC and Gabon as focal countries and conducted a scoping exercise, comprising document review, key informant interviews, and several field visits. The preliminary findings associated with this work are a composite of factual elements for which we were able to find evidentiary support, as well as the views of informants as presented to us in interviews.

The Congo Basin's mining and forestry sectors are both a major source of raw material imports to China, as well as a target for investment by Chinese-owned firms. The configurations of commodity chains between Africa and China are numerous and complex, ranging from Chinese State investment in extraction, processing and trade to the involvement at any stage of production of numerous small actors of various ethnicities and nationalities operating independently. We argue that governance of trade impacts is primarily the responsibility of the producer State, but that the responsibility of Chinese buyers and investors increases with the importance of the resources acquired to the company or industry to which they are directed, and also with the potential for procurement of those materials to damage the environment and societies from which they are extracted.

While investment in the highly strategic mineral sector is strongly backed by the Chinese State, in the timber sector activities are privately capitalised. In general, Chinese State investments in the mining sector take the form of conditional loans with infrastructure development provided by China against the collateral of a quantity of minerals to be extracted and exported by Sino-African joint ventures. Investments in the timber industry, meanwhile, are likely to be focused on the capital required for extraction, processing and transport. In Gabon, however, with the new SEZ in the works, any major investments could be seen as a swap for land,

since investments in wood processing factories in the SEZ come with a timber concession thrown in.

Over the next few years, the Chinese Government has committed to investing billions of dollars to mining in the DRC and Gabon and in both countries these are infrastructure-for-resources swaps. The terms of these deals are unclear, including the quantity of minerals involved. A potentially important question is whether the infrastructures proposed as partial payment for the minerals will be of high utility to the population as a whole, or if they will be especially useful for transporting the target resources out of the country and, as such, a *de facto* subsidy to the cost of the extraction and export.

In Gabon, where Chinese logging concessions alone cover 10% of the forested area, the Government is trying to reform the forestry sector by enforcing a log export ban and requiring investment in processing. Over the next few years, it will be interesting to see if the investment in the processing industry comes, or if China's demand for unprocessed wood shifts to other countries. To some degree this will depend on the development banks' interest in financing the sector's development. In 2009, the China Development Bank made a statement at the XIIIth World Forestry Congress suggesting a new interest in the forestry sector, but gave few details about its plans to invest in any specific country or in a particular stage of the commodity chain.⁵²

In the agricultural sector, China remains a source of financial and technical aid. Although still smaller and less developed than the other sectors, private investments in agribusiness projects are beginning to appear. However, unlike in the other sectors, private investment in agriculture does not appear to be export-oriented at this point, but this may change if Chinese companies get involved in producing cash crops such as palm oil, which is certainly a strong possibility. Selling produce from a Chinese farm in

⁵² [http://forum.cfm2009.org/e-forum/en/?no_cache=1&tx_weccdiscussion\[single\]=259](http://forum.cfm2009.org/e-forum/en/?no_cache=1&tx_weccdiscussion[single]=259) (10 May 2011).

DRC to the World Food Program, which has a policy of local purchasing, is particularly interesting, as it suggests an integration of the company within DRC's national economy. In terms of its effect on local livelihoods, this might not be the most beneficial model, since it will neither bring foreign exchange nor increase Congolese ownership of capital.

In terms of potential for deforestation and forest degradation, our overview leads to the following observations, by sector:

1. The involvement of Chinese companies, particularly in the small-scale and artisanal segments of the mining sector, is potentially a significant source of deforestation and especially forest degradation in areas that attract large numbers of migrant diggers. In terms of large-scale mining in DRC, the location of the major concession (DIMA) is generally in areas that were deforested long ago. In Gabon, however, it is not well known what the effect of development of the Belinga iron mine will be.
2. In the forestry sector, Chinese companies have acquired substantial concessionary holdings in Gabon, some of which border on national parks. Our overview suggests that a need for more in-depth study of the activities of Chinese companies on the ground in Gabon, which vary greatly in their compliance to legislation and other responsibility norms; research would focus on their activities in the forest with their development and implementation of sustainable management plans. In all three countries, further study is needed of the articulations between Chinese companies and the informal timber sector, and a comparative approach is needed to determine the relative effects of the Chinese market and Chinese companies vs. other markets and non-Chinese companies.
3. In the agricultural sector, Chinese investment has not reached a level where a substantial impact is to be expected. However, such investments are planned for the future, and may materialise over the next few years. The investment in Nanga Eboko would result in conversion of about 10 000 ha of mosaic farm and forestland ('gallery forests') to monocultural maize and rice production. In DRC, investment in 100 000 ha of oil palm is planned, the location of which is still unknown.

In terms of economic contribution, Chinese investment and aid is important to the economies of the target countries, but still represents a small proportion of overall foreign investment. Much Chinese aid appears to be politically motivated, since it is targeted to projects identified by the head of State, and it is often also the executive branch that negotiates with China for large deals.

In terms of its social contribution, Chinese trade has a tendency to interface with small-scale local actors, such as artisanal miners and timber sellers, and therefore the benefits are likely to be distributed relatively widely. However, those benefits come with increased costs in the form of potential labour and even human rights abuses associated with vulnerable people being involved in dangerous industries conducted on a small scale with little oversight. In this regard, Chinese trade is no different from other foreign ethnic groups operating within the region. Chinese investment, meanwhile, is increasingly subject to the same kind of social and environmental safeguards as that of Western companies. Increasingly, Chinese investment banks require approved environmental and social assessments as well as mitigation plans. However, in several studies specifically targeting Chinese actors, poor labour practices such as low wages, long hours and bad working conditions abound.

Further research needs

Further research is needed to measure the economic returns on Chinese investments, and to systematically assess their relative costs and benefits compared to other investors, including European, North American, South African and Australian companies, among others. Initial results point to a need to better understand the efficacy of national, provincial and local laws and institutions and customary systems—including land and resource laws, investment promotion agencies and environmental oversight bureaus, and officials and local chiefs with authority to allocate land—in terms of ensuring the highest returns to society on investments while reducing and mitigating environmental and social costs. In addition, the responsibilities of investors in CB countries, including banks, corporations, and, where relevant, foreign governments, need to be better defined in forming and implementing guidelines on responsible finance and project implementation.

In particular, questions that need to be asked in the next phase include:

1. What are the strategies employed by Chinese investors to secure concessions and obtain permissions and approvals from the producer country's national, provincial, and district governments and customary authorities? What are the livelihood impacts of such resource allocations?
2. How do Chinese companies articulate with the informal and small-scale sectors (e.g. timber and mining)? How do companies bypass formal approval processes by using alternative strategies (e.g. temporary extractive permits) to legitimise their status?
In answering this question, it will be important to obtain a comparative perspective, including what is different about Chinese companies' behaviour compared with other groups. Attention should be paid to both the benefits and the costs of engagement with informal groups, in benefit flows to different actors, as well as differential effects on forest and tree cover.

3. Do Chinese companies carry out the required environmental and social impact assessments and planning, and to what degree are they implemented? Are there differences between Chinese and non-Chinese companies and between large and small SOEs/private companies in this regard? What are the requirements of Chinese banking institutions in relation to environmental and social impacts and how are they enforced and verified? Chinese vs. non-Chinese companies' adherence to both local CdCs and international voluntary corporate social responsibility standards will also be assessed.
4. What are the relationships between new Chinese and more longstanding non-Chinese investment partners in CB countries? Within landscapes containing the extractive activities of actors with different backgrounds, is there a differential degree of tree cover loss associated with the different groups? If so, what factors explain those differences?
5. Is there a difference in terms of the species composition of Chinese timber imports? If so, what are the potential ecological ramifications?

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Since 2000 and the implementation of China's 'going abroad' policy, mainland Chinese state-owned and private companies have significantly increased their interests in the resources and investment opportunities of the Congo Basin, bringing new opportunities as well as potential social and environmental costs. This report is a synthesis of some main findings of preliminary scoping studies conducted by CIFOR and partners in Cameroon, Democratic Republic of Congo and Gabon. It focuses on how Chinese trade and investment in the forestry, mining and agricultural sectors might relate to effects on forests and forest-dependent communities in the region. All studies were conducted under the CIFOR project 'Chinese trade and investment in Africa: Assessing and governing trade-offs to national economies, local livelihoods and forest ecosystems', initiated in 2010. The scoping studies yielded useful results, including an increased understanding of the main trends in natural resources trade between the target countries and China, and the major land-based productive sectors targeted by Chinese investors. The studies also considered the role of national agencies tasked with promoting investment and overseeing corporate adherence to environmental and social requirements, and provided a better understanding of the informal processes surrounding investment and acquisition of land and other resources.

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Center for International Forestry Research

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