

Stadium Coltán

Artisanal Mining, Reforms and Social Change in Eastern
Democratic Republic of Congo



Claude Iguma Wakenge

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This research was conducted under the auspices of the Graduate School Wageningen School of Social Sciences

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Democratic Republic of Congo

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Thesis

submitted in fulfilment of the requirements for the degree of doctor
at Wageningen University
by the authority of the Rector Magnificus,
Prof. Dr A.P.J. Mol,
in the presence of the
Thesis Committee appointed by the Academic Board
to be defended in public
on Wednesday 21 June 2017
at 8:30 a.m. in the Aula.

Claude Iguma Wakenge

Stadium Coltan. Artisanal Mining, Reforms and Social Change in Eastern Democratic Republic of Congo, 210 pages.

PhD Thesis, Wageningen University, Wageningen, the Netherlands (2017)

With references, with summary in English, French and Dutch

ISBN: 978-94-6343-456-0

DOI:<http://dx.doi.org/10.18174/416721>

ACKNOWLEDGEMENTS

I began, developed and completed this thesis like many artisanal miners organise their work when they extract minerals in my study area—the Tanganyika province in northern Katanga (in south-eastern Democratic Republic of Congo, DRC). Miners rarely dig for minerals alone. Instead, they always work in a team, organised in groups of two or more people, depending on the workload, tasks to perform, social relations among the team members and their expectations from their work.

Miners' teams are ingeniously organised. From the onset of the digging operations to the sale of the minerals, each team member performs specific tasks, according to his or her capabilities and role in the mining operations. For instance, the team leader—often known as shaft owner—organises financial arrangements with state agencies such as the *Service d'Assistance et d'Encadrement du Small-Scale Mining* (SAESSCAM, Assistance and Training Service for Small-Scale Mining) or with the customary chief (*mwami*) to obtain the mining shaft. The team leader also selects a number of miners (known as *mercenaires*) on the basis of many criteria, including social ties, the *mercenaires*' experience with mining, their commitment and endurance as it relates to completing the work and, most importantly, the trust relations among the team members. The team leader makes financial arrangements with the miners regarding their payment. He also organises and supervises their everyday work and provides various kinds of support, ranging from financial to technical assistance—for instance, when the team leader provides *mercenaires* with the equipment needed for extracting minerals, such as shovels and pickaxes. Importantly, the team leader provides the *mercenaires* with daily food rations and advises them regularly, for instance on how to avoid accidents occurring in the shaft or how to reach promising mineral veins.

The team leader rarely works alone. He cannot reach the promising mineral veins or obtain minerals without the help of mineworkers. Moreover, he must be patient, because digging operations may last several weeks or months. The team leader is also connected to and has good relations with other people. For example, when he lacks money for paying for the *mercenaires*' food rations, he can acquire loans from the local traders (*sponsors* or middlemen known as *négociants*). He can also ask these traders to finance the ongoing digging operations in exchange for in-kind payments of minerals or other forms of payments. To achieve a high level of production or to avoid accidents, the team leader and mineworkers also ask people like the *mwami* or pastors to bless the shaft. For

their part, miners are the daily workers entering the shafts. However, they may be confronted with risks, because these shafts are deep, sometimes extending more than 30 metres underground. In this situation, some miners—or other local experts—are good at building up protective devices to avoid accidents. All of these arrangements, this cooperation and the web of relations have the purpose of obtaining minerals as the final outcome.

This thesis can also be compared to the miners' everyday lives. Despite the risky character of their activities, miners display an uncommon sense of hope. After a long stay in the mines, they hope to return home with something of value in their hands. Thus, miners rarely give up, unless their working conditions become unbearable.

First and foremost, I would like to thank the sponsoring organisation, the WOTRO Science for Global Development programme of the Netherlands Organisation for Scientific Research, which funded our research programme, entitled 'Down to Earth: Governance Dynamics and Social Change in Artisanal and Small-scale Mining in DRC'. My PhD project was part of this broader programme. WOTRO also made possible the collaboration between Wageningen University and the *Institut Supérieur de Développement Rural* (ISDR) in Bukavu (DRC)—where I teach—in implementing the Down to Earth programme.

My sincere and warm thanks go to my team of supervisors: Professor Dorothea Hilhorst, Professor Koen Vlassenroot and Dr Jeroen Cuvelier. Since 2012, these individuals have provided me with supervision much like the miners' team leaders. Dear Professor Hilhorst, more than being only my supervisor, you have also been like a mother to me. You always translated this PhD study from an academic exercise into real social life. When I travelled to the Netherlands for the first time to begin the PhD programme, you helped me with many aspects of my life. Your guidance throughout the entire process has been crucial to my successful completion of this programme. Your attention and insightful advice made it possible for me to become integrated into the academic life at Wageningen University, especially in the Special Chair for Humanitarian Aid and Reconstruction. I learned a lot, starting from the very onset of this study. During our first meeting in Wageningen in early 2012, you advised me that, 'The more you publish, the better you will do into the academic world'. These words have since resonated in my mind as an impetus to work hard and keep this goal in mind. *Dank je wel!*

Professor Vlassenroot, you have always been a source of inspiration for me. I remember our earlier meeting at Coco Lodge in 2010 in Bukavu. I was coordinating the national programme of the Life & Peace Institute, a Swedish NGO established in DRC. You asked me whether I was eager to continue my studies, and I promptly responded ‘Yes’. After my selection as a PhD candidate, I benefited a great deal from your academic experience.

Dr Cuvelier, *asanti mingi sana* (thanks a million) for your patience. You provided good literature recommendations, guided my everyday work, read everything I wrote—whatever form this was in—and gave inspiring advice on everything from my worst drafts to the ready-to-be-published articles. I was fortunate to be supervised by someone like you, who dedicates so much time, attention and care to the work of a student.

I could never forget Professor Dennis Dijkzeul, to whom I am lacking words to express my thanks. What I remember most is the many things we have done together during the last decade. In 2010 and 2014, we published two interesting articles on the perceptions of NGOs and on proselytising peacekeepers in eastern DRC. These articles were a solid foundation for my career as an academic researcher. You made time to read and comment on every piece of my PhD work. Visiting your family in Germany and in the Netherlands were important moments than I remember fondly.

My gratitude goes to all of my colleagues at ISDR. In particular, I think of Professor Bosco Muchukiwa, Professor Murhega Mashanda, Pierre-Célestin Mumbu, John Kadjunga, Kimengele Uledi, Bugeme Zigashane and Emery Mudinga. Many thanks for your collaboration during this study and for your sense of sociability.

My gratitude goes also to my fellow-student colleagues in the Down to Earth programme: Jose Diemel and Marie-Rose Bashwira. We were part of the same miners’ team, full of hope like the miners and fulfilling the different tasks necessary for completing our respective PhD projects. Supporting each other, travelling together and discussing our projects were great sources of inspiration that facilitated this achievement. This also gave me the sense that this exercise was not solitary. I also think of colleagues participating in other programmes in the Special Chair for Humanitarian Aid and Reconstruction: Bodille Arensman, Gloria Nguya, Aembe Bwimana, Teddy Atim, Carlos Morales, Luna Ghimire, Annisa Srikandini, Gayathri Halinne Lokuge and Raimond Duijsens. It was always a great time being together in our office. In the same vein, I would like to thank Gemma van der Haar as a member of the Down to Earth team, Jennifer Barrett as our inspiring editor and Adriaan Ferf who coordinated the research uptake agenda. Regarding your

respective roles, you were the crucial experts who advised the miners on how to avoid accidents.

In 2012, I was fortunate to meet Lucie van Zaalen and Wendy Ömerköylü, the secretaries in the department formerly known as Disaster Studies. Both were of great help for making financial and housing arrangements, booking tickets and so forth. When Wendy became the office manager of the Special Chair for Humanitarian Aid and Reconstruction, she did not change the ways in which she supported me.

My thanks go to my brothers and fellow Congolese people living in the Netherlands and in DRC. In the Netherlands, I think of Leandres Bulambo and Nelly Faso. You helped me with socialising, and you were always ready to welcome me in your homes. In DRC, I received a great deal of encouragement from Charles Mampasu, Deogratias Buuma, Sosthene Maliyaseme, Loochi Muzaliwa, James Chamusoke, Sisto Byabele, Tchales Chalondagwa Mwagalwa and Raoul Kitungano.

In Kahendwa, Kalemie, Kisengo, Mai-Baridi, Nyunzu, Misisi and Uvira, I would like to thank all of the people who welcomed me and spoke with me, especially the miners, *négociants*, civil servants and other community members. In particular, I think of Gilbert Leya Wa Nkulu and my main research assistant, Muhoya N'kungwa Gervais, whose support was very useful during my travels and fieldwork in northern Katanga.

To my family members, I would like to thank all of you for your contributions and support during my studies, before and during this PhD programme. I think of Cosmas Musafiri, Bernard Kizoni, David Ramazani, Adolphine Wakenge, Gaston Mukamba, Simon Kibonge, Berthe Zamukulu, Cadet Mukamba, Maggy Mukamba, Kamundala Baleke, Clément Byakya and my sister-in-law, Mireille Kashindi. *Kwendile Wamulume, buza ububi!*

My sincere gratitude goes to my beautiful wife, Viviane Igilima Mapendo, the mother of my twins, Emmanuel Songa Iguma and Noël Muganza Iguma. My wife was able to manage my long absence at home, and she aptly responded to many questions from my children. When they saw my packed bags in the living room and guessed that I was travelling, they always wondered, 'Where are you going again, and when will you come back?' When I responded that I was conducting a long-term academic research study, my 10-year old first daughter, Davina Iguma, often asked, 'So, what are you looking for?' Let me tell you that what I was looking for—like miners look for minerals—is the present

thesis. Through times of both happiness and challenge, I have never given up on this work. Thus, I hope that this thesis can become an example for all of you, including Bénédiction Wakenge Iguma-Benito and Bernard Kizoni Iguma-Mzee. To Viviane and my kids, this thesis is dedicated to you.

Finally, it is my hope that this thesis may contribute to changing something in the working of the mining sector in DRC. It tries to respond to the questions I often heard from miners, *négociants* and civil servants, who often wondered when they saw me taking notes during interviews, ‘What is the purpose of your writings, and how can it change our lives and this country?’

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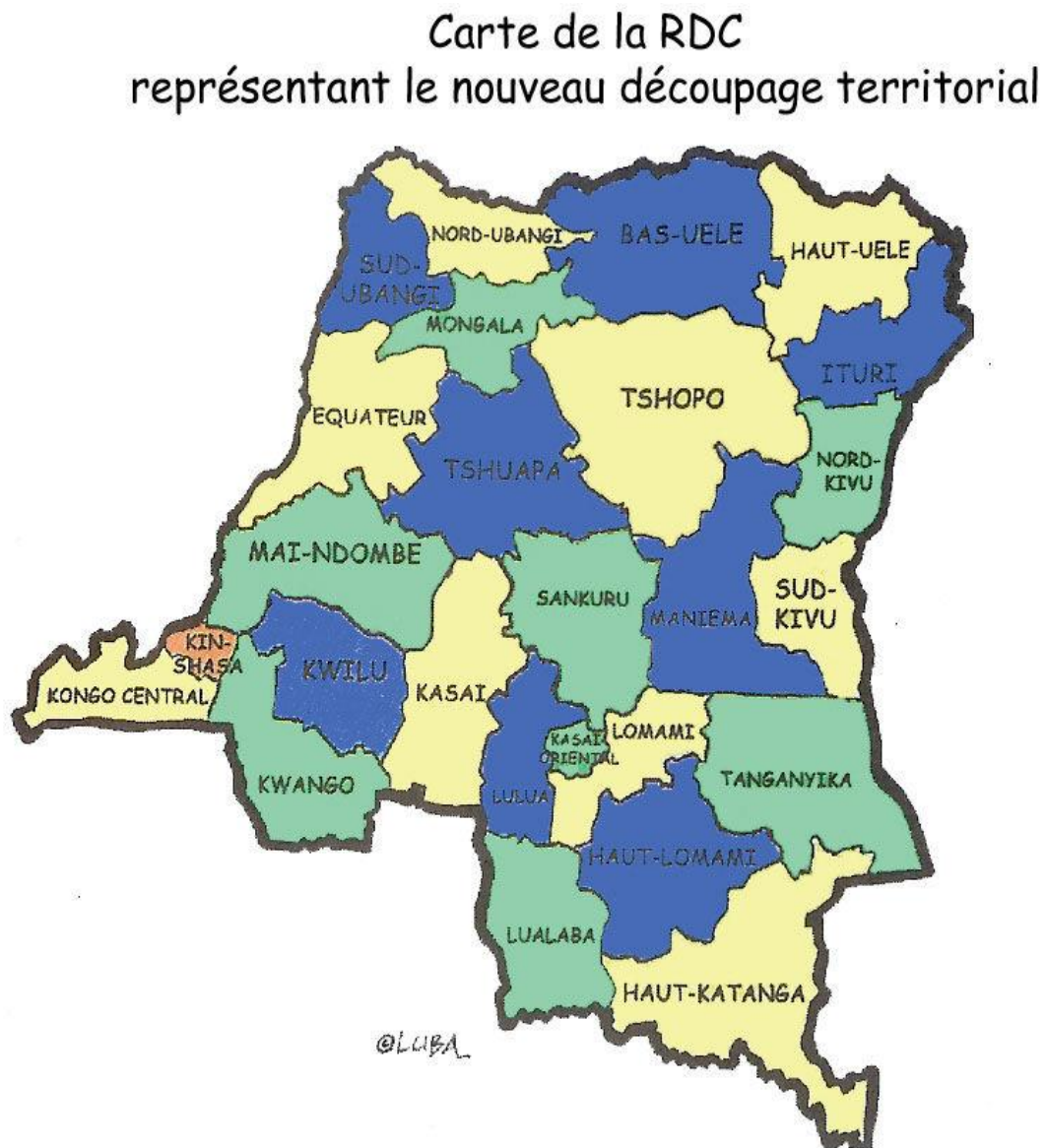
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ACRONYMS AND ABBREVIATIONS

ACK	: Association des Creuseurs de Kisengo
AEZ	: Artisanal Exploitation Zone
ANR	: Agence Nationale des Renseignements
CB	: Comité de Base
CDMC	: Coopérative des Artisans Miniers du Congo
CLS	: Comité Local de Suivi
CMMA	: Coopérative Minière Maendeleo
CSK	: Comité Spéciale du Katanga
DRC	: Democratic Republic of Congo
FARDC	: Forces Armées de la République Démocratique du Congo
ITRI	: International Tin Research Institute
iTSCi	: ITRI Tin Supply Chain Initiative
IPIS	: International Peace Information Service
MMR	: Mining Mineral Resources
NGO	: Non-Governmental Organisation
OECD	: Organisation for Economic Cooperation and Development
PMH	: Police des Mines et Hydraucarbures
SAESSCAM	: Service d'Assistance et d'Encadrement du Small-Scale Mining
SGMC	: Société Géologique et Minière du Congo
SOMIKA	: Société Minière du Katanga
UMHK	: Union Minière du Haut-Katanga
UN	: United Nations
3T	: Tin, Tantalum and Tungsten

Map 1. Administrative map of the Democratic Republic of the Congo



Source: Great Lakes Human Rights programme (2017).

Map 2. The Tanganyika province



Source: Omasombo (2014: 14).

— CHAPTER 1 —

Investigating Coltan Mining and Reforms in Northern Katanga

1.1. Context

The vast mineral wealth of the Democratic Republic of Congo (DRC) has been exploited since the pre-colonial (De Hemptinne, 1926) and colonial eras (Hönke, 2013). This exploitation continued after DRC's independence in 1960 (Rubbers, 2006). Large reserves of copper and cobalt are mined in Katanga, diamonds are mined in the Kasai region, gold and diamonds are mined in the provinces of Orientale and Equateur, and tin (cassiterite), coltan¹, tungsten and gold are mined in the Kivus and the Maniema province (De Failly, 2001; Geenen, 2011). Until the 1980s, these resources were mainly exploited through state-owned industrial mining companies, but, after a period of privatisation and mismanagement, the mining sector became dominated by artisanal and small-scale mining.

In the last 15 years, Congolese minerals have carried a negative reputation. Despite the potentially pivotal role of the mining sector in post-conflict reconstruction (World Bank, 2008) and the fact that artisanal mining sustains the livelihoods of millions of people in DRC (PACT, 2010), minerals are associated with conflict, violence and corruption. Rebel groups, foreign armies and the Congolese army have fought over and seized mining sites, as well as being involved in mineral trafficking.

This situation triggered a number of national and international reform initiatives in the mining sector. These reforms were meant to support the Congolese government to break through the cycles of resource-related conflicts. In 2014, 13 reform initiatives—10 focusing on 3T² and the three on gold—were operational in eastern DRC (Cuvelier et al., 2014: 5). These initiatives aim to make the Congolese artisanal mining sector more transparent and to prevent conflict minerals, that is, minerals thought to feed violence, conflicts and the involvement of armed actors in the mining business (Autesserre, 2012; De Koning, 2012), from entering the international market (Garrett and Lintzer, 2010; Verbruggen et al., 2011). Among these initiatives is the ITRI Tin Supply Chain Initiative

¹ Coltan is an abbreviation of columbite–tantalite commonly used in eastern Democratic Republic of Congo. This is a mixture of two mineral ores, namely niobium and tantalum, used for industrial applications in high-tech industries. For more details, see Nest M. (2011). *Coltan*. Cambridge: Polity Press, pp. 3–30.

² The abbreviation '3T' refers to three types of minerals extracted in DRC: tin (cassiterite), tantalum (coltan) and tungsten (wolframite).

(iTSCi)³, a conflict minerals policy implemented, along with trading houses (also known as buying houses) and mining cooperatives, in most of the coltan mining sites⁴ in the northern part of Katanga (as well as in the North Kivu, South Kivu and Maniema provinces). This thesis focuses especially on what happened around the iTSCi initiative. This is important, because many mineworkers (*creuseurs*) extracting coltan in mining sites where iTSCi was in force were frustrated about the impact of this policy on their everyday lives. One miner in Kahendwa expressed his frustration as follows:

Trading houses and mining cooperatives operating in northern Katanga can be compared to a car without a driver, breaks or headlights, but that drives in the dark, over bumpy roads, without anyone being able to stop it. [Interview in January 2014]

Hearing this metaphoric statement inspired four questions. First, how do *creuseurs* perceive the ongoing mining reforms? Indeed, the metaphor implies that the reforms have raised both a sense of powerlessness and a profound resentment. From the metaphor, one may conclude that the *creuseurs* perceive the actual reforms as vast and powerful machinery functioning in an invisible manner. Such bottom-up reactions have been under-researched in the Congolese coltan mining areas, resulting in a gap in our knowledge that this thesis aimed to fill.

The second question involves whether this car reached its destination, and, if so, where did this happen and what did it look like? In *creuseurs*' everyday experiences with institutions and actors engaged in executing the reforms—especially the trading houses, mining cooperatives and middlemen (*négociants*)—the *car* reached some of its intended destinations: For instance, the reforms profoundly changed previous patterns of accessing and marketing coltan. However, as it turned out, the car also travelled over unintended pathways and was steered by different people in quite different directions.

The third question arising from the metaphor relates to the everyday interactions between trading houses, mining cooperatives and *négociants*. Specifically, how did these interactions affect the *creuseurs* in the environment of 'darkness' suggested by the

³ The International Tin Research Institute is a UK based industry association. It is largely funded by tin producers and smelters and defends the interests of the tin industry. For more information see: www.itri.co.uk.

⁴ In this thesis, the phrases 'mining sites' and 'mining areas' are used interchangeably, as are the terms 'miners', 'mineworkers', 'artisanal miners' and '*creuseurs*'.

metaphor? This ‘darkness’ signals the opposite of increasing transparency in the mineral supply chain, which is the main tenet of the mining reforms. Pursuing answers to the three questions above constantly reminded me a fourth: How can fieldwork be carried out successfully in such an environment, characterised by ‘darkness’? This thesis offers answers to each of these questions.

1.2. Introduction to the thesis

This study investigated initiatives intended to ‘formalise’ artisanal mining in DRC—in other words, they aimed to bring mining under state control. This thesis presents a fine-grained case study of one of these initiatives: the iTSCi. Designed by ITRI in 2009, iTSCi provides a means of determining the origin of 3T and documenting the trading chain for these minerals by ‘tagging and bagging’ the loads of 3T near miners’ shafts (at *postes d’achat*/selling points or buying stations), at counting offices (*comptoirs*) and in mineral depots, before the minerals are exported through the international market. In practice, the tag contains a barcode, which holds information on the origin, transport route and actors involved in the extraction, trade and transport of these minerals.

As the title of this thesis suggests, the study’s main hypothesis was that, while the pre-existing organisation of mining in DRC was shaped by a number of structural problems associated with artisanal mining (e.g. the informal character of the coltan trade, abuses of *creuseurs* by armed actors, and the smuggling of coltan), the ongoing mining reforms have reproduced these problems and also generated new challenges. Thus, the present study is especially concerned with the question of how the new reform initiatives played out in practice. It examines how they blended, overtook, altered or were subsumed into existing institutional arrangements, and how two key groups of actors (miners and *négociants*) fared under the reforms.

Thus, this thesis explores the micro-dynamics of changes after the arrival of the mining reforms. Because the mining reforms are just one aspect of the explanation of local realities, this thesis specifically investigates the changes following iTSCi’s implementation at three coltan mining sites, namely Kahendwa, Kisengo and Mai-Baridi. These sites are located in the territories of Kalemie and Nyunzu (northern Katanga, Tanganyika province), where iTSCi has been in force since April 2011.⁵ In the course of

⁵ Following the 2006 Congolese constitution—article 2—regarding state decentralisation, the former province of Katanga was administratively divided into four provinces in July 2015: Haut-Haut-Katanga, Lomami, Lualaba and Tanganyika.

its implementation, iTSCi collaborates with trading houses and mining cooperatives. These two entities set the prices for the minerals after recruiting a number of *négociants* who are qualified to purchase 3T from the *creuseurs*.

Since the first decade of the 2000s, reforming Congolese artisanal mining has been privileged in both the international and national policy agenda. This has also been the case in many sub-Saharan African countries affected by conflict minerals (Maconachie and Hilson, 2011a; Van Bockstael and Vlassenroot, 2009). In DRC, it is implicitly assumed that mining reforms will fully ‘clean’ artisanal mining of violence, corruption and the involvement of militias, and that this will contribute to sustaining people’s livelihoods (Garrett and Mitchell, 2009: 12; World Bank, 2008: 5).

However, questions have been raised about the efficiency of the reform initiatives that have been implemented in the artisanal mining sector. For instance, it has been argued that these initiatives do little to address the structural problems shaping the sector, such as corruption, the smuggling of minerals, and the involvement of armed groups and other powerful actors in the mining business (Geenen, 2012; Vogel and Radley, 2015). Questions also concern the performance of these initiatives in terms of boosting people’s livelihoods (Cuvelier et al., 2014).

To shed light on these questions, this thesis addresses a series of themes. It first examines the historical contexts of mining and reforms, before moving on to study the process of institutional creation and change through exploring how, after the reforms, newly introduced institutions (mining cooperatives) interacted with pre-established miners’ organisations. Additionally, I analyse how these interactions changed pre-existing patterns of accessing and trading coltan. I also explore the implications of these changes for the livelihoods and economic position of *négociants* and how *creuseurs* experienced this group of mineral brokers throughout the coltan supply chain. Finally, this thesis examines how and why the *creuseurs* and *négociants* complied with or bypassed the reforms, especially the iTSCi politics around ‘tagging and bagging’ mineral loads.

1.3. Scope

This thesis can be seen as a case study that contributes to debates about two interrelated processes: ‘conflict resources’ and mining reform as a driver of socioeconomic recovery in post-conflict area.

1.3.1. Conflicts and natural resources

Natural resources, political stability and conflicts have been the subject of academic debates for a long period of time. Since the end of the 1980s, academics have debated the ‘resource curse’ thesis, which holds that ‘natural resource abundance (or at least the abundance of particular types of natural resources) increases the likelihood that countries will experience negative economic, political and social outcomes’ (Rosser, 2006: 7).

Proponents of the ‘resource curse’ proposition embrace various analytical angles. Scholars such as Sachs and Warner (1995), Auty (2001) and Lamb et al. (2009) have taken an economic line of reasoning, arguing that an abundance of natural resources causes low economic performance (mainly Dutch disease)⁶ and generates poor political effects (e.g. poor governance or corruption), which undermines countries’ development and economic growth.

Another group of scholars (Jensen and Wantchekon, 2004; Ross, 2006) have established linkages between the presence of natural resources and poor democracy records, because of the risk that these resources will feed despots (Jensen and Wantchekon, 2004) or make governments less keen to respect human rights (Ross, 2006). In addition to this view, Nordstrom (2004), for instance, has explained that the malfunctioning of governance structures, corruption and the illicit trade of natural resources encourage criminalised networks.

There also exists a group of scholars who argue that the presence of lootable resources and the ‘greed’ and competition of armed actors for these resources cause civil conflicts and explain why these may be protracted (Berdal and Malone, 2000; Collier and Hoeffler, 1998). This line of reasoning has been influential in the reforms undertaken in the Congolese mining sector. Although the ‘greed hypothesis’ has been criticised for its inconsistent performance in explaining resource-related conflicts (Le Billon, 2001; Ross, 2006; Vlassenroot and Raeymakers, 2004), policymakers and other observers have been convinced, since the end of the 1990s, that the exploitation and trade of Congolese minerals are linked to conflicts (Global Witness, 2009; Human Rights Watch, 2005).

⁶ □ ‘Dutch disease’ is a situation where a high level of resources and export revenues lead to an appreciation of the national currency, and this, in turn, has a negative effect on non-resource economic sectors. See Ross M.L. (1999). The political economy of the resource curse. *World Politics*. 51:297–322.

Nevertheless, some have questioned the association between minerals and conflicts. Following Lahiri-Dutt (2006), who argued in her study of coal mines in Southern Asia that the images of paradox of plenty and resource conflicts suggest deviant and unruly behaviour among the third world poor, I argue that linking resources to conflicts tends to turn a blind eye to other drivers of the Congolese conflicts. These drivers predominantly relate to limited state authority (Raeymaekers et al., 2008), the presence of regional and criminal commercial networks (Utas, 2012) and internal divisions pitting local communities against one another, for instance over land issues and identities (Van Acker, 2005; Vlassenroot and Huggins, 2005; Vlassenroot et al. 2016). Stressing that all conflicts are exclusively linked to resource exploitation also overlooks the structural problems shaping the mining sector noted above, such as the rampant corruption of political elite (Global Witness, 2006). Linking conflicts and resource exploitation does not take into account ‘the myriad other causes causing instability, conflicts and poverty’ (Autesserre, 2012:4) and therefore ‘lacks a nuanced understanding of the complex interactions between resources and conflicts’ (Vlassenroot and Perks, 2010: 65).

This thesis contributes to understanding the issues raised in the larger body of work exploring links between natural resources and conflicts. This existing work informed my choice to focus the present study on iTSCi as a conflict minerals policy, because, given that iTSCi aimed to establish order in the mining sector, it is important to examine how structural problems in the sector have survived or been reshaped along with iTSCi and how these problems continue to obstruct the working of artisanal mining.

1.3.2. Reforms and socio-economic recovery

In war-torn, resource-rich countries recovering from violent conflicts, such as DRC, reforming the mineral sector can be seen as a shift from the view of conflicts being driven by resources, as explained above, to the idea that a well-functioning system of resource governance can contribute to economic growth and improve the well-being of the population (Binns and Maconachie, 2005; Maconachie and Hilson, 2011a; Varisco, 2009). This view aligns with the broad meaning of socioeconomic recovery, which recognises ‘the role of economic actors in causing conflict, but also in building peace and reconstruction (Hilhorst et al., 2017: 2).

The reform initiated in the Congolese mining embraces the above optimistic view. Although pockets of violence still exist, and despite the fact that the relationship between mining and development is often ‘contentious and ambiguous’ (Bebbington et al., 2008, Campbell, 2009), some scholars and observers have argued that a formalised mineral sector can become a ‘basis of development’ (Garrett et al., 2010: 5). In other words, when mining governance is improved, reforms have potential for poverty reduction (Ansoms and Marysse, 2011). They can thus ‘improve productivity and recovery factors of artisanal miners’ (World Bank, 2008: 76) through ensuring better technical assistance, equipment and safety standards.

However, in post-war, resource-rich countries, the governance of artisanal mining is a complex process (Maconachie, 2009). The reforms and socioeconomic recovery itself are shaped by the ‘micro-politics of recovery [...] entailing variations in social outcomes of recovery (Hilhorst et al., 2017: 4). This thesis therefore aims to find out how socioeconomic recovery works, with a special focus on if and how the mining reforms actually improve people’s livelihoods. This work specifically looks at how, why and under which conditions the reforms have been beneficial to people, what the reforms have meant for these people and whether the mining sector has become more or less inclusive following the implementation of the reforms.

In DRC, the mining reforms have been enforced through various measures. In 2002, a new Mining Law was passed. From 2003 to 2007, after several calls for policy responses addressing conflict minerals,⁷ concrete initiatives to make artisanal mining and the mineral trade more transparent gained traction. The first reform initiative that came into being in 2009 was the iTSCi programme, which was then tested in the Kalimbi mine (South Kivu). Around the same period, the Congolese government started to demarcate Artisanal Exploitation Zones (AEZ).⁸ These were mainly granted to mining cooperatives. In July 2010, the United States Congress passed the Dodd–Frank Wall Street Reform and Consumer Protection Act, which includes a section (1502) on conflict minerals requiring

⁷ For instance, significant reports documenting the involvement of armed actors in the exploitation of resources include the United Nations panel of experts’ reports (from 2001 to 2009); the Porter Commission report on Ugandan stakes in the DRC war economy (2002); ‘Curse of gold’ by Human Rights Watch (2005); and ‘Under-mining peace: tin—the explosive trade in cassiterite in eastern DRC’ by Global Witness (2005).

⁸ According to the Congolese Mining Law (Title 4, Ch. 1, Art. 109), the AEZ are areas where ‘the technological and economical factors are not suited for the site to be industrially exploited’. AEZ are therefore reserved exclusively for artisanal mining.

companies listed on the United States stock exchange to provide specific assurances that any products they have manufactured or contracted to manufacture do not contain minerals that directly or indirectly finance or benefit armed groups in DRC or neighbouring countries.⁹ A special measure taken by the government of DRC was a ban¹⁰ on artisanal mining in the Kivus and in Maniema province (Geenen, 2012).

Other measures directly targeted the governance of artisanal mining areas. In 2010–2011, the government encouraged *creuseurs* to register in mining cooperatives or, ideally, to create them. Importantly, while many *creuseurs* were already established within AEZ where they were accustomed to extracting minerals and setting up various local structures (e.g. *comités des creuseurs*—miners’ committees), granting AEZ to mining cooperatives could be seen as a process of privatisation, ‘dispossession and accumulation’ (Bush, 2009) that brought new tensions. Although creating AEZ encouraged the establishment of private entities in artisanal mining areas, it also created conditions that deprive *creuseurs* of mining as their traditional activity.

To this point, many academics, researchers from NGOs and think tanks have examined the working of the mining reforms in DRC. They have taken several analytical angles, ranging from analysing legislative measures to working to gain an understanding of the on-the-ground effectiveness and impact of the initiatives. For instance, Mazalto (2005) explored how international institutions (the World Bank and the International Monetary Fund) have been influential in the design of the Congolese Mining Law, increasing foreign capital in large-scale mining extraction. Furthermore, according to other academics (Cuvelier, 2010; Vogel and Radley, 2015), most of the reform initiatives targeting the mining sector are bureaucratic solutions to problems shaping artisanal mining. Correspondingly, in her study on the effectiveness of the mining ban that hit the mining business in the Kivus and in Maniema province, Geenen (2012) has argued that this measure was too ‘technical and narrow, thereby neglecting broader socio-economic and political issues’ (Geenen, 2012: 329). Some have also argued that the initiatives taken

⁹ Another document addressing these topics is the Organisation for Economic Co-operation and Development’s (OECD) Paris-formulated Voluntary Due Diligence Guidance on Responsible Mineral Sourcing.

¹⁰ The six-month ban (September 2010–March 2011) was decreed by President Kabila to end the militarisation of artisanal mining in these provinces.

are insufficiently in tune with one another (Geenen and Custers, 2010).¹¹ These initiatives are often designed by different entities and are implemented at different levels, in different periods and across different locales to such an extent that they poorly take into account the complexity of the problems associated with artisanal mining. Reflecting this point, Kinniburgh (2014: 64) asserted that ‘the number of supply chain monitoring initiatives alone [...] has become almost as dizzying as the list of armed groups involved in the conflict’.

Moreover, other authors have noted that many reform initiatives have had ambiguous effects on the ground and have done little to improve the governance of artisanal mining or to boost people’s livelihoods (Cuvelier et al., 2014; Mattyssen and Montejano, 2013; Vogel and Radley, 2015). The effects described above cannot all be attributed to a single factor. Rather, the reasons for these observations need to be contextualised and may vary from one mining area to another. For instance, Mattyssen and Montejano, (2013: 33–34) have noted that, in northern Katanga—where this study was undertaken—*creuseurs* have often been dissatisfied with the mineral prices set by the trading houses, predominantly Mining Mineral Resources (MMR).

Following the initiation of the reforms, many observers have formulated a series of recommendations aimed at making the ongoing reforms efficient. A non-exhaustive list of these recommendations includes De Koning (2011) and Global Witness (2009; 2010), who have proposed the demilitarisation of artisanal mining areas. Additionally, Spittaels (2010:59) has argued that making the mineral commodity chain more transparent can contribute to fighting conflict minerals. Other recommendations include enforcing a regulatory framework that encourages ‘operators to move from a-legal to fully legal activities’ (Garrett et al., 2010: 33) and designing policy for the ‘formalisation of the entire production and trade process’ (Geenen, 2012: 324). This process should be ‘context-sensitive [...] starting from the bottom-up and providing incentives to miners and traders (Geenen, 2012: 329). Further recommendations align with fighting corruption (Trefon, 2016) and undertaking a finer analysis of the underlying problems creating violence and instability in eastern DRC (Vlassenroot and Perks, 2010; Vogel and Radley, 2015). Notably, these recommendations all call for contextually informed reforms.

¹¹ Maconachie and Hilson (2011b) observed similar issues regarding a governmental initiative taken in Ghana’s mineral sector, stating that this initiative ‘has been driven primarily from the top down, with minimal interaction with target groups’ (Maconachie and Hilson, 2011b: 608).

In many respects, this thesis is quite focused. Although the authors cited above are mostly concerned with providing analysis, criticism, wake-up calls and recommendations for reforming artisanal mining, many of them do not sufficiently address the questions of how mining reforms work in practice, what these reforms entail for people's livelihoods, which 'glocalized'¹² responses the reforms have elicited and to what extent they have contributed to socioeconomic recovery in artisanal mining areas. These issues deserve attention, especially as many mineral-rich countries in the Third World are witnessing a phenomenon of 'globalized miners' (Ballard and Banks, 2003: 294) because of increased privatisation, dispossession and exclusion (Bush, 2009; Fischer, 2007; Geenen, 2016). Drawing on the case of iTSCi, this study attempts to address these issues. Additionally, as Cuvelier et al. (2014: 349) have noted, 'while existing literature offers some insights into the resilience and adaptation of populations living in conflict-affected areas, less is known about how shifts in power constellations and reconfigurations in hybrid governance frameworks affect livelihoods'. This thesis will try to fill this gap in knowledge.

1.4. The ITRI Tin Supply Chain Initiative

The intention of the present study was not to perform an exhaustive examination of all of the conflict mineral initiatives designed and implemented in eastern DRC. Although this region experienced the implementation of 13 reform initiatives in 2014, iTSCi can be considered a primary case, and a starting and ending point that deserves an in-depth analysis. Focusing on iTSCi alone has the advantage of unravelling the lessons that can be learned from this kind of conflict mineral initiative. Although iTSCi is further explained in Chapter 2, it is important to inform the reader in brief about its development.

In DRC, the first conflict minerals campaign can be traced back to 2001 (Nest, 2011: 112). After the promulgation of the Mining Law in 2002 and following the increased concern expressed by Western governments, advocacy groups and the United Nations about conflict minerals in the Great Lakes Region, especially in the eastern part of

¹² Vlassenroot and Raeymaekers (2004: 75) use this term to explain how commercial entrepreneurs or predatory elites in eastern DRC link and develop their activities between local opportunities and economic opportunities offered by regional markets. For more on this concept, see Roland R. (1995). 'Glocalization: Time-Space and Homogeneity-Heterogeneity'. pp. 25–44 in Featherstone M. and Roberstone R. (eds.) *Global Modernities*. London: SAGE publications.

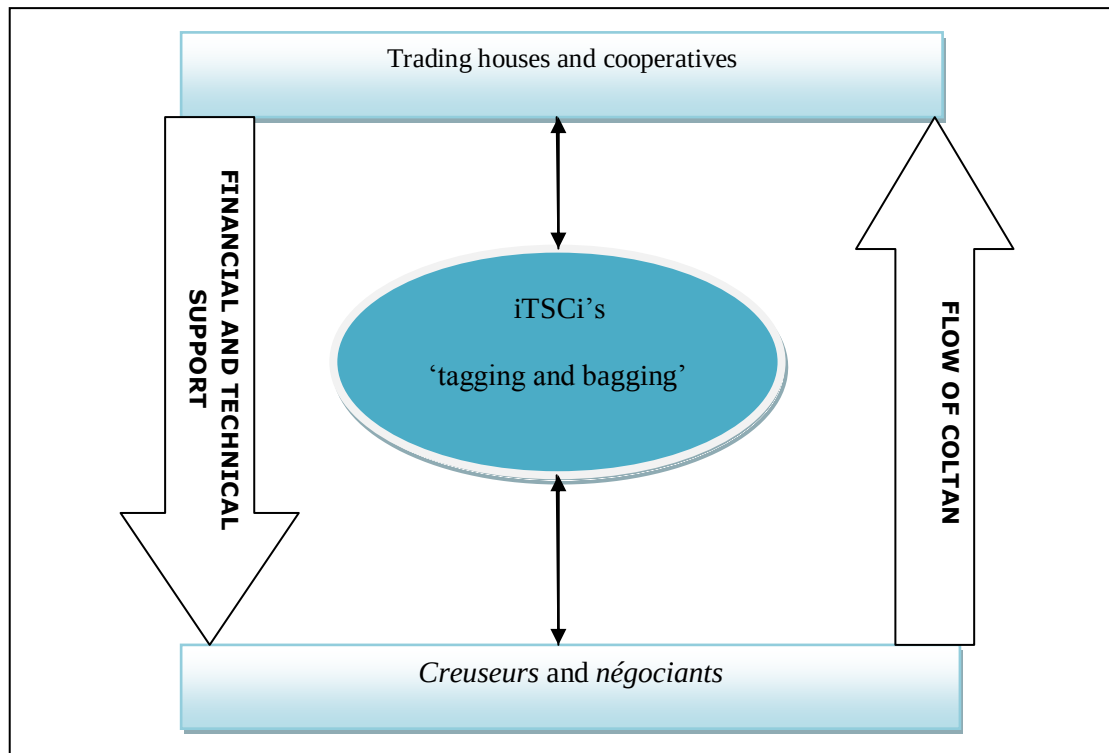
DRC,¹³ campaigns against conflict minerals focused mainly on the ‘iconic’ (Smith, 2011: 31) mineral of coltan. Developed from 2000 to 2007, this campaign resulted in the design of iTSCi in 2008 by the ITRI. After being tested at Kalimbi mine in 2009, iTSCi was expanded to the former Katanga province in 2011.

The iTSCi policy deserves attention for various reasons. First, in eastern DRC, iTSCi has been the most widely implemented conflict minerals policy. In March 2015, iTSCi was implemented in 471 mining areas, 232 of which were located in the former Katanga.¹⁴ The second reason for focusing on iTSCi relates to its approach. In practice, iTSCi mainly consists of ‘tagging and bagging’ mineral loads as a strategy to track the coltan flow.

¹³ iTSCi was largely inspired by the creation of the Kimberley Process at the beginning of the 2000s, which now governs the international diamond trade. On the Kimberley Process, see, for example, Van Bockstael S. and Vlassenroot K. (2009). From conflict to development diamond: the Kimberley process and Africa’s Artisanal Diamond Mines. *Studia Diplomatica*. 62(2):79–96.

¹⁴ iTSCi general overview, 9th OECD meeting, Paris, May 2015.

Figure 1. iTSCi's role in the coltan supply chain



Source: Primary data collected in 2013–2014.

Researching iTSCi offered several advantages for this study. As iTSCi's 'tagging and bagging' system provided a down-to-earth enactment of the iTSCi policy, this study enabled me to observe interactions between institutions and actors engaged in performing the iTSCi policy at the mining sites in a comprehensive manner. Thus, this thesis tries to unravel the micro-dynamics of changes by exploring in detail the emerging realities around iTSCi.

1.5. *Creuseurs* and *négociants* as the unit of analysis

Without downplaying the implications of ongoing mining reforms on other groups of people (e.g. customary chiefs, civil servants, local traders and other 'big men'¹⁵), this thesis focuses on two specific groups: *creuseurs* and *négociants*.

¹⁵ 'Big men' refers to individuals using their power position to command others or to profit from resources' exploitation. See for instance, Utas M. (ed.) (2012). *African conflicts and informal power: big men and networks*. London: Zed Books; Kyamusugulwa P.M. and Hilhorst D. (2015). Power Holders and Social Dynamics of Participatory Development and Reconstruction: Cases from the Democratic Republic of Congo. *World Development*, Vol. 70: 249–259.

Focusing on these groups is important for several reasons. The examined mining reforms are predominantly based on untested assumptions, and the policymakers supporting these reforms have fixed ideas about how artisanal mining and the mineral trade should be organised (Verbruggen et al., 2011) around policy (iTSCi) and institutions (trading houses and cooperatives). These policymakers therefore tend to overlook the meaning and effects of this organisation for *creuseurs* and *négociants*, who are directly dependent upon artisanal mining for their livelihoods. It is often reported that, because of their easier access to information (Geenen, 2011), financial assets and connections, *négociants* are powerful actors in the mineral supply chain, enjoying a brokering position that allows them to dupe the *creuseurs* (Global Witness, 2006; Maconachie and Hilson, 2011b: 296). However, initial interviews in the mining sites cast some doubt about this representation of *négociants* vis-à-vis *creuseurs*. It was therefore decided to study both groups, examining the position of the *négociants* in the wake of the reforms as well as the experiences of *creuseurs* with these reforms.

Focusing on *creuseurs* and *négociants* allowed for a detailed study of how mining reforms have affected these two groups of key actors in coltan production and trade. Prior to the reforms, there were an estimated 10, 000 *creuseurs* in the study area and about 100 *négociants*. These *creuseurs* were men aged 19–45 years, with different backgrounds, including farmers, deserters and demobilised soldiers. As for *négociants*, some were independent traders and others purchased coltan for urban-based trading houses (*comptoirs*) based in Kalemie (northern Katanga), Uvira and Bukavu (South Kivu), and Goma (North Kivu). At that time, mining cooperatives and trading houses were not yet established in the mining areas. This thesis studies the changes that the ongoing mining reforms have brought about from the perspective of the *creuseurs* and *négociants*.

1.6. Research objectives and questions

This study pursues two objectives. First, it aims to provide insights into how iTSCi is concretely implemented in 3T mining areas and how it has altered the organisation of mining and the trade of coltan. Second, this thesis aims to examine how this organisation affected *creuseurs* and *négociants* regarding their livelihoods and mineral access, and how these two groups responded to iTSCi. Both objectives will contribute to formulating recommendations that are policy relevant for making the mining reforms more efficient. As Hilson has noted, ‘to date, the impact of efforts to support ASM [artisanal and small-

scale mining] in sub-Saharan Africa [...] in particular has been negligible, in large part because of poor understanding of the sector's dynamics' (Hilson, 2012: 184).

The main question that this thesis seeks to answer is as follows:

How have initiatives to reform artisanal mining (iTSCi in particular) affected institutional change, how does this relate to changes in patterns of coltan production and trade, how were *creuseurs* and *négociants* affected by these changes, and how did these groups respond in the coltan mining areas of Kahendwa, Kisengo and Mai Baridi (northern Katanga) from 2009 to 2014?

This question was divided into the following sub-questions:

1. What are the contexts of coltan mining and reforms in northern Katanga?
2. How, following the implementation of iTSCi, have mining cooperatives as newly introduced institutions interacted with pre-existing miners' organisations?
3. How have these interactions altered patterns of property rights and access to coltan?
4. What implications have the changes in property rights and access to coltan had for the livelihoods of *négociants*?
5. How have *creuseurs* and *négociants* responded to iTSCi?

1.7. Theoretical framework

1.7.1. Actor-orientation

This thesis uses an actor-oriented approach. Building on critiques of prevailing structuralist development ideologies and practices, this approach starts from the premise that individual actors have the agency, knowledge and experience necessary to reflect upon their situation and to respond to changes in their surrounding contexts (Biggs and Matsuert, 1999; De Bruijn et al., 2007; Giddens, 1984; Long, 2001). Importantly, actor-orientation is particularly useful because it goes to the heart of debates among social scientists about examining the role of institutions in making people vs. the role of people in making institutions. Thus, actor-orientation takes both directions in the sense that 'individuals shape institutions and are shaped by them' (Cleaver, 2012: 112).

Incorporating the concepts of policy, institution and social change is consistent with the actor-oriented approach. Policy as ‘project design, model and approach’ (Mosse, 2004: 640) is usually put into practice through institutions. Through an actor-oriented perspective, Long and Van Der Ploeg (1989: 226), for instance, view policy interventions (such as iTSCi) and the institution through which these operate as a ‘multiple reality’, where social actors are confronted with diverging interests. These actors bring their interpretations and strategies to the arena of ‘policy speak’, institutions and practices (Hilhorst, 2013: 8), and to social change (Christoplos and Harvey, 2017).

More importantly, policy acquires meaning and interpretation as a result of interactions between different stakeholders, ‘who try to make policy fit their own perspectives of the problem and goals’ (Hilhorst, 2013: 8). In the processes of social change—such as those occurring in mining areas—actors socially negotiate policy outcomes while institutions and rules are produced as a result of people’s interactions. This means that policy processes and the institutions they bring about cannot be considered fixed or planned (Colebatch, 2009). Rather, they are best understood as emergent and negotiated (Hilhorst et al., 2010) or as being shaped through the blending of the old and the new, of customs and inventions, a process that Cleaver (2012: 43–46) aptly describes as ‘institutional bricolage’. However, these processes can also be shaped by ‘elite capture’, where powerful actors (also referred to as ‘big men’) negotiate policy outcomes for individual rather than community interests (Platteau, 2004). However, the ‘big men’ can also contribute to community interests (Kyamusugulwa and Hilhorst, 2015).

Through the use of an actor-orientation, this thesis demonstrates that, rather than being fixed or planned, the ongoing reforms and related institutions can be viewed as an arena that is shaped through the interactions of actors (Hilhorst and Jansen, 2010). In the case of the iTSCi policy, this thesis brings out several examples of how iTSCi was shaped by clashes and resistance between the *creuseurs*, trading houses and cooperatives. Such resistance confirms Long’s (2004: 15) decade-old argument that ‘it’s here [in the field of intervention] that we see most clearly the emergence of various kinds of negotiated orders, accommodations, oppositions, separations and contradictions’.

In post-war reconstruction processes such as those continuing in northern Katanga, institutions defined by North (1990: 3) as ‘the rules of the game in a society, or more formally humanly devised constraints that shape human interactions’ are in constant flux. In such settings, the meanings ascribed to institutions are usually negotiated and

manipulated by social actors (Christoplos and Hilhorst, 2009; Hilhorst et al., 2010). This will be shown regarding, for instance, the working of mining cooperatives (Chapter 3).

In the present study, the nexus of policy, institutions and social change is important in two ways. First, it helps in explaining how iTSCi as a planned policy intervention has encouraged the introduction of new institutions in the mining communities, how these have been shaped by the influence of the ‘elite’ and what have been the outcomes of this process (Chapter 3). The thesis pays less attention to the distinction between informal and formal institutions, concentrating instead on their merging and on the results of this process.

Second, using the concepts of policy, institutions and social change helps in explaining how iTSCi, along with trading houses and cooperatives, put into force new ‘rules of the game’ around iTSCi’s ‘tagging and bagging’ (Figure1), what organisational arrangements have emerged from these rules and how they have been negotiated and contested. I view the ongoing mining reforms and the changes they bring about as social processes shaped by the (diverging) interests of actors, as well as their interactions and reactions to policy. As this thesis is concerned mainly with the changes that followed the implementation of iTSCi, an actor-orientation allows for an understanding of societal change. According to De Sardan (2005: 38), societal change can take a variety of forms and result from multiple sources, including outside interventions initiated by the state, activists or private operators trying to transform the behaviour and everyday practices of actors.

1.7.2. The sociology of economic life

This thesis also draws upon the sociology of economic life school of thought. The varying nature of changes that followed the introduction of iTSCi—and the responses of *creuseurs* and *négociants* to these—are interesting points that need to be analysed through a sociological lens. Therefore, I moved beyond official regulations and the formal market exchange promoted by iTSCi by exploring how the reforms and the reactions to them are socially constructed. For instance, to examine the livelihoods of *négociants* after the reforms (Chapter 5) or what strategies this group developed when smuggling minerals (Chapter 6), it would be very superficial to look only at the *négociants*’ everyday activities or at how many individual smugglers were arrested. Livelihood activities and mineral smuggling occur in the context of complex processes and may involve many actors inside and outside the mining areas. Studying such

complexities best tallies with ideas such as ‘social networks’, which are prominent in many studies inspired by the sociology of economic life (Beckert, 2007; Granovetter, 1985; Hilhorst et al., 2017; Twijnstra, 2014).

The sociology of economic life approach emerged with Karl Polanyi in the 1950s (Beckert, 2007) in response to the classic economics approach of perceiving people and institutions as purely rational and profit-maximising. The sociology of economic life draws on the main idea that economic action is a form of social action that is socially ‘embedded’, meaning that it is linked to or dependent on actions and institutions that are non-economic in content, goals and processes (Granovetter, 2005; Hilhorst et al., 2017). The mining reforms are concerned with making transparent the formal economic transactions between entities (trading houses and cooperatives) and actors (*creuseurs* and *négociants*), and the social networks in which these actors are embedded are often disregarded. This is the case even though these networks strongly impact the performance of the reforms. In this thesis, the sociology of economic life school of thought is incorporated through the concepts of social networks and livelihoods. The next two sections explore the academic debates around these concepts and explain their relevance for this study.

Social networks

In sub-Saharan Africa, social networks have been used extensively to study informal economic activities and their role in the processes of societal change. For instance, in their study on transnational trade between Central Africa and Europe, MacGaffey and Bazenguissa-Ganga (2000: 13) asserted that long-term and recurrent relations of economic exchanges between buyers and sellers are a key feature of a network, beyond market transactions. Researching the shoe and garment trade networks in Aba, Nigeria, Meagher (2010: 10) used social networks to ‘refer to informal organizational arrangements based on social ties’, a definition adopted by this thesis.

There is an abundant literature about social networks. This body of work points to various types of networks that are set up in various contexts and for diverse ends. Although not all of these types of networks will be used in this thesis, it is useful to introduce some of the proposed network types to provide an idea of the concept’s range. In their work on clandestine economic activities in Central Africa, Nordstrom (2004) and Taylor (2003), for instance, discussed ‘shadow networks’ that developed in war-torn African countries

around a wide range of non-state actors and transactions. Using the concept of ‘war networks’, Duffield (2001) explained existing interconnections between different interest groups in war activities. ‘Elite networks’ (Raeymaekers, 2010) and ‘networks of power’ (Roitman, 2001) refer, to varying degrees and in varying contexts, to groups with political influence or large economic interests, such as actors gathered around Utas’ (2012) ‘networks of conflict economies’, a network type that is used extensively in Chapter 6 of this thesis.

Many of the accounts of networks described above seem to be consistent with a political economy approach. This revolves around the analysis of the ‘interaction of political and economic processes in a society, the distribution of power and wealth between different groups and individuals and the processes that create, sustain and transform these relations over time’ (Collison, 2003: 3). This thesis, however, opts for the sociology of economic life perspective, which I find to be theoretically more satisfying because the social is broader and more encompassing than the political in terms of understanding the realities of mining communities.

There are continued debates about the role of social networks in the economy. Some have argued that social networks serve to trace informal organisation processes. Meagher (2010: 23) emphasises the importance of institutions in shaping social networks and the need to analyse these institutions’ power and relations to the state to understand how networks are constructed. In contrast, the concept of social networks also helps to explain how peoples’ agency allows individuals or marginalised groups to circumvent institutional constraints and structures of exclusion or marginalisation within the wider society (Vlassenroot and Raeymaekers, 2004). This thesis embraces this line of reasoning. However, other scholars believe that social networks are detrimental to economic development, arguing that these networks foster social liabilities and encourage predatory or criminal activities (Bayart, 2000; Chabal and Dalloz, 1999; Collier, 2000; Le Billon, 2001; Reno, 2004).

The most important aspect highlighted in the literature above is the fact that the concept of social networks transcends the notion of ‘formal’ market exchange, pointing to patterns of reciprocal relations that may or may not be clandestine. For this thesis, social networks form an important theoretical cornerstone that makes it possible to understand how mineworkers and *négociants* formed their ‘networks of exclusion’. These actors

relied on their social ties to make ends meet and to bypass and react to iTSCi, while dealing with institutional constraints and process of exclusion from mining activities and the mineral trade.

Livelihoods

Developed since the 1990s (Chambers and Conway, 1992) as a response to the conventional approach to development, which mainly explained poverty in terms of low income, the livelihoods framework has generally been used as a holistic, people-centred development approach to poverty eradication. It is based on the assumption that a livelihood is broader than monetary income (De Haan, 2000). Ellis (2000), for instance, asserts that one should analyse issues of livelihoods in terms of assets (natural, human, financial, social and physical), activities and people's access to them, through 'social relationships and institutions that mediate people's access to different assets and income streams' (Ellis, 2000: 291).

Despite its popularity in development interventions, the livelihoods framework has been criticised in many ways. Associating assets with 'types of capital' tends to overlook other aspects affecting people's vulnerability and the strategies they develop to build up a livelihood portfolio. As an illustration of this, Hinton (2011: 49) contends that 'the escape route out of poverty is far more complex and depends on many factors such as policies, institutional practices, or the ways in which the market is organized'. These factors influence not only access to assets but also the broader social context. Bebbington (1999) and Krantz (2001) contend that livelihoods are shaped by non-economic elements, such as cultural aspects or 'informal structures of social dominance and power within the communities themselves' (Krantz, 2001: 4). These broad insights from the literature indicate that livelihoods are more than material but also tie in social relations, identity and processes of meaning.

Debates about understanding people's livelihoods in artisanal mining have evolved along three lines of reasoning. These debates do not often pay attention to explaining how people cope to sustain their livelihoods or which mechanisms they use in doing so. In the 1970s and 1980s, policymakers and donors were convinced that people chose to engage in artisanal mining to 'get rich quick', in other words, to earn fast money (Banchirigah, 2006). However, in the 1990s, several authors pointed out that the artisanal mining sector was actually 'poverty-driven'. Stimulated by the collapse of the agriculture sector, the expansion of mining and the engagement of people in it resulted predominantly from the

negative effects of economic reforms initiated by multilateral institutions (the World Bank and the International Monetary Fund) in most developing countries (Banchirigah, 2006). Further, it is increasingly argued—and will also be shown in this thesis—that many people involved in artisanal mining are stuck in a vicious cycle of indebtedness and ‘poverty traps’ (Perks, 2011).

For this thesis, the concept of livelihoods is used against the backdrop of social networks. Instead of using a livelihood model, which has been criticised on different grounds including the lack of attention for supra-local economic relations, this thesis uses the livelihoods concept to show the role of networks in building people’s living. As has also been found in other studies, this thesis demonstrates that, when social networks are based on kinship relationships or other forms of informal social relations, they may become what Chimhowu (2002: 570) calls ‘livelihood cells’ or localised networks of sharing and support. These networks therefore act as informal systems of mutual risk mitigation allowing people to borrow and exchange assets, as in reciprocal labour pools, or to access resources and markets (Lourenco-Lindell, 2002; Vlassenroot and Raeymaekers, 2004).

1.7.3. Conceptualising ‘enclaves of regulations’

To analyse the changes iTSCi has introduced into artisanal mining areas, this thesis coins the concept of ‘enclaves of regulations’. This concept corresponds to the process undertaken by the Congolese government in demarcating the AEZ. The establishment of AEZ can be interpreted as the creation of mining ‘enclaves’ in a geographical and economic sense of closed and isolated territories where rules of reforms regarding mining and the mineral trade are to be enforced (Mining Law, Title 4, Ch. 1, Art. 109). The concept of ‘enclaves of regulations’ aligns with the concepts of ‘mining enclaves’ (Bush, 2009: 58), ‘extraction enclaves’ developed by Hönke (2013: 13) and ‘arena’ of interventions developed by Hilhorst and Jansen (2010). For this reason, I chose to use the metaphorical notion of ‘enclaves of regulations’, which also draws on the theoretical notions of ‘semi-autonomous social field’ coined by the legal anthropologist Moore (1973).

Bush (2009: 58) used the phrase ‘mining enclaves’ to describe mining concessions prohibited to ‘unlicensed miners’ in Ghana, but the research also found that miners ‘resisted’ this policy (Bush, 2009: 61). In her study on mining and security governance in South Africa and DRC, Hönke (2013) referred to ‘extraction enclaves’ to explain how

industrial mining companies established order to secure mining extraction, but she also noted that ‘illegal miners and thieves pose major security problems’ (Hönke, 2013: 86). These enclaves appear to be closed and insulated from the environment, but in reality such closure is not complete. They thus have the character of a ‘semi-autonomous social field’, referring to as a small field that an anthropologist can observe in its semi-autonomous character (Moore, 1973: 720). This field generates rules, customs and symbols internally. However, Moore (1973) argued that rules and decisions or ‘other forces’ emanating from the large social matrix or persons inside the field make it vulnerable to invasion (Moore, 1973: 720).

The key to the concepts of semi-autonomous fields, the arena of interventions and my original idea of ‘enclaves of regulations’ is their potential to produce rules and institutions, and the diversity of actors involved, which renders these rules and institutions non-definite and changing. Further, these enclaves experience constant change, as actors involved in mineral exploitation seek to advance their strategic interests.

This thesis is therefore concerned with demonstrating that artisanal mining areas where reforms are in force, which resemble ‘enclaves of regulations’, are arenas that are not fully local or ‘locked down’. While ‘enclaves of regulations’ are geographically bounded areas—mining sites—where regulations are introduced and there is an elaborate institutional framework aimed to impose and monitor these regulations, these areas cannot be viewed as ‘small islands of transparency’ (Spittaels, 2010: 59). For this reason, beyond the mining areas, attention will be paid to analysing ‘other forces’ surrounding these areas; how these forces are connected to urban political and economic elites, mineral smugglers and local actors; and how local actors allow these ‘forces’ to bypass the reforms taking place around the iTSCi policy (Chapters 3, 4 and 6).

1.8. The study area

This section introduces the study area, briefly describing its geographical location and population, as well as explaining how the cases were selected.

1.8.1. Geographical location and population

This study was undertaken in Kalemie and Nyunzu (see Maps 1 and 2), two territories of the Tanganyika province (formerly the Tanganyika district) in the northern part of what was then the Katanga province. The Tanganyika province comprises six territories—Kabalo, Kalemie, Kongolo, Manono, Moba and Nyunzu—and has a surface of 134,940 km². It has approximately 2.5 million inhabitants (Omasombo et al., 2014: 401), the majority of whom are of the Baluba, Bakalanga and Hemba ethnic groups. In DRC, a territory is the medium administrative structure below the province and chieftaincies (*chefferies*). In 2011, Kalemie, with an area of 30,000 km², counted 400,000 inhabitants, while Nyunzu had 300,000 inhabitants spread over 17,275 km². Kalemie is both the capital city of Tanganyika province and the territorial city of Kalemie territory. It is located on the shore of Tanganyika Lake. The territorial capital city of Nyunzu is located 194 km west of Kalemie.

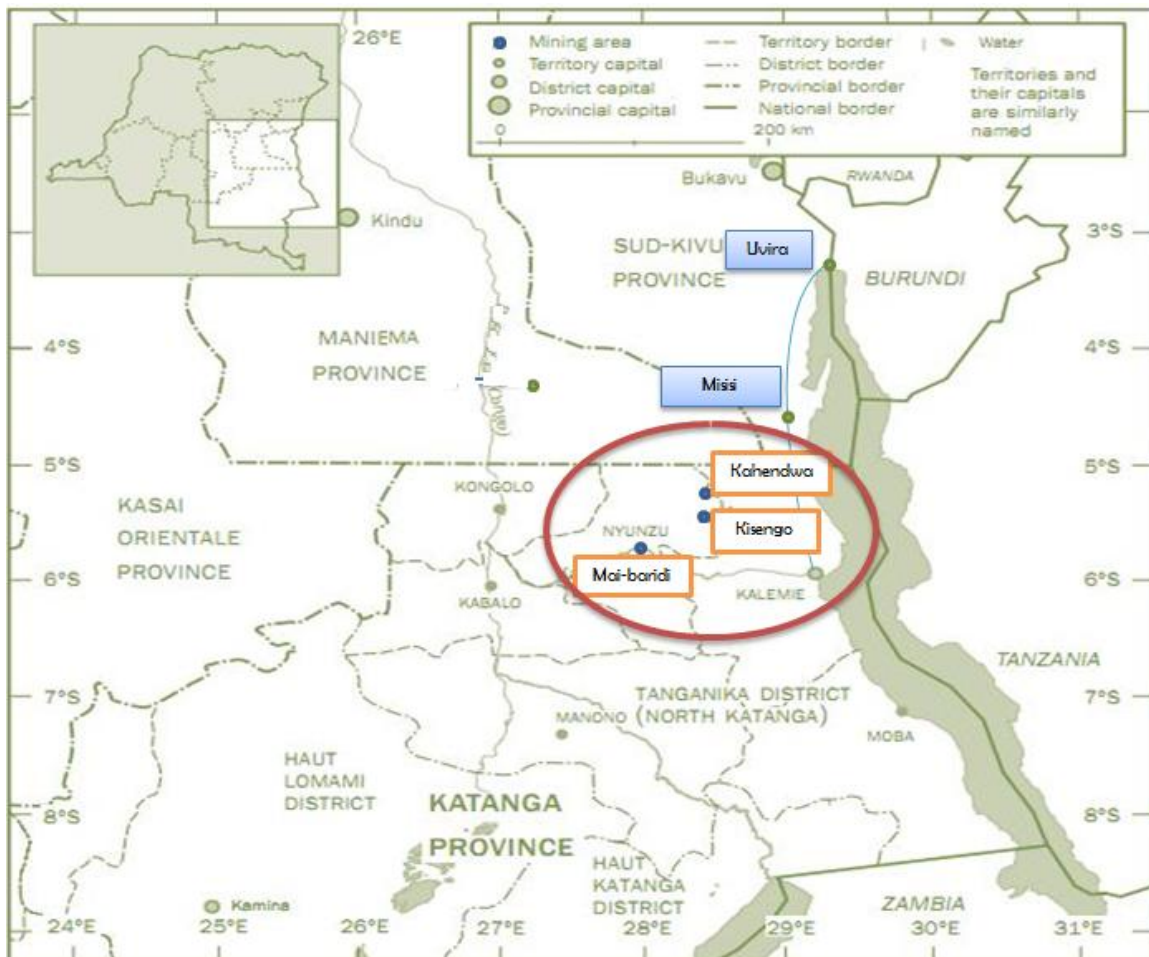
Four reasons drove me to focus this research in Kalemie and Nyunzu. Apart from Manono—where tin has been extracted since 1932, during the colonial era—Kalemie and Nyunzu are the first territories of northern Katanga to witness the expansion of coltan mining beginning in 2007. Additionally, these territories host the most rapidly growing, populated and productive coltan mines in the region—namely, Kahendwa, Kisengo and Mai-Baridi. These three mining areas could be seen, to some extent, as representative of the dynamics of coltan mining and reforms in the area. Importantly, Nyunzu and Kalemie both border on South Kivu. In the past decade, the informal coltan trade thrived between both territories and South Kivu, contributing to the ‘conflict minerals’ narrative. In addition, iTSCi was the first conflict minerals policy implemented in northern Katanga, especially in Kalemie and Nyunzu (at the Kisengo and Mai-Baridi sites) in April 2011, before it was expanded to other mining sites of Katanga, including Kahendwa in 2012. Finally, apart from several NGO reports (De Koning, 2011; IPIS, 2007, Jorns and Cishugi, 2015; Spittaels, 2010), very little academic research has been done on coltan mining in Kalemie and Nyunzu—and in northern Katanga as a whole. For these reasons, studying the everyday realities of changes in the exploitation and trade of coltan after the reforms in Kalemie and Nyunzu was interesting for this research.

1.8.2. Selecting the mining areas

Druckman (2005: 163) has described case-based research as ‘a bound process that can be documented in time/order or space’. In the social sciences of which this study is part,

selecting cases also allows the researcher to draw attention to the question of what specifically can be learned about the cases selected (Yin, 2009).

Map 3. Selected mining areas



Source: Adapted from De Koning (2010: 2).

Initially, my intention was to select six artisanal mining areas in Kalemie and Nyunzu on the basis of the following criteria: mining areas where iTSCi had been implemented, including 3 coltan mining areas and 3 tin mining areas. This selection would allow for the diversification of cases for comparison. However, initial information gathered in Kalemie convinced me to take another approach. I was told that in many artisanal mines in Kalemie and Nyunzu, tin was neither extracted nor traded. Although these two territories had significant deposits of tin, MMR—the largest trading house in Tanganyika—did not privilege the trade of tin and was interested instead in the coltan business.¹⁶ MMR's interest in coltan probably resulted from the fact that, at that time, coltan was more

¹⁶ Interview with the chief office of *Division des Mines* in Kalemie, April 2013.

lucrative than tin.¹⁷ Because there were no trading houses (such as MMR) or mining cooperatives in tin-mining areas, iTSCi could not be established there. I therefore decided to focus the research on coltan mining areas. After selecting three of these areas—Kahendwa, Kisengo and Mai-Baridi—I was able to study the ongoing reform process in detail. In addition, I also decided to examine how actors and entities engaged in the reforms were connected to other actors and entities in cities such as Nyunzu-centre and Kalemie, as well as Uvira and Misisi (South Kivu). Each of the examined cities hosted the mining administration (e.g. offices of the SAESSCAM and *Division des Mines*) or the territorial offices of trading houses or cooperatives¹⁸, or they harboured clandestine coltan *négociants*, in other words traders who smuggled coltan. Table 1 provides data about the population of *creuseurs*, *négociants* and other inhabitants in the mining areas. The data were obtained from different sources including annual reports (2012, 2013 and 2014) of the offices of the *Division des Mines* and SAESSCAM.

Table 1. Population of the selected mines

Territory	Mining site	Population			
			<i>Creuseurs</i>	<i>Négociants</i>	Inhabitants
Kalemie	Mai-Baridi		300	2	700
Nyunzu	Kisengo		1,500	21	17,000
	Kahendwa		230	5	650
Total			2,030	28	18,350

Source: Primary data collected in May 2014.

When selecting the specific cases, additional factors came into play. In 2007, Mai-Baridi and Kisengo were the first mining sites in the Tanganyika province to witness coltan extraction, as well as the implementation of iTSCi in 2011. Selecting these mines and also including Kahendwa allowed me to reconstruct and document the reforms over a long period of time. Additionally, prior data about mining reforms in the area indicated that the selected mining sites, where iTSCi was in force, witnessed revolts of local coltan traders against MMR (Johnson, 2013: 38). There, *creuseurs* and *négociants* experienced new rules and repertoires of practices regarding mining extraction and the coltan trade.

¹⁷ At that time, one kilogram of coltan cost around 30 USD, whereas one kilogram of tin was worth 5 USD.

¹⁸ In October 2014, additional interviews were held in Lubumbashi (the former provincial capital of Katanga) with staff members of mining cooperatives.

These rules and their enforcement needed to be thoroughly studied to understand how and why people complied with or bypassed them.

1.8.3. Looking beyond the ‘enclaves’

In addition to the three selected mining areas, the data collection for this study was expanded to South Kivu for several reasons. Prior to the reforms (2007–2010) and the implementation of iTSCi (2011), the coltan trade flourished between South Kivu and the mining areas of Kalemie and Nyunzu through informal channels and smuggling (Spittaels, 2010: 17). As Spittaels (2010: 59) has noted, while smuggling minerals appears to be a deeply rooted practice across the region, ‘north Katanga is the most important supplier of coltan to Bukavu and quite possibly the most important coltan mining area in eastern DRC as a whole’. Before the reforms, many coltan *négociants* were based in Uvira and Bukavu (South Kivu) and in Goma (North Kivu). Expanding the data collection to South Kivu thus enriched the data that I was able to collect. This is clear especially in Chapter 2 (on mining and reforms in a historical perspective), Chapter 6 (on the smuggling of minerals) and the conclusion of this thesis.

1.9. Methodology

This study is grounded in the ethnographic tradition, which studies peoples’ activities, accounts and interactions in their everyday context. Following Hammersely and Atkinson (2007), ethnography entails long-term immersion and participation in peoples’ lives, explicitly or implicitly. For this research, this meant staying at selected mining sites and travelling between them for a period of 19 months (March 2013–October 2014), interviewing people, and observing how artisanal mining and the coltan trade were organised. Studying different facets of changes resulting from the reforms in a comprehensive manner required the use of three research methodological approaches: multi-sited ethnography, historical ethnography and research uptake.

1.9.1. Multi-sited ethnography

Marcus (1995) defines multi-sited ethnography as a mobile ethnography. This is ‘designed around chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that defines the argument of the ethnography’ (Marcus, 1995: 105). In other words, multi-sited ethnography studies

contemporary changes in culture and society and acknowledges that such changes are being multiply produced in different sites.

A multi-sited ethnography approach was useful to this study in many ways. It allowed me to view society and the changes occurring within it in a larger perspective, rather than in a confining single site or research location (Marcus, 1995: 98). This notion of ‘perspective’ reinforces the idea of ‘following things and people’, in other words, tracing the circulation of objects—such as minerals—and traders across various locations. For instance, I followed groups of coltan smugglers across multiple social contexts and locales. In this sense, multi-sited ethnography is not at odds with the heavy emphasis this study places on the actor-oriented approach. Because there is no central locus of representation that can unveil the working of the mining sector in northern Katanga—or DRC as a whole—the use of the multi-sited approach allowed for studying people’s practices, experiences and connections to one another. For instance, *négociants* are known to move frequently from one location to another when purchasing mineral ore, and it was interesting to study how mining reforms have influenced their mobility and activities. A major strength of multi-sited ethnography is that it allows for a cross-cutting and symmetrical¹⁹ analysis of actors and relations among them.

Moreover, collecting data at the selected locations of Kahendwa, Kisengo and Mai-Baridi allowed me to closely examine—in both a focused and a broader perspective—how the mining reforms took place, how different actors interacted and the main characteristics of these areas in terms of similarities and differences. In addition, taking a multi-sited ethnography approach allowed me to study in detail how the reforms were challenged by groups of people (e.g. smugglers, locally known as *hiboux*), who were connected through various networks from the local mining areas to large cities (Chapter 6). Studying coltan mining and the effects of the reforms on people without taking these aspects into account through a broader perspective would have missed an opportunity to gain an understanding of how the reforms were challenged in a variety of settings in terms of efficiency, effectiveness and impact.

¹⁹ Symmetrical here means that I do not make a priori assumptions about the hierarchy between different sites or actors, but that I retain an open mind as to the ways in which meanings and routines get produced.

1.9.2. Historical ethnography

This thesis also embraces a historical ethnographic approach. According to Silverman and Gulliver (1992: 16), ‘a historical ethnography provides a description and analysis of a past era of the people of some particular, identifiable locality, using archival sources and, if relevant, local oral history’.

How artisanal mining came into being, how it evolved and what were the traditional activities in the study areas were mainly investigated through historical ethnography (Chapter 2). This involved in-depth interviews with mineworkers, who were previously farmers, and with *négociants*, who had traded (or smuggled) coltan in and from northern Katanga before the reforms. Among other topics explored, these interviews asked about traditional activities before 2007, about how the mining and the trade of coltan were organised before the reforms and about the changes the reforms had introduced in the mining areas. The ethnographic approach taken also included participant observation in villages where artisanal mining had become more important than farming activities, complemented by a document review of reports by NGOs or state agencies on the study areas and on the coltan trade between northern Katanga and South Kivu.

Taking a historical ethnographic approach also allowed for the study of how traditional activities were affected by the initiation of coltan mining and how this was affected by the involvement of armed actors in the mining business. As the territory administrator of Nyunzu noted, ‘*avant de reformer, il faut connaitre la forme qui existait*’ [literally, before reforming, one needs to know the form that previously existed].²⁰ This statement conveys that it is important to be informed about pre-existing realities to grasp how the reforms met and were mirrored in these realities.

Following Comaroff and Comaroff (1992) and Fujii (2009), historical ethnography should pay attention to the context, power and meaning of the situation that is analysed to avoid accounting for people’s subjective stories and accounts of past events. In a context where the ongoing reforms comprised a series of externally driven interventions (through iTSCi), it was therefore important to look at what these reforms meant for local people and what changes occurred in existing patterns of accessing and trading coltan, as well as in people’s livelihoods. In each chapter, I provide data to inform the reader about the

²⁰ Interview in Nyunzu, April 2014.

historical evolution of artisanal mining, how measures to reform this sector were developed over time and the effects of these measures on people.

1.9.3. Research uptake

For the Down to Earth programme research uptake has been a key issue. This means that the research team has made consistent and systematic efforts to reach out to different audiences for whom the reforms in artisanal mining matter. In the process of my research, I thus also embraced a series of activities for research uptake. Research uptake may contribute to generate change in terms of awareness raising and by informing key stakeholders about issues regarding current reforms of the mineral sector. More specifically, research uptake intended to build linkages between the academic lens of the researcher, and perspectives of policy and practice. Throughout the project, research uptake took the form of active networking and sharing evolving insights with stakeholders.

In the course of this thesis, I participated in a number of different activities, including conferences where academic researchers, donors, policymakers and NGOs were gathered. These ranged from the World Conference of Humanitarian Studies in Addis Abeba in 2016 to yearly gatherings of the Organisation of Economic Cooperation and Development (OECD) in Paris. The Down to Earth project organised a mid-term conference in Lubumbashi in October 2014. At the end of the programme, the Down to Earth project took part in the organisation of two final conferences to present our findings in DRC: in December 2016 in Bukavu and in February 2017 in Kinshasa. For both conferences, efforts were made to invite a mix of academics and relevant government and non-government participants. In these different fora, I presented my findings and shared my research brief that summarized the main findings —also translated into French—with other researchers and people interested in my research, and received useful comments from the audience.

We also developed a series of activities geared to a broader audience in DRC. I developed a short YouTube movie on cooperatives and artisanal mining in northern Katanga.²¹ I also participated in radio shows, for instance at the *Radio Maendeleo* (Bukavu in December 2016) and *Radio Top Congo* in Kinshasa (February 2017) and had

²¹ See Youtube: handle humanitarian aid and reconstruction

several interviews with journalists of Radio Okapi (Bukavu and Kinshasa) and magazines like *Le Souverain* (in Bukavu), *La Référence Plus* and the *Radio Télévision Nationale Congolaise* (RTNC) in Kinshasa.

Finally, to enhance the accessibility of the thesis in DRC and other French speaking areas, it was translated into French. This was supported by the WOTRO Science for Global Development programme of the Netherlands Organisation for Scientific Research. The manuscript has been accepted for publication by L'Harmattan.

1.10. Data collection techniques

In this study, I conducted many individual and group interviews with miners, representatives of their committees (*comités des creuseurs*), *négociants*, staff members of mining cooperatives and trading houses, civil servants and customary chiefs. These interviews were supplemented with participant observation, life histories and secondary data.

1.10.1. In-depth interviews

Interviews were the main method of data collection in this study. These enabled me to get an in-depth understanding of the experiences of mineworkers and *négociants* with iTSCi, trading houses and mining cooperatives. Semi-structured in-depth interviews were conducted either individually or in small groups in the mining areas, at selling points where mineworkers sold their coltan to *négociants*, in miners' camps and in the villages where the miners' households lived. During the interviews, I asked open-ended questions from a previously determined question list. Additional semi-structured interviews were conducted on particular themes to collect data on a variety of topics that are elaborated in the following chapters. These interviews covered topics including the history of mining, the functioning of mining cooperatives, interactions with miners and *négociants*, how pre-existing patterns of accessing minerals changed, how these changes affected people, and what strategies miners, *négociants* and *hiboux* used to bypass iTSCi.

1.10.2. Informal interviews

Informal interviews dealt with aspects of the research that participants often wanted to keep hidden. For instance, some of these interviews related to confidential reports by iTSCi staff members, for example on corruption, the illegal taxation of miners or

négociants by civil servants or the smuggling of coltan. Other findings that needed to be cross-checked included information on how *creuseurs* and *négociants* built up their social networks and how these operated. On these types of questions, many interviewees did not speak candidly during group interviews. Therefore, for a given practice, activity or event, I selected specific informants and asked them individually to recount exactly what happened, who the people involved were and why these people participated in such an event. Cross-checking interviews were also useful to check the accuracy of data collected, for instance in terms of location, the sequence of events or the actors involved. Those interviewed included iTSCi field staff members, state officials and civil servants of intelligence agencies such as the National Intelligence Agency (*Agence Nationale des Renseignements*). Interviewing these persons often took the form of informal conversations. During these conversations, I carefully took into account ethical issues by ensuring that the initial sources of information were not revealed. In general, the cross-checking interviews enabled the triangulation of data through comparing sources of information (Silverman, 2009).

1.10.3. Playing soccer as a particular form of participant observation

Observation is a method through which an observer takes part in the daily activities of the people being studied, experiencing and observing dimensions such as social actions, events, interactions, relationships and behaviour (Mason, 2012). This method was particularly important in the present study, because it supplemented the data collected through interviews. I regularly observed how *creuseurs* extracted coltan, how *négociants* purchased it at selling points, how iTSCi's 'tagging and bagging' was carried out by civil servants and how all of these actors interacted at the mining sites.

While conducting participant observation, I also became 'one of the crowd'. I spoke *Kiswahili* (a local language) with people and was able to listen carefully to them talking amongst themselves. On various occasions, I participated in specific events, such as football tournaments, meetings convened by the *comités des creuseurs* and mourning ceremonies that took place when mineworkers lost their lives during extractive activities. During all of these events, I heard and learned a lot about mineworkers' and *négociants*' satisfaction, complaints and discourses vis-à-vis iTSCi, the trading houses and the cooperatives.

Playing football was one aspect of the participant observation that turned out to be especially valuable for collecting data for this thesis. In Kisengo, for example, after joining Kivu Sports, a local football team, I participated in two tournaments organised by MMR at the ‘Stadium Coltan’. Many Kivu Sports team members were local traders and *creuseurs* from South Kivu. The team was managed by Divin Wasolela, a Kahendwa-based *négociant*. He was from South Kivu, my native province. In my leisure time, I also watched football (including the 2014 World Cup) with miners in local cinemas (for instance *Chez Mayanga* in Kisengo or *Chez Diedo* in Mai-Baridi).

Sport, like nothing else, was useful in many respects. It allowed me to temporarily suspend the social differences between myself as an academic researcher and the local people in the study areas. It also enabled me to build camaraderie, which was a very good way to gain access to useful or hidden information and develop the level of trust required for interviews, including with people from institutions like trading houses and cooperatives and with civil servants, who normally highly distrust interviewers. Thus, joining Kivu Sports had the advantage of enabling my participation in the local ‘information economy’ (Goodhand, 2000: 12) in that players became familiar with me and were then more outspoken about their activities. All of these things contributed to me feeling more at ease with miners and *négociants* and added pleasure to the fieldwork by making me feel more accepted.

1.10.4. Secondary sources of data

Secondary data in the form of unpublished reports by state agencies on artisanal mining in the Tanganyika province were also used in this study. The reports were collected in Kalemie, Nyunzu and the mining areas. I also drew upon policy documents and published NGO reports about mining in Katanga and South Kivu. It was important to review these documents, because many of them highlight issues of militarisation (De Koning, 2011), the earlier organisation of mining, the coltan trade and the smuggling of minerals between northern Katanga and South Kivu (Spittaels, 2010), and the challenges facing the ongoing reforms (Johnson, 2013; Jorns and Cishugi, 2015).

1.11. Data process and presentation

Again, this thesis incorporates data from individual and group interviews and observations of events and processes. Most of these materials were transcribed and coded using NVivo qualitative software. As the study was exploratory in nature, I opted for a

descriptive analytical approach. Interviews were directly quoted from my field notes. Interviews were most often held in *Kiswahili* and sometimes in French or a mix of the two languages. The interview excerpts presented in quotations are direct translations of the informants' statements and stories into English. During each visit to the mining areas, I carried a new notebook in which the names and positions of the interviewees were coded. This prevented data that had been collected previously in the same mining areas from falling into the hands of a third party (Silverman 2009). At the time of writing, I have chosen to reveal the names or positions of some informants, as they agreed with the objectives of this study and granted consent during the fieldwork to use their names.

1.12. 'These are our saucepan': my positioning as a researcher

1.12.1. Negotiating trust

Broadly speaking, positionality and field relations with people matter in ethnographic work (Hammersley and Atkinson, 2007). These refer to the relationships with participants and how they form, change and evolve during the study, determining whether an ethnographer is seen as an insider or an outsider.

In the study area, positioning myself and negotiating trust varied from one category of participant to another. Heemskerk (2005: 84) has argued that 'because of their lack of confidence in the good intentions of the government and researchers, miners may not reveal that they employ clandestine labourers, sell their product outside legal channels, and violate national labour, environmental, and other regulations'. However, I believe that this depends on the strategies developed by the researcher when negotiating and trying to gain trust.

During my fieldwork, I developed various strategies that influenced perceptions of me as an independent researcher. As was mentioned above, I joined Kivu Sports, a Kisengo-based football team. In addition, my social ties with miners and *négociants* also opened doors in terms of gathering detailed information on their activities. In the selected mining areas, many of the miners and *négociants* belong to the Bakalanga, Bangubangu or Hembra ethnic groups, who traditionally consider all people of Lega ethnicity, such as myself, as their 'uncles'. Thus, for the majority among *creuseurs* and *négociants*, I was an insider.

For the iTSCi field staff members, I developed trustworthy relations as an insider. At the onset of my fieldwork in March 2013, the Katanga ITRI/iTSCi project manager (Gilbert

Leya Wa Nkulu) introduced me to the iTSCi staff as his friend because I knew him a decade ago. This personal relation allowed me to travel frequently with staff members to the mining areas where they monitored the iTSCi ‘tagging and bagging’. There, they introduced me as an independent researcher to the personnel of mining cooperatives and trading houses with whom they interacted. I was therefore able to visit mineral depots and to observe how minerals were marketed, ‘tagged and bagged’ at the selling points held by the cooperatives. Over the course of the fieldwork, the iTSCi staff members became candid when talking with me and provided crucial documents, such as the *rapports d’incidents* (incidents reports), which were confidential.²²

1.12.2. Challenges

My fieldwork was also shaped by many challenges. In Kalemie, the most striking challenge related to obtaining reports by the *Service d’Assistance et d’Encadrement du Small-Scale Mining* (SAESSCAM, Assistance and Training Service for Small-Scale Mining) and the *Division des Mines* (mining service). One SAESSCAM civil servant noted that ‘les rapports et statistiques sont notre casserole’ [reports and statistics are our saucepan].²³ His words communicate the idea that he was not willing to offer these reports unless I paid for them. After I complained about this attitude to the head office of SAESSCAM in Kalemie, the head office asked the civil servant to offer me the reports. I then gained access to them, confirming what Trefon (2011: 89) has highlighted in the statement that the ‘Congolese have a bizarre love–hate relationship with the state and its administrative machine’.

Insecurity also shaped the data collection. At the start of my fieldwork, fights between the M23²⁴ and the Congolese army were raging in North Kivu. On 16 May 2013, a policeman—drunk on *Kampiongo* (a local alcohol)—arrested me in Nyunzu because he saw me typing on my computer. He said, ‘You are from the Kivus where there are many rebel movements [...]. Computers are the devices used to communicate with the rebels of M23’. On our way to the Nyunzu police station—and then probably to the prison as he

²² The reports document and denounce inimical practices to the reforms and iTSCi implementation (e.g. corruption or smuggling of minerals).

²³ Interview with SAESSCAM civil servant, Kalemie, April 2013.

²⁴ M23 (or March 23 military movement) is a rebel movement created by insurgent soldiers of the Congolese national army in April 2012. It was defeated in November 2013. See Stearns J. *From CNDP to M23: The Evolution of an Armed Movement in Eastern Congo*. London: Rift Valley Institute, 2012.

was promising me—I was lucky to meet the Administrator of Finances of Nyunzu (Pierre Mukamba Kaseya), who released me.

Following this incident, I learned two things. Computers, like any device, are not only equipment for data recording and saving time (Kumar, 2005: 245); they can also become a source of threat for a researcher in conflict and post-conflict settings. Where a researcher is situated and when he/she uses his/her computer or any other equipment matters for security. The incident also reminded me of the volatile contexts I encountered during my previous research in eastern DRC.²⁵ I could therefore draw upon lessons that reminded me that, in such volatile environments, my research could be politicised, and I should be cautious about protecting the data and not ‘doing harm’ to my informants (Lee, 1995; Van der Haar et al., 2013: 523). Crucially, even being Congolese, I was not safe from insecurity, which worsened in the study areas in May 2015, when ethnic conflicts broke out between the Bantu and the Pygmy, causing 200 deaths and displacing 12,000 persons (Radio Okapi, 2015a). At that time, I had already left the study area.

With MMR and mining cooperatives, I was introduced by the Katanga ITRI/iTSCi project manager as an independent student researcher. However, one question that was often raised by MMR staff members reminded me that I was an outsider for the company: ‘Why did you opt to undertake your fieldwork in northern Katanga when many coltan mining areas are also found in South Kivu, where you are from?’²⁶ Based on this question, I suspected that the MMR staff members feared that I would be too nosy in collecting detailed information on the activities of the company. These activities were sometimes characterised by tensions between MMR and the mineworkers. My suspicion was confirmed when MMR’s office in Kalemie stalled for months without approving the *ordre de mission* that would allow me to enter into MMR’s concessions. As a solution to this challenge, the head office of the *Division des Mines* for northern Katanga (Simon-Pierre Kambi) approved my *ordre de mission* and added, ‘As a Congolese researcher, no

²⁵ Earlier research includes my work experience with the Life & Peace Institute in eastern DRC on conflict transformation involving local communities and armed groups and the following two published. See Dijkzeul D. and Wakenge C.I. (2010). Doing good but looking bad? Local perceptions of two humanitarian organisations in the eastern DRC. *Disaster Studies*, 34(4):1140–1170 and Dijkzeul D. and Wakenge C.I. (2014). Proselytizing peacekeepers? Comparing proselytizing by UN peacekeepers in the Sudan and the DR Congo. *Journal of International Organisations Studies*. 5(1):39–57.

²⁶ Interviews with MMR administrators, Kalemie and Mai-Baridi, April 2013.

one can prevent you from conducting your fieldwork in any artisanal mining area'.²⁷ This also implied that in case that I encountered an administrative problem, he was able to mediate.

This administrative issue with MMR reminded me that I had to develop strategic relationships, not only with this company but also with many other locally based trading houses and mining cooperatives. Their activities were probably shaped by the 'darkness' mentioned through the metaphor that introduces this chapter to such an extent that one who tries to shed light on this 'darkness' crosses a kind of red line. I felt suspected of attempting to break open the black boxes of trading houses and mining cooperatives when I visited the mining areas. Their field staff members often asked me to stay with them in their compounds. I suspected that these invitations were strategic attempts to control my fieldwork activities. Additionally, I thought that staying with them would be misconstrued by many miners and *négociants* with whom I interacted, who would perceive me as being part of those entities. I therefore opted to stay instead in small hotels held by *négociants* or in private houses of inhabitants as a way of keeping my independence.

1.13. Thesis outline

To study the micro-dynamics of changes after the reforms following the implementation of iTSCi at three coltan mining sites in northern Katanga, this thesis aims to understand these changes both at the contextual and institutional levels and from the perspective of individuals. Following this introduction, the thesis is composed of six chapters.

Chapter 2 explores the evolution of the mineral sector in the former Katanga province. It analyses the history of mining, the initiation of artisanal mining and how the ongoing reforms have been informed by this history.

Chapter 3 focuses on mining cooperatives as newly introduced institutions aimed at governing the artisanal mining sites. Through a single case study, the chapter analyses how these cooperatives were introduced into the mining areas and how they interacted and blended with pre-existing miners' organisations.

In Chapter 4, I provide a different perspective on 'conflict minerals'. I thus introduce the notion of 'reform conflicts' to emphasise that, although ongoing reforms aim to sever the

²⁷ Informal conversation in Kalemie, April 2013.

supposed linkages between the artisanal mining business and violent conflicts, these reforms have become a driving force behind the emergence of new conflicts.

Chapter 5 is about livelihoods. It analyses how the reforms have influenced the livelihoods and socioeconomic position of *négociants*. This chapter also explores what kind of opportunities the reforms have offered to this group of mineral brokers often considered powerful in the mineral supply chain, and explains what kind of constraints they have confronted and why they have opted to diversify their livelihood portfolios.

Chapter 6 analyses the responses of *creuseurs* and *négociants* to iTSCi. Although the mining sites where iTSCi is in force appear to be ‘enclaves of regulations’, I explore the strategies of *creuseurs* and *négociants* to bypass iTSCi and the reforms, especially around the coltan trade. Finally, Chapter 7 concludes the thesis.

A group of men, likely miners or workers, are standing in a line in front of a building with a thatched roof. They are wearing blue work uniforms and hard hats. Some have red hard hats, while others have white. One man in the center is holding a large, rectangular sign made of cardboard or wood. The sign has the words "COMITE DE CREUSE" written on it in a simple, hand-drawn font. The ground is dry and dusty. In the background, there are other people, including children, and more of the thatched-roof building.

Photo 1.2. The *comité des creuseurs* of Kisengo celebrating Congolese Independence Day on 30 June 2014

— CHAPTER 2 —

A Historical Analysis of Mining and Reforms in Northern Katanga

This chapter has been submitted for publication as:

Wakenge C.I. (2017). A Historical Analysis of Mining and Reforms in Northern Katanga, eastern Democratic Republic of Congo. *Third World Quarterly*.

Abstract

In the Democratic Republic of Congo (DRC), there has been a series of reforms that aim at breaking through cycles of violence linked to mineral exploitation. Based on both published and unpublished documents about mining in eastern DRC (especially in the former Katanga province) and drawing on debates about the post-conflict introduction of externally driven policy and institutions, this chapter highlights two issues. It first argues that the ongoing mining reforms do not seem to have a sense of history before the wars. Second, the chapter shows that Katanga has been acquainted with mining for centuries. The chapter thus demonstrates that, although the reforms are framed as a measure against conflict minerals, they represent a historical continuity of favouring international companies, turning the mineral sector into an increasingly privatised sector. It is therefore crucial to reconstruct the historical organisation of mining to better understand how this organisation informs current reforms.

1. Introduction

The Democratic Republic of Congo (DRC) has seen nearly 20 years of armed conflicts, beginning with the outbreak of the first war in 1996. Since then, the country has evolved into a ‘continuously evolving network of crises’ (Dijkzeul and Wakenge, 2014: 45). Although minerals often appear to be central in these conflicts, they are not themselves the cause of the conflicts (Autesserre, 2012). Many of the conflicts stem from unresolved historical tensions pitting communities against each other over territory, authority or resources, combined with the governance weaknesses of the Congolese state (Vlassenroot et al., 2016). Despite a wide-ranging peace deal agreed in 2002, the organisation of general elections in 2006 and 2011, and tensions around the upcoming presidential elections (Congo Research Group, 2016)²⁸, it has been reported that more than 70 armed groups continue to operate in eastern DRC (Verweijen and Wakenge, 2015; Stearns and Vogel, 2015). Many of these groups reap benefits from the mining business (Stearns et al., 2013: 36).

This chapter has three objectives. Given the importance of the conflict minerals discourse in the policy agenda and how this has influenced the ongoing reforms of the mineral sector, it is worth understanding the context of how artisanal mining came into being, its

²⁸ These elections have been postponed until the end of 2017.

development and its relationship with the so-called conflict minerals. Related to this, the second aim of the chapter is to introduce the context of the reforms to 3T (tantalum or coltan, tin and tungsten) mining. Special attention is dedicated to coltan, a mineral that has recently contributed to making the northern part of Katanga economically important. The third objective of the chapter is to introduce in detail one conflict mineral policy: the International Tin Research Institute (ITRI) that designed the Tin Supply Chain Initiative (iTSCi). Already implemented at the 3T mining sites where this study was undertaken (Kahendwa, Kisengo and Mai-Baridi), iTSCi has been the only reform initiative carried out in Kalemie and Nyunzu. It is also the most widely implemented reform initiative in eastern DRC.

This chapter argues that the ongoing reforms—the iTSCi policy in particular—and the institutions they bring about do not enter into a country without a past. Understanding how policy and institutions are introduced and how they interact with pre-established institutions and actors in the mining areas is a key to grasp how the reforms are co-shaped at the grassroots level.

The remainder of this chapter consists of seven sections. In the next two sections, I briefly explain the theoretical framework and the methods. After providing the historical background for how mining came into being in the former Katanga province, I focus on the initiation of artisanal mining in the northern part of this province. Then, the chapter outlines how northern Katanga witnessed the phenomenon of conflict minerals and how these were addressed. The next section explores the functioning of the iTSCi policy. The final section provides an analysis and concludes the chapter.

2. Post-conflict introduction of externally driven policies and institutions

The concepts of policy and institutions are central to this chapter. Policy is understood as the pursuit of goals, or what we want to achieve (Colebatch, 1998: 42). It is usually put into practice through institutions that provide the framework for human behaviour and social interactions (Soysa and Jutting, 2006).

This chapter centres on the historical context of mining and the iTSCi programme. It starts from the idea that it is important to understand the relationships between mining and reforms through an institutional lens because crises (e.g. conflict minerals) and the responses to these crises (e.g. the ongoing mining reforms) are usually acted upon through policy and institutions (Hilhorst, 2013).

In post-conflict settings, institutions and policy are in constant flux. Institutional design and change result from the interactions between structures, practices and policy interventions. This change is both an incremental and a discontinuous process (Scott, 2001: 50). Thus, the idea that institutions cease to exist during conflict and that post-conflict reconstruction can start from a blank slate—what Cramer (2006) refers to as the ‘great post-conflict makeover fantasy’—has been questioned (Hilhorst et al., 2010). This means that, in the course of its implementation, policy gets reinterpreted, contested and constructed through human interactions (Hyden, 2008).

The role of institutions has been extensively debated in the context of the reforms taking place in the Congolese mineral sector. It is widely assumed that state reconstruction should be more centred on reforming and strengthening state institutions, because these institutions are too weak to control the management of the mining sector. The World Bank (2008: 72) and Garrett and Mitchell (2009: 48), for instance, argue that, to improve the ability of the government to effectively and efficiently supervise, monitor, and evaluate activities in the mining sector, government institutions should be strengthened. Moreover, some scholars (Rackley, 2006; Trefon, 2011) contend that the main obstacle facing reforms in DRC is the fact that ‘disorder is associated with Congolese institutions’ (Trefon, 2011: 101). Along the same line of reasoning, it has been suggested that the ‘creation of institutions’ (Garrett and Mitchell, 2009: 12) and the implementation of effective policy regarding mining (e.g. iTSCi) are the keys to improving the mineral sector governance. However, these policy recommendations formed around institution-building tend to overlook the nature of institutional arrangements that co-existed or competed before the reforms.

This chapter aims to show that the idea of introducing externally driven policy and institutions for mining governance adds a new layer to what already existed. The chapter thus addresses the questions of how the history and historical organisation of mining have informed the current reforms and of what influence these historical trends have had on mining reform policy. In writing this chapter, I want to contribute to the debate about the role of institutions in a context of reforms, beginning with the assumption that the reforms do not enter into a *tabula rasa* situation. Externally driven policy and institutions thus rest on the evidence that they are both informed and co-shaped by past experience and everyday realities regarding mining.

3. Methods

This chapter is based mainly on a review of available documents and several in-depth interviews undertaken from March 2013 to October 2014. The interview data were collected in Kalemie (capital city of the Tanganyika province), Nyunzu (territorial city of Nyunzu territory) and at three mining sites (Kahendwa, Kisengo and Mai-Baridi). In total, 16 reports by state agencies, NGOs and the iTSCi programme about mining in Katanga were reviewed, and 21 in-depth interviews were conducted. The interview participants included state officials and civil servants of the *Service d'Assistance et d'Encadrement du Small-Scale Mining* (SAESSCAM, Assistance and Training Service for Small-Scale Mining) and of the *Division des Mines* (the mining service), miners, members of the *comités des creuseurs*, middlemen (so-called *négociants*) and other community members in the mining areas.

4. Mining from a historical perspective

4.1. Mining in the former Katanga province

Although industrial activities dominated in the southern part of Katanga, artisanal mining, especially of copper, predated colonisation. Copper production and trade have a long history in the Katangese region and contributed to the development of indigenous metallurgical techniques. Copper production also played an important role in the regional trade (De Hemptinne, 1926; Herbert, 1984; Hönke, 2013: 135).

The former province of Katanga, especially the southern part, is the wealthiest Congolese province in terms of mineral deposits. The region has an area of 496,965 km² and was home to approximately 5,600,000 inhabitants in 2010. It is known for very rich soil (Garrett and Lintzer, 2010). Thought to contribute highly to the view that DRC is a 'geological scandal', an expression coined by the Belgian geologist Jules Cornet (Turner, 2007: 47), Katangese soil is believed to contain almost half of the world's cobalt reserves and 10% of world's reserve of copper (Rubbers, 2004: 3)²⁹. Additionally, at the beginning of the 1970s, the Katangese mining industry contributed around 50% of the

²⁹ See also United States Geological Survey. *Cobalt – for Strength and Color*, USGS Mineral Resources Program Fact Sheet 2011-3081 (July 2011), available at <http://pubs.usgs.gov/fs/2011/3081/pdf/fs2011-3081.pdf>.

Congolese national budget (Young and Turner, 1985: 289). This economic contribution, combined with an abundant presence of minerals, explains why industrial exploitation was initially concentrated in the southern part of Katanga. According to Rubbers (2006: 115), southern Katanga was the *poumon économique* (the economic lung) of the province, conveying that this region was the most valued economic area. In 2014, exported coltan was estimated at 1,004.53 tonnes for the whole of Katanga (Diemel and Cuvelier, 2015: 158).

The Katangese mining sector has been managed by several entities. Before Katanga came to be industrially exploited at the beginning of the 20th century, it was administrated by the *Comité Spécial du Katanga* (CSK), which was created on 19 June 1900 by the Belgian King Leopold II. However, CSK did not cease to exist in 1906. Until Congolese independence in 1960, CSK was one of the three major mixed economy corporations that continued to share concessionary authority over land and mineral rights with the state.

On 28 October 1906, the *Union Minière du Haut-Katanga* (UMHK) was established. This became the biggest large-scale mining corporation in Katanga during the first half of the 20th century (Cuvelier, 2011b: 12–24; Hönke, 2013: 135–136). In 1967, UMHK was taken over by the Zairian Mobutu regime with the intention of severing the Zairian mining business from the dominance of foreign corporations (Cuvelier, 2011b: 13). UMHK was first renamed *Générale Congolaise des Minerais* (Gécomines) and then *Générale des Carrières et des Mines* (Gécamines), under the management of the *Société Générale des Minerais*, a branch of the *Société Générale de Belgique*. However, the years that followed, especially at the end of the 1970s, witnessed the bankruptcy of Gécamines as the result of a combination of several factors, including corruption, political interference and a drop in mineral prices (Garrett and Lintzer, 2010: 403–405; Rubbers, 2006).

After the Congolese independence in 1960, the expansion of artisanal mining was also observed in Katanga. In 1982, in response to a growing economic crisis, President Mobutu liberalised the artisanal mining of gold and diamonds. Importantly, this measure affected many concessions that belonged to and were managed by Gécamines in the form

of ‘fortress protection’ (Hönke, 2013: 54)³⁰, because artisanal mining also took place within these concessions. To respond to the economic crisis and to make ends meet, many *creuseurs* started to extract minerals either in abandoned shafts or encroached on Gécamines’ concessions (Kennes, 2000: 319)³¹. According to Rubbers (2004: 8), some *creuseurs* worked legally in areas conceded by the Congolese government, while others entered illegally into Gécamines’ concessions. In 1997, following a presidential decree by Laurent-Désiré Kabila that formalised artisanal mining, southern Katanga witnessed an increase in the numbers of *creuseurs* and *négociants* involved in copper and cobalt mining and trade. To date, artisanal mining continues in many parts of southern Katanga, and the mining sector is sometimes shaped by tensions between *creuseurs* and large-scale companies (Cuvelier, 2011a; Geenen, 2014; Radio Okapi, 2015b).

4.2. Mining in northern Katanga

The last decade has seen a considerable expansion of coltan mining in northern Katanga, particularly in Kalemie and Nyunzu. This section examines the rise of mining in northern Katanga, especially in terms of how coltan mining has made *utile* (useful) the northern part of Katanga, which was traditionally known as an agrarian region (Omasombo, 2014: 257).

4.2.1. Before mining: farming

Kalemie and Nyunzu have a long tradition of farming. With respective areas of 30,000 and 17,275 km² and respective populations of approximately 400,000 and 300,000 inhabitants, Kalemie and Nyunzu territories were once considered the breadbasket of the Katanga province (Mwanyimi-Mbomba, 1988: 220). More than 11 farming enterprises were established in Kalemie during the colonial era (Omasombo, 2014: 258), and, until the end of the 1980s, Kalemie and Nyunzu nourished the southern part of Katanga, which was dominated by industrial mining. In the 1980s, Abdoul Sahel, a Greek trader established in Kalemie, created *Domaine Agriculture et Elevage*. Until the mid-1990s,

³⁰ Hönke (2013: 54) defines ‘fortress protection’ as a series of security techniques of deterrence, coercion and control that concentrates on the fortress of the mine.

³¹ This phenomenon was also observed in other Congolese regions (including the provinces of North and South Kivu, Maniema, Kasai and Orientale) where artisanal mining has been a direct source of livelihood for about two million Congolese people. See, for instance, Geenen & Claessens (2013) for more detail.

this enterprise was the largest company marketing food products located in the territories of Kalemie or Nyunzu³².

The products supplied by farms in Kalemie and Nyunzu varied. Many farmers harvested great quantities of maize, cassava and cotton. Some of these crops, such as cassava and cotton, as well as rice and peanuts, were even compulsory (*cultures obligatoires*) during the Belgian colonial period. These crops were first produced in rural areas to increase the volume of exportation, with the objective of building rural capacity by improving production techniques. After Congolese independence in 1960, the policy regarding *cultures obligatoires* was abandoned.

4.2.2. Local history of mining

In Kalemie and Nyunzu, gold has been extracted using artisanal methods since the 1920s (Weyn, 2010), alongside the farming activity in the region. In 1928, the Belgian colonial administration created the *Syndicat de la Luama*, later renamed the *Société Minière de la Luama*. At that time, gold was extracted from the alluvial deposits in the beds of a number of rivers, especially Kimbi and Mudjale in the northern part of Kalemie near the border between Tanganyika district and the province of South Kivu. Gold production is estimated to have reached 344 kg in 1941 (Weyn, 2010: 130). In Nyunzu, no mining company was locally established. However, *creuseurs* supervised by the colonial administration extracted gold at several mining sites in northern Nyunzu, including Mulungui, Kakulumaziba, Lunga, and Mamba. Many of these sites are still operational today. However, compared with a buoyant mining sector in southern Katanga (1906–1967), mining in Kalemie and Nyunzu can be seen as relatively marginal.

In 1932, several deposits of tin were discovered in Manono territory. Until 1967, Géomines was the only company to exploit tin through artisanal and semi-industrial methods. In 1967, Géomines was replaced by the *Société Géologique et Minière du Congo*, which became Congo-Etain in 1968, then Zaire-Etain in 1971. Zaire-Etain was in operation until 1996, when it ceased operations because of the outbreak of the first Congolese war (De Koning, 2010). After Zaire-Etain had stopped working in the region, many *creuseurs* began to extract tin in the company's abandoned concessions.

³² Interview with the administrator of Nyunzu, September 2013. See also Omasombo (2014: 287–288).

In 2007, northern Katanga gained an increased economic importance because of the initiation of artisanal coltan mining. The shift in the region was characterised by one *Division des Mines* civil servant as the transformation of this part of Katanga from useless (*‘inutile’*) to useful (*‘utile’*)³³. The change resulted from two main factors. First, mining began in Kalemie and Nyunzu after several deposits of coltan were found. Since 2007, the most promising coltan mining sites in Katanga have been Kisengo (115 km northeast of Nyunzu), Mai-Baridi (170 km west of Kalemie) and Kahendwa (115 km east of Nyunzu) mined since September 2011. The second factor making Kalemie and Nyunzu *utile* is the popularity of coltan. Since the beginning of the 2000s, the coltan trade has become increasingly important in the international market, following a high demand for the mineral in electronics manufacturing (De Faily, 2001: 13). This demand also signalled the importance of coltan mining and the trade of coltan from the mining areas located in Kalemie and Nyunzu to other Congolese regions, especially North and South Kivu (Spittaels, 2010), and between these regions and neighbouring countries (i.e. Rwanda and Burundi).

Before the reforms, coltan extraction was artisanal, and the trade was predominantly informal. Neither mining cooperatives nor trading houses were established at the mining sites. Instead, the *creuseurs* were organised in teams of 2–10 workers assembled around various forms of local structures (e.g. *comités des creuseurs* and *syndicats*). These structures were set up by the miners themselves or were led by local powerholders such as customary chiefs. These chiefs also provided plots of land to the *creuseurs*. The organisation of the trade of coltan from the mining areas to urban-based trading houses (known as *comptoirs* or *maisons d’achat*) was led by *négociants*. In addition, elements of the Congolese army and of armed groups and state agencies, including the *Division des Mines*³⁴ and SAESSCAM³⁵, were also present in or around the mining areas. Representatives of these groups were involved in artisanal mining activities or levied

³³ Interview in Kalemie, June 2013.

³⁴ The *Division des Mines* is DRC’s mining administration service. Like SAESSCAM, the *Division des Mines* plays an official role in the iTSCi initiative. It is responsible for weighing and tagging mineral bags and documenting mineral production in iTSCi log books at mine sites and mineral depots.

³⁵ SAESSCAM is a Congolese mining authority responsible for supporting artisanal miners and for the development of small-scale mining. SAESSCAM plays an official role in the iTSCi initiative, weighing and tagging mineral bags and documenting mineral production and trade at the level of the mining site.

various kinds of taxes over the *creuseurs*, *négociants* and local traders (De Koning, 2011).

Table 2. Coltan mining sites and creuseurs in Kalemie and Nyunzu (May 2014)

Territory	Mining site	Year of discovery	Number of <i>creuseurs</i>
Kalemie	Mai-Baridi	2007	300
	Sango Mutonshia	2012	60
Nyunzu	Kahendwa	2011	230
	Kisengo	2007	1,500
	Kilunga	2008	50
	Lengwe	2007	50
	Luba	2006	200
	Lububu Kitoke (1)	-	-
	Mbale (1) ³⁶	-	-
TOTAL			2,390

Sources: Primary data collected in 2013–2014, iTSCi master mines list of 18 April 2013, 2014 annual report of the *Division des Mines/Nyunzu*.

As Table 2 displays, the latest available data when the study was carried out show eight coltan artisanal exploitation zones (AEZ) in Kalemie and Nyunzu. According to the 2002 Congolese Mining Law (T. 4, Ch. 1, Art. 109), AEZ are demarcated by ministerial decree as areas where ‘the technological and economic factors are not suited for the site to be industrially exploited and which are exclusively reserved for artisanal mining activities’³⁷. In the eight AEZ found in Kalemie and Nyunzu, there were approximately 2,500 *creuseurs*³⁸. One of the mining areas listed in Table 1 (Kisengo) is a private concession of Mining Mineral Resources (MMR). The other mining areas are AEZ granted to the *Coopérative des Artisans Miniers du Congo* (CDMC), which was the

³⁶ For both Lubuku Kitoke and Mbale, the data were not available.

³⁷ However, the law (Mining Law, T. 4, Ch. 1, Art. 110) also provides a possibility for closing down the AEZ if ‘the factors justifying its creation ceased to exist’ or if a ‘new deposit necessitating large-scale exploitation has been discovered’.

³⁸ In March 2015, iTSCi estimated the number of 3T *creuseurs* in Katanga to be approximately 26,489. See iTSCi general overview, 9th OECD meeting, Paris, May 2015.

largest cooperative in the study area. The two mines at the bottom of the table (Lububu Kitoke and Mbale) were not operational when this study was carried out. These mining sites were inactive because of conflicts over property rights between MMR and Minserve, another trading house³⁹. It is important to bear in mind that, in eastern DRC, artisanal mining activities are not restricted to the AEZ. Rather, these activities often occur in other areas as well, even where it is not officially allowed or where it is unclear who owns the property rights.

5. Experiencing conflict minerals

From 1998 to 2003, conflict minerals entered the mineral sector in Kalemie and Nyunzu. According to International Peace Information Service (2012: 10), the term ‘conflict minerals’ is applied to define the extraction and trade of minerals from conflict-affected areas where human rights abuses take place. These minerals were thought to fund local and foreign armed groups committing atrocities against the population (Autesserre, 2012: 9), and it has been reported that coltan ore played a crucial role in the trade of conflict minerals in DRC (Nest, 2011; Smith, 2011; UN, 2001).

Indeed, revenues from coltan mining contributed to the funding of conflicts and human rights abuses in DRC. Many coltan (and gold) mining sites in Kalemie and Nyunzu were characterised by the presence of armed actors, including Forces Armées de la République Démocratique du Congo soldiers and Mai-Mai militias (IPIS, 2007)⁴⁰ such as the Mai-Mai groups of Captain Kafuku Numbi and Kabeja Tango Fort. These groups were involved in extractive activities (IPIS, 2007; De Koning, 2011) and found lucrative means to finance their military operations through mining activities (Johnson, 2013). Additionally, from 1998 to 2003, Kalemie and Nyunzu were controlled by the *Rassemblement Congolais pour la Démocratie* (Congolese Rally for Democracy), which was also involved in the mining business through the establishment of control over the mining areas (De Koning, 2010: 10).

The militarisation of coltan mines took various shapes. In Kisengo, for instance, the soldiers of the Kongolo-based 69th brigade of the FARDC regularly visited the coltan mining areas in 2009–2011. These soldiers demanded various forms of rents, taxes and

³⁹ Interview with the chief office of the *Division des Mines*, Kalemie, December 2013.

⁴⁰ The term ‘Mai-Mai’ refers to local militias in eastern DRC. For further details, see, for instance Stearns et al. (2013). Mai-Mai Yakotumba. Violence and racketeering in Fizi, South-Kivu. London: Rift Valley Institute.

mine royalties from the *creuseurs*, *négociants* and local traders, as well as occasional forced labour from the artisanal miners. The militarisation also increased the already established practice of coltan smuggling in which many *négociants* who collaborated with military officials were involved (Spittaels, 2010). These officials intervened when the smugglers were arrested by civil servants of the *Agence Nationale des Renseignements*, allowing the smugglers to continue their activities. Militarisation also took the form of the direct looting and plundering of coltan⁴¹ at the mining sites and sometimes included negotiating arrangements whereby soldiers provided ‘security’ in return for a share of the mining profits (De Koning, 2011: 21; Garrett et al., 2009).

6. Formalising responses to conflict minerals

6.1. International and domestic responses

Addressing conflict minerals aligns with a series of measures taken to formalise artisanal mining. Formalisation is understood in this chapter as a ‘process of registering, organising, and tracking mining activity in the field’ (Siegel and Veiga, 2009: 52). Taken by different entities at various periods and in various locations, this series of formalisation measures aimed at ‘cleaning up’ the state of affairs in the Congolese mining sector, improving the governance of mining and making the state’s control of artisanal mining effective. Before explaining in detail how iTSCi was implemented at the mining sites, a close look needs to be taken at the most important measures regarding mining reform in DRC as a whole.

Attempts to reform the artisanal mining sector have been made concrete through a series of measures. The first measure was the promulgation of the 2002–2003 Mining Law and its regulations. This law provides the regulatory framework for mining activities in DRC. More specifically, the law laid out the demarcation of the AEZ and specified that *creuseurs* who wanted to extract coltan or other minerals within the AEZ—including those who already extracted minerals in these locations—must purchase a *carte d’exploitant artisanal*, a kind of official authorisation to mine, which has to be renewed yearly.

⁴¹ Interview with Michel Ngongo-Lutete, the president of the diggers’ committee of Kahendwa, August 2013.

Another series of measures targeted conflict minerals directly. This followed a call by the UN Panel of Experts⁴², and later by Belgian NGOs working on natural resource issues in Central Africa, for a temporary embargo and sanctions against individuals or companies involved in arms trafficking or the illegal trade of Congolese minerals. However, this embargo was ineffective because of political unwillingness and had limited effects on the illegal trafficking of minerals (Geenen and Custers, 2010: 231–233).

Additionally, from September 2010 to March 2011, in reaction to the militarisation of artisanal mining, President Kabila banned the exploitation and trade of minerals in the provinces of North Kivu, South Kivu and Maniema. Although the ban was only in force in these provinces, it also had effects in other provinces. For instance, the ban encouraged all artisanal miners to create (from their *groupement des exploitants artisanaux*, pre-existing informal miners' organisations) or join mining cooperatives that had to be established within the AEZ (Decree № 0706/CAB.MIN/MINES/01/2010).

Another type of measures addressing conflict minerals was taken by international organisations, foreign governments or NGOs, or came into being at the instigation of the mining industry (Nest, 2010: 105–160). These measures differed from each other in nature and in shape (Verbruggen et al., 2011). Measures taken by foreign governments include the Dodd–Frank Act. Passed in 2010, section 1502 of this act addresses conflict minerals by requiring companies listed on the United States stock exchange to provide specific assurances that any products that they have manufactured or contracted to manufacture do not contain minerals that directly or indirectly finance or benefit armed groups in DRC or neighbouring countries⁴³. Another example of this approach is the Paris-formulated voluntary due diligence guidance on responsible mineral sourcing from the Organisation for Economic Co-operation and Development (OECD)⁴⁴. Interestingly,

⁴² The Panel of Experts was set up by the UN in 1999 to monitor and document the illegal exploitation of minerals in the Great Lakes Region, especially eastern DRC.

⁴³ Actually, the US President Donald Trump is poised to issue a new executive order suspending section 1502 of the Dodd-Frank Act, which regulates conflict-free minerals. See Freudenthal E. (2017). *Who pays the hidden price for Congo's conflict-free minerals? IRIN special report on the effects of US conflict-free mineral regulations on mining communities in eastern Congo*, www.irinnews.org, accessed on 28 February 2017.

⁴⁴ OECD. (2013). *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, Second Edition*. Paris: OECD Publishing.

this guidance has become a global standard for responsible business conduct for mining companies operating in conflict and conflict-affected areas.

Domestically, at the end of 2014, eastern DRC counted 13 reform initiatives in total. Among these initiatives, 10 focused on 3T, whereas only three targeted gold (Cuvelier et al., 2014: 5–6). Their main objective has been to control the trade of minerals by making their supply chains more transparent. As was mentioned above, iTSCi, which is discussed in more depth in Section to come, is one of the initiatives that was designed by the mining industry.

6.2. The arrival of MMR

In Kalemie and Nyunzu, measures to formalise artisanal mining and to address conflict minerals were undertaken in many ways. These measures first aligned with a decision (Circular Note № 2631 of 26 November 2008) taken by the governor of the former Katanga province (Moise Katumbi Chapwe), who, in 2008, urged all unauthorised forces—e.g. FARDC—including public services to leave the artisanal mining areas.

In 2009, the national Mining Ministry began to demarcate a number of AEZ. By 2012, there were an estimated eight AEZ in these territories⁴⁵. Importantly, around the same period, MMR first arrived in Kalemie and Nyunzu. MMR had its head office in Lubumbashi (capital city of former Katanga) and was a subsidiary of the *Société Minière du Katanga*⁴⁶. MMR signed a five-year contract (№ 06/1331/CABMIN/MAF/KAT/2009) with the provincial Katangese government, through which the company obtained the exclusive buying rights for minerals extracted in four mining sites of northern Katanga, namely Katonge (coltan, Manono), Lunga (gold, Nyunzu), Kisengo (coltan, Nyunzu) and Mai-Baridi (coltan, Kalemie)⁴⁷. MMR purchased minerals together with the mining cooperative CDMC. Over the next few years, the rights of MMR (and of CDMC) were expanded to other mining sites, and MMR enjoyed a privileged position as a mineral trader in the Katangese mining business (Diemel and Cuvelier, 2015: 155–156).

⁴⁵ Annual report 2014 of the Division des Mines/Kalemie.

⁴⁶ The Société Minière du Katanga (SOMIKA) is a Mining and Mineral Processing Company based in Democratic Republic of the Congo since 2001. It has set benchmarks in the mining and mineral processing industry by producing Copper and Cobalt.

⁴⁷ Contract № 06/1331/CABMIN/MAF/KAT/2009.

In addition to MMR, other mining companies were also established in northern Katanga⁴⁸. However, some of these companies, such as Minserve earlier mentioned, did not manage to set up operations for a combination of reasons, including disputes over mineral rights with MMR (Ken and Montejano, 2013: 31). In addition to CDMC, other mining cooperatives operating in the study area with the aim of improving the governance of artisanal mining were the *Cooperative Minière Maendeleo* based in Kahendwa, the *Coopérative Minière Tuungane* in Kisengo, and Vimated in Sango Mutosha and Lengwe—two artisanal mines located in Kalemie and Nyunzu, respectively.

The approach to addressing conflict minerals in the region took shape following the arrival of the iTSCi programme. The presence of all of the entities described above indicates the extent to which artisanal mining in the area became increasingly privatised.

6.3. The iTSCi programme

In eastern DRC, the iTSCi programme has three components: traceability (the so-called ‘tagging and bagging’), risk assessments and third-party audits. This chapter—and the whole PhD thesis of which it is part—focuses only on the ‘tagging and bagging’, because this component was the one to be implemented on a permanent basis at the level of the mining sites.

The iTSCi has been implemented in several waves. In July 2009, iTSCi was tested and started at the Kalimbi mine in Nyabibwe (South Kivu). However, from September 2010 to March 2011, iTSCi was suspended because of President Kabila’s ban, which was discussed above. Although the ban has been severely criticised for its adverse impact on the livelihoods of mining communities, its inability to stop the illegal trade of minerals and the fact that it paralysed the regional economy (Geenen, 2012), it did offer an opportunity to expand the iTSCi programme to other provinces, including Katanga (Diemel and Cuvelier, 2015: 152).

To this point, iTSCi is the only conflict minerals policy that has been carried out in mining areas located in Kalemie and Nyunzu at the time of writing. After establishing its

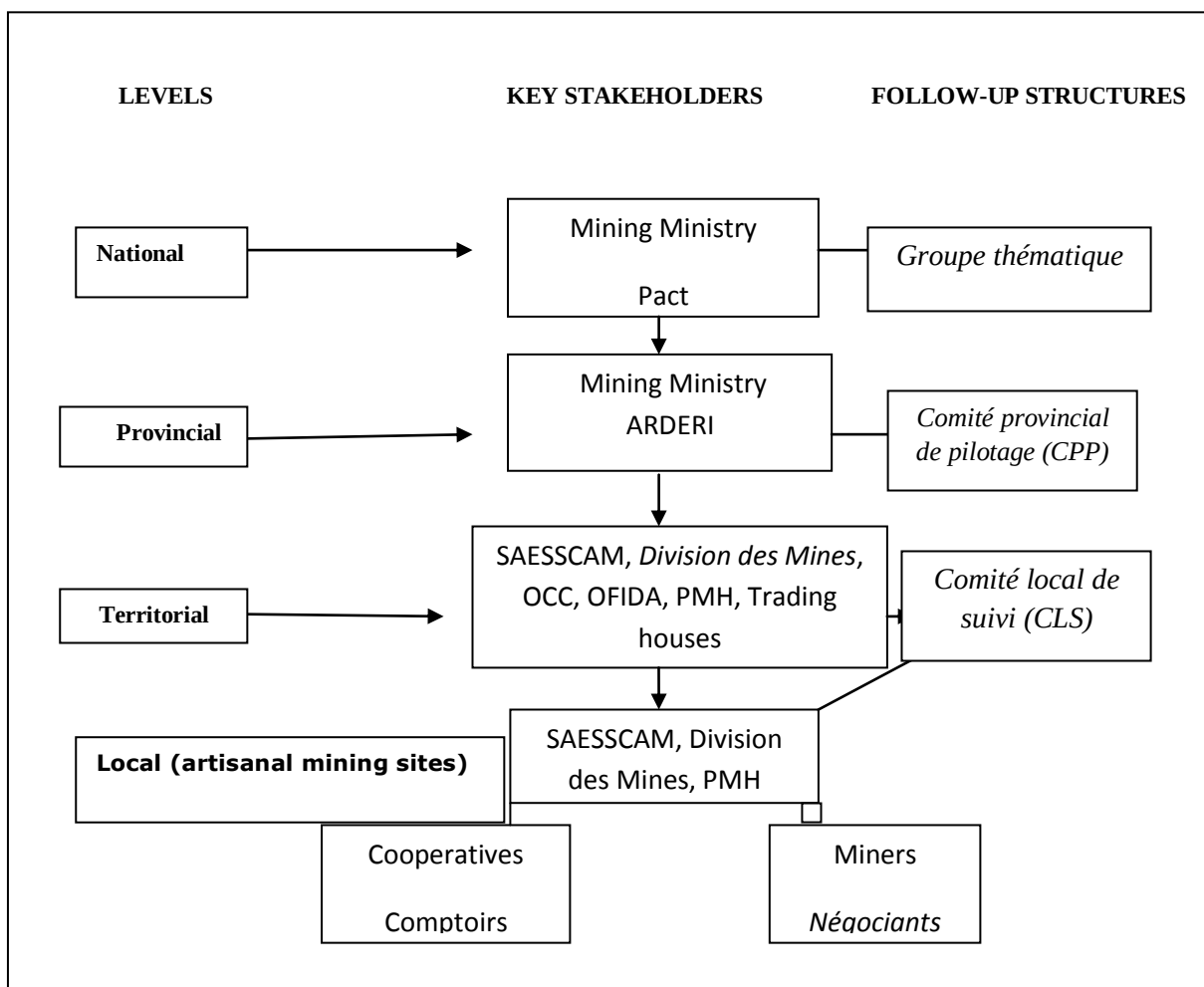
⁴⁸ At the end of 2014, there were about 13 mining companies holding mining research permits in the Tanganyika province. For further details, see Omasombo (2014: 352).

Katangese head office in Kalemie in early 2011 and two field coordination offices in Manono and Mitwaba, iTSCi began in Kisengo and Mai-Baridi in April 2011 and in Kahendwa in January 2012. The iTSCi programme has also been implemented in the Congolese provinces of Maniema (starting in December 2012) and North Kivu (starting in March 2014), as well as being resumed in South Kivu (in October 2012). In 2014, iTSCi was in operation at 471 mining sites in eastern DRC, 232 of which were located in the former province of Katanga⁴⁹.

6.3.1. iTSCi's governance structure

The iTSCi programme involves many entities in its governance structure. These can be situated from the national level to the level of the mining sites. This section explains how iTSCi was organised and how it collaborated with these entities, including its partners.

Figure 2. The iTSCi governance structure



⁴⁹ See the general overview of the iTSCi programme presentation of ITRI delegates at the 9th OECD meeting in Paris, May 2015. iTSCi is also implemented in Rwanda and Burundi, where, in March 2015, it covered 815 mining sites in Rwanda and 40 in Burundi.

As Figure 2 shows, iTSCi partners form four categories. The first category is composed of state agencies. These include the national and provincial Mining Ministries in Kinshasa or Lubumbashi. In Kinshasa, ITRI and Pact (a United States-based non-governmental organisation that is the ITRI implementing agency in DRC) sign a yearly contract with the national Mining Ministry. This contract (*protocole d'accord*) renewed every year outlines the terms of reference of iTSCi's implementation in DRC⁵⁰. Also in Kinshasa, there is a *groupe thématique*, a kind of think tank gathering together a number of stakeholders who are directly involved or have economic interests in the mining business. Participants in the *groupe thématique* discussing how the mining reforms are undertaken on the ground include representatives of iTSCi and Pact, state agencies (especially SAESSCAM, the *Division des Mines* and the national Ministry of Mines), the *Chambre des Mines* (mining chamber), trading houses, mining cooperatives and extractive companies.

At the provincial level (in Lubumbashi, before the restructuring of the Katanga province), the provincial Mining Ministry, along with other state agencies including SAESSCAM, the *Division des Mines* and the *Centre d'Evaluation, d'Expertise et de Certification des Substances Minérales Précieuses et Semi-précieuses* (CEEC, Centre for Evaluation, Expertise and Certification of Precious and Semi-precious Mineral Substances)⁵¹ performed a number of tasks. These tasks included, for instance, the taxation of exported minerals. Other tasks were administrative and revolved around controlling the trade and export of minerals undertaken by trading houses, mining companies and cooperatives. The *Comité Provincial de Pilotage* (CPP), which was created along with iTSCi, also functioned in Lubumbashi. Presided over by the provincial Minister of Mines, the CPP met yearly, gathering together several mining stakeholders based in the Katanga province. In the Katanga province, iTSCi collaborated with the *Association Régionale pour le Développement Rural Intégré* (ARDERI), a Congolese NGO with its head office in Kolwezi. Although I was unable to determine why iTSCi made this choice, it was

⁵⁰ In 2012, this contract comprised a number of points explaining, for example, the objectives of the iTSCi, the provinces where iTSCi was to be implemented, the participants in and frequency of assessment meetings, and the management strategy of data and statistics on minerals. See *Protocole d'accord entre le ministère des mines de la République Démocratique du Congo et ITRI LTD sur l'Initiative d'ITRI sur la chaîne d'Approvisionnement de l'étain*, Kinshasa, Janvier 2012.

⁵¹ CEEC is a Congolese mining authority responsible for assessing the economic value of minerals. CEEC also plays a role in setting prices, along with trading houses and mining cooperatives.

remarkable because ARDERI was specialised in rural development, while there were other NGOs in Katanga that specialised in mining. ARDERI employees—who were also iTSCi field staff members—monitored iTSCi’s ‘tagging and bagging’ at the mining sites where the programme was in force.

The *Comité Local de Suivi* (CLS) functions at the territorial level (in Kalemie and Nyunzu). Chaired by the administrator of the territory, the CLS held discussions about the progress and the challenges faced by the iTSCi programme—and the whole reform process—in the course of its implementation. CLS meeting participants were representatives of local and international NGOs working in the area, members of the *comités des creuseurs, négociants*, staff members of mining companies or cooperatives, and, sometimes, customary chiefs of areas where mining activities took place.

Finally, at the mining sites, iTSCi field staff (*superviseurs de sites*) collaborated with staff members of trading houses and mining cooperatives, for example when the iTSCi staff inspected their mineral depots or elaborated the *rapports d’incidents* (incident reports)⁵².

6.3.2. The functioning of iTSCi’s ‘tagging and bagging’

This section outlines the everyday working of iTSCi at the mining sites. It starts by explaining that, with iTSCi’s ‘tagging and bagging’, the coltan supply chain functioned as a ‘closed pipe’. According to Jorns and Cishugi (2015: 13), ‘a closed pipe supply chain involves a limited and pre-determined number of actors with direct relations to each other, i.e. a single mine, a single exporter, a single trader where the material is sold to a pre-determined customer at a given price’.

The iTSCi closed-pipe technically functions as follows: *Creuseurs* sell coltan to a very limited number of well-known *négociants* recruited and appointed by mining cooperatives at fixed *postes d’achat* (buying stations or selling points). All of these *postes d’achat* were installed near mineworkers’ tunnels. In September 2014, 28 *négociants* (including four women) were working at Kahendwa, Kisengo and Mai-Baridi. At each of

⁵² Incident reports aimed to denounce practices that undermined iTSCi’s implementation, such as corruption and the smuggling of minerals.

these *postes d'achat*, coltan loads were weighed, given iTSCi tags, so-called mine tags and put into bags. Finally, each cooperative handed over its loads of tagged and bagged minerals to the trading house's counting office (*comptoirs*), before the minerals were exported to the international market.

Table 3. Landmark events related to mining in northern Katanga and DRC as a whole

Year	Event
1906	Creation of the <i>Union Minière du Haut-Katanga</i> , renamed <i>Générale des Carrières et des Mines</i> (Gécamines) in 1967.
1932	The Compagnie géologique et minière des ingénieurs et industriels belges (Géomines) started exploiting tin (cassiterite) in Manono
1996	Start of artisanal mining of tin in Manono
2002	Publication of the Mining Law
2003	Publication of the mining regulations
March 2007	Coltan exploitation was initiated in Kisengo and Mai-Baridi
26 November 2008	The governor of Katanga asked all unauthorised forces to leave artisanal mining areas (Circular Note № 2631 of 26 November 2008)
July 2009	iTSCi was launched in Kalimbi/Nyabibwe (South Kivu)
September 2010–March 2011	President Kabila banned mining activities in the provinces of North and South Kivu and Maniema (Decree № 0705/CAB.MIN/MINES/01/2010 of 20 September 2010)
April 2011	iTSCi began implementation in the former Katanga province
September 2011	Coltan exploitation started in Kahendwa
9 March 2009	The Katanga government granted Mining Mineral Resources (MMR) and Coopérative des Artisans Miniers du Congo (CDMC) the mines of Katonge, Lunga, Mai-Baridi and Kisengo

7. Analysis and conclusions

The aim of this chapter was to provide historical background for artisanal mining and the mining reforms in the Congolese region of Katanga, especially in the northern part of the region. The chapter has drawn on debates concerning externally driven policy and institutions in post-conflict settings. Explaining how artisanal mining came into being in DRC, the chapter elaborated on how the mining business has been shaped by conflict minerals. It then introduced a series of measures designed to deal with these conflicts, which have been implemented along with measures related to the formalisation of artisanal mining. The chapter introduced one conflict minerals policy, the iTSCi programme, in detail.

One major finding presented in this chapter is that artisanal mining has a long historical organisation in the Katanga region. For instance, before the reforms, artisanal miners were organised around the *comités des creuseurs*. Customary chiefs provided mining shafts to the *creuseurs*, and the trade of minerals was organised around and by the *négociants*, albeit in an informal way and through smuggling patterns (Spittaels, 2010: 17). This means that the reforms did not enter into an arena of anarchy or an institutional void. To be better understood, the reforms should therefore be considered in light of the past, because these reforms have added a layer to the forms of organisation that already existed.

This chapter also has also pointed out an important historical continuity involving the demarcation of AEZ. Establishing a number of AEZ was part of a broad policy reform initiative adopted to formalise artisanal mining and to address the problems of conflict minerals (e.g. smuggling), which hindered the governance of mining activities. This chapter has shown that, in the southern part of Katanga, the Belgian colonial powers, and later the Congolese state, allocated vast mining concessions to private large-scale extractive industries, predominantly Gécamines. These entities managed their concessions as ‘enclaves’, in other words, in the form of closed and isolated territories. In the wake of ongoing reforms, the Congolese state has enforced a similar policy through the establishment of AEZ. By entitling trading houses and mining cooperatives to manage these AEZ, the state has favoured the operations of these entities, turning the artisanal mining sector into an increasingly privatised sector.

Moreover, it was shown in this chapter that trading houses and cooperatives working under the iTSCi programme provide a new repertoire of practices for *creuseurs* and *négociants*. These practices relate, for example, to where *creuseurs* sell minerals (the buying stations) and to whom they do so (appointed *négociants*). These changes are organised around the iTSCi ‘tagging and bagging’ system. The introduction of these new practices leads us to conclude that the mining reforms, alongside externally driven policy interventions and institutions, bring new challenges. These challenges result from tensions between the newly introduced policy (iTSCi) and institutions (cooperatives and trading houses) and the pre-existing stakeholders (*creuseurs* and *négociants*, or other local powerholders, such as customary chiefs) who extracted minerals or managed the AEZ prior to the reforms. Thus, the interactions among all of these actors signal that ‘it’s here [in the field of intervention] that we see most clearly the emergence of various kinds of negotiated orders, accommodations, oppositions, separations and contradictions’ (Long 2004: 15).

Finally, the present chapter has shown that artisanal mining has become an important livelihood activity for people in the northern Katanga region, which was historically predominantly agrarian. Considering that *creuseurs* and *négociants* who were previously established in the mines relied on coltan mining and trade for their livelihoods, examining how the mining reforms have changed this situation is an interesting and important line of enquiry. Such a topic can best be explored in the ethnographic tradition, which involves studying people’s practices in their own settings and grounded in their own historical or current experiences and perspectives (Reimer, 2009).



Photo 2.1. Benz village, located 8 km from Mai-Baridi (formerly known as 100 kg) where the CDMC was established



Photo 2.2. Billboard that signals the Kahendwa AEZ

— CHAPTER 3 —

Mining Cooperatives

This chapter was presented at ‘World Humanitarian Summit’ (Addis-Ababa/March 2016). It has been published as a book chapter as:

Wakenge C.I. and Hilhorst D. (2017). Emergency or Durable Solution? Coltan Mining and Cooperatives in Northern Katanga. In Hilhorst D., Weijs B. and Van der Haar G. (eds.) *People, Aid and Institutions in Socio-economic Recovery: Facing Fragilities*. London and New York: Routledge.

Abstract

In an attempt to break the linkages between mining and violent conflicts in the Democratic Republic of Congo, the Congolese government and the international community have embarked on organising the informal mining sector. One measure has been the creation of mining cooperatives that represent the interests of miners and ensure the transparency of the mineral trade. This study examined how the cooperatives function in practice. We especially focused on how these new institutions interact with existing institutions, paying attention to the role of ‘big men’ with large economic interests in artisanal mining in both old and new institutions. Data were collected through an ethnographic study carried out between 2013 and 2014 in northern Katanga. We found that cooperatives were top-down creations that by-passed the institutions already established by the mineworkers. They overlooked the influence of elites in the process of institutional formation, to the detriment of miners. The study cautions against the view that the creation of new institutions (cooperatives) will lead to the improvement of miners’ working conditions. New initiatives like the mining cooperatives should be based on knowledge of the actual situation and grounded in existing institutions.

1. Introduction

‘Cooperatives are etiquette, appendix, wrap, skeleton [...] We are not informed when mineral’s price increases but only when it collapses.’ (Interviews with miners in Kisengo, September 2013).

This chapter studies institutional change by zooming in on what happens when new institutions created by policymakers interact with existing local institutions. It focuses on the creation of mining cooperatives in the Congolese region of northern Katanga, and examines the working of these new institutions and the implications these have had for the artisanal miners in the area.

During the 2000s, the international community has supported a series of reforms in the Congolese mining sector. These reforms were meant to break through cycles of conflict in which mineral resources are perceived to play a major role (Autesserre, 2012). In addition, the reforms were meant to formalise the informal mining sector in DRC. The mining sector is, up to now, predominantly organised through artisanal mining where small teams of miners dig and exploit their own tunnels, and the DRC government views the reforms as a means of bringing artisanal mining under control and improving its

management. The reforms are also meant to improve the conditions of miners. In order to address the appalling poverty among miners and their exploitation by power holders (which are referred to as ‘big men’ in this chapter, following Utas (2012)), the 2003 Mining Law encourages miners to create or become members of cooperatives in order to protect their interests. According to the law (Art. 234), the cooperatives should emanate from ‘*groupements d’exploitants artisanaux*’, that is, from the pre-existing informal miners’ organisations. The initiative to form new cooperatives with a formal role in the resource chain can be seen as an attempt to ‘rectify an institutional deficit’ (Cleaver, 2012: 2), as it is meant to refashion these ‘*groupements*’ while improving the living and working conditions of miners (World Bank, 2008: 5). This chapter examines how these cooperatives worked in practice, and raises the question whether they really represented the interests of the miners (as they claim to do).

By definition, cooperatives are ‘autonomous associations of persons united voluntarily to meet their economic, social and cultural needs and aspirations through a jointly owned and controlled enterprise’ (Birchall, 2003: 3). In Africa, however, there is a long tradition of cooperatives that have been instigated by the state (especially by the colonial powers). Barry concluded that ‘attempts to form cooperatives have usually failed’ (1996: 8) because of the top-down format in which they were created and a lack of know-how among the policymakers designing the initiatives. Nonetheless, scholars and policymakers were convinced that mining cooperatives in sub-Saharan Africa can make artisanal mining economically viable and have the potential to contribute to poverty alleviation (Hoadley and Limpitlaw, 2004; World Bank, 2008).

This optimistic take on the potential working of cooperatives in the mining sector has not been underpinned by large bodies of evidence. Sinding (2005: 8) observed that, apart from a very limited number of studies documenting the establishment of mining cooperatives as examples of successful policy interventions, hardly any research has been done on the role of mining cooperatives in reform of the artisanal mining sector. Anuarite and Geenen (2014) in their seminal research on cooperatives, found no evidence of the effectiveness of the cooperatives.

This chapter focuses on mining cooperatives in the northern part of Katanga. It is based on two years of qualitative research in 2013/2014, with eight months spent in the mining site of Kisengo. Since 2007, Kisengo has been the most populated and productive coltan

mining site of this region. From the beginning, miners were represented by a local miners' association, the *Association des Creuseurs de Kisengo* (ACK). In 2009, Kisengo was granted to Mining Mineral Resources (MMR, see Chapter 2, Table 3), an Indian buying house that has its Congolese head office in Lubumbashi (capital of Haut-Katanga province). MMR closely collaborates with *Coopérative des Artisans Miniers du Congo* (CDMC), a mining cooperative created in Lubumbashi on 10 April 2010. The takeover by MMR of the mining site of Kisengo thus also signalled the introduction of CDMC into the area.

This chapter analyses the interactions between the formal CDMC mining cooperative and the pre-existing miners' association ACK, with special attention to the issue of the role of elites and the way in which miners' interests, in particular through negotiating the price of minerals, have been represented. According to Cleaver (2002), it is important to understand the interactions between newly introduced and socially embedded institutions when aiming to improve resource management.

The chapter is organised as follows. We first introduce the conceptual framework. Then, a background is provided on cooperatives in Africa, in DRC and in Katanga, followed by a discussion of the methodology. The fourth and fifth parts present the case study. The final section concludes the chapter.

2. Conceptual framework: institutions, policy and 'big men'

This chapter centres on the everyday interactions between cooperatives and local organisations and examines the institutional approach to crises in post-conflict areas. This approach draws on the idea that institutional processes of formation and deformation continue during, and are partly shaped by, the dynamics of the crises and the responses to the crises (Hilhorst, 2013: 9; Meagher et al., 2014). Thus, in cases of institutional engineering, such as the formation of mining cooperatives, it is important to realise that new structures in post-conflict settings never start with blank slates (Cramer, 2006), but interact with local institutions and various forms of operating authorities (Hilhorst et al., 2010).

Institutions are never static. Change can occur in various ways, through conflicts, internal development or external (policy) interventions. During such processes, new institutions, norms and rules are introduced and are negotiated, contested and constructed through

human interactions (Christoplos and Hilhorst, 2009; Hyden, 2008). In many ways, including formal and informal interactions, coercive violence, gossip or writings, social actors interpret and give meaning to institutional rules and norms (Hilhorst and Serrano, 2010; Jutting et al., 2010). Policy processes and the institutions they bring about cannot be considered as fixed and planned. They are best conceived of as emergent and negotiated. Institutions are shaped through the blending of the old and the new, customs and inventions, and the multiple strategies of social actors that each bring their own interpretation and interests to the ‘arena’ of institutions. Institutions are shaped through the interactions of all these actors and factors (Colebatch, 2009).

In this chapter, we especially focus on the role of so-called big men, meaning people endowed with the ability and power to command (Utas, 2012: 8). The big men can also be seen as ‘elites’ (Platteau, 2004). Irrespective of the scope and nature of their power, big men are recognised to shape policy outcomes in many ways. They can be, overtly or covertly, a barrier to social change, embodying the phenomenon of elite capture (Blair, 2000). This is particularly important in crisis settings where formal institutions tend to be weak in enforcing regulations. As a result, big men often emerge and vie for power and control of resources, and are often seen to be instrumental in breeding conflict. On the other hand, the presence of big men can also be favourable to local people, who may find room for negotiation arrangements for their protection (Garrett et al., 2009). Big men can couple their personal interests with extending protection and services to the poor in their communities. In this vein, Kyamusugulwa and Hilhorst (2015) found elites leveraging their position and strengthening their power base by shaping policy processes for positive development outcomes. The position and influence of big men can thus not be assumed but needs to be established empirically.

In the mineral sector, big men have indeed been observed striving for personal gain at the expense of those less powerful. Fischer (2007: 747), for instance, has observed that formalisation in the Tanzanian mining sector has been beneficial to wealthier individuals capable of acquiring mining titles, while it has led to the exclusion and/or marginalisation of individuals lacking the necessary financial means and connections. Similarly, Geenen has noted that, in DRC, mining reforms are likely to favour powerful and well-informed participants in the mining business (Geenen, 2012). Finally, in Ghana, Machonachie and Hilson (2011b) have pointed out that the leaders of mining cooperatives have had an easier time obtaining mining licences than ordinary artisanal miners.

This chapter follows up the discussion on the role of big men and the representation of miners' interest, by focusing on what happens in the transition from informal local miners' associations to government-induced formal miners' cooperatives in the wake of mineral reform in Katanga. It looks into the relationships between cooperatives and pre-established miners' organisations, and observes how the changes they have brought about also allowed big men to consolidate their powerful positions.

3. Cooperatives in a historical perspective

3.1. Cooperatives in Sub-Saharan Africa

In many parts of sub-Saharan Africa, cooperatives came into existence in the 1920s during colonial times. They were introduced as modern organisations that would replace traditional forms of cooperation between Africans, mainly in the agricultural sector. Through the creation of cooperatives, colonial governments wanted to increase crop production and give farmers the opportunity to protect their interests (Schwettmann, 1997). In reality, cooperatives ended up controlling economic activities in rural areas. As Develtere (1994) explains, rather than serving the interests of their members, cooperatives became instruments of control in the hands of the colonial administration.

In the 1960s, the early independence period, cooperatives continued to be state-controlled. Wanyama et al. (2009) found that cooperatives in those days had little autonomy. Similarly, Holmen (1990) observed that cooperatives did not originate from below, but their development was planned by government departments. As a result, most cooperatives 'served as instruments for implementing government socio-economic policies' (Wanyama et al., 2009: 1). Ultimately, they failed to satisfy members' needs and many of them disappeared as they were sponsored by the state and 'had become a heavy burden on the state budget' (Schwettmann, 1997: 5).

In the 1990s, cooperatives were restructured and liberalised with support from the World Bank. Since then, we have seen cooperatives being established in various domains of development and poverty alleviation (Birchall, 2003). Most of them are active in the agricultural sector and in financial services (Allen and Maghimbi, 2009). However, mineral-rich countries have also witnessed the creation of mining cooperatives. In Mali, mining cooperatives have been set up with the aim of improving efficiency in the mines (Keita, 2001: 13). In Tanzania, mining associations have been legally recognised since

1987. Yet, according to Fischer (2007: 752), the government officials who encouraged their creation have tended to exclude miners from decision-making processes, thereby negatively affecting their lives and livelihoods. Finally, Hilson et al. (2007: 422) examine how the Ghanaian state was eager, yet unsuccessful, to curb illegal mining through the creation of cooperatives.

3.2. Cooperatives in DRC

The Belgian colonial government started encouraging the creation of cooperatives in 1921. In the agricultural sector, they were structured around the so-called *paysannat indigenes*, which were areas created to test the efficiency of modern farming techniques. In the 1960s, *paysannats* disappeared due to economic constraints and mismanagement (Mandjumba Mwanyimi-Mbomba, 1988). Although some cooperatives survived, Masudi (2014) points out that the lack of financial support from the state compounded their problems.

In the 1970s and later on, other forms of cooperatives emerged. In contrast to the colonial model, a 1972 ministerial decree (N^o 72/004 of 4 January 1972) stipulated that they were to be run as a kind of alternative banking system. As in other African countries, this policy switch occurred as part of a poverty reduction strategy supported by the World Bank and the International Monetary Fund (Birchall, 2003: 17–19). In 2001, another decree (N^o 004/2001 of 20 July 2001) was promulgated in DRC, constituting, up to now, the legal framework for cooperatives and other non-profit organisations.

Current policy on mining cooperatives stems from the 2002/2003 Mining Law and regulations. The latter provide two procedures for creating cooperatives. First, the demarcation of an AEZ (Artisanal Exploitation Zone). AEZs are areas exclusively designated for artisanal mining activities. The formation of an AEZ is restricted to areas where ‘the technological and economic factors are not suited for industrial exploitation’ (Mining Law, T. 4, Ch. 1, Art. 109). The law recognises that there may be informal organisations in these areas, and states that these so-called *Groupements d’Exploitants Artisansaux* (Groups of Artisanal Miners) can ask to become mining cooperatives (mining regulations, Art. 235-236). Secondly, once the cooperatives have been legally recognised by ministerial decree, miners can request a research permit (*permis de recherche*), valid for four or five years (regulations, Art. 103-1010) or obtain an exploitation permit (*permis d’exploitation*). This process requires a total amount of 3,500 USD for

administrative costs paid by the group of miners (decree № 0458 and 304 of 14 March 2011).

In the eastern DRC, cooperatives have mushroomed since September 2010, following a temporary presidential ban on artisanal mining activities in North Kivu, South Kivu and Maniema (Geenen, 2012) that was meant to create political space to address the dynamics of poverty, exploitation, and conflict in the mines. After the ban was lifted, the government made it clear that only recognised cooperatives could continue to work in the artisanal mines. Although it only concerned these three provinces, the ban served as wake-up call to other provinces where people promptly created cooperatives. In most cases, some individuals took advantage of their position to create cooperatives or to reinforce their political and economic influence while claiming to represent miners' interests (Cuvelier, 2013; Geenen and Radley, 2014: 61).

3.3. Cooperatives in Katanga

Cooperatives have existed in Katanga since the colonial era. In the study area, one cooperative was founded by craftsmen in Nyunzu as early as 1937. Another was formed by local traders and was based in Kalemie (capital of former Tanganyika district) since 1947. Today, these cooperatives no longer exist and none of them operated in the mineral sector (Mandjumba Mwanyimi-Mbomba, 1988).

The first cooperative that appeared on the Katangese mining scene was EMAK (*Exploitants Miniers Artisanaux du Katanga*). It preceded the 2003 Mining Law and was created in 1999. According to Global Witness (2006: 22), EMAK was 'like an informal state structure' because it was officially independent but acted like a government body. It was followed by *Coopérative Minière Madini Kwa Kilimo* (CMKK) in 2004. Global Witness (2006) reported that EMAK and CMKK extorted miners and middlemen (the *négociants*) by imposing illegal taxation on them.

In Katanga, the number of cooperatives has exploded since 2010. Today, there are more than fifty registered cooperatives in the province. Several factors played a role in this. First, there was the mining ban mentioned above. Secondly, there was a large reform project, iTSCi (ITRI Tin Supply Chain Initiative), which operated in South Kivu but was transferred to Katanga after the ban. The objective of the iTSCi project is to avoid the sales on the international market of minerals originating from conflict zones through a 'tagging and bagging system'. In this system, cooperatives play a key role in organising

the purchases of minerals at the mining sites, thus working at the interface between mineworkers and trading houses. Thirdly, in the wake of reforms, the Katangese provincial government took several steps on the minerals' trade. In November 2008, Moise Katumbi, the Governor of Katanga, urged all unauthorised state agencies to leave the mining areas (Circular Note № 263). This was followed by other regulations on 3T trade (tantalum, tin and tungsten) from Katanga to other provinces. Moreover, some AEZs were demarcated and granted to cooperatives. Finally, the Katangese government allocated mining concessions to private companies or signed contracts on minerals' trade with others. On 9 March 2010, MMR was granted (decree № 06/1331/CABMIN/MAF/KAT/2009) exclusive rights to buy minerals, in collaboration with the cooperative CDMC, in four artisanal mines located in northern Katanga, namely Katonge, Kisengo, Mai-Baridi and Lunga. The vast majority of all these cooperatives were therefore not initiated by mineworkers, as was foreseen in the Mining Law, but came about through different outside forces, including the state, the iTSCi project, buying houses and mining companies.

4. Research area and methods

This chapter focuses on the local dynamics of cooperatives through a single case study. Such an in-depth case study enabled the gauging of different layers of local realities. It concerned the interactions between the cooperative CDMC and ACK, the local association of mineworkers in Kisengo, a coltan mining site located at the northeast of the territory of Nyunzu. This case was selected for various reasons. The first author had a long immersion in the area: He carried out his PhD fieldwork there, which fostered the development of trust with many of the actors involved. Preliminary research revealed that whereas this case resembled many other cases, many aspects were more pronounced in the CDMC/ACK case than in the others. The case stood out, in particular, because related unrest led to open disagreement, which, in turn, allowed different actors to speak out about their views while at the same time facilitating access to the complex reality on the ground. This was important because normally processes of conflict, co-optation, corruption and conflict are, at the very least, partly hidden.

Empirical data were collected in Kisengo with some additional interviews in Kalemie. Kisengo can be reached by road and is 115 km from Nyunzu-centre. Coltan was discovered in Kisengo in March 2007. Since then, it has become a burgeoning mining site

with approximately 17,000 inhabitants, including 1500 mineworkers. Most of the inhabitants belong to the Bakalanga ethnic group. In Katanga, Kisengo was the first mine to host the iTSCi project in April 2011. It is also the most productive coltan mine of northern Katanga. In 2014, 284 tonnes of coltan were extracted by mineworkers (*creuseurs*) and through semi-industrial methods that were set up by the Indian mining company, MMR. Since 2007, various actors have been involved in resource governance in and around the Kisengo mining site.

Over a period of eight months, data were collected for this case study (and more broadly for a PhD project of which this chapter is part) through participant observation, semi-structured interviews and informal conversations. In total, 166 persons were interviewed either in groups or individually. They included representatives of CDMC and MMR, former members of ACK and the *Comité des Creuseurs*, local authorities, miners, négociants and shaft owners. The first author attended several meetings held by the state agency that supports the artisanal mining sector, *Service d'Assistance et d'Encadrement du Small-Scale Mining* (SAESSCAM) and the *Division des Mines*. Observations took place during several visits to the mines. On some of these occasions, the first author had the witnessed riots involving artisanal miners. Finally, he accessed and analysed letters expressing the concerns of the *Comité des Creuseurs*' members against CDMC and MMR.⁵³

5. Organisation of mining

In Kisengo, miners were organised in teams of four to ten workers, so-called *mercenaires*. These groups did not work independently because they usually lacked the finances to purchase a pit or to support digging operations. Therefore, they worked, through manual labour, for shaft owners who provided food rations and basic equipment. Between 2007 and 2009, pits were mainly located near the surface, in alluvial deposits, which made access to minerals easier than today. At that time, digging operations went on from two to three weeks while shaft owners spent around 500 USD in support of digging operations. Once production became available, the revenue was equally distributed between shaft owners and *mercenaires*. Yet, when the shaft was unproductive, people agreed that: '*he [the pit owner] lost money and mercenaires their energy*'.

⁵³ Letters of March 3rd and 29th, 2014 concerning '*demande de la hausse du prix du coltan*' and '*demande des accords de la découverte*'.

5.1. The evolution of ACK: 2007–2010

The association of artisanal miners, ACK, was created at the end of 2007 by the *chef de groupement* of Kisengo. It was structured around a steering committee called the *Comité de Base* (CB), which was composed of twelve members and led by a President, four counsellors and seven members. Among members of this CB, nine were of the Bakalanga ethnic group and the others were people from Maniema and South Kivu. Although it proved difficult to find exact and reliable figures, it is estimated that, by the end of 2009, Kisengo was home to about 3,000 to 5,000 *creuseurs* (mineworkers) and more than a hundred *négociants* (middlemen). They came from different places. Most of the *creuseurs* originated from Nyunzu-centre, Kalemie, surrounding villages, Maniema and South Kivu while *négociants* were mostly from North and South Kivu provinces.

The *chef de groupement*, a member of the Bakalanga ethnic group, was very influential in the daily activities of ACK. Although the main objective of ACK was to organise *creuseurs* around digging activities in Kisengo, he appointed members of the *Comité de Base*, many of them being his relatives. As one pit owner said during an interview in Kisengo, on 15 May 2014: ‘when ACK was created, the collaboration between autochthons [the population of Bakalanga] and other people was difficult. The former had precedence to access the mines’. This statement reveals that members of the *Comité de Base* had higher entitlements in controlling mining activities. They allocated shafts to people at 60 to 100 USD/shaft, depending on its size, location and potential of production. Besides, they also levied customary royalties, the so-called *tozo* [a Bakalanga term used to refer to this customary tax]. *Creuseurs* paid *tozo* in cash, the equivalent of 2 USD twice a month. They were then granted a voucher that allowed them to mine. For their part, shaft owners paid the so-called *koroboi ya chef* at the production phase. This usually was a payment in kind, valued at approximately 50 USD. It was said to prevent bad luck in the shaft [Koroboi is a tomato can of approximately 25 gr].

When they arranged for the transportation of the minerals to buying houses, *négociants* paid 3 USD/kg to the *Comité de Base*. Similarly, all local traders also paid, on a monthly basis, a *tozo* either in Kisengo-village or when they opted to trade in the mines. The *tozo* varied proportionally to the type and value of commodities. A final issue that illustrated the strong influence of the *chef de groupement*, during the mining boom in Kisengo, was that he was upgraded in April 2009 when the acting District Commissioner of Tanganyika promoted him from *chef de village* to the position of *chef de groupement*.

The ACK was thus an association initiated by a big man, the local chief, steered by a group of people closely related to him, and the main objective appeared to be the collection of informal taxes and levies from mineworkers and traders for the personal benefit of this elite group. The ACK also had a function in conflict management in the mining area. When conflicts arose between shaft owners and miners, or shaft owners and traders, ACK mediated and imposed penalties.

5.2. ACK and state actors

Between 2007 and 2010, ACK exerted direct control over mining activities, yet there were also some government offices regulating mining. In particular, the offices of SAESSCAM and the *Division des Mines* were established in July 2007. SAESSCAM collaborated with the *Comité de Base* in allocating shafts. It was also involved, along with agents of the *Division des Mines*, in levying tax from miners and *négociants*. In the eyes of local peoples, most of these taxes were illegal as these agents had the habit of not delivering receipts.

ACK interfered very much in the daily activities of SAESSCAM. Although being a public service, SAESSCAM was managed by the son of the *chef de groupement* who was said to have created SAESSCAM in Kisengo. Later, in December 2010, he left SAESSCAM after being appointed *chef de village*. Finally, five to ten soldiers of the national army (69th brigade) were also located in Kisengo between 2008/2009. They also interfered in the mining business through ‘coercive governance’, meaning that they robbed people and imposed illicit fees and taxes (De Koning, 2010: 12). One Kisengo *négociant* said that this situation, which went on until mid-2010 was, to some extent, condoned by ACK members who feared being abused by the military.

The next section describes how reform impacted on the evolution of ACK and on mining activities in Kisengo.

5.3. CDMC: From Lubumbashi to Kisengo

CDMC came into existence on 10 April 2010 in Lubumbashi, the capital city of Haut-Katanga and far removed from the actual mining sites. Its objective was to ‘promote the economic and cultural interests of its members’ (CDMC statute, Section 2, Art. 4). Its board consisted of seven members: five lived in Lubumbashi, and two in Likasi and Kinshasa respectively. One of the board members was the brother of the national Minister of Mines, Martin Kabwelulu. The Chairman of the board was not a miner but Serge Mulumba, a communication professional, who had previously headed several radio and television companies. He was still heading CDMC at the time of the fieldwork. In northern Katanga, CDMC has become the largest cooperative, claiming to represent up to 13,000 miners.⁵⁴

CDMC expanded its activities to Kalemie and Nyunzu in June 2010. The cooperative made a strategic decision in appointing a former catholic priest, Abbé Arnold Champo Mumba as their representative. Abbé Champo is a man in his 50s of the same ethnic group (Babemba) of Moise Katumbi Chapwe, the provincial governor. As a former priest, Champo had the visibility and capacity to mobilise the communities. Because of his ‘celebrity’ status, the miners nicknamed him *Ronaldinho*, after the famous Brazilian football player. Nevertheless, the same miners believed that Champo used several strategies to deceive them.

5.4. Reshuffling old and new decks of cards

Mining Mineral Resources (MMR) arrived in January 2010, and CDMC and Champo came to Kisengo six months later. Because his arrival followed MMR, many miners assumed Champo was working for the company. Whereas CDMC formally represented the mineworkers and their interests in negotiating prices and facilities with MMR, miners used to speak about the two entities as belonging together and often referred to CDMC/MMR.

When MMR staff arrived in Kisengo, they used various strategies to gain acceptance by people. They first had talks with the *chef de groupement*. As the MMR representative said: ‘*I informed him that MMR planned to construct bridges, schools and hospitals, etc. He was very enthusiastic. But, in the end, the chef de groupement asked me: so, what are*

⁵⁴ Interview with CDMC representative/Kalemie May 2013.

*you planning for me?*⁵⁵ This remark conveys that the *chef de groupement* had vested interests in the mineral business, and despite the intention of MMR to trade minerals and carry out social projects for the mining communities, he would not collaborate unless personally compensated for these interests. After his initial reluctance, the *chef* agreed with MMR for a payment in exchange for his *redevance coutumiere* (customary tribute). The amount was kept secret but it was believed to be 3,000 USD per month.

ACK members were also involved in the talks to introduce CDMC and MMR in the area. Most of them were reluctant to collaborate with MMR. However, the company promised an improvement of their social conditions through a number of social projects, and setting up food canteens, restaurant and bars at cheaper prices. A first canteen called *Mwayiseni* opened in April 2010. It was followed, in October 2010, by the bar and restaurant, *Serata*. When ACK members also heard that MMR planned to buy minerals at a fair price, people became enthusiastic in supporting their activities. CDMC further fostered acceptance by incorporating many of the committee members of the ACK into their organisational structure. By the end of 2013, CDMC consisted of nine *Chiefs de sites*, 47 *Gardes de Sites* and 21 *négociants*, among whom people from the local community.

Finally, MMR and CDMC relied on political support to facilitate their acceptance in Kisengo. A national parliamentarian, Bienvenu Kalunga Mawazo, visited Kisengo several times during his election campaign in 2011. During his visits, he called upon people to support MMR and CDMC.

While CDMC was able to gain the confidence of many actors in the area by, amongst other things, incorporating eight of the twelve members of the *Comité de Base*, the remaining members decided to form a new and independent *Comité des Creuseurs* in August 2010. It was led by the former President of the *Comité de Base*. People interviewed in Kisengo actually believed that this alternative committee was formed at the instigation of the *chef de groupement* who wanted to maintain control over mining activities. This *chef* gave evidence of this when he said: ‘*we need more oversight over our richness*’.⁵⁶ The existence of these multiple organisations thus signalled intra-elite contestation over control of mining.

⁵⁵ Interview with CDMC representative, Kisengo, February 2014.

⁵⁶ Interview with *chef de groupement*, Kisengo, June 2014.

6. Organising miners and feeding claims

6.1. Mining activities and the coltan trade

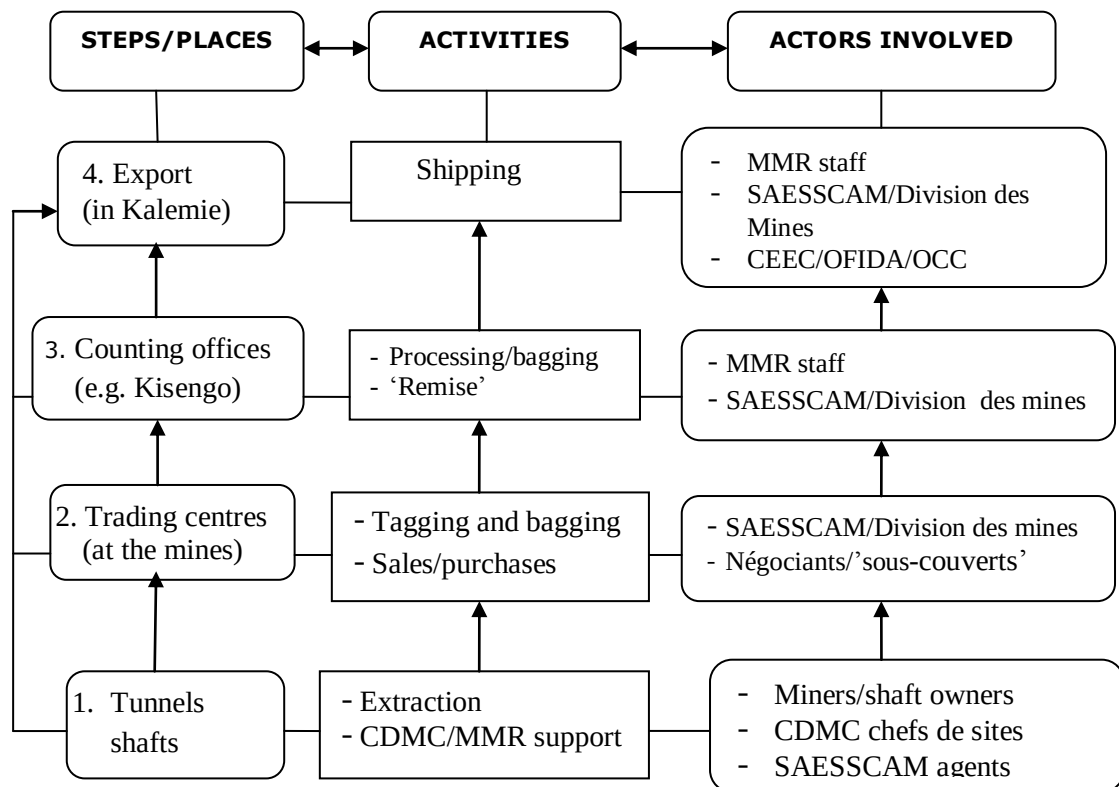
The presence of MMR and CDMC influenced the organisation of mining activities. Kisengo has now been subdivided into sectors, sub-sectors and shafts. Each sector had two to five *chief of sites* and *gardes de sites* and could be reached only after crossing MMR's check points. This organisation also allowed MMR and CDMC to provide technical support to *creuseurs*, for instance water supply and *découverte*, a shovelling job where the top layer of the pits is removed to facilitate access to minerals' deposits.

MMR and CDMC were also instrumental in creating different categories of miners. Some miners were able to obtain a permit, called a *carte de creuseurs* from CDMC, which allowed them to mine. Officers (*encadreurs*) of SAESSCAM distributed plots of land (*calendres*) of 10 to 20m² to these miners. In order to prevent accidents, they regularly inspected digging operations in and around the shafts.

In spite of this advanced technical organisation that could allow *creuseurs* to produce more, disputes often arose between *encadreurs* and *chefs de sites* appointed by CDMC. As one *chef de site* explained, '*We belong to CDMC and we need increased production. When encadreurs inspect the shafts and put a red flag to prevent accidents, this prohibition prevents our miners from working*'⁵⁷. These type of disputes happened on a regular basis.

⁵⁷ Interview with chef de site, Kisengo, July 2014.

Figure 3. The 3T mineral supply chain



Source: Fieldwork (2013/2014).

In Kisengo, the trade of minerals became more formalised as a result of regulations of MMR, CDMC and iTSCi. As Figure 3 shows, the mineral supply chain was organised as follows. At Step 1, miners and shaft owners extracted minerals from tunnels. They were now technically supported by the CDMC, MMR and SAESSCAM agents. At Step 2, miners sold coltan to 21 négociants at fixed trading centres (11 in total). At each of these centres, a fixed purchase price was given. However, in most cases, *négociants* delegated their associate so-called *sous-couverts* who bought coltan at the centres. After being 'tagged and bagged' by civil servants of SAESSCAM, all the transactions were recorded by agents of the *Division des Mines* on an iTSCi form (*Fiche de site minier*) and in logbooks. Then, CDMC staff collected mineral loads and proceeded to the 'remise' (Step 3). This operation consisted of handing over the mineral loads to MMR's counting office where they were processed and bagged again. Finally, coltan was processed and exported at Step 4. However, at this stage, other states agencies were involved in administrative procedures. These were respectively the Centre for Evaluation, Expertise and Certification of Precious and Semi-Precious Mineral Substances (CEEC), OFIDA (Revenue Authority) and the Congolese Office of Control (OCC). The organisation of the

supply chain appeared successful at a technical level, but underneath different tensions were found at the local level.

6.2. Growing unrest

In the above, we explained how the *Comité des Creuseurs* was formed in opposition to the incorporation of ACK members in the CDMC cooperative. However, in the course of time, it turned out that this *Comité des Creuseurs* became increasingly co-opted by CDMC. The *Comité* found some recognition and the President was for example involved in the allocation of shafts to the miners. In the eyes of miners, the *Comité* also increasingly favoured the decisions of MMR and CDMC on the price of the minerals and other issues. They felt that the CDMC had overtaken their own organisation, the ACK. Conveying that the ACK did not cease to exist, one interviewee declared ‘*We were almost legally recognised when CDMC arrived. But, today we feel marginalised*’.⁵⁸

A telling example happened on 29 September 2013, in a meeting convened by the CDMC staff and the MMR chief engineer. They informed the gathered miners that they planned to substantially reduce the price of coltan from 37.7 to 28.8 USD per kilo. They promised miners who would help in convincing the other miners to accept this deal, that they would receive *cartes de creuseurs* free of charge. Although the miners vehemently opposed the price cut, the *Comité* appeared to be supportive of CDMC/MMR. After intense discussion, some shaft owners were heard saying that: ‘*comité balishalambula chunvi*’, which means “the *Comité des Creuseurs* has already eaten salt”, meaning that the *Comité des Creuseurs* had been corrupted. The meeting ended with the CDMC staff and the MMR chief engineer at loggerheads with the miners.

The president of the *Comité des Creuseurs* later stated that he would be convinced that the miners would eventually accept the set price, ‘*Miners cannot support one day without eating. They will be inclined to sell minerals at any price*’.⁵⁹ He also mentioned that he personally possessed 17 pits and planned to travel to Dubai on the financial proceeds of the pits. He did not deny having been bought off, which further confirmed the notion that he was co-opted by the CDMC and MMR.

Another event that made miners and shaft owners believe that the *Comité des Creuseurs* was bankrolled by CDMC/MMR was their eviction from Bovu, in February 2014. Bovu

⁵⁸ Interview with former ACK member, Kisengo, February 2014.

⁵⁹ Interview with President of diggers’ committee, Kisengo, June 2014.

was the most productive quarry of Kisengo with nearly 250kg of coltan extracted per day. It had approximately 43 shaft owners and 450 miners. In December 2013, MMR and CDMC convinced the *Comité des Creuseurs* to initiate a campaign for evicting miners and shaft owners from Bovu where MMR planned to set up semi-industrial methods of exploitation. After resistance from the miners, MMR imposed a payment of 400 USD for each shaft and, ultimately, called in the police to evict them in February, 2014.

By this time, many miners perceived of the *Comité des Creuseurs*, CDMC and MMR as one entity united by personal interests and gain. Their anger against this bloc took different forms. Miners were most angry about the conditions under which prices were fixed and how the opening of new shafts, *découverte*, was organised. In interviews, they used expressions like ‘*CDMC is an etiquette, an appendix of MMR*’ or ‘*we are slaves*’; ‘*the president of the Comité des Creuseurs is a ghost*’ and finally, ‘*no one informs us when mineral’s price is up at the international market but only when it collapses*’. On 3 December 2013, a group of miners burnt down one *poste d’achat* of the CDMC and destroyed two others. When the demonstration came close to the offices of MMR, SAESSCAM and the *Division des Mines*, 16 miners were arrested, and taken to Nyunzu-centre where they were jailed for a month. They were released in exchange for 500 USD, after an intervention by the Diocesan Committee for Justice and Peace (CDJP, *Commission Diocésaine Justice et Paix*).⁶⁰ When the *Comité des Creuseurs* wrote a letter to protest against *découverte* and the ways in which prices were fixed, miners and shaft owners interpreted this as an empty gesture.

The protest of miners found further expression in the circumvention of the compulsory selling system. In many ways, miners managed to boycott the price monopoly set by MMR and condoned by CDMC. Some miners explained to the first author that they hid their minerals and sold it to clandestine *négociants*, so-called *hiboux* (locally known as owls, see Chapter 6).

The protest, finally, led to an initiative in July 2014 to organise yet another organisation for the miners. This was called the *Cadre de Concertation* (CDC). It was a local branch of the Diocesan Committee for Justice and Peace (CDJP) and was led by a former influential ACK member. He was a man in his 50s who was also the president of the influential mutuality (a self-help association) of the *Bakalanga* group of Kisengo. The

⁶⁰ Interview with CDJP member, Kisengo, April 2014.

objective of the CDC was to create another mining cooperative, in competition with the CDMC.

7. Discussion and conclusions

This ethnographic research followed the introduction of MMR (an Indian mining company) and of the cooperative CDMC into Kisengo, a coltan mining area of northern Katanga. The CDMC was meant to represent the miners in their negotiations over exploitation and pricing of the coltan. The research focused on the interaction between these institutions (MMR and CDMC) and the pre-existing self-created miners' organisation, namely ACK.

In DRC, mining cooperatives are currently formed with the objective of improving the bargaining positions of miners. In part, they are meant to be an answer to the dominance of big men in pre-existing governance arrangements in artisanal mining. However, the formation of new cooperatives is done without much sensitivity to existing institutions and realities. CDMC did draw on ACK for its initial membership. Soon enough, it turned out that CDMC acted on behalf of MMR and was, in the eyes of the miners, part of the company. A number of ACK members formed an alternative organisation, the *comité de creuseurs*. However, the *comité de creuseurs* likewise failed to defend the entitlements of the miners. Created at the instigation of the *chef de groupement*, the *comité de creuseurs* was co-opted or bribed into collaborating with the company. The result was that miners had no bargaining power, but were forced to accept fixed prices in exchange of the facilitation of their mining operations. One of their frustrations in this respect was that these prices went down with world-market prices but never up when the market recovered. In the end, miners expressed their frustration by setting a buying station (trading centre) on fire. They also massively tried to circumvent the company rules by keeping some ore to sell clandestinely, at a higher price. Finally, a former ACK member set out to organise yet another organisation to defend the miners' entitlements, this time linked to the Diocesan Committee for Justice and Peace (CDJP).

A major finding of the study is that all the organisations of the miners, created before and during reforms, are dominated by 'big men'. These may have interests of miners in their mind, but their own interests always come first and foremost. In Kisengo, the pre-existing ACK was dominated by the *chef de groupement*. It predominantly served as a vehicle for informal taxation, although it was also seen to represent miners' interest to some extent. The new cooperative of CDMC was also controlled by elites. It was initiated and led by

elite members at the provincial level. In Kisengo, the CDMC found access by buying off the *chef de groupement* with a monthly allowance, believed to amount to 3,000 USD. The first CDMC representative was a clergyman from outside of the area, who was part of the political elite. Lastly, the president of the *comité de creuseurs* was closely related to the *chef de groupement*, who was believed to be the driving force behind the formation of this committee in order to retain his control over artisanal mining. Thus, if new cooperatives were meant to break away from big men politics, they failed from the start. If there were power changes, they did not mean that mineworkers were empowered. Instead, power was partially shifted from local to provincial elites.

As the case of CDMC illustrates, the cooperative was neither created nor led by miners and could be seen as a ‘bureaucratic institution’, meaning an institution based on contracts or introduced by the government (Cleaver, 2002: 13) that consequently fell prey to elite politics. The cooperative failed to meet miners’ needs and expectations. In this situation, miners had no other choice but to riot, to comply with ‘imposed’ regulations or to circumvent them.

The chapter thus reveals that cooperatives are not an effective and durable solution to miners’ problems. The case of the CDMC, its interactions with MMR, ACK and artisanal miners confirms the general observation that, in many developing countries, miners often experience marginalisation and exclusion in their dealings with mining corporations (Ballard and Banks, 2003: 301). The policy reforms addressing the governance of the artisanal mining sector have focused on establishing security in the artisanal mining sector (away from ‘blood minerals’) and on rationalising mining processes. The interests of lower-class miners, their economic position and labour conditions, have not been sufficiently taken into account in these reforms. The formation of cooperatives that were meant to provide miners with bargaining power, are instead turned into vehicles to control miners and protect the interests of mining companies and local elites.

In eastern DRC, there seems to be an ongoing process of new institution-building around mining cooperatives. This will serve to move from emergent solutions to designing a more efficient policy frame for artisanal mining.

— CHAPTER 4 —

Accessing Coltan Mines

This chapter was presented at the Workshop on ‘Mining, Conflict and Post-conflict Reconstruction in Eastern DRC’ (Antwerp, October 2015). It has been submitted for publication as:

Wakenge C.I., Cuvelier J. and Hilhorst D. (2017). ‘Referees Become Players’: Accessing Coltan Mines in the Democratic Republic of Congo. *Extractive Industries and Society*.

Abstract

This chapter offers ethnographic insights into how reforms of artisanal mining have triggered conflicts regarding property rights and access to minerals (coltan) in eastern Democratic Republic of Congo. The study was inspired by the literature on access control. Based on fieldwork undertaken in 2013 and 2014 at the Kisengo and Kahendwa mining sites (Nyunzu territory, northern Katanga), the study found that, although ongoing reforms aimed to sever the supposed linkages between the mining business and violent conflicts, these reforms have become a driving force behind the emergence of new conflicts, labelled here as ‘reform conflicts’. These conflicts result from an instrumentalisation of reform policy by the Katangese state authorities. Providing an in-depth understanding of the narratives, strategies and practices of the key players, this chapter argues that the widespread concern about ‘conflict-free minerals’ tends to obfuscate the nature and effects of ‘reform conflicts’. Unless these conflicts are revealed, better understood and adequately addressed, mining reforms will fail to improve the living conditions of people living in artisanal mining areas.

1. Introduction

The Katangese mining business can be compared to a football team. However, during the game, it is not the competitors—but the referees—who are the players on the pitch. [Interview with civil servant from the *Division des Mines*, Nyunzu, May 2014]

Following national, regional and international policies aimed at ending the supposed linkages between the mining business and violent conflicts, artisanal mining in the Congolese region of northern Katanga is undergoing reform. Inspired by international discourse on ‘conflict-free minerals’, ongoing mining reforms in the region follow a complex conflict landscape (Autesserre, 2012; Vlassenroot and Raeymaekers, 2004) and take many forms, including certification schemes, legislative measures and specific interventions promoting transparent models of resource governance (Verbruggen et al.; Vogel and Radley, 2015).

Recently, eastern Democratic Republic of Congo (DRC) has become a testing ground for many reform initiatives. In 2014, 13 initiatives were active in this region: 10 focusing on 3T and three on gold (Cuvelier et al., 2014). In addition, in 2009, the Congolese government began to demarcate a number of artisanal exploitation zones (AEZ)⁶¹, which were granted to mining cooperatives with the aims of governing artisanal mines and

⁶¹ According to Congolese law (Mining Law, T. 4, Ch. 1, Art. 109), AEZ are areas where ‘the technological and economical factors are not suited for the site to be industrially exploited’.

stopping minerals from falling into the hands of armed groups or other unknown mining entrepreneurs. Meanwhile, vast mining concessions were allocated to private mining companies and, in rare cases—as in the Nyunzu territory—to trading houses.

In several parts of sub-Saharan Africa, many scholars are convinced that the mineral sector reforms have been predominantly top-down, externally driven and biased in favour of large-scale extractive companies (Hilson and Potter, 2005). This has led to tensions between these companies and artisanal miners (*creuseurs*), as well as other local stakeholders such as customary chiefs (Campbell, 2010; Cuvelier, 2011a; Geenen and Claessens, 2013; Machonachie and Hilson, 2011a; Mazalto, 2009). Adding to this body of work, the present study examined how ongoing reforms have fuelled conflicts over property rights and access to coltan in the Congolese region of northern Katanga. These conflicts have been between mining cooperatives and trading houses, and between both of these entities and mineworkers.

Policymakers (UN, 2015), advocacy-oriented NGOs (Global Witness, 2009) and other well-informed observers (Garrett and Mitchell, 2009; De Koning, 2010) are convinced that ‘cleaning’ the mineral trade through reforms can end the armed conflicts obstructing the mineral sector in eastern DRC. This conviction—inspired by the ‘greed hypothesis’⁶²—has been analysed as an explanatory factor for armed conflicts (Le Billon, 2010; Ross, 2006), but little research has examined the nature of the interactions between actors and entities engaged in the reform process (trading houses, mining cooperatives and mineworkers) or how these interactions create new conflicts. By analysing how the ongoing reforms engender new conflicts, this study aimed to contribute to debates on the governance of artisanal mines in post-conflict eastern DRC. This chapter argues that the widespread concern regarding ‘conflict-free minerals’ as a way of making the mineral market transparent and addressing the appalling poverty of people tends to obfuscate the nature and effects of ‘reform conflicts’. For the mining reforms to yield positive change, these conflicts need to be unmasked and adequately addressed.

This chapter is based on fieldwork undertaken at two coltan mining sites in the Nyunzu territory (Kahendwa and Kisengo) from March 2013 to September 2014 and additional

⁶² This hypothesis puts forward the idea that armed actors’ greed for natural resource revenues is a key factor in explaining the onset and persistence of armed conflicts. See, for instance, Collier, P. and Hoeffler, A., *Greed and Grievance in Civil War*. Oxford Economic Paper 56, The World Bank, Washington, DC, 2001; Berdal, M. and Malone, D. (eds.) 2000. *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder & London: Lynne Rienner Publishers.

data gathered in October 2014 in Lubumbashi. In both Kahendwa and Kisengo, the reforms basically aim to trade coltan through a ‘closed-pipe’ supply chain organised by and around the International Tin Research Institute (ITRI) Tin Supply Chain Initiative (iTSCi). The reforms involve the mining cooperatives, trading houses, middlemen (*négociants*) and artisanal mineworkers. The ‘closed-pipe’ supply chain is organised so that the coltan flow is tracked from miners’ tunnels to the point of exportation in Kalemie (the capital city of Tanganyika Province).

In the remainder of this chapter, I begin by outlining the theoretical framework. After introducing the study areas and the research methods, the next section discusses how property and access to mining areas has evolved in eastern DRC, particularly in northern Katanga. I then describe the findings from the two case studies. Briefly, the first of these centres on conflicts over access to coltan in Kisengo, and the second focuses on conflicts following the entitlements to the mines of Kahendwa being granted to several cooperatives and trading houses. The final section discusses the findings and puts forward the main conclusions.

2. Theoretical perspective on property and access

The present study approached conflicts over property rights and access to minerals (coltan) from a property rights perspective. As the mining reforms have mainly revolved around granting entitlements of AEZ to mining cooperatives or trading houses, a property rights lens allows for a fruitful analysis of these entitlements and the related conflicts.

Debates on property and access have been informed by the field of legal pluralism, which studies the coexistence of different normative systems in the same social space (Griffiths, 1986). Drawing on theoretical understandings from legal pluralism, von Benda-Beckmann (1981), for instance, developed the notion of ‘forum shopping’ to describe how people use multiple legal orders and different institutional frameworks to foster their claims or to protect their interests. Being traditionally focused on dispute resolution, public service delivery and hybrid governance, legal pluralism also provides relevant insights for studying how social actors are able to further their property claims by drawing on various legal systems to access resources (Geenen, 2016).

Broadly speaking, property is about relationships among social actors with regard to objects of value (von Benda-Beckman et al., 2006, quoted in Sikor and Lund, 2009: 4). In other words, property is a relation not between people and things, but rather between people about things. As Sikor and Lund (2009: 4) assert, property encompasses any enforceable claim to the use and benefit of something. Such a claim may derive from conventions, customary rules or state law. From this legal perspective, property contributes to maintaining order within society and entails the regulation of entitlements and the distribution of wealth among social actors (Peluso and Lund, 2011; Singer, 2000). However, property can also produce conflicts between people. Blomley (2003) contends that such conflicts may be shaped by overt or hidden violence and processes of exclusion.

Access is distinct from property in many ways. Indeed, having property rights does not necessarily mean that one has the ‘ability to benefit from things’ (Ribot and Peluso, 2003: 153). Thus, Ribot and Peluso (2003: 160) define access as all ‘means, processes and relations by which actors are enabled to gain, control and maintain access to resources’. They conceptualise the notion of property as a ‘bundle of powers’ instead of a ‘bundle of rights’ (Ribot and Peluso, 2003: 173). Additionally, understanding access relations helps in analysing who actually benefits from things and through which processes people are able to do so. In their study on access theory, Ribot and Peluso (2003: 161–172) identify three access mechanisms, namely rights-based access (legal or illegal), structural mechanisms of access and relational mechanisms of access. These mechanisms mediate, condition or constrain people’s access to resources and benefits. Structural and relational mechanisms include access to technology, capital, markets, labour and labour opportunities, knowledge and authority, as well as access through social identities and access via the negotiation of other social relations.

Sikor and Lund (2009) see property and access as closely linked to power and authority. They argue that, when people try to further their claims or to turn these into ‘recognized property’, power and authority are closely related (Sikor and Lund, 2009: 9). Power legitimises the authorised institutions underpinning such a property claim, and authority gives the power to grant or deny legitimacy to the claim. As Sikor and Lund (2009: 2) emphasise, ‘struggles over property are as much about the scope and constitution of authority as about access to resources’. This argument is relevant to the present study because, following the mining reforms, granting AEZ entitlements to mining cooperatives and trading houses has not only legitimised these organisations’ claims over

property, but this legitimisation has also led to the denial of property rights to local resource users, especially the *creuseurs*.

Access and property are dynamic, with changes over time being shaped by various factors, which determine ‘the nature of power and forms of access to resources’ (Ribot and Peluso, 2009: 154) and position individuals and institutions vis-à-vis access to property. These factors include shifts in authority, competition among different powerholders (Van Acker, 2005), changes in political circumstances, new economic opportunities and shifts of ideas and of ideologies, policy, politics and the environment (Lund and Peluso, 2011: 673–676). All of these factors affect the conditions under which access processes take place and influence how individuals (e.g. state authorities and mineworkers) or interest groups (e.g. mining cooperatives and trading houses) develop different strategies to benefit from resources. The case studies discussed in this chapter concern the changes in access patterns introduced by mining reforms that have fostered new economic opportunities for state authorities.

The literature outlined above is mostly concerned with property rights and access in relation to state formation, emphasising the coexistence of norm-producing authority, institutional legitimisation, access processes and the contestation of claims. However, although social actors use various strategies and mechanisms of access to advance their claims, as described in the idea of ‘forum shopping’, existing work does not tell us much about how, why or under which circumstances access mechanisms can be instrumentalised by those in authority or about how this affects people’s access to resources. In other words, authority does more than granting the power to produce norms and to authorise, deny or legitimise peoples’ claims to property (Sikor and Lund, 2009: 10). Under circumstances where the state is ineffective in enforcing regulations, it is possible that some state authorities will instrumentalise the laws and policy for private ends. As Lund (2006: 699) argues, ‘while formalization is often propelled by government institutions and reform, formal rules and regulations are also negotiated and undone by corruption, political networks and powerful alliances’.

Thus, this chapter closely explores the relationships between two mechanisms of access, namely access to technology and access to authority. The first of these refers to the idea that while tools and technology are used in resources’ exploitation, it has been evidenced that more advanced technology benefits those who have access to them (Ribot and

Peluso, 2003: 165). The second mechanism of access is about having ‘privileged access to the individuals or institutions with the authority to make and implement the laws (Ribot and Peluso, 2003: 179).

3. Study areas and methods

3.1. Study areas

This study was based on data collected at two coltan mining sites, namely Kahendwa and Kisengo. Both sites are located in the chiefdom of Ntengu, at a distance of 49 km from each other. Kahendwa and Kisengo are roughly 115 km from Nyunzu-centre (the territorial capital). Mining activities started in Kisengo in March 2007 and in Kahendwa in September 2011. The majority of the population belong to the Bakalanga ethnic group.

The selected mining sites share both similarities and differences. Kahendwa and Kisengo are the most productive of the seven coltan mines in Nyunzu territory⁶³, accounting together for 286 tonnes of coltan in 2014, according to the 2014 annual report of the Nyunzu-based *Division des Mines*. In both mining sites, *creuseurs* extract coltan in sedimentary deposits, open shafts or deep tunnels. The coltan extracted from both sites is sold to Mining Mineral Resources (MMR)⁶⁴, the only trading house established in the area.

Kisengo has a larger population than does Kahendwa. At the end of 2014, Kisengo hosted 17,000 inhabitants, including 1,500 *creuseurs* and 21 *négociants*. The population of Kahendwa declined dramatically from 10,000 in 2012 to about 230 in May 2014⁶⁵. This decline was caused by a decrease in coltan production and by the ban of mining activities by the national Ministry of Mines in May 2014 because of mineworkers’ use of dangerous extractive techniques.

Kahendwa and Kisengo were also interesting cases for the analysis because of differences between the two sites in the methods of coltan production. In Kisengo, MMR began using semi-industrial methods of coltan extraction at Bovu, the most populated and productive of the 11 Kisengo quarries, in February 2014. Additionally, MMR initiated the

⁶³ The other coltan mines in the territory are Kilunga, Lengwe, Luba, Mbale and Lububu-Kitoke.

⁶⁴ MMR is an Indian trading house with its Congolese head office in Lubumbashi.

⁶⁵ Interview with the chief office of the *Service d’Assistance et d’Encadrement du Small-Scale Mining* in Kahendwa, June 2014.

découverte—shovelling away of the top layer of the pits to facilitate access to mineral deposits—at many other quarries. MMR also installed a *lavérie* (a kind of processing machine) at Bovu. Interestingly, the *lavérie* operated alongside artisanal mining. In Kahendwa, where only three coltan quarries were operational, most *creuseurs* used pickaxes and shovels.

Kahendwa and Kisengo also differed in terms of entitlements. Kisengo is a private MMR mining concession and has never been demarcated as an AEZ. Conversely, Kahendwa has been established as an AEZ since early October 2011, but the site was disputed among various trading houses and mining cooperatives.

3.2. Methods

This study drew upon qualitative methods, with data collected through nearly 19 months of ethnographic field research. From March 2013 to September 2014, I paid regular visits to Kahendwa and Kisengo. These visits allowed me to observe at regular intervals how access to the mining quarries changed over time, how trading houses and mining cooperatives provided technical support to the mineworkers and what this entailed in terms of interactions between these actors. In total, 204 *creuseurs* and shaft owners were involved in group interviews. Additionally, 36 individuals, including 12 *creuseurs*, participated in in-depth interviews and informal conversations. In-depth individual interviews and informal conversations were held with *creuseurs* and shaft owners at eight coltan quarries (six in Kisengo and two in Kahendwa, of a total of 14 quarries found in both mining sites). I also conducted participant observation at nine meetings gathering representatives of miners' committees (*comités des creuseurs*), shaft owners, and representatives of MMR, the *Coopérative des Artisans Miniers du Congo* (CDMC) and *Cooperative Minière Maendeleo* (CMMA).

Individual interviews were also conducted with five staff members of MMR, the administrator of finance of Nyunzu, and seven civil servants from the *Service d'Assistance et d'Encadrement du Small-Scale Mining* (SAESSCAM, Small-scale Mining Assistance and Training Service) and the *Division des Mines* (mining service). Moreover, in October 2014, I conducted additional individual interviews with two staff members of the CDMC and CMMA in Lubumbashi (the provincial capital of what was then Katanga province). Lastly, to gain an overview of the evolution of property rights and access regarding mining areas in eastern DRC, I reviewed several documents,

including letters written by representatives of the *comités des creuseurs*, official reports and memos, ministerial decrees and NGO reports on mining activities in the study areas.

4. Property and access to DRC's mining areas

4.1. General situation

Geenen and Claessens (2013), in their study of access to gold sites in eastern DRC, discuss the evolution of access to mining property. From the Belgian colonial times (1885–1960) to 1982 and after Congolese independence in 1960, the mineral sector was largely dominated by private and state-owned large-scale extractive companies that were granted vast concessions by the colonial administration. These companies managed their concessions through private modes of governance, allowing them to provide social services and security to their employees, while restricting outsiders' access to their 'mining domains' (Hönke, 2013). In 1982, following the intensification of the financial and socioeconomic crisis, President Mobutu liberalised artisanal mining, especially the exploitation and trade of precious minerals (mainly gold and diamonds) (Tshibanza, 1985). Subsequently, artisanal mining has grown to sustain the livelihoods of approximately 200,000–550,000 mineworkers and their 1–4 million dependants (PACT, 2010).

Liberalising artisanal mining brought changes in property rights and in access to mining areas. This introduced a dual system of resource governance. Traditional chiefs (*mwami*) were allowed to exert considerable influence over the mining activities on the basis of customary rights over the land and its resources. The *mwami* also provided plots of land to *creuseurs* and levied various taxes and fees on the *creuseurs*, as well as *négociants* and local traders. However, at the same time, the state controlled these mining areas on the basis of the General Property Law introduced in 1973. This law declared all land and its resources to be the property of the state, regardless of occupancy status (Van Acker, 2005). In the 1990s, this dual system of resource governance became more problematic because of several factors, including population growth, the manipulation of land issues by political elites and increased militarisation and competition over mineral-rich areas following political change and instability (Vlassenroot and Huggins, 2005).

In the first decade of the 2000s, interest grew around reforming the entire Congolese mining sector. In 2002–2003, a new Mining Law was passed. This law was seen as a strategy to attract foreign capital (Mazalto, 2009), as it favoured multinational large-scale

extractive companies by granting them vast concessions. The law also demarcated a number of AEZ, stipulating that an AEZ could be closed down if ‘the factors justifying its creation ceased to exist’ or if ‘a new deposit necessitating large-scale exploitation has been discovered’ (Mining Law, T. 4, Ch. 1, Art. 110). Moreover, the law required artisanal miners to obtain a *carte d’exploitation artisanale*, a special authorisation to mine within an AEZ’s boundaries (Mining Law, T. 4, Ch. 1, Art. 111/112). All of these measures meant that *creuseurs* were increasingly confronted with multiple restrictions.

4.2. Accessing mining areas and coltan in northern Katanga

In northern Katanga, mining reforms changed pre-existing patterns of accessing the mining areas and coltan ore. Before the reforms, artisanal miners were already extracting coltan in these areas. At the end of 2009, the national Mining Ministry demarcated many of these areas as AEZ, and the provincial Katangese government granted these AEZ to mining cooperatives or, occasionally, to trading houses. In 2014, 77 AEZ existed in what was then the province of Katanga. These were granted to 34 mining cooperatives. To be allowed to mine, artisanal miners were encouraged by the Mining Ministry to join these cooperatives (Wakenge and Hilhorst, 2017). Clearly, these entitlements and requirements suggest the introduction of new power relations between cooperatives, trading houses and mineworkers, for instance, in terms of which mineworkers were qualified to mine coltan, and how, where and to whom they were allowed to sell it.

Additionally, the mining reforms strongly changed pre-existing mechanisms of land allocation and the ways in which mineworkers paid the *itulo* or *tozo* (Bakalanga⁶⁶ terms used to refer to customary taxes). Before the reforms, customary chiefs provided plots of land (*calendres* or shafts) to mineworkers, who paid *tozo* in cash—the equivalent of 2 USD twice a month. These mineworkers were then granted a voucher allowing them to mine. Likewise, shaft owners paid the *koroboi ya chef* (a tomato can for the chief)⁶⁷ at the production phase—a payment usually made in kind, valued at approximately 50 USD. This payment was said to prevent bad luck in the mining shafts⁶⁸.

Following the reforms, the *calendres* are given to *creuseurs* by the SAESSCAM, a state agency supporting *creuseurs*. In the study areas, SAESSCAM staff members maintained

⁶⁶ Bakalanga is the ethnic group of the majority of the population of Nyunzu.

⁶⁷ Koroboi is a tomato can of approximately 25 gr.

⁶⁸ Interviews with the president of the *comités des creuseurs*, Kisengo and Kahendwa, January and April 2014.

that the *calendres* are allocated without payment⁶⁹. In reality, mineworkers are charged 15–30 USD to obtain a *calendre*. Importantly, instead of levying the *tozo* against individual mineworkers, many *mwami* are paid a monthly sum by mining cooperatives or trading houses. These payments vary proportionally to the mineral production of the mining site, the degree of legitimacy of the *mwami* and how successful the *mwami* negotiated this payment with the cooperative or trading house representatives. In Kisengo, the trading house MMR and CDMC paid an estimated 3,000 USD/month to the acting *mwami* (*chef de groupement*) of Kisengo (Joseph Kisengo). In Kahendwa, CMMA paid around 250 USD/month to the *chef de village* of Kahendwa (Lwamba Kataki).

The above changes in access to mining areas and coltan, the allocation of *calendres* and the payment of the *tozo* suggest a reconfiguration of the economic interests of many actors in the local coltan business.

5. Conflicts over accessing coltan in Kisengo and Kahendwa

5.1. Case 1: Kisengo

In Nyunzu, Kisengo is an iconic mine. It was the first mine where coltan was discovered (in March 2007). Early in 2010, Kisengo hosted the first trading house (MMR). After signing a five-year contract with the Katangese provincial government on 9 March 2009, MMR arrived in Kisengo in early January 2010, followed by CDMC in June 2010. Subsequently, MMR and CDMC have collaborated in purchasing coltan. Kisengo was also the first iTSCi pilot site⁷⁰ in Katanga, beginning 1 April 2011. Perhaps more interestingly, Kisengo is a rare artisanal mine using a hybrid mode of mineral extraction. As was noted above, alongside MMR's introduction of semi-industrial methods (*lavérie*) of coltan extraction at Bovu, many *creuseurs* extract coltan manually in other local quarries.

Bovu is the most productive, populated and disputed coltan quarry in Kisengo. In June 2013, it harboured approximately 43 shaft owners and 450 *creuseurs*, extracting around 250 kg of coltan daily⁷¹. With a 30% tantalum concentration, Bovu's coltan has the highest ore grade found in Nyunzu. Bovu is also rife with conflicts between MMR and

⁶⁹ Interviews with the chief office of SAESSCAM, Kisengo, May 2013.

⁷⁰ In December 2014, iTSCi covered 471 mining sites, of which 232 were located in the province of Katanga (iTSCi overview, March 2015).

⁷¹ Group interview with civil servants from the *Division des Mines*, Kisengo, July 2013.

the *creuseurs* regarding, for instance, the *découverte* and the fact that MMR set up semi-industrial methods of coltan exploitation (Chapter 3). In June 2013, MMR started the construction of a processing centre (*laverie*) for coltan extraction, changing the patterns of accessing and processing coltan.

Starting semi-industrialised methods at Bovu occurred for two reasons. The first was a legal reason. On 7 May 2013, MMR acquired a 30-year exploitation permit, transforming the entire Kisengo mining site into its private concession. In addition, the Mining Law stipulates that a mining company may transform an AEZ into an industrial concession if it finds it suitable for industrial exploitation (Mining Law, T. 4, Ch. 1, Art. 110). Although Bovu has never been declared an AEZ, this legal provision enabled MMR to semi-industrialise this quarry because it was part of its concession. The law is silent regarding what happens to the mineworkers in such a concession after the extraction methods change from purely artisanal to industrial.

The second reason pushing MMR to introduce semi-industrialised methods at Bovu was economic. On a daily basis, MMR and CDMC pre-financed 21 *négociants* an amount ranging from 160 to 1,500 USD per *négociant*, allowing them to purchase 5–50 kg of coltan. Although the pre-financing system allowed MMR/CDMC to obtain coltan, this system also created a managerial dilemma. The system increased MMR/CDMC's management expenses, because they paid each *négociant* an incentive of 2.2 USD per kg of coltan purchased from the *creuseurs*. In addition, MMR/CDMC provided technical support to the *creuseurs*, including motor pumps and *découverte*. From June 2012 to May 2013, perhaps the most important constraint for MMR/CDMC's activities occurred when, following the coltan price went down from 48.8 to 28.8 USD/kg, coltan production in Kisengo dropped from 20 tonnes to approximately 12 tonnes per month after many *creuseurs* reacted to this price drop by moving to gold mines (such as Musebe in northern Nyunzu), abandoning their mining activities in Kisengo. The chief office of MMR in Kalemie explained this constraint as follows:

Our business depends on artisanal mining. We provide various kinds of support to *creuseurs*, for instance by installing motor pumps at almost every quarry in Kisengo. This allows them to easily access and use the water needed for washing mineral sands. However, our support does not work as expected, because we cannot control everything. Not only do MMR/CDMC suspect *creuseurs* and *négociants* of stealing coltan, but,

recently, the number of *creuseurs* has dropped from 1,500 to around 800, making it hard for our business to flourish⁷².

This statement conveys the idea that there was initially cooperation, mutual dependency and reciprocity among MMR/CDMC, *creuseurs* and *négociants*. However, this relationship gave way to growing suspicion and dissatisfaction. Coltan production entailed high costs for MMR throughout the process—for instance through the pre-financing system mentioned above—and the company found it difficult to control this production fully. At the very least, coltan production depended upon *creuseurs*' willingness to stay in the mines or to sell coltan to *négociants*. *Creuseurs* were able to hide part of the coltan, and they often complained that, because of the monopoly of MMR and CDMC and their frequently imposed price cuts, they were tempted to steal or conceal part of the coltan production (see also Chapters 3 and 6)⁷³.

Ribot and Peluso (2003: 157) contend that some actors have the ability to select the aspects of law, custom or convention that favour their objectives. In the same vein, MMR/CDMC, confronted with the challenges described above and inspired by certain provisions of the Mining Law (e.g. the possibility of changing the extractive methods used), developed various strategies to take over Bovu⁷⁴. When MMR/CDMC initiated the *découverte*, it was free of charge and not legally sanctioned. As such, the *découverte* was a mutual and verbal convention between MMR/CDMC and the *comité des creuseurs*. However, in June 2013, MMR/CDMC began charging *creuseurs* to obtain the mineral sands (*remblais*). As one MMR staff member reported, charging *creuseurs* helped to offset the financial costs of the *découverte*⁷⁵. Following this idea, MMR/CDMC agreed with the *comité des creuseurs* that half of the *remblais* belonged to MMR/CDMC and the other half to the *creuseurs*. After three months, this convention changed again in October 2013, when MMR/CDMC decided that the *creuseurs* had a right to only one-fifth of the *remblais*, with the rest to be processed by MMR/CDMC's *shayeurs* (daily workers). In reaction to this decision, a member of the *comité des creuseurs* made the following complaint:

The decision taken by MMR/CDMC has gone beyond the pale, violating the terms of our earlier convention. Incidentally, when they shared the *remblais* with us, we were given the *marouge* or *bibembele*,

⁷² Interview with the head office of MMR, Kalemie, July 2014.

⁷³ Informal conversation with *creuseurs*, Bovu (Kisengo), December 2013.

⁷⁴ See also Geenen and Claessens (2013) for similar accounts in South Kivu.

⁷⁵ Interview with one MMR staff member, Kisengo, July 2014.

in other words the poorest and worthless part of the *remblais*. They [MMR and CDMC] keep the richest and most promising mineral sand. *Iyi ni uvamizi tu ya coltan yetu na hatuta itika tena* [This is just confiscating our coltan and we will no longer tolerate it]⁷⁶.

This complaint implies that, although technically organised, the *découverte*, which should allow the *creuseurs* to improve their working conditions, became a new burden. In fact, the organisation of the *découverte* and the advantages it provided for MMR/CDMC confirm the notion that ‘many resources cannot be extracted without the use of tools and technology, more advanced technology benefits those who have access to them’ (Ribot and Peluso, 2003: 165). Many *creuseurs* felt profoundly dissatisfied with the procedure of sharing the *remblais*. One shaft owner reported a similar dissatisfaction:

Compared with our last convention for sharing the *remblais* with MMR/CDMC, our income has diminished dramatically. Before this new convention, we were able to produce 10–12 kg of coltan per dumpster of *remblais*, yielding around 350 USD for the team. Today, we only produce around 5 kg [worth around 150 USD], making it difficult to make ends meet⁷⁷.

In December 2013, MMR/CDMC developed a new strategy to take over Bovu quarry. After an unsuccessful round of negotiations with the *comité des creuseurs* and SAESSCAM/Kisengo, MMR/CDMC decided to buy all of the miners’ shafts. A price of 400 USD was given for each shaft. However, in the eyes of many *creuseurs*, this decision and the price set were one-sided. Consequently, they violently protested by erecting roadblocks on the roads leading to the mines and by setting fire to a selling station⁷⁸. In addition, although SAESSCAM promised the *creuseurs* that they would be allocated new shafts elsewhere, this promise was not kept, leading many *creuseurs* to believe that SAESSCAM and their *comité* had been corrupted by MMR/CDMC.

In February 2014, MMR/CDMC resorted to a radical strategy combining the destruction of miners’ camps and the support of this operation by state authorities. Before this destruction—probably fearing protest—MMR/CDMC called in the support of the acting administrator of the territory of Nyunzu (Etienne Mwamba Kamasonga). On several occasions, he visited Kisengo and held meetings with the *comité des creuseurs* and civil servants from SAESSCAM and the *Division des Mines*, asking them to convince the *creuseurs* to leave Bovu. The administrator promised to initiate development projects for

⁷⁶ Group interview with shaft owners at Bovu, November 2013.

⁷⁷ Interview in Kisengo, November 2013.

⁷⁸ Interviews with the *comité des creuseurs* in Kisengo, March 2014.

these people once they were permanently established in villages outside of Bovu. Arguably, asking the *creuseurs* to leave Bovu followed an administrative decision (N° 3072/418/BUR/CDD/DT/2013) issued on 10 May 2013 by Maurice Kyoni Ngoie, the acting Tanganyika district commissioner. The decision declared that Bovu was a *zone interdite*—in other words, an area where people were not allowed to live or carry out mining activities for reasons of their own safety (Mining Law, T. 1, Ch. 1, Art. 6). As the *creuseurs* were not convinced by this explanation, on 7 February 2014, MMR/CDMC called in the *Police des Mines et Hydraucarbures* (Mining Police/Kisengo), who destroyed a total of nine miners' camps and expelled 526 miners' households. As compensation, MMR/CDMC allocated two canvas sheets and 50 USD per household. However, in Kisengo, rumours gained currency that the administrator of Nyunzu embezzled part of the funds intended to provide this compensation. In the end, some of the people who were displaced did not receive their compensation.⁷⁹

Two elements of the Mining Law are relevant here. First, the Mining Law (T. 1, Ch. 1, Art. 6) states that *zones interdites* can be declared only by presidential decree and not by a district commissioner such as Maurice Kyoni Ngoie. Second, in such zones, the Mining Law (T. 1, Ch. 3, Art. 17) stipulates that no mining activities can take place. However, mining activities continued in Bovu. Although I was unable to find evidence that MMR/CDMC bought off the state authorities (the Tanganyika district commissioner or the administrator of Nyunzu), the acting administrator of finance of Nyunzu, a man in his 60s who had occupied this administrative position since 2002, expressed related suspicions:

No one knows what happens regarding mining activities in Nyunzu. Someone who wants to find out more about what happened, for instance at Bovu, like in many other similar cases where conflicts occurred between trading houses, cooperatives and *creuseurs*, faces intimidation from high-ranking state authorities based in Lubumbashi or Kalemie.

This statement reveals that, even though practices of corruption are often hidden, some people in positions of authority were suspected to manipulate the law covertly because they had vested interests in the mining business. Regarding the case of Bovu discussed here, this statement also means that some authorities were suspected of supporting MMR/CDMC's operations there, while probably benefitting financially from this deal.

⁷⁹ Interview with MMR's administrator, Kisengo, May 2014.

However, the conflicts over access to coltan that caused the eviction of miners from Bovu yielded some economic advantages. For MMR/CDMC, the change in coltan production methods from artisanal to semi-industrial increased production. In 2014, production in Kisengo was estimated at 127 tonnes for the Bovu *lavérie* alone—this nearly equals miners' production of 157 tonnes in the other quarries combined. Thus, Kisengo can be seen as an interesting example where semi-industrial methods of mineral extraction coexist with artisanal mining. This coexistence contributed to professionalising around 40 *shayeurs* hired by MMR/CDMC at Bovu, and these workers are regularly paid 100 USD per month, promoting them from casual workers to paid employees.

Many *shayeurs* said that they were experiencing better working conditions than when they worked as independent miners⁸⁰. Lastly, increased coltan production in Kisengo meant that MMR/CDMC had to pay more taxes to state agencies⁸¹.

5.2. Case 2: Kahendwa

Kahendwa is an artisanal mine located to the east of the territory of Nyunzu. When coltan was discovered here in September 2011, people from different areas came to Kahendwa, increasing its size from a village of approximately 200 to more than 10,000 inhabitants, of whom 6,000 were *creuseurs*. During the heyday of mining productivity, *creuseurs* extracted around 300 kg of coltan per day⁸². Extraction took place in three main quarries—*maendeleo* 1, 2 and 3. Of the 3T mining sites in Nyunzu territory, Kahendwa was among the most productive. From January 2011 to December 2013, this site produced 227 tonnes of coltan ore⁸³.

The entitlements to Kahendwa changed on several occasions. Following a ministerial decision (Nº 10.7/00418) signed on 1 October 2011 by the acting Katangese provincial Minister of Mines (Therese Lukenge Kapwibwe), Kahendwa was granted to Volcano Mining, a trading house based in Lubumbashi. However, for unknown reasons, Volcano Mining conducted no activity in Kahendwa. Later, on 3 January 2012, the same Minister granted four artisanal mines, namely Kankwala, Kampulu, Maende and Mungaza, to

⁸⁰ Group interview with *shayeurs*, Kisengo, July 2014.

⁸¹ For instance, the *autorisation de sortie carrière*, a tax paid 1% of the actual coltan price in the mines.

⁸² Interview with the SAESSCAM's head office, Kahendwa, June 2014

⁸³ *Division des Mines*, Kahendwa, report 2013.

Minserve, another trading house, which has its Congolese head office in Kalemie⁸⁴. In February 2012, a group of Minserve's staff members arrived in Kahendwa, although this site was not among the mines granted to the company. Minserve's staff began the construction of several facilities, including their office and a mineral depot. They also promised the *creuseurs* that they would buy coltan at higher prices (around 60 USD per kg) than the price of 30 USD set by MMR/CDMC in Kisengo.

As could be expected, the presence of Minserve in Kahendwa sparked controversy. According to Minserve's staff members, the *maende* mine that had been granted to Minserve was short for *maendeleo* (the name of the three coltan quarries of Kahendwa). However, Nyunzu-based territorial authorities were convinced that *maende* had never existed in Nyunzu and that Minserve, as an *entité de traitement* (processing plant) could not be established within an AEZ like Kahendwa. According to the Mining Law (T. 1, Ch. 2, Art. 81), an *entité de traitement* can only process mineral ore and cannot be involved in extractive activities. Thus, the Nyunzu-based authorities worried about the fact that the ministerial decree (0562/CAB.MINES/01/2012) that legally allowed Minserve to be established in the Katangese province was too ambiguous. In their eyes, it did not clearly indicate where exactly Minserve could conduct its activities⁸⁵. However, despite these controversial interpretations, Minserve's staff members remained in Kahendwa for seven months, until September 2012.

Importantly, there have also been disputes regarding Kahendwa among mining cooperatives. CDMC, the first cooperative in Kahendwa, arrived in October 2011. Even though CDMC was based in Kisengo (49 km from Kahendwa) and had no entitlement over Kahendwa, CDMC's presence was condoned by the provincial and the Nyunzu state authorities. A representative of CDMC in Kisengo confirmed this:

CDMC had no property rights but arrived in Kahendwa following a request by the provincial Katangese government and the administrator of Nyunzu. Because CDMC was based in Kisengo, near Kahendwa, the authorities asked CDMC to help them control the trade of coltan extracted in Kahendwa because this was undertaken informally⁸⁶.

Although a request by state authorities asking CDMC to purchase coltan from Kahendwa mines was plausible, no further evidence was found to substantiate this claim. CDMC also had economic reasons to engage in purchasing coltan from Kahendwa. In contrast to

⁸⁴ Decree 107/00504/CAB/MIN.PROV./MINESJ.GEF/KAT/2011.

⁸⁵ Interview with the administrator of finances of Nyunzu, April 2014.

⁸⁶ Interview with CDMC staff, Kisengo, April 2014.

Kisengo, where iTSCi, CDMC and MMR monitored the coltan trade, the situation was largely informal in Kahendwa, where many independent *négociants* were established. Thus, for CDMC staff members, the coltan business of Kahendwa was likely carried out concurrently with their activities in Kisengo. For instance, in early October 2011, Kahendwa *négociants* purchased coltan at 65 USD per kg, while it cost 35 USD in Kisengo⁸⁷. Price variations between Kisengo and Kahendwa led CDMC staff members to believe that coltan mined in Kisengo was smuggled to the market in Kahendwa for sale.

CDMC's attempts to become permanently established in Kahendwa—from September 2011 through early 2012—were not successful. On several occasions, for instance on 25 October 2011, artisanal miners violently protested against CDMC's presence. The fact that Kahendwa was already proclaimed as an AEZ also made it difficult for CDMC to claim or justify any property rights over this mining site⁸⁸.

In February 2012, further confusion over Kahendwa's entitlements developed. Minserve was already present at the site and considered the series of *maende* (the local quarries) to be its property. However, Therese Lukenge Kapwibwe (the provincial minister of mines) signed another note (№ 10.7/00651/CAB/MIN.PROV.MINES/KAT/2012) stipulating that both Kahendwa and Kankwala were granted to CMMA. This new entitlement meant that the rights of Minserve over Kankwala and its claim over Kahendwa were totally denied. Creating further tensions between CMMA and Minserve, granting the 'disputed' mines of Kahendwa and Kankwala to CMMA led people to believe that CMMA was a cooperative intentionally created by the Minister as a strategy to control the mining and to gain economic benefits from it⁸⁹. After CMMA staff members arrived in Kahendwa at the beginning of February 2012, tensions increased between them, the Minserve staff and the Nyunzu-based authorities. One civil servant from the *Division des Mines* interviewed in Nyunzu on 13 April 2014 suspected state authorities of manipulating such tensions:

In Nyunzu, our agency is never informed of when and how trading houses like Minserve have been granted an AEZ. In many cases, we see their staff members arriving from Lubumbashi or Kalemie. Then, they talk to the Nyunzu-based administrator and go into the mining areas to

⁸⁷ Interview with the president of the *comité des creuseurs*, Kahendwa, September 2013.

⁸⁸ Kahendwa was demarcated as an AEZ (decree № 238), on 10 October 2011 by Martin Kabwelulu, the national Minister of Mines. However, this decree became effective only in early 2012, when the CMMA team arrived in Kahendwa.

⁸⁹ Interviews with staff members from the *Division des Mines* and *creuseurs*, Kahendwa, April 2014.

start their activities. It is when disputes have occurred between them and artisanal miners that the authorities have asked us to mediate.

This statement shows that some high-ranking state officials, such as the Nyunzu-based administrator and the provincial Minister of Mines, used their power positions to favour the installation of a certain trading house or mining cooperative. In other words, these officials were also able to obstruct the activities of other entities. Another example provides further evidence of this situation. Although the acting Katangese Minister of Mines (Therese Lukenge Kapibwe) created a commission of enquiry in charge of investigating the existence and exact location of the contested *maende* or *maendeleo* mines in March 2012, unsurprisingly, this commission confirmed the exclusive rights of CMMA over the mines of Kahendwa⁹⁰.

6. Discussion and conclusions

Following the reforms introduced in 3T mining in DRC, this study examined how these reforms have been a driving force behind new conflicts over property rights and access to minerals (coltan). In northern Katanga, the mining reforms were meant to organise artisanal mining and the coltan trade around transparent models of resource governance. They aimed especially at breaking the supposed linkages between violent conflicts, mineral exploitation and trade. Concretely, the Congolese government allocated artisanal mining areas—AEZ—to mining cooperatives and trading houses for the purpose of organising artisanal mining. However, these entitlements also introduced changes in patterns of mining property rights and access to coltan.

This study built on evidence that property theory is very useful in explaining processes of state formation, which provides a better understanding of how people access and benefit from resources and of the mechanisms they use in doing so. However, the theory does not tell us much about how, in the course of policy implementation (such as that of the ongoing mining reforms), social actors may leverage their power positions in instrumentalising specific policy on mining property. The present study revealed that such an instrumentalisation can occur in various ways and take different shapes from the grassroots to the Katangese provincial level. While power exercised by the authorities serves as a vehicle for personal interests, such an instrumentalisation can also be seen as

⁹⁰ Interview with a CMMA member, Lubumbashi, October 2014.

‘elite capture’, meaning that power may be exercised for individual interests rather than for community interests (Platteau and Gaspart, 2003).

One major finding of this study is that, at different levels, state authorities took advantage of their power positions to influence policy on mining property. As Hilhorst (2013: 8) argues about policy interventions in post-conflict settings, ‘policy is the result of interaction between different stakeholders, who try to make policy fit their own perspectives and goals [...] according to their own understanding, interests and ambition’. For various reasons, the national Ministry of Mines in Kinshasa, the Katangese provincial Ministry of Mines in Lubumbashi, the Tanganyika district commissioner in Kalemie and the Nyunzu-based territorial authorities decreed, changed or condoned policy decisions taken to entitle certain entities to mining property rights or to deny the rights of other entities in both Kahendwa and Kisengo. The involvement of the Katangese officials in ‘local resource politics’ confirms the existence of an intimate connection between property and authority (Sikor and Lund, 2009: 7).

Although state authorities intended to organise artisanal mining, they were also endowed with a ‘bundle of power’ to deny or legitimise actors’ claims over mining property, and it was found that they were able to influence the micro-politics of property rights and access to coltan at the grassroots level. For example, Kisengo was not officially declared an AEZ despite the fact that it was actually an artisanal mine. Although MMR/CDMC introduced semi-industrial methods at Bovu (Kisengo), artisanal methods of coltan production prevailed. Thus, granting Kisengo to a trading house (MMR) can be seen as the Katangese provincial authorities bestowing a privilege upon this company (Diemel and Cuvelier, 2015: 156). This entitlement gave MMR room to exercise more freedom than the *creuseurs* in enforcing its property claims over Kisengo, especially in the most productive coltan quarry of Bovu.

A series of instrumentalised policy decisions illustrate the influence of state authorities over mining property. In Kisengo, the Tanganyika district commissioner declared Bovu to be a *zone interdite* despite the fact that this decision should be taken only by the Congolese President through a decree. Then, instead of stopping the mining activities, as is clearly stipulated in the Mining Law for a *zone interdite*, mining at Bovu continued—conducted by MMR/CDMC instead of the *creuseurs*. The state authorities did not sanction MMR/CDMC for continuing with these activities. Additionally, following mounting disputes between *creuseurs* and MMR/CDMC, the Nyunzu-based territorial

authorities condoned (and seemed to appreciate) the demolition of miners' camps and the eviction of people from them. Authorities said that this would have positive effects on the sedentarisation of the mining populations. However, it was also reported that the administrator of Nyunzu embezzled part of the funds intended for compensating the evicted households. In Kahendwa, state authorities also leveraged their power positions. Through entitlements, supports, approvals and denials of property claims of several trading houses and mining cooperatives, they pitted one against another. All of these elements lead to the conclusion that the mining reforms have become an arena for conflict.

The study has also demonstrated that mining reforms inspired by the 'conflict-free minerals' discourse and fixed ideas about how the artisanal mining business should be organised have led to a renewal of 'conflict minerals'. These conflicts saw mining cooperatives, trading houses and *creuseurs* in oppositional positions. Comparing the two case studies presented here reveals important similarities in how conflicts around property rights negatively affected miners' access to minerals. In Kisengo (Bovu), MMR/CDMC used various strategies to gain access to mineral resources, to the detriment of artisanal miners. Over time, MMR/CDMC's strategies to take over Bovu gradually came to include sharing extracted mineral sands (*remblais*) with *creuseurs*. Initially, the share was equal, but this ultimately evolved into MMR/CDMC buying the miners' tunnels and evicting them. MMR/CDMC's access to the authorities played a crucial role in this regard, as the authorities condoned the eviction of miners from Bovu. This supports the idea that, in developing countries, violence is increasingly becoming a practice used by governments and private investors to consolidate access to and control of land and resources (Ballard and Banks, 2003; Geenen and Claessens, 2013; Lund and Peluso, 2011: 675–676). In Kahendwa, the cooperative CMMA also succeeded in establishing nearly monopolistic control over local resources. Although no massive eviction occurred, conflicts involving *creuseurs* persisted between trading houses and cooperatives in their attempts to govern the mines of Kahendwa.

In short, 'conflict minerals' have given rise to new types of conflicts, labelled here 'reform conflicts'. It can therefore be concluded that, although 'greed' over mineral resources is central to the persistence, intensity and duration of conflicts because it offers economic opportunities for armed groups (Ballentine and Sherman, 2003), addressing 'conflict minerals' through reforms also offers economic opportunities for people,

including the Katangese state authorities. This finding lends support to the observations of some authors who are convinced that African elites view post-conflict reconstruction—in which mining reforms play an integral part—as an opportunity to maximise their political fortunes and compete for resources through new means (Englebert and Tull, 2008; Trefon, 2011).

The struggle against ‘conflict minerals’ cannot be unidimensional (Vogel and Radley, 2015: 407). It would be worthwhile for policymakers to pay attention to ‘reform conflicts’, which have thus far been ancillary to debates on reforming Congolese mining. Taking ‘reform conflicts’ seriously will help in understanding the micro-dynamics and implications of these new types of conflicts for the vulnerable position of artisanal miners.



Photo 4.1. Miners extracting coltan at site 4 (Kisengo)



Photo 4.2. Coltan being sold to *négociants* at a *poste d'achat* (selling point) in Mai-Baridi

— CHAPTER 5 —

Livelihoods of Coltan *Négociants*

This chapter was presented at the international conference on ‘Change and Local Development in Eastern Congo (Bukavu, DRC)’ in December 2016. It has been submitted for publication as:

Wakenge C.I., (2017). Livelihoods of Coltan *Négociants* after Mining Reforms in the Democratic Republic of Congo. *The Journal of Development Studies*.

Abstract

This chapter examines the implications of reforms of tantalum (coltan) mining for the livelihoods and socioeconomic position of middlemen (*négociants*)⁹¹ in the Democratic Republic of Congo. The research explores how and why *négociants* diversified their livelihood portfolios following mining reforms in artisanal mining areas of northern Katanga. Drawing on ethnographic fieldwork conducted in 2014 in Kalemie and Nyunzu territories, this chapter argues that, contrary to the widespread opinion that *négociants* abuse their position as brokers in the mineral production and commodity chain, mining reforms have affected their livelihoods in different ways. While some *négociants* are relatively well off, others have been pushed out of the commodity chain or have become trapped in indebtedness. *Négociants* predominantly relied on their social networks in their efforts to diversify their livelihood portfolios. There is a need to move beyond policymakers' aim of improving transparency in the coltan market to also consider mining reforms as an opportunity to make the livelihoods of people, including *négociants*, more sustainable.

1. Introduction

Repeatedly, *négociants* do not pay mineworkers like me in cash. When *coupures de fond* [cash flow problems] happen, they give us vouchers. However, we cannot eat vouchers. We then wait for one or two weeks before being paid, but we understand this problem, because *négociants* also complain about depending on cash availability from trading houses and mining cooperatives. The issue is that, when we complain about these payment delays, we are seen rebelling against the mining reforms and become suspected of collaboration with coltan smugglers.

[*Mwamba's story, Kisengo, June 2014*]

Beginning in the early 2000s, the Democratic Republic of Congo (DRC) embarked upon a series of reforms of the mineral sector. In 2002–2003, a new mining code was passed (Mazalto, 2005). These reforms broadly align with the so-called 'conflict-free minerals' narrative, following the idea that minerals have fuelled violence and conflict (Autesserre, 2012) and that the good governance of mining has the potential to cut the ties between

⁹¹ The literature distinguishes various types of *négociants*, ranging from '*petit négociant*' to '*négociant principal*' (Garrett, 2008: 44; De Failly, 2001: 15–16). In some studies, *négociants* are also referred to as 'traders' (Geenen, 2011a). In this chapter, *négociants* are mine-based mineral buyers purchasing coltan from mineworkers and working at the interface between these workers and the mining cooperatives.

resource exploitation and conflict (Verbruggen et al.; World Bank, 2008). To reach this policy objective, special attention has been paid to enforcing international due diligence standards, which are a series of regulations requiring mining companies sourcing minerals (including coltan) to respect human rights and avoid contributing to conflict (OECD, 2013). The goal of boosting the Congolese economy while improving governance and transparency in the trade of minerals lies at the core of the mining reforms in DRC (World Bank, 2008: 29). In addition, these reforms may contribute to sustaining the livelihood of millions of people (Garrett and Mitchell, 2009: 12). The reforms also aim to have more economic oversight over the trading activities of intermediaries in the mineral commodity chain (OECD, 2013: 59), including *négociants*, individuals recruited by trading houses and mining cooperatives to act as middlemen, purchasing coltan from the mineworkers.

Based mainly on nineteen months of ethnographic fieldwork conducted in three coltan mines in the northern Katanga, this study aims to provide an in-depth understanding of how reforms of artisanal mining have affected the livelihoods and socioeconomic position of *négociants*. It also examines how mineworkers have experienced *négociants*. This is very important, because *négociants* are key actors in the mining business. Although they play a crucial role in trading coltan (De Failly, 2001: 20; Kilosho, 2011), their experiences with the reforms and efforts to diversify their livelihood portfolios have often been sketched in superficial ways or simply left out of many studies. This oversight has resulted from a tendency to treat *négociants*' livelihood activities in isolation from those of mineworkers (Geenen, 2011; Maconachie and Hilson, 2011b).

Négociants are frequently portrayed as economically powerful actors who abuse and dupe mineworkers and enjoy a brokering position in the mineral market. For example, in 2008, the World Bank (2008: 8) concluded that 'the artisan is frequently indentured to middlemen and financiers who, while playing a legitimate and valuable role in the sector, often charge usurious rates or fail to give full market value for the minerals produced'. Likewise, in his Master dissertation on the position of artisanal mineworkers in eastern DRC in the global cassiterite (or tin) chain, Kilosho (2011: 15) argued that the commercial trade of tin is domestically dominated by 'big traders' who give orders. This portrait aligns with Global Witness's (2006: 20) assertion that, in the Katangese copper and cobalt sectors, although *négociants* are also exploited by trading companies, they make a reasonable living and pay the mineworkers 'very low prices'. A similar

observation was made in the gold sector in Western Africa, where Maconachie and Hilson (2011b: 296) observed that middlemen abused artisanal mineworkers and ‘neglected their welfare’.

Thus, there appears to be a widespread conviction that *négociants* occupy a powerful economic position. Little attention has been paid to how economic constraints introduced by the reforms have reshuffled this position and affected the livelihoods of both *négociants* and mineworkers. It is this gap that the present study aimed to fill. This chapter addresses the question of how reforms of coltan mining and trade have altered the relationships between trading houses, mining cooperatives,⁹² *négociants* and mineworkers, and explores what effects these changes have had on *négociants*’ livelihood assets. The findings indicate that, in northern Katanga, the reforms have left many *négociants* exposed to ‘external and internal threats to livelihood security’ (Ellis, 2000: 298). In response, they have used their social networks as strategies to diversify their livelihood portfolios, which has also affected mineworkers through their experiences and dealings with *négociants*.

The remainder of the chapter is organised as follows. The next section of this chapter presents the theoretical framework, followed by a description of the role of *négociants* in the informal mining business before the reforms. The study methods are then described in brief, before moving into the present findings. The presentation of the findings focuses on how the reforms shaped the socioeconomic position of *négociants*, implications of this change for their activities and livelihoods, and how they opted for diversification. The last section presents final analyses and conclusions.

2. Conceptualising livelihood

Since the 1990s, academic debates on the livelihood framework have evolved significantly. As a response to the conventional approach to development, which mainly explained poverty in terms of low income, this framework has generally been used as a holistic, people-centred development approach to poverty eradication (Chambers and Conway, 1992). It is based on the assumption that a livelihood is broader than monetary income (De Haan, 2000) and that formal or informal institutions can enable people’s

⁹² This is referred to as ‘mining cooperatives’ or simply ‘cooperatives’ in this chapter.

pursuit of their livelihoods (Christoplos and Hilhorst, 2009). Thus, Ellis (2000: 291) has asserted that one should analyse livelihood issues in terms of assets (natural, human, financial, social and physical), activities and how people access to these assets, through ‘social relationships and institutions that mediate people’s access to different assets and income streams’.

The notion of ‘social relationships’ is theoretically important for understanding how *négociants* diversify their livelihood portfolios. Bebbington (1999) and Krantz (2001) have both argued that livelihoods are shaped by non-economic elements, such as cultural aspects or ‘informal structures of social dominance and power within the communities themselves’ (Krantz, 2001: 4). Likewise, in their book on conflict dynamics in eastern DRC, Vlassenroot and Raeymaekers (2004: 17) have put forth the idea that ‘social bonds’ are vital in enabling people’s access to resources and markets. Clearly, it is important to examine how, in addition to using the ‘formalised’ coltan market⁹³, *négociants* may also rely on their social spheres for diversifying their livelihood portfolios.

Many authors have drawn on a political economy perspective to discuss the livelihoods and economic position of *négociants*. For instance, Maconachie and Hilson (2011b: 296) reported, in their study on the formalisation of artisanal mining in West Africa, that the middlemen of the gold trade abused artisanal mineworkers, leaving them ‘in desperate poverty’. Similarly, in their study of the artisanal mining of tin in Nigeria, Mallo et al. (2011) concluded that mineworkers were exploited by middlemen because they lacked information on mineral prices. Other studies, undertaken in eastern DRC, have arrived at similar conclusions. De Failly (2001: 20) considered *négociants* to be the ‘*vainqueurs*’ (winners) during the 2001 coltan boom in South Kivu. Additionally, D’Souza (2007: 6) has argued that *négociants* have a vested interest in controlling vulnerable mineworkers through the various types of *négociant*-created organisations, such as cooperatives. In her seminal study on the gold trade in Kamituga (South Kivu), Geenen (2011: 431) similarly reported that *négociants*’ access to information about prices ‘has dramatically strengthened their position when they have to bargain over gold price’, resulting in a particular set of power relations between *négociants* and mineworkers.

In the present analysis, the use of a livelihood perspective provided two main advantages. First, following Mallett and Slater’s (2012: 61) contention that ‘government policies have

⁹³ The formalisation of the coltan market further discussed is a set of policy measures to make the trade of coltan more transparent.

the potential to both constrain and enable people's pursuit of effective livelihood strategies', this chapter analyses the factors influencing *négociants*' choices in diversifying their livelihood portfolios in a context where the government has taken a series of policy measures to reform artisanal mining and to organise the coltan trade. The study examines whether *négociants*' decisions to diversity their livelihood portfolios were influenced by these measures, beyond necessity (involuntary and desperation reasons) and choice (voluntary and proactive reasons) as Ellis (2000: 291) suggests.

Second, taking a livelihood approach also facilitated the analysis of how *négociants*, when confronted with economic constraints, risks and uncertainties, relied on their informal social relationships in their efforts to diversify their activities. It is especially crucial to take into account the social aspects of livelihood activities in a context where mining reforms tend to privilege a 'formalised' coltan trade instead of paying attention to understanding the social relations between mineworkers and *négociants*. Much of the past work described above has lacked an in-depth analysis of *négociants*' livelihood activities. By incorporating a careful analysis of this, the present study aims to contribute to the body of literature on livelihood diversification in artisanal mining areas in a context of ongoing reforms, asking why and how *négociants* engage in livelihood diversification, as well as about the implications of the reforms for mineworkers.

3. Methods

This study primarily used ethnographic methods, which involve studying people's practices from their own perspectives and in their own settings (Hammersley and Atkinson, 2007). The data for this study were collected during seven months (February–August 2014) of ethnographic fieldwork conducted in three coltan mines—Kahendwa, Kisengo and Mai-Baridi—located in Kalemie and Nyunzu territories, roughly 200 km to the west of Kalemie, the capital city of Tanganyika province.

The data collection for this study combined observation, individual and group interviews, life histories and a survey questionnaire. These multiple methods were used to check the accuracy of the data collected, cross-checking and validating the findings (Reimer, 2009). Observation is a key method in ethnographic research (Campbell and Gregor, 2010). I first observed how *négociants* purchased coltan from mineworkers and their interactions with trading houses and cooperatives. I conducted in-depth interviews with 20 out of 28 *négociants* and collected their life histories, based on their long-term experience in the

mining activities. I also conducted interviews with 133 individual mineworkers and 16 members of their committees, collecting 12 life histories from these groups. Additionally, I conducted 14 interviews with the staff of trading houses and mining cooperatives. The interviews with mineworkers and institution staff members helped in gaining an understanding of how they experienced and interacted with the *négociants*.

The survey questionnaire was primarily geared towards assessing the activities of the *négociants* living in Kahendwa, Kisengo and Mai-Baridi. The survey, which concerned 25 of the 28 *négociants* living in the study area, was structured around various themes at the level of *négociants*' households. It collected information about their areas of origin, length of experience in mining and trading coltan, the types of livelihood activities they engaged in other than purchasing coltan, and the actors with whom they engaged in these activities. The survey allowed us to identify the key activities undertaken by these *négociants* when seeking to diversify their livelihood portfolios.

Among the *négociants* studied, only four were women, given the fact that women's activities in artisanal mining are often blamed for their social status and this reflects the typical gender division in mining communities (Bashwira et al., 2013). Likewise other *négociants*, two were recruited in 2012 in Kisengo by representatives of the *Coopérative des Artisans Miniers du Congo* (CDMC), and the two were recruited in 2013 in Kahendwa by *Coopérative Minière Maendeleo* (CMMA). The analysis of the *négociants*' activities was not based on the amount of income generated, which is beyond the scope of this study. Instead, the analysis focused on explaining the nature of the activities, exploring what they meant for the *négociants* and for mineworkers' households, as well as why *négociants* opted for this kind of diversification. All of the data were transcribed, organised electronically and coded using NVivo qualitative data analysis software.

4. Coltan mining and *négociants* in Kalemie and Nyunzu (2007–2009)

Prior to coltan mining, the rural economy of Kalemie and Nyunzu was predominantly agrarian (Mwanyimi Mbomba, 2011; Omasombo, 2014). Many farmers cultivated plots of land of around one acre for local consumption. Land was held through customary tenure and lineage, as has been observed in other regions of DRC, such as North and South Kivu (Van Acker, 2005: 81–82). Additionally, customary tenure arrangements were managed by local traditional chiefs (*Bami*, singular *Mwami*), who allocated land as it passed from one generation to another.

In 2007, this situation changed dramatically, following the discovery of several coltan deposits, mainly in Kisengo and Mai-Baridi (2007) and in Kahendwa (2011). In response to the impoverishment of the population after the collapse of the agriculture sector in the 1990s, coltan mining has provided people with opportunities to seek new livelihood options and income (Omasombo, 2014)⁹⁴. Mining has become an important source for the flow of cash into local communities.

Until 2010, coltan trading was controlled by *négociants*. Some were independent traders who neither belonged to the mining cooperatives nor received pre-financing through them (Table 1), and others purchased coltan for urban-based trading houses (*comptoirs*). These *négociants* organised their activities through small groups known as ‘committees of *négociants*’ (*comités des négociants*), which were made up of 5–10 persons. The ‘*comités*’ helped *négociants* to collect information on price setting and fluctuations in towns (Kalemie, Uvira and Bukavu in South Kivu and Goma in North Kivu). Besides organising the ‘*expédition*’ (transportation/dispatching) of coltan to *comptoirs*, the ‘*comités*’ also conveyed cash to the mines. According to many *négociants*,⁹⁵ ‘*coupures de fond*’ (cash flow problems) were rare given the high number of *négociants*, which approached 100, and the competitive nature of their activities. Competition among *négociants* allowed mineworkers to negotiate on prices and to choose the highest bidders.

During this period, in the absence of efficient economic markets and given the weakness of the governance structures, coltan trading was based on informal networks. This made it difficult to control this trade and encouraged smuggling (Spittaels, 2010). Trading coltan was organised as follows: Many *négociants* collaborated with intermediaries (known as *convoyeurs*). These *convoyeurs* either stored and transported coltan for the *négociants* or provided cash to other lower-level intermediaries in the mining areas. To make additional profits, many *négociants* combined purchasing minerals with delivering consumer goods that were hard to find in the mining communities to the mineworkers and community members. *Négociants* also relied on a barter economy, exchanging these goods for in-kind payments of coltan, a practice that Garrett (2008) also observed in North Kivu province.

⁹⁴ The decline of the agriculture sector resulted from a series of factors, including the collapse of basic infrastructure (rural roads and railways), the two congolese wars (1996; 1998–2003) and armed conflicts, which caused serious slump in crops production and access to markets.

⁹⁵ Interviews with *négociants*, Kahendwa and Mai-Baridi, August 2014.

Many coltan *négociants* belonged to the Bashi and Nande ethnic groups, originating from South and North Kivu. They had been established in northern Katanga (mostly in Kalemie) since the beginning of the 2000s, before the discovery of coltan, and they were mostly involved in gold trade. At that time, they collaborated with politico-military entrepreneurs belonging to the Rally for Congolese Democracy (*Rassemblement Congolais pour la Démocratie*), a Kivu-based rebel movement that took over northern Katanga and ruled the area between 1998 and 2003 (Spittaels 2010: 17). According to one well-informed source, these entrepreneurs offered start-up capital or provided ‘security protection’ for the *négociants*’ activities.⁹⁶ Since this time, mining reforms have introduced significant changes to the economic position of *négociants*, as the following section will show.

5. Reforming coltan mining

5.1 Policy measures

Beginning in 2009, 3T mining (tin, tantalum and tungsten) in DRC was affected by a series of policy measures. These measures targeted all of the participants in the mining business, including *négociants*. Measures were taken at both the national and the Katangese provincial government levels following international pressure put on the DRC government to enforce clear guidelines concerning the exploitation and trade of 3T (Vogel and Radley, 2015) and other mineral resources.

In 2009, the Congolese government demarcated eight artisanal exploitation zones (AEZs) for 3T in Kalemie and Nyunzu territories.⁹⁷ According to the 2002 DRC Mining Law (T. 4, Ch. 1, Art. 109), the AEZs are areas where ‘the technological and economic factors are not suited for the site to be industrially exploited and which are exclusively reserved for artisanal mining activities’. The AEZs were granted to mining cooperatives, predominantly the *Coopérative des Artisans Miniers du Congo* (CDMC)⁹⁸.

⁹⁶ Interview with Boniface Kyungu, chief office mining service/Kalemie, June 2014.

⁹⁷ Two among these AEZs were located in Kalemie (Mai-Baridi and Sango-Mutonshia) and six in Nyunzu (Kahendwa, Kilunga, Lengwe, Luba, Lububu-Kitoke and Mbale).

⁹⁸ CDMC came into existence on 10 April 2010 in Lubumbashi, the capital city of Haut-Katanga. It has become the largest cooperative in northern Katanga, claiming to represent up to 13,000 miners (see Chapter 3).

In addition, the Katangese government took its first measure targeting coltan mining in northern Katanga. On 9 March 2009, the Katangese government granted a 3T-buying monopoly in four mining areas of northern Katanga⁹⁹ to Mining Mineral Resources (MMR), an Indian trading house headquartered in Lubumbashi (the former capital city of Katanga). This entitlement was confirmed after MMR acquired official rights from the mining cadastre in December 2011 (CAMI, 2012). The above decision and MMR's entitlement led many *négociants* of coltan to abandon their activities amidst tensions with MMR. Some *négociants* were arrested. Spittaels (2010: 20) noted that, in Kisengo, 'three protesting South Kivu traders [...] were detained until they agreed to sell MMR the 11 tonnes [of coltan] they had planned to transport to Bukavu'. The arrival of MMR also coincided with the establishment of mining cooperatives in northern Katanga (see Chapter 3).

The Katangese provincial government also decided to stop the flow of coltan to other provinces, especially North and South Kivu. After observing that, since 2007, minerals systematically escaped administrative, economic and tax control by the authorities (Spittaels, 2010: 17), in October 2009, the then Katangese governor, Moïse Katumbi Chapwe, raised administrative charges for transporting cassiterite and coltan significantly, from 0.10 USD to 5 USD per kilogramme on all transit of tin, its by-products and coltan from Katanga province to any other province.¹⁰⁰

Alongside these measures, the Katanga policy network¹⁰¹ played a pivotal role in concentrating conflict mineral policy in Katanga (Diemel and Cuvelier, 2015). This encouraged the implementation of the ITRI Tin Supply Chain Initiative (or iTSCi) in most of the Katangese 3T areas. As already mentioned, the iTSCi was designed by the International Tin Research Institute (ITRI) in 2009 and has been providing a means of determining the origins of 3T and documenting the trading chain of these minerals, by 'tagging and bagging' 3T loads at the mining sites or *postes d'achat*, counting offices (trading posts or *comptoirs*) and mineral depots. The iTSCi presence has had the effect of

⁹⁹ In Nyunzu territory (Kisengo [coltan]) and Lunga [gold], in Kalemie territory (Mayi Baridi [coltan]) and in Manono territory (Katonge [coltan]).

¹⁰⁰ Provincial decree № 2009/0035/KATANGA du 9 Octobre 2009.

¹⁰¹ It is defined by Diemel and Cuvelier (2015: 152) as 'a network of influential private and public actors involved in the reform of Katanga's 3T mining sector governance between 2009 and 2011'.

introducing new patterns of organising the coltan trade in cooperation with trading houses and cooperatives.

5.2 Organising the coltan trade

In the wake of the reforms, trading coltan has involved five actors in coltan mining areas: the iTSCi, trading houses, mining cooperatives, *négociants* and mineworkers. The iTSCi programme encouraged trading houses to collaborate with mining cooperatives. With rare exceptions, such as Manono in central Katanga, where some *négociants* continued to purchase coltan independently, trading houses and cooperatives reduced the number of *négociants* they found operating in mining areas, recruited some of them (see Table 1) and pushed out others from the commodity chain. This was meant to organise the coltan trade more efficiently.

5.2.1. Recruiting *négociants*

The size of the mining areas, their potential of production, the number of mineworkers working in the mines and the number of *postes d'achat* available all had a bearing on the recruitment of *négociants*. Trading houses and cooperatives considered four main sets of factors in recruiting *négociants*.

The first *négociants* to be recruited were those who had lived in the mining areas for a long period of time approaching four years. It was believed that they had a good knowledge of coltan ore. Second, trading houses and cooperatives selected *négociants* on the basis of their own management politics. In Kahendwa, for instance, representatives of the CMMA¹⁰², the only cooperative established there, charged in 2012 a 500–1,500 USD to *négociants* who wanted to work with CMMA. This amount was seen as illegal by many of the *négociants*.¹⁰³ In addition, trading houses and cooperatives recruited *négociants* who either had houses in mining areas or had invested in these areas. Although material assets such as houses did not serve as ‘security deposits’ as such, they were seen as proof that those *négociants* would not be tempted to abandon their activities or run away with the funds that cooperatives provided to them. Nevertheless, the fact that

¹⁰² The Coopérative Minière Maendeleo (CMMA) arrived in Kahendwa in February 2012.

¹⁰³ Interview with *négociants*, Kahendwa, May 2014.

négociants abandoned their activities occurred several times, mainly because of debts owed to the cooperatives.

Other *négociants* were recruited on the basis of their social connections, networks of patronage within the cooperatives and roles in the local mining business. Finally, some *négociants* were people from the local communities (*'batoto ya mungini'*). These people were mostly from the Bakalanga ethnic group and were either recommended or had social ties with the *mwami* of the areas where the coltan extraction took place. For the *mwami*, having community-based *négociants* was a strategy to reinforce their power positions among the local constituencies while maintaining an influence over the mining business in their areas (see also Chapter 4).¹⁰⁴

Finally, according to these cooperatives' representatives, female *négociants*, like masculine *négociants*, were recruited based on their experience, moral integrity and family relations. Although many *négociants* were present in the mining areas, one of the female *négociants* recruited in Kisengo (Maman Henriette Kabala), for example, was the wife of the president of the diggers' committee.

5.2.2. Interactions between trading houses, cooperatives and *négociants*

Relationships between trading houses, cooperatives and the handful of *négociants* recruited and qualified for trading coltan can be characterised as both 'patron–client' and interdependent (see Table 4). After signing contracts of collaboration, trading houses pre-financed the cooperatives on a daily or weekly basis. The amounts varied, especially by the potential production of the mining area. For example, in Kisengo, where production approached one tonne of coltan during the peak period, funding provided by MMR to the CDMC is estimated at 25,000 USD/day.

¹⁰⁴ Interview with the village chief of Kisengo, July 2014.

Table 4. The coltan trade pre-financing scheme

	Trading houses	Cooperatives	Négociants	Mineworkers
Functions	Pre-finance cooperatives	Pre-finance <i>négociants</i> Appoint <i>négociants</i> at <i>postes d'achat</i> Hand over coltan to trading houses	Purchase coltan at <i>postes</i> <i>d'achat</i> Often replaced by their collaborators, ' <i>sous-couverts</i> '	Mine in tunnels Sell coltan to <i>négociants</i> at <i>postes d'achat</i>
Frequency of transactions	Daily or weekly	Daily	Daily	Daily
Relationship type	Based on written contracts		Buyers–sellers	

In Kisengo for instance, this pre-financing scheme functioned as follows: MMR provided funds to the CDMC, which then pre-financed 21 *négociants* appointed at 14 *postes d'achat*. The daily amount per *négociant* ranged from 160 to 1,500 USD, allowing them to purchase 5–50 kg of coltan. When this pre-financing scheme functioned properly, it nourished the local economy with a steady circulation of cash. The above pre-financing system functioned in the same way in Kahendwa and Mai-Baridi but with only five *négociants* based in Kahendwa and two in Mai-Baridi (see Table 1).

6. Effects of the reforms

6.1 Effects on the livelihoods of the *négociants*

This section builds on a life history to examine the implications of the reforms for the livelihoods of *négociants*. Mallett and Slater (2012: 56) have emphasised that the environment where livelihoods are made and business is done matters for understanding how economic reforms affect people's activities. This is relevant in post-conflict areas such as Kalemie and Nyunzu, where the roles played by different groups of actors in

livelihood processes are worth exploring (Christoplos and Hilhorst, 2009). This section shows that, although the reforms yielded some advantages for *négociants*, they also had negative effects on them. These effects are situated at the level of policy measures regarding the organisation of the coltan market.

Mwamba's story

Mwamba is a young man of 35 years. He has lived in Kisengo since 2008. He owned a tunnel before he got married in 2010. When MMR and the CDMC arrived in January and June 2010, respectively, followed by the iTSCi in April 2011, he said that the working conditions in Kisengo changed profoundly. MMR/CDMC fixed the purchase price of coltan, making it difficult to negotiate prices with other independent *négociants*. In September 2011, coltan was discovered in Kahendwa. Mwamba moved there. He first worked in Kahendwa as a mineworker. He was then recruited by Divin Wasolela (the *négociant principal*) as a CDMC *négociant*. Mwamba received funds from Divin Wasolela and was paid 2.2 USD per kilogramme of coltan he handed over to the CDMC. The CDMC was replaced by the CMMA in January 2012. Mwamba had accumulated many debts to mineworkers—estimated at 1,200 USD—because of cash flow problems. Unable to pay these debts, he was regularly in dispute with the mineworkers. In October 2012, he paid half of the debt and returned to Kisengo, where he became an ordinary miner. In January 2013, he owned a tunnel at the quarry of Bovu and was appointed by the mineworkers as member of their committee. However, like many other mineworkers interviewed, on 12 July 2014, Mwamba described the following problems:

When we sold coltan to the two *négociants* appointed by the CDMC at Bovu [Dunia Kayanda Mokili and Maman Henriette Kabala], they rarely paid us directly because of recurrent cash flow problems. We and our families have been living like birds. We rely on petty loans and use our valuable items [such as radios, shoes, etc.] as security deposits to obtain food or medicine from traders or pharmacists. Other *négociants* can give us micro-loans, too, but many of them are also indebted to local traders and both impose deadlines that we can rarely afford.

Mwamba's story highlights two important elements. First, it reveals the complex trajectory of a *négociant* switching roles to become a mineworker and how he was confronted with financial difficulties. Second, it highlights how mineworkers have experienced *négociants*. Importantly, in the conditions described in his statement, it is clear that both groups have been confronted with the same types of problems.

6.2 Effects of policy measures

Policy measures have had implications for the livelihoods of *négociants*. Being in dispute with MMR and the doubling of the administrative costs associated with the trade of 3T from Katanga to other provinces made it difficult for many *négociants* to maintain their activities in the area. They were either forced out the mineral commodity chain or had no choice but to work with and for the trading houses and cooperatives. Additionally, according to the chief office of the Federation of Congolese Enterprises (Kisengo), a man of 45 years who had been established in Kisengo since 2007, many *négociants* were arrested by the mining police because they were unwilling to collaborate with MMR and the CDMC.¹⁰⁵

Table 5. Number of *négociants* by mining area, 2009–2014

	Mining area			
Year	Mai-Baridi (Kalemie)	Kahendwa (Nyunzu)	Kisengo (Nyunzu)	Total for all areas
2009	41	0	64	105
2010	9	0	17	26
2011	6	67	21	94
2012	5	15	22	42
2013	2	8	21	31
2014	2	5	21	28

Source: Primary data collected in 2014

Table 5 shows that the number of *négociants* decreased over time. Although the table does not present data for all of the active 3T mining areas in northern Katanga, it reveals a general trend showing that trading coltan ceased to be an independent activity.

¹⁰⁵ Group interview with *négociants*, Kisengo, May 2014.

6.3 Purchasing coltan under trading houses and cooperatives

6.3.1 Opportunities

Working for trading houses and cooperatives yielded several advantages to the *négociants*. Neither state agencies nor other people in positions of authority (e.g. *mwami*) were then able to levy taxes or fees directly against the *négociants*. These, for instance the fee for the ‘*cartes de négociants*’ (the official authorisation to trade minerals), were paid by the cooperatives. However, this does not mean that illegal taxation completely disappeared, as the amount of 500–1,500 USD paid by the *négociants* in Kahendwa illustrated. Another advantage was that cooperatives paid the *négociants* an incentive of 2.2 USD per kilogramme of coltan purchased, irrespective of price drops at the international and local markets.

However, the amounts earned through these incentives varied considerably from one mining area to another and between *négociants*. Although incentive earnings were estimated at 10–25 USD/day overall, this depended on a number of factors. For instance, when tunnels entered a productive phase, *négociants* appointed at nearby *postes d’achat* were able to purchase more coltan ore than were those at other locations. This explains why other *négociants* were sometimes able to provide micro-loans to mineworkers, as Mwamba suggested.

The incentives earned also depended on the quality and quantity of coltan produced. When a mining area was less productive or its coltan had a poor tantalum concentration (as was the case, for example, in Kilunga, another Nyunzu coltan mine), the cooperative (in this case, Vimated) had difficulty obtaining pre-financing from a trading house. This directly affected the cooperative’s *négociants*.

Négociants used their incentive earnings to pay for a number of expenses. For instance, they paid for food rations, transport costs and a kind of salary (100 USD/month) to their ‘*sous-couverts*’—people they appointed at the *postes d’achat* to purchase coltan for them. In some cases, mineworkers have been reported to sell ‘fake’ coltan to the ‘*sous-couverts*’ (Wakenge, 2014). These factors demonstrate that, although *négociants* seemed to be favoured by the pre-financing system, in reality, many of them had several costs to cover, which implies that it would be too simplistic to state that they are the “big winners” in the resources game.

Working with trading houses and cooperatives allowed and forced many *négociants* to undergo a process of sedentarisation. Although they were known to move frequently from

one mining site to another, always heading for those locations where they thought the minerals with the highest ore grades could be found, many *négociants* became permanently established in a specific mining area. Also, because otherwise they risk losing their membership of a given cooperative and may find themselves excluded from the buying process, sedentarisation became an important factor for livelihood diversification of *négociants* through engaging in activities besides trading coltan.

6.3.2 Constraints

The negative effects that working under trading houses and cooperatives had on *négociants* should not be neglected. The trading houses and cooperatives repeatedly faced problems with cash flow. These '*coupures de fond*' were caused by logistical challenges inherent in the remoteness of mining sites located in rural areas where no banking system was available or by prices fluctuation at the international market. In the mines, all payments had to be made in cash. This cash had to be physically transported from a bank to the mines. The only bank branches were located in Kalemie, and these also depended on shipments of cash from banks in Lubumbashi. Such shipments were usually flown in weekly by commercial airlines, which operated irregularly and unreliably. As might be expected, these '*coupures de fond*' presented many challenges for the livelihood activities of *négociants*. Without cash, *négociants* could not pay for minerals from the mineworkers, reinforcing patterns of credit and debt, as the story of Mwamba demonstrated.

Additionally, in the study area, *négociants* were able to make use of the so-called '*Bank Lambert*' to keep their activities afloat. '*Bank Lambert*' (a nickname of the former Belgian *Banque Bruxelles Lambert*) denotes money lending by mineworkers or *négociants* on particularly strict terms, including interest rates of up to 50% and rapid repayment of the debt. Moreover, many *négociants* faced substantial financial losses. This resulted from the mobility patterns of mineworkers, who often moved from one mine to another, leaving their debts behind. In Mai-Baridi and Kahendwa, many of the *négociants* interviewed described this kind of constraint:

Buying coltan depends on how we organise our 'campaign'—that is, building trust relationships with mineworkers. We provide them with petty micro-loans and buy cigarettes or food rations for them individually or for their teams. We buy these items personally or obtain them on credit from local traders. However, often, we are unable to recover these debts, because many mineworkers leave the

mining areas or are unable to reimburse us, making us indebted to our cooperatives.¹⁰⁶

In this statement, it is clear that trust relationships play a key role in patterns of reciprocity and market exchanges, as has been noted in previous work (Grätz, 2004; Hart, 1988). However, it also reveals that the relationships between *négociants* and mineworkers did not always have positive outcomes. As a result, many *négociants* became indebted to their cooperatives. They were unable to buy the quantity of coltan for which they received funds. From 2012 to 2014, these debts totalled 25,000 USD owed by a group of five CDMC *négociants*. As they could not pay their debts, some of these *négociants* were fired by the CDMC; others ran away.¹⁰⁷ Trading under cooperatives had implications for both *négociants* and mineworkers.¹⁰⁸ All of the constraints mentioned above—‘*coupures de fond*’, patterns of debt and financial losses made livelihood diversification very important for many *négociants*.

6.4. Livelihood diversification by *négociants*' households outside the mines

Table 6 below shows how *négociants* diversified their livelihood portfolios in various ways. The livelihood activities of *négociants* and their households illustrate that, when confronted with risks, people may respond to the threat to their welfare and activities in many ways as Ellis (2000: 294) suggests. The table also shows that the specific activities chosen were not the same. Rather, the activities varied from one mining area to another and between individual *négociants*. The mining areas differed in terms of population size, accessibility and business opportunities. These factors largely determined the choices *négociants* made for engaging in particular activities. For example, in Kisengo, where there were relatively more inhabitants (17,000) and therefore likely many potential customers, 2 of the 21 *négociants* invested in the hotel trade.

¹⁰⁶ Group interview with *négociants*, Mai-Baridi and Kahendwa, March 2014.

¹⁰⁷ Interview with MMR staff member, Kisengo, June 2014.

¹⁰⁸ Group interview with mineworkers, Kahendwa, April 2014.

Table 6. Activities of 25 négociants in addition to purchasing coltan

	Mining area				
Activity	Kisengo (n = 19)	Kahendwa (n = 4)	Mai- Baridi (n = 2)	Total for all areas (n = 25)	%
Providing micro-loans to mineworkers' households	12	3	1	16	64
Selling beer/alcohol	3	2	2	7	28
Farming activities	6	1	0	7	28
Providing motorbike transportation	6	1	0	7	28
Selling fuel	2	2	1	5	20
Investing in cinemas	4	1	0	5	20
Engaging in other activities (e.g. petty trade or shops)	5	1	0	6	24
Investing in the hotel trade	2	0	1	3	12
Logging/Selling planks	3	0	0	3	12

Source: Primary data collected in 2014

Moreover, as discussed above, *négociants* had differing levels of financial assets and income. Some were financially better off than others and were able to invest, for instance, in cinemas or motorbikes for public transportation.

Farming activities did not feature prominently in *négociants*' livelihood diversification strategies. As Table 6 shows, of a total of 25 households, only 7 (28%) engaged in farming. In these cases, the farming activities were performed by the *négociants*' spouses. These households reported that farming was something normal because they were 'autochthons'—peoples living in these villages before the mining began. A discussion with the spouses of the *négociants* who were not involved in farming revealed that they did not have much interest in farming, because they perceived it to be an activity that would take too much time, generate little income and fail to help them and their spouses

quickly in the face of financial problems. Our findings are consistent with past evidence of links between mining and farming activities in other mining areas across sub-Saharan Africa (Hilson, 2011). However, our findings have also shown that farming is only considered a viable livelihood option by *négociants* if they expect it to yield swift benefits. But agriculture rarely – if ever – produces quick benefits.

Table 6 also reveals that providing micro-loans was the most widespread livelihood activity, engaged in by 16 of the 25 surveyed *négociants* (64%). Loans were predominantly provided to mineworkers' households. As has been found elsewhere in eastern DRC, although patterns of debt and credit predated the reforms, shifts in the organisation of the coltan market introduced new types of relationships between *négociants* and mineworkers. Before the reforms, debts were mainly taken on for the purpose of producing minerals (Geenen, 2011). This situation has changed profoundly. For example, the 'Bank Lambert' system mentioned earlier, which was the basis of micro-loans, gave loans of 20–50 USD, not for the purpose of producing coltan, but rather to enable mineworkers' households to start a livelihood activity. After a month, the creditor of a 50 USD loan would be paid back 75 USD. This also suggests that many *négociants* and mineworkers' households were confronted with credits and debts altogether.

6.5. Mineworkers' experiences of *négociants*

Kissamba's story

Kissamba is a man from South Kivu in his 50s. He has lived in Kahendwa since December 2011 with his wife and three children—one son and two daughters, all between 11 and 16 years old. When Kissamba arrived in Kahendwa, he was an ordinary mineworker. In October 2012, he was appointed to the diggers' committee, a position that allowed him to own five pits. On several occasions, Kissamba observed that mineworkers' living and working conditions have not improved in spite of the reforms. He said that, although the CMMA claims to support the mineworkers, they continue to carry heavy sacks of mineral sand (*kabondema*) on their heads. He also added that '*coupures de fond*' were recurrent, and the mines lacked adequate equipment such as motor pumps. He asked, 'How can *négociants* of the CMMA keep buying coltan "on credit" when mineworkers live off their day-to-day income and are not allowed to sell coltan to someone else?' Similar to many other mineworkers, Kissamba expressed his disappointment with the reforms:

Trading houses and mining cooperatives operating in northern Katanga can be compared to a car without a driver, breaks or headlights, but that drives in the dark, over bumpy roads, without anyone being able to stop it. [Interview in January 2014]

For mineworkers, the post-reform actors, namely, the trading houses, cooperatives and *négociants*, were seen as a single entity, and the reforms were almost always disappointing.

Kissamba's spouse sold peanuts and cassava flour at Kahendwa market. Before she started working at the market, she did not have any income-generating activity of her own. She said that her husband earned enough income from his five pits. However, in May 2014, the national mining ministry banned mining activities in Kahendwa (N° 0143/CAB. MIN/MINES/01/2014, Article 3) because mineworkers extracted coltan from tunnels exceeding 30 m, a depth prohibited by the Mining Law (Heading I, Ch. 1, Art. 1). Deprived of mining as their main source of income, Kissamba's spouse had no choice but to engage in petty trade. She obtained a micro-loan of 50 USD as start-up capital from a Kahendwa-based *négociant* who was also from South Kivu, her native region. After one month, she paid back 75 USD. The money she earned helped to pay the school fees for her children and to make ends meet.

As Kissamba's story reveals, although mineworkers' households were charged a high interest rate, taking on debts was not only useful for wealth creation; debts became the main means of living. Following Van Dijkhorst (2011: 113), who found that an activity undertaken in a context of necessity may become a livelihood base, the present study found evidence that debts may illustrate patterns of resilience, adaptation and financial necessity in difficult times.

More importantly, micro-loans and debts also served to build social cohesion and 'group solidarity' as Mauss asserts (quoted in Peebles, 2010: 226). Many mineworkers' households contracted micro-loans from *négociants* who originated from the same geographical area as they did. Thus, these loans were not just economic transactions for income-generating activities. One *négociant* established in Kisengo since 2009 noted, 'When you give a loan or need cash, the only person who can help you "*ni wako wa ndani kabisa*", meaning a person who knows who you are, what you do and where you

are came from'.¹⁰⁹ Social relations and informal practices with mineworkers' households allowed many *négociants* to cope with financial problems. Similarly, Knowles and Weatherston (2006) found that informal relations were an important determinant of earnings.

7. Analysis and conclusions

This study examined the implications of artisanal mining reforms on the livelihoods of middlemen (*négociants*). Considered key actors in the mining business in DRC, *négociants* are generally believed to enjoy a brokering position in the conduct of mining affairs. Studying their livelihoods in the wake of the reforms has provided a better understanding of their role in the local socially embedded economy and of how this has changed profoundly over time.

Our findings indicate that changes in patterns of trading coltan have locally reshuffled the economic position of *négociants*. Before the reforms, *négociants* were practically independent traders, connected to and collaborating with urban-based trading houses (*comptoirs*). At this time, the *négociants* largely controlled the informal trade of coltan. Following reforms of mining aimed at cleaning-up the state of affairs in the mining business, the economic position of *négociants* has changed. A series of policy measures have been taken by the DRC national government and by the Katanga provincial government, including granting artisanal mining areas to mining cooperatives (and sometimes to trading houses). Trading houses and cooperatives, in turn, have acted to exclude some *négociants*, while recruiting and pre-financing others to purchase coltan from mineworkers.

This study has shown that the mining reforms have created many opportunities for *négociants*. The trading houses and mining cooperatives have pre-financed *négociants'* activities, paid them an incentive of 2.2 USD per kilogramme of coltan purchased and led many *négociants* to settle permanently in mining areas. However, these opportunities have been tempered by several constraints and a number of restrictions. For instance, recruited *négociants* were only able to purchase coltan for the trading houses and cooperatives, following the terms and conditions fixed by those entities. However, the trading houses and cooperatives often faced financial difficulties (cash flow problems), which repeatedly affected the *négociants* who participated in this study. The *négociants*

¹⁰⁹ Interview with a *négociant*, Kisengo, April 2014.

faced financial losses in their dealings with mineworkers and were often mired in patterns of credit and debt with local traders or with their cooperatives. As the stories of Mwamba and Kissamba demonstrated, these constraints and restrictions also affected the mineworkers. Thus, it cannot be taken for granted that mining reforms will increase the sustainability of people's livelihoods. The findings of the present study are in sharp contrast to the often-held opinion that *négociants* are economically powerful and act to exploit mineworkers. In reality, they do not always enjoy an affluent or stable economic position.

This chapter has shown that *négociants* diversified their livelihood portfolios in many ways, confirming that artisanal mining offers people opportunities to easily find a livelihood option (Hilson, 2011: 1033; Maconachie, 2011: 1056). However, this study has also revealed that these activities were not equal in nature. Some *négociants* were better off than others, wielding considerable economic power that seems to have been unleashed by the reforms. Other *négociants* lost their capital, were fired from the cooperatives, ran away or were only able to invest in petty trade. Still others survived by managing their financial problems through investments in non-farm activities such as the hotel trade, or by providing micro-loans to mineworkers' households, as seen in the story of Kissamba. Likewise, Barrett et al. (2001) have shown that the wealthy in Sub-Saharan Africa are able to diversify their activities, taking advantage of lucrative 'non-farm' income-generating opportunities.

A key finding from the present study is that many *négociants* relied on their social spheres, trust relations and informal financing schemes to cope with financial problems. This reliance on social networks resulted from a number of the constraints discussed above. In sum, formal institutions (trading houses and cooperatives) faced difficulties in mediating easier access to livelihood assets for *négociants*, especially through the pre-financing scheme. As a result, alongside the 'formalised' coltan market, social relations of exchange gained prominence. The 'Bank Lambert' system, which also helped many mineworkers' households to make ends meet, illustrates this point. In spite of its constraints, this 'bank' allowed many *négociants* to provide start-up capital to these households on the basis of social ties and trust relations. The functioning of this system could also be seen as part of the 'informal rules of the game' (Helmke and Levisky, 2004), through which people addressed their livelihood difficulties within their social networks (Lourenço-Lindell, 2002). In this way, people can build on kinships, trust and

reciprocity to diversify their livelihood opportunity (Vlassenroot and Raeymaekers, 2004: 17).

Taken together, the findings presented in this chapter mean that reforming artisanal mining cannot be restricted to ‘formalising’ the coltan market. Reforms often create exclusion and marginalise certain groups of people (Fischer, 2007). Thus, our findings show that future reforms should draw on existing patterns of livelihood diversification. This approach would serve to implement efficient programmes built upon such a diversification. In northern Katanga, where such programmes do not currently exist, there is a need for further empirically based analyses exploring which institutional structures can best support these kinds of programmes.

— CHAPTER 6 —

Coltan Smuggling

This chapter is based on an earlier publication:

Wakenge C.I. (2014). Réguler un vieux jeu? Acteurs et défis à la réforme minière au Nord-Katanga. *L'Afrique des Grands Lacs, Annuaire 2013–2014*, pp. 223–242.

The chapter has been submitted for publication as:

Wakenge C.I., Cuvelier J., Dijkzeul D., and Vlassenroot K. (2017). Ruling the Old Game of Smuggling? Coltan Mining, Trade and Reforms in the Democratic Republic of Congo. to the *Journal of Modern African Studies*.

Abstract

This chapter examines the phenomenon of smuggling coltan into and out of artisanal mining areas. In northern Katanga, the ITRI Tin Supply Chain Initiative (iTSCi), a policy on conflict minerals, is meant to improve transparency in the trade of tin, tantalum (coltan) and tungsten. Ongoing mining reforms include increased economic oversight of the activities of middlemen (*négociants*) throughout this supply chain. The chapter approaches smuggling from a sociology of economic life perspective, closely examining how and why artisanal miners and mine-based *négociants* helped smugglers in the trafficking of coltan. The findings indicate that the social networks in which artisanal miners and mine-based *négociants* are embedded perform a double function. These networks allow the miners, *négociants* and smugglers to maintain close relationships and to breach official regulations—as is often assumed—but miners and mine-based *négociants* also rely on the same networks in their dealings with the smugglers. This chapter concludes that, rather than considering coltan mining areas to be ‘enclaves of regulations’, understanding and addressing smuggling in both local and broader contexts calls for a comprehensive approach.

1. Introduction

‘Nowadays, smuggling coltan is like witchcraft¹¹⁰. One cannot engage in it with unknown persons’. (Interview excerpt with coltan smuggler, Kalemie, January 2014)

In crisis and post-crisis situations, people display different responses to institutions and policies. Based on their own interests, they may make their own interpretations to accommodate, circumvent and/or protest these entities (Christoplos and Hilhorst, 2009; Colebatch, 2009; Mosse, 2004). While it sometimes refers to related deceptive practices, this chapter is primarily concerned with the smuggling of coltan. Although smuggling goods—especially minerals—has characterised the informal economic sector in DRC for decades (MacGaffey, 1991), this study revisits this phenomenon, viewing smuggling as an important primary response that circumvents the ITRI Tin Supply Chain Initiative (iTSCi) policy that has been in place in northern Katanga since 2011. Revisiting this long-held practice of smuggling is very useful today to providing an in-depth and contextualised analysis of the ways in which policy on conflict minerals, like iTSCi, take place and face challenges in the eastern Congo.

¹¹⁰ Witchcraft refers to malevolent practices of sorcery done secretly. See, for example, Geschiere, P. (2003). Witchcraft as the Dark Side of Kinship: Dilemmas of Social Security in New Contexts. *KINSHIP* (2003), 16(1):43–61.

The iTSCi Programme aligns with international policy on conflict-free minerals in eastern DRC. Since the onset of the 2000s, the international community has urged the DRC government to reform its mineral sector, which was said to encourage various types of ‘networks of conflict economies’ (Utas, 2012: 11), to sustain war by allowing armed actors to reap benefits from the mining business (Global Witness, 2009).

In northern Katanga, iTSCi aims to curb the smuggling of tin, tungsten and, especially, tantalum (coltan) (collectively known as ‘3T’). Given that the mining business has supposedly been militarised (Global Witness, 2009), iTSCi’s main objective is to improve the transparency of the trade of coltan (iTSCi, 2011). In addition, coltan is a Congolese mineral that has often been linked to discussions of conflict minerals in media reports and advocacy campaigns conducted by nongovernmental organisations (Nest, 2011: 105–159). Making the coltan trade more transparent would ‘make an important contribution to the evolution of better governance of the sector, including its trade’ (Spittaels, 2010: 62) and help artisanal miners and *négociants* to carry out their activities more safely and efficiently. Why, then, have these miners and mine-based *négociants* cooperated with coltan smugglers, undermining iTSCi’s primary objective?

In addressing this question, this chapter draws on a sociology of economic life perspective, which understands economic action to be embedded in social networks (Granovetter, 2005; Swedberg, 1991). Based on 19 months of fieldwork conducted mainly at three artisanal mining sites in northern Katanga, the study analyses how social networks in which mineworkers and *négociants* participate facilitated smuggling and, more importantly, how these networks changed and adapted their strategies in response to iTSCi as an external policy intervention. Thus, the chapter builds on the argument that people adapt their strategies of negotiating policy outcomes while trying ‘to make policy fit their own perspectives of the problem and goals’ (Hilhorst, 2013: 8).

This chapter is organised as follows. The next two sections discuss the theoretical framework and elaborate on the methods of data collection and analysis. We then briefly introduce the local and historical context of 3T mining and the coltan trade in northern Katanga. This is followed by an outline of the policy on smuggling. The next section discusses the modus operandi of miners and *négociants* in liaising with and deceiving the smugglers. This is followed by an explanation of how iTSCi addressed smuggling and its significance in the study area. The final section discusses the main outcomes of this chapter.

2. Theorising the informal economy and social networks

The sociology of economic life school of thought builds on the assumption that economic action is linked to or depends on actions and institutions that are non-economic in content, goals and processes (Granovetter, 2005: 35). This theory is important for understanding how debates on the informal economy, of which smuggling is an integral part, have evolved in sub-Saharan Africa.

The informal economy, consisting of ‘economic activities taking place outside the framework of the state’ (Meagher, 2010: 12) has been documented extensively in many parts of sub-Saharan Africa since the end of 1980s (MacGaffey, 1991). Several studies on the informal economy have investigated the smuggling of minerals specifically (Deardorff and Stopler, 1990; Hilson and Potter, 2003; Oomes and Vocke, 2003). Scholars have shown that the growth of an informal and ‘invisible economy’ (Meagher, 2010: 6) allows people to respond to state failures in service provision.

In the 1990s, social networks gained prominence in social science research. Working with this concept enables the tracing of informal organisational processes (Meagher, 2010: 23), and it has since been used to examine smuggling (Meagher, 1990) and other forms of behaviour (including corruption) that violate the laws or regulations of the state. Many authors have argued that, in the absence of efficient economic markets, personal and trust relations between people—especially sellers and buyers—and their networks play a key role in economic life (Granovetter, 1985; Hart, 1988; Nordstrom, 2004; Titeca and De Herdt, 2010).

Opinions differ on whether social networks are beneficial in the context of economic development. Some scholars have asserted that people use social bonds or support networks to access resources and to foster a ‘logic of self-protection’ (Vlassenroot et al., 2016: 17). Other researchers have stressed that certain types of social networks are detrimental to economic development, arguing that these networks foster social liabilities and encourage predatory or criminal activities such as mafias, drug trafficking and smuggling (Bayart, 2000; Reno, 2000; Roitman, 2001).

Smuggling and cheating behaviours can be approached in multiple ways in terms of how they are perceived by social actors. De Sardan (2015), for example, has argued that these practices have variable legitimacies. They can take place in hidden or open manner

‘without anyone taking offence at them’ (De Sardan, 2015: 26). In their seminal study on cross-border trade and practical norms in Uganda’s West Nile region, Titeca and De Herdt (2010: 582), referred to a kind of ‘moral economy of smuggling’ that is strongly legitimate in the eyes of the local populations in reaction to the abandonment of the region by the central state. Kibreab (2004), in his study on cheating behaviours among refugees in the Horn of Africa, found that refugees had a double moral standard, in which cheating that was normally considered dishonest was acceptable when it concerned aid institutions.

The above literature points to various types of networks, created in different contexts and for diverse ends, including for the purpose of smuggling. Although it does not do much to explain how smuggling networks may adapt and change their strategies in response to an external intervention (such as a policy), there has been significant interest in analysing how smuggling practices breach ‘formal regulations’, predominantly those of the state or those set by ‘formal’ institutions such as aid agencies (e.g. Kibreab, 2004). The present study will show that miners and *négociants* used social networks both for breaching ‘formal’ iTSCi regulations and in their dealings with ‘informal’ smugglers.

In this chapter, using an approach grounded in the sociology of economic life to investigate coltan smuggling was useful in two ways. First, this perspective facilitates the analysis of the details of why and how networks are structured around specific social actors and which noneconomic factors help these networks to emerge and persist. Second, this perspective is useful for situating smuggling and cheating practices around coltan in the local context, examining the meaning of these practices for the people involved.

Analytically, this chapter aligns with the concept of ‘networks of conflict economies’, coined by Utas (2012). In his study on African conflicts and trans-border networks, Utas argued that these networks are very wide, ranging over neighbourhoods and cities, into the rural, and over the national and transnational. They frequently, but not always, range into the clandestine, if not illicit (Utas, 2012: 11). He described trans-border networks as groups of actors connected for economic, political or war agendas, and as complex, dispersed over geographical space, operating under the control of ‘big men’ and based on ‘social relations’ (Utas, 2012: 8).

Although Utas mainly studied trans-border dynamics, his concept of networks of conflict economies was useful for the present study. In addition to looking at networks ‘from an actor-centred perspective’ (Utas, 2012: 11), his approach tallies with the sociology of economic life approach, which focuses on analysing economic activities as cultural, contextual and political phenomena rather than being purely based on rational actors’ economic decisions (Beckert, 2007; Granovetter, 1985). Additionally, it is interesting to explore how networks around coltan smuggling have adapted to iTSCi. This is very important given that networks are not static, stable or monolithic and can operate at different levels of society (i.e. local, provincial, national, regional and international) (Diemel and Cuvelier, 2015; Twijnstra et al., 2014; Taylor, 2003).

Utas (2012: 13–14) identified four factors to consider when studying networks of conflict economies: i) the degree of power that individual ‘big men’ invest and the resources they possess; ii) the clandestine and unstable character of networks, which can make them efficient, flexible and adaptable to new functions; iii) the fact that networks cut across social and economic groups, as well as geographies; and iv) that these networks may also involve ‘criminal actors’.

In this chapter, we discuss only the second and third of these factors: adaptation of networks and the fact they cut across social and economic groups. Discussing these two factors sheds light on the contribution of this chapter to the sociology of economic life literature. Our findings demonstrate that miners and *négociants* changed and adapted their smuggling strategies in response to iTSCi. However, contrary to Utas’ argument, these networks were not only under the control of ‘big men’ or ‘criminal actors’ but also involved less powerful actors, such as ordinary miners.

3. Methods

This chapter draws on qualitative fieldwork undertaken from June 2013 to March 2014 and continued in early 2015. This work followed a multi-sited ethnographic approach (Marcus, 1995) and was conducted in northern Katanga (Kahendwa, Kisengo and Mai-Baridi mines), in the city of Kalemie, and in South Kivu in the cities of Uvira and Misisi. The data were collected mainly through observing how mineworkers extracted coltan, processed and sold it to *négociants*. Also, the first author held in-depth individual

interviews, group interviews and informal conversations with miners, *négociants* and ‘clandestine *négociants*’ (smugglers) of coltan (known as ‘*hiboux*’¹¹¹—literally, owls).

Gathering reliable data on smuggling is often difficult, given the lack of data on this practice, corruption and the concealing of information on it. Heemskerk (2005: 84) has contended that, ‘because of their lack of confidence in the good intentions of the government and researchers, miners may not reveal that they sell their product outside legal channels, and violate other regulations’. For this reason, gaining trust and collecting accurate empirical data among this population required a multifaceted approach (Ellis and MacGaffey, 1996: 25) and a long-term period of fieldwork in mining areas, urban locations and areas where clandestine *négociants* travelled.

The first author collected data on smuggling practices through in-depth interviews with nearly 300 artisanal miners and 21 *négociants*, as well as informal conversations with these individuals during regular visits to the studied mining areas. Marcus (1995: 106–108) has proposed that, when doing multi-sited ethnography, one may be ‘following people and things’. In line with this approach, the first author followed 11 clandestine *négociants* of coltan (*hiboux*) in various locations. However, this could not be carried out easily. Smuggling is characterised by great secrecy. Other challenges related to the geographical space this study covered and how dispersed these individuals were across this space. Additionally, as has been noted in related studies (Titeca and De Herdt, 2010: 574), interviewing people such as *hiboux* regarding their activities can put researchers in the position of dealing with hidden and very sensitive issues such as bribes. When seeking such data, the first author repeatedly explained to the research participants about the type of questions he was going to ask (Kumar, 2005: 213), promised to maintain confidentiality and to protect their privacy, and assured the participants that the data were being collected for academic purposes. The data were not shared with any third party.

With the help of local research assistants, the first author first identified and contacted *hiboux* in Uvira, Misisi and Kalemie. Prior to iTSCi, these people had traded coltan in northern Katanga and were based in these cities, located roughly 180–250 km from the coltan mines. These *hiboux* were then asked whether they still had activities or ‘contact

¹¹¹ Earlier, this term was used in the province of North Kivu to refer to miners who were, according to Pole Institute (2010: 15), ‘experts in detecting and extracting cassiterite (tin)’.

persons' (*antennes*) in the mining areas and if they could refer the first author to them. After explaining the research objectives, meeting with these *hiboux* on multiple occasions, and probably aided by the fact that many of these *négociants* were from South Kivu, the first author's native province, he progressively gained their consent and trust to gather information on their activities, and they began to provide crucial data in a forthright manner. Of 16 former *négociants* initially met in Uvira and Misisi, 11 agreed to provide information on their *antennes* among which 9 were based in the coltan mines and 2 in Kalemie. Once there, the first author searched for these people and conducted multiple interviews with them. He then cross-checked the data by alternating between them and the initial *hiboux* based in Uvira and Misisi.

Other interviewees included 5 iTSCi field staff in Nyunzu and Kalemie; 7 civil servants in the *division des mines* (mining service) and 12 of intelligence agencies, such as the National Intelligence Agency (ANR) and *Détection d'Activités Militaires Anti-Patrie* (DEMIAP); inspectors of investigation in the *division des mines* in northern Katanga and the mining police (*Police des Mines et Hydraucarbures*, PMH). Many civil servants worked in mining areas, along trading routes used by the *hiboux* or in urban areas hosting coltan black markets.

4. Local context of 3T mining and the coltan trade

As was noted earlier (see Chapter 2), in northern Katanga, 3T mining—especially tin—began in 1932, during the colonial era. Until 1960, Géomines was the sole industrial company established in Manono territory (central part of Katanga). After the Belgian Congo (now the Democratic Republic of the Congo) gained independence in 1960, Congo-Etain (renamed Zaire-Etain in 1973) replaced Géomines until 1995, when it ceased operations (De Koning, 2011). In 2007, several deposits of coltan were also discovered in Manono, Kalemie and Nyunzu territories. In December 2014, the Kalemie office of *division des mines* estimated that there were a total of almost 6,000 artisanal miners working in Nyunzu and Kalemie.¹¹² Among these miners, around 2,390 extracted coltan in eight mining sites (iTSCi-Katanga mining list/8 April 2013).

After 2007, the coltan trade became predominantly informal and opaque. Many coltan *négociants* originated from North Kivu and South Kivu. Through various intermediaries,

¹¹² Interview with Boniface Kyungu, chief office of the *division des mines*, Kalemie, June 2013.

they transported their parcels of the mineral by air, roads or boats to the cities of Uvira, Bukavu and Goma. At that time, their activities were closely interwoven with a web of cartels and various traders who engaged in smuggling minerals, an activity that has deep historical roots in DRC in general (MacGaffey, 1991) and in northern Katanga and South Kivu (Spittaels, 2010: 17).

5. Policing smuggling and the trade of coltan

5.1. iTSCi within a regional smuggling framework

Although it was designed by the mining industry, iTSCi is part of a regional governmental framework aimed at curbing contraband minerals in the African Great Lakes region, especially in eastern DRC. This framework aligns with the conflict-free mineral policy narrative, following the idea that Congolese minerals are controlled by criminal cross-border networks (Tailor, 2003) and finance violent conflicts (Autesserre, 2012). However, some *négociants*—in North Kivu, for example—continue to sell minerals illegally (UN, 2015: 35). To improve the security situation in eastern DRC and to contribute to state-building, improved transparency in trading 3T (and gold) is expected to cut the assumed ties between mining, violent conflicts and the involvement of warmongers in the mining business (Vogel and Radley, 2015).

In pursuit of this aim, efforts to address mineral smuggling have been implemented at the regional and domestic levels. This first took shape in Lusaka on 15 December 2010, when 11 presidents of member states of the International Conference of the Great Lakes Region (ICGLR) signed the Lusaka Declaration of the ICGLR Special Summit to Fight Illegal exploitation of Natural Resources in the Great Lakes Region. In November 2013, the ICGLR created a regional anti-fraud committee. Recently, a first meeting of this committee was held in Kinshasa on 17–18 April 2015, gathering ICGLR's state agencies in charge of dealing with fraud and mineral contraband across the member countries. Additionally, on 20 October 2010, DRC's government created a national commission against mineral contraband.¹¹³ iTSCi has also been expanded to countries neighbouring DRC, namely Rwanda (June 2011) and Burundi (May 2014).

¹¹³ Decrees № 0719/CAB.MIN/MINES/01/2010 and № 140/CAB.MIN/INT.SEC/2010.

5.2. Anti-smuggling provincial measures

In Katanga and South Kivu, addressing smuggling has been an official priority of the provincial governments since the end of 2009. In October 2009, the governor of Katanga, Moise Katumbi Chapwe, raised administrative charges to 5 USD per kg on the transit of cassiterite and its by-products, including coltan, from Katanga province to any other province. This measure aimed to control contraband minerals, to increase taxes from mining to the provincial capital of Lubumbashi, while also stressing the ‘peaceful character’ of Katanga province (Diemel and Cuvelier, 2015: 155). Similarly, on 15 August 2013, Marcellin Chishambo, the governor of South Kivu, raised the *frais rémunérateurs*, a tax paid by licensed *négociants*, from 0.20 USD per kg to 3 USD per kg of coltan and from 0.01 USD to 0.50 USD per kg of tin (decree № 13/030/GP/SK). Although it was also intended to control contraband minerals, the main purpose of this measure was to increase provincial tax revenues from mining.

Because of the above measures, combined with additional factors, including a ban on mining activities in the North Kivu, South Kivu and Maniema in 2010 and 2011 (Geenen, 2012) and the prominent role of the Katangese policy network (Diemel and Cuvelier, 2015: 154), iTSCi has been the most concrete initiative implemented in 3T mines and has addressed smuggling since 2011. By the end of 2014, iTSCi was being put into action in 471 mining sites in eastern DRC, including 232 located in Katanga.¹¹⁴ As a result, iTSCi has made a huge contribution to improving the 3T trade in terms of stimulating the export of minerals. From 2011 to 2013, 1,000.53 tonnes of coltan and 15,561.99 tonnes of tin were exported from Katanga (Diemel and Cuvelier, 2015: 158). In 2014, Kisengo alone produced 284 tonnes officially exported in Kalemie by Mining Mineral Resources (MMR), a trading house that has been established in the area since 2010.¹¹⁵

5.3. Trading coltan under iTSCi

By April 2011, iTSCi had transformed coltan mining areas from relatively free spaces for business into what can be seen as enclaves of regulations. ‘Regulations’ here, refer specifically to ‘procedures and organizational structures’ (De Sardan, 2015: 1) of the coltan market set up by iTSCi. Practically, iTSCi worked hand in hand with trading

¹¹⁴ iTSCi general overview, 9th OECD meeting, Paris, May 2015.

¹¹⁵ Report of the *division des mines*, Kisengo, January 2015.

houses (such as MMR) and mining cooperatives (see Chapter 3). Although these entities had entitlements over 3T mines, they could only purchase coltan under iTSCi regulations. iTSCi field staff divided each mining area into sectors, subsectors and sites composed of several tunnels, allowing them to establish selling points (*postes d'achat*) within each site. No minerals from another site could enter into a site or be traded there. iTSCi field staff monitored, on a daily or weekly basis, the sale of coltan under iTSCi's 'tagging and bagging' system. They also helped civil servants in the *division des mines* to record mineral statistics. All of these measures were meant to break up the existing networks of the informal coltan trade. However, in spite of the measures, miners and mine-based *négociants* collaborated with the *hiboux*.

6. Smuggling coltan: practices, actors and significance

Utas (2012: 13) has argued that, given their clandestine and unstable character, networks of conflict economies become efficient and flexible and may adapt new functions. The present examination of the use of fake minerals and the smuggling of coltan is highly relevant, because these were also the most reported practices in other 3T mining areas. Following Utas, we pay special attention to explaining how these practices, as well as the actors and networks involved, adapted to iTSCi regulations.

6.1. *Vragage*

Examining the practice known as *vragage*, it becomes clear that the belief that the coltan business can be perfectly 'cleaned' is based on wishful thinking. Etymologically, *vragage* comes from *vrac*, a French term literally meaning something left in a jumble. Similarly, miners and *négociants* used the term *vrages* to refer to fake minerals, worthless stones (sometimes called *fausses matières* or *faibles matières*), and the by-products of coltan or similar minerals, such as tin, which were often used for cheating or smuggling.

Basically, the *vrages* were found only in certain places. They entered into the coltan mining areas through two main sources. First, the *hiboux* transported *vrages* from often remote 3T mines, mostly those where iTSCi was not yet implemented or had been suspended. In collaboration with drivers or local motorbike transporters, the *hiboux* concealed parcels of *vrages* on commercial trucks, in the reservoirs of motorbikes, in oil drums, and in sacks of charcoal and maize that were brought into coltan mining areas. Second, *vrages* came from the *maman muturuse*, a group of women who processed coltan

before it was sold by mineworkers at the selling points. After heating the coltan, the *maman muturuse* separated the genuine coltan from the by-products. The latter were rarely thrown away, leading people to believe that mineworkers and *négociants* used them afterwards as *vrages*.

Selling *vrages* was cleverly organised. This process took place in private houses or in the bush rather than at iTSCi selling points. Many *hiboux* had local clients—predominantly miners or mine-based *négociants*. They were not chosen by happenstance. During many informal conversations with the *hiboux* who had been established in Kalemie since 2011, they noted that their clients were not only linked through economic relationships. Rather, their ties were, in one way or another, kinship- and/or trust-based (Hart, 1988)¹¹⁶.

These clients fulfilled various tasks and used the *vrages* for diverse ends. They were able to inform the *hiboux* about the evolution of mining activities, the current coltan prices and the local security situation—for instance, the places where the mining police had erected checkpoints. Clients purchased *vrages* themselves and also helped the *hiboux* to sell them to other mineworkers or to mine-based *négociants*. In the second half of 2013, one kg of *vragage* cost around 15 USD in Kisengo and Kahendwa, approximately half the price of genuine coltan set by the *Cooperative des Artisans Miniers du Congo* (CDMC) and the *Cooperative Minière Maendeleo*, which was 40 USD in Kisengo and 28.80 USD in Kahendwa.

Vrages were also used for mineral-producing ends and coltan trade. Mineworkers introduced *vrages* into their tunnels (*chantiers*) during the production phase. They mixed these *vrages* with the mineral sand found there to inflate the site's productive potential. Mineworkers also mixed *vrages* with the coltan sold to *négociants*. In addition, *sous-couverts* (lower-level mineral buyers often appointed by *négociants* at selling points mostly on the basis of trust relationships) used *vrages* to augment the quantity of minerals purchased and introduced these *vrages* in the purchases of *négociants*. This implies that *négociants* also used *vrages* before they handed over their parcels of minerals to the cooperatives. Even though the *vragage* was prohibited by iTSCi, none of the informants in this study denounced it.

Three explanations may account for why *vragage* took place. First, this practice stemmed from the local organisation of the coltan market, which provided strong incentives for

¹¹⁶ Informal conversation with *Hiboux*, Misisi, February 2014.

cheating and price evasion because of the monopoly of certain actors like MMR. Also, given the limited production of coltan, the largest coltan trading house and cooperative—MMR and CDMC—did not purchase tin in Nyunzu and Kalemie. Consequently, tin was mostly used as a *vrage* in these territories. Additionally, iTSCi was the only reform initiative implemented in the area, and mining activity continued in those areas where iTSCi did not expand or was halted, as it was in Kilunga.¹¹⁷ However, mineworkers in these areas had no one to sell to unless their mineral or their *vrages* were purchased by *hiboux* who were capable of marketing them elsewhere.

Second, cheating and the smuggling of *vrages* resulted from the management politics of most trading houses and cooperatives. As mentioned above, there were significant variations in the prices set for coltan between and within the mining areas, depending on the concentration of tantalum. For instance, in late 2013, the price variation between Kisengo and Kahendwa approached 30%, pushing many mineworkers, local *négociants* and *hiboux* to search for promising market opportunities in Kisengo or elsewhere. The third explanatory factor for the use of *vrages* is their role as a source of income. Many *négociants* interviewed reported that mixing 10 kg of genuine coltan with 1.5 kg of tin or other *fausses matières* raised *négociants*' income from 288.80 to 331.20 USD.¹¹⁸

6.2. *Hiboux*

The relatively uncontrolled nature of the coltan trade can also be seen when looking at the smuggling activities of the *hiboux*. These clandestine *négociants* either operated through local *antennes* or moved to coltan mining areas from other mining areas, urban cities or other provinces (e.g. from South Kivu to northern Katanga). Of the 11 *hiboux* followed in the present study, nine operated through *antennes* who were their close relatives. The other *antennes* were people with whom the *hiboux* had collaborated for years. Given the *hiboux*'s mobility, scattering throughout the study area and local connections, it was difficult to estimate how many *hiboux* there were, or how and when they formed their networks. Utas (2012: 10) has argued that networks of conflict economies are important to analyse but hard to pin down with precision. At the end of 2013, the Kisengo police station estimated that around 21 *hiboux* were smuggling coltan in Kisengo alone.¹¹⁹

¹¹⁷ iTSCi was not implemented in all areas, because certain mines were less productive or the coltan produced there had a poor concentration of tantalum.

¹¹⁸ *Négociants* in Mai-Baridi, Kahendwa and Kisengo, December 2013 and June 2014.

¹¹⁹ Interviews with police chief and ANR staff members, Kisengo April 2014.

Although the trading houses, cooperatives, state agencies and mining police treated *hiboux* as illegal mineral buyers, the *hiboux* regularly visited coltan mines and their adjoining villages. Mine-based *négociants* of Kisengo and Mai-Baridi who worked for CDMC made the following comment that when they saw some faces of people known as *hiboux* coming to the mines, they guessed that coltan prices have increasing somewhere¹²⁰. In addition, four *hiboux* noted that they often visited Kisengo and Kahendwa. Once there, they would hide to avoid being seen, but they knew people to talk to in order to buy coltan.¹²¹

Together, the above statements convey two interesting elements. First, coltan mining areas were not virgin territory for many *hiboux*, suggesting that locally based *négociants*, their *antennes* and *hiboux* seemed to know each other. They not only had economic exchanges but were also embedded in ‘networks of social relations’ (Granovetter, 1985: 490). Such social relations between traders were earlier documented in DRC. In their study on trade networks between Congo and Paris, MacGaffey and Basenguissa (2000: 16) showed that networks are more than economic transactions and emerge when people have long-term and recurrent relations.

Both in and out of the mines, the *hiboux* were involved in two types of activities. As was discussed in the previous section, they first marketed *vrages*. They also smuggled coltan. This was ‘untagged’ and escaped iTSCi regulations. During their purchases, the *hiboux* outstripped the prices set by trading houses and cooperatives as a means of attracting clients. As an example, in October 2013, when the current price of coltan was 28.80 USD per kg in Kisengo, *hiboux* offered to purchase it for 35.50 USD per kg.¹²² This variation led mineworkers to wonder ‘why do *hiboux* never experience bankruptcy?’¹²³ This question implies that, although they cooperated with them, many mineworkers also believed that the *hiboux* were better off and, to some extent, suspected them of reaping higher benefits from smuggling than the income these mineworkers earned.

Coltan smuggling also flourished because of variations between prices set in mining areas and those found in the black markets of northern Katanga and South Kivu. In February 2014, 1 kg of coltan cost 37.50 USD in Bukavu, 44 USD in Uvira and 34 USD in Kalemie. Each of these prices exceeded that set in the mines, which ranged from 28.80 to

¹²⁰ Interviews with *négociants*, Kisengo, November 2013.

¹²¹ Interviews with *hiboux*, Uvira and Kalemie, May and October 2013.

¹²² Informal conversations with miners at Matongo (Kisengo), October 2013.

¹²³ Group interview with miners at Matongo (Kisengo), June 2013.

40 USD.¹²⁴ Price variations contribute to flourishing black markets, feed ‘broader patterns relating to cross-border smuggling’ (IPIS, 2012: 35) and sustain shadowy commercial networks characteristic of the Great Lakes Region economy (Taylor, 2003; Vlassenroot and Perrot, 2012). In Uvira, many *hiboux* said on several occasions that they travelled to Bujumbura for ‘business’,¹²⁵ implying that they also traded minerals, especially coltan at higher prices than in northern Katanga and South Kivu.

The *hiboux* used various means to transport smuggled coltan out of the mining areas. According to inspectors at the *division des mines* in Kalemie and civil servants at ANR in Misisi and Uvira,¹²⁶ *hiboux* used either commercial trucks or motorbikes and conveyed their parcels mostly by road to Kalemie or via Misisi to Uvira or Bukavu. Some parcels were transported to Uvira by boat from Kalemie. Regardless of the itinerary, the parcels were sometimes broken down into small packages and then transported at various intervals.

Finally, the *hiboux* negotiated their passage with civil servants in the areas where they travelled. When, on 16 February 2014, the first author asked whether they feared being arrested, many *hiboux* interviewed in Uvira remarked, ‘*Tunajua kuongea na batu* [We know how to talk to people]’. The *hiboux* reported that they bought off some civil servants in the areas where they travelled or obtained official but often fake documents from civil servants. These documents allowed them to transport coltan under the name of tin to evade certain taxes and to conceal its value and origin. Clearly, the *hiboux* were experienced in negotiating with the civil servants appointed to curb the trade of contraband coltan. Similarly, in their study on taxation at a border crossing between South Sudan and Northern Uganda, Twinjsra et al. (2014) found that norms and rules were constantly negotiated between traders and state officials.

6.3. Cheating in dealings with the *hiboux*: a ‘weapon of the weak’?

Cheating and smuggling practices were not used only to breach iTSCi regulations. They were also used against the *hiboux* themselves. In coltan mines, many *hiboux* operated within a web of actors. They had *antennes* to recruit other mineworkers and mine-based *négociants* or *sous-couverts* to purchase *vrages* or to allow them to smuggle coltan. These

¹²⁴ In December 2014, the price in Kisengo went down to 22 USD.

¹²⁵ Several interviews with *hiboux*, and ANR and DEMIAP staff members, Uvira, November 2013.

¹²⁶ Several interviews, Kalemie, November 2013.

actors and their social networks formed what can be seen as close social cartels based predominantly on kinship, friendship or other trust-based relations that allowed them to develop and maintain their economic transactions. Locally, there were therefore many different cartels. This may explain why cases of condemning misconduct related to *vragage* or smuggling coltan rarely occurred in the study area.

Importantly, smuggling was a two-way street. Within the cartels, miners and mine-based *négociants* also duped the *hiboux*. Instead of selling them genuine coltan, they also sold them *vrages* or other kinds of *fausses matières*.

In the eyes of the miners and the local *négociants*, many *hiboux* were well off. They were convinced that the *hiboux* had the opportunity to sell coltan smuggled at better prices, were richer than they were and were exploiting them. Miners and local *négociants* often said that the *Hiboux, na Muhindi, bote ni bamwizi tu* [meaning that *hiboux* and expatriate staff of MMR, predominantly from India,¹²⁷ who were working for the company, were all stealing from them]¹²⁸. These words suggest that, although their objectives were not the same, mineworkers and *négociants* often viewed *hiboux* and MMR staff as similar groups. At the same time, although social networks were useful, relationships between mineworkers, *négociants* and *hiboux* were of subtle ‘conniving trust’. Although they could cooperate with the *hiboux*, miners and *négociants* were also able to deceive them. Cheating against the *hiboux* was not perceived to be a bad behaviour. Instead, the miners and *négociants* viewed this as an act of resistance against a group of *hiboux* who exerted control over the coltan black market and were probably exploiting them. This is better illustrated in the following account.

In Kalemie and Uvira, the first author met, on several occasions, four *hiboux* to whom mineworkers and mine-based *négociants* had sold *vrages* (*fausses matières*). These *hiboux* said that this happened regularly. The first author then asked them whether, despite being deceived in this way, the *hiboux* planned to travel to the mines and were willing to continue their ‘clandestine’ trade. The *hiboux* confirmed their intention to continue going to the mining areas and to maintain collaboration with their *antennes*. Additionally, they said that they knew the mineworkers and *négociants* who had deceived them and were convinced that these persons would provide them with an in-kind

¹²⁷ Muhindi means Indian in the Kiswahili language.

¹²⁸ Group interviews, Kahendwa, Kisengo and Mai-Baridi, June 2013 and February 2014.

reimbursement in the form of genuine coltan. Later, interviewed *hiboux* explained that, unless the deceivers left the mining areas, their *antennes* were responsible for convincing them to provide this reimbursement. However, and more importantly, the *hiboux* emphasised that those deceivers agreed to provide this reimbursement only after being convinced that the *hiboux* would purchase coltan at higher prices than before during their next visit to the mines.¹²⁹ This shows that the social networks in which mineworkers and mine-based *négociants* participated played a key role in this ‘economy of cheating’ against the smugglers.

6.4. Significance of smuggling

Hilson and Potter (2003: 241) have pointed out that illegal mineral sales are most rampant in contexts where governmental or policy control of the mineral sector tends to be excessive. The smuggling practices described above and the following sequence of events provide evidence of this tendency.

Although iTSCi contributed significantly to tracing the flow of coltan, cases involving smuggling were found. Some of these cases occurred outside of mining areas, making it difficult for iTSCi to address them. For instance, on 16 August 2013, 1,400 kg of coltan kept by Minserve, a mineral trading house with its head office in Kalemie disappeared from its depot. According to an interview at the chief office of the *division des mines* in Kalemie in December 2013, the *hiboux* were allegedly involved in the theft. Despite a commission of inquiry initiated by the Kalemie prosecutor (*parquet de grande instance*’/Nº RI/991/Pr/KIT), the destination of the stolen coltan remained unknown at the time of this interview.

Additional cases involving smuggling were also reported. It is difficult to estimate the total amount of *vrages* in circulation. However, in 2013, the Kisengo police station, for example, intercepted approximately 775 kg of *vrages*¹³⁰ brought into Kisengo at checkpoints. In the same year, they also intercepted 965.3 kg of smuggled coltan.¹³¹ According to one iTSCi field staff member, five cases of smuggling were reported in Kahendwa from February to September 2013.¹³² Meanwhile, many sources mentioned

¹²⁹ Expert interviews with *hiboux*, May and November 2013.

¹³⁰ Reports, PMH/Kisengo, December 2013.

¹³¹ Official reports (January–December 2013) on the caretaking of minerals (*‘PV de gardienage des minerais’*), MMR office/Kisengo, February 2014.

¹³² Interview in Kahendwa, October 2013.

that approximately 6,400 kg of smuggled coltan reached Uvira via Misisi that year.¹³³ In 2015, the provincial office of the National Commission against Mineral Contraband (*Commission Nationale de Lutte contre la Fraude Minière*) reported that 60 tonnes of smuggled tin, tungsten and coltan were intercepted in Bukavu in 2015 (Radio Okapi, 18 February 2016). Although one cannot conclude that all of these parcels originated from the northern Katangese region given the historical coltan production in North and South Kivu (De Failly, 2001), scrutinising their tantalum concentration led many civil servants in the mining service in Uvira to believe that many of these parcels did originate from northern Katanga.¹³⁴

7. Addressing smuggling

By 2011, iTSCi had made significant strides towards addressing smuggling. First, iTSCi field staff monitored the ‘tagging and bagging’ of coltan. They also completed ‘incident reports’ related to four categories of practices: i) cases of smuggling and issues related to ‘tagging and bagging’, for instance mistakes in data recording; the loss, damage and disappearance of tags; or recording higher than accurate weights for parcels of coltan; ii) acts of corruption; iii) acts of harassment, such as illegal taxes; and iv) acts of insecurity and human rights abuses committed against miners, *négociants* or other people by any entity in a position of authority.

‘Incidents’ involving smuggling were repeatedly reported. However, these reports were ‘confidential’ and kept secret. In the eyes of iTSCi field staff members, this secrecy prevented them from confronting with people who were directly or indirectly involved or suspected to have caused these ‘incidents’. In 2013, the Nyunzu-based iTSCi field coordination office completed approximately 20 incident reports monthly, of which five to seven concerned smuggling. In 2014, reports on smuggling were only four.¹³⁵

Reporting and addressing ‘incidents’, including those involving smuggling, were found to follow three procedures. Reports were first sent to iTSCi senior staff members in Kalemie or Lubumbashi. Then, these senior staff members contacted and eventually called in state officials or senior staff members of the mining cooperatives and trading houses, asking

¹³³ Interviews with the chief office of the mining service and agents of DEMIAP and ANR in Misisi and Uvira, November 2013 and February 2014.

¹³⁴ Group interview with civil servants at the *division des mines*, Uvira, September 2013.

¹³⁵ Interviews with the iTSCi coordinator and field staff members, Nyunzu, June 2014.

them to address those ‘incidents’ in which their staff members were allegedly involved in cooperating, for instance, with *hiboux*, dishonest mineworkers or mine-based *négociants*. The senior staff could then suspend them, warn them or terminate their employment.

Smuggling was also addressed during meetings of the follow-up committees (*Comité Local de Suivi*, CLS), which were created at the instigation of iTSCi. Gathering staff members from iTSCi, the trading houses and cooperatives, together with miners’ representatives, *négociants* and state officials, the CLS were held on a monthly basis in either Nyunzu or Kalemie. However, CLS meetings were often delayed for financial reasons or because many participants were unavailable. Many CLS participants reported that, during the meetings, people or entities incriminated in smuggling coltan were often absent or felt offended when cases of smuggling involving their staff were publicly discussed¹³⁶. This suggests that, although people participated in CLS meetings, the agenda of these meetings could be sabotaged.

Addressing smuggling also aligned with legal requirements. According to Congolese Mining Law (Art. 300-303), smugglers are to be arrested, the smuggled and intercepted minerals are to be sold, and the amount earned is to be deposited into a national treasury bank account. In Nyunzu and Kalemie, no cases were documented in which the smugglers were arrested. Rather, public prosecutors’ departments seized parcels of coltan and sold them to trading houses, which ‘tagged and bagged’ them according to the iTSCi system. However, the profits from these sales were embezzled by the representatives of the public prosecutors’ departments.¹³⁷

Overall, iTSCi has clearly been an important whistleblowing mechanism to counteract smuggling. As was described earlier in this chapter, it yielded positive outcomes in terms of tracing the flow of coltan. However, in the view of some local actors (namely, miners, mine-based *négociants*, civil servants and staff members of cooperatives and trading houses), iTSCi field staff members’ work had an accusing character because they reported and denounced smuggling of coltan or any other illegal practice regarding the trade of coltan. Some *négociants* established in Mai-Baridi and Kisengo since 2010 who worked for CDMC lamented that iTSCi field staff members are so fast to accuse them.

¹³⁶ Expert interviews with iTSCi staff members, Kalemie/Nyunzu, July 2013.

¹³⁷ Interviews with civil servants at the *division des mines*, Kalemie and Nyunzu, July 2013.

Thus, if the *négociants* inform them about everything they did, their reports threaten to cause them to be fired from CDMC, making the *négociants* jobless.¹³⁸

Hence, iTSCi was not perceived in a positive way, especially in terms of addressing smuggling. The sentiment expressed by *négociants* above also reveals fears about the consequences of total transparency in fully embracing the iTSCi system. This also confirms that policy and humanitarian and development interventions can generate unintended outcomes. Their rules, norms and principles are interpreted through interactions among various social actors (Christoplos and Hilhorst, 2009; Dijkzeul and Wakenge, 2010; Hyden, 2008).

8. Discussion and conclusions

This chapter has elucidated the process of smuggling coltan in northern Katanga, the roles of the key actors involved and the effects of measures mainly the iTSCi that have been taken to stop these illegal practices. In coltan mines of northern Katanga, iTSCi basically aimed to improve the transparency and oversight of the coltan trade. In this way, it intended to address the smuggling of coltan. As part of a regional conflict-free mineral policy, beyond iTSCi, there was an assumption that its activities could contribute to Congolese state-building.

However, following the view that people have different responses to policy, the chapter considered smuggling as a primary case of responses circumventing iTSCi policy. Drawing on a sociology of economic life approach, which relies on the idea that economic action is embedded in social networks (Beckert, 2007: 9), the chapter analysed the procedures followed by artisanal miners, *négociants* and their social networks operating in coltan mining areas and between the Congolese regions of northern Katanga and South Kivu.

Our key findings show that iTSCi technically organised the sale of coltan. It set out a number of regulations and involved official entities (trading houses and cooperatives) in purchasing coltan at the mine level. It also established official selling points where coltan was ‘tagged and bagged’. All of these procedures brought a great deal of clarity to an opaque situation where, prior to iTSCi implementation, a plethora of informal actors intervened in the coltan trade.

¹³⁸ Interviews with *négociants*, Mai-Baridi and Kisengo, February 2014.

For iTSCi, addressing smuggling meant breaking up pre-existing informal trade networks. However, our findings indicate that these networks were maintained by mineworkers and mine-based *négociants* and adapted the iTSCi regulations. Although iTSCi addressed smuggling through various mechanisms, including ‘tagging and bagging’ minerals, follow-up committees and reporting ‘incidents’, these procedures overlooked the social networks in which the mineworkers and *négociants* were embedded. In addition to iTSCi, the coltan trade was structured around a web of actors and networks. These included mineworkers, *négociants*, local traders, *antennes* of the *hiboux*, and *sous-couverts*. All of these actors were, in one way or another, connected to the *hiboux* or helped them to operate in mining areas. These networks were predominantly based on personal and trust relations, which highlights the importance of a socialised conception of human action in economic transactions (Granovetter and Swedberg, 1992).

The present study reveals that the use of social networks was beneficial for mineworkers and *négociants*. Given that coltan prices varied in the mining sites, the politics of price fixing by trading houses and cooperatives differed and the fact that there were variations in coltan purchase prices between the northern Katanga and South Kivu, all these situations provided strong economic incentives for cheating and smuggling. Meanwhile, social networks of mineworkers and *négociants* served to maintain an opaque circuit around coltan trafficking, as the operations of *vragage*, for instance, illustrated. In fact, the *vragage* was condoned by all the participants involved in it. This attitude resembles to what De Sardan (2015: 27) has observed when researching on practical norms in Africa and beyond, arguing that people involved in practices like ‘illegal’ payments view these as ‘small cheats that are part of the game’. In northern Katanga, the organisation of social networks leads us to conclude that economic life was socially embedded in and worked through these networks (Hilhorst et al., 2017). Disregarding this social embeddedness explains why iTSCi faced challenges.

Thus, the operations of social networks explains why smuggling continued. Smuggling breached and hampered the iTSCi regulations. Importantly, this study has shown that social networks also served miners and mine-based *négociants* seeking to cheat the *hiboux*. Cheating smugglers is often hidden and underreported in many studies on smuggling. Smuggling is also likely to undermine state effectiveness, as was illustrated by the significance of coltan smuggling and the involvement of civil servants in facilitating the *hiboux* smuggling operations. The potential of smuggling activities

undertaken by state and non-state actors—e.g. armed groups—to trigger further ‘conflict minerals’ requires further investigation.

Utas (2012) has described networks of conflict economies as being shaped by instability and evolving in a clandestine way, making them flexible, adaptable and under the control of ‘big men’. The findings of the present study indicate that these features cannot be restricted to conflict settings alone. Rather, these findings suggest that many of these characteristics can also be found in post-conflict economies such as northern Katanga, where the networks formed around *hiboux* (who may be seen as ‘big men’) were very flexible in adapting their smuggling activities. However, this was not a role filled by the *hiboux* alone. Ordinary miners, who may be seen as ‘less powerful’ actors, were also involved in these activities. In her seminal research on the gold trade in Kamituga (South Kivu), Geenen (2011: 433) described similar cheating practice like the *vragage* after finding that the ‘commission agents’ of gold sellers generated additional profits by buying quantities of gold to sell elsewhere or by using their manual balance to cheat when weighing the gold.

Finally, the present study has shown the interconnectedness between mining areas and the wider context of iTSCi policy. The level of organisation of the *hiboux* and the complex nature of their activities in this context indicate the existence of informal networks around the coltan trade. Of course, this cannot be attributed to iTSCi alone. This study indicates that additional factors, such as bribes or inter-provincial price imbalances, strongly promote the smuggling of coltan. There is therefore a need to move beyond considering coltan mines to be ‘enclaves of regulations’. It is necessary to develop both a contextualised and a global approach (Cuvelier et al., 2014: 26) to conflict mineral policies such as iTSCi, and attention should be paid to understanding the logics behind existing informal structures (Van Bockstael and Vlassenroot, 2009) of which miners and *négociants* are a part. This would help to ‘rule the old game of coltan smuggling’—in other words, to address deeply rooted smuggling practices in a more efficient manner.

— CHAPTER 7 —

General Discussion and Conclusions: Shifting Challenges?

7.1. Introduction

In this thesis, I have analysed the implications of the initiatives set out to ‘formalise’ artisanal mining in eastern Democratic Republic of Congo (DRC) for artisanal miners (*creuseurs*) and middlemen (*négociants*). These initiatives aimed to bring mining under state control while addressing conflict minerals, that is, minerals thought to feed violence, conflicts and the involvement of armed actors in the mining business (Autesserre, 2012). The thesis is focused on one of these initiatives: the ITRI Tin Supply Chain Initiative (iTSCi). Designed by the International Tin Research Institute (ITRI) in 2009, iTSCi is the most widely implemented conflict mineral policy in eastern DRC (Chapter 2). iTSCi is a mechanism that works by ‘tagging and bagging’ loads of minerals from the mineworkers’ shafts to the export points in order to determine the origin of 3T minerals and to prevent these from entering the international market.

This study is important because of the realisation of two objectives. First, the study aimed to provide insights into how iTSCi is concretely implemented in 3T mining areas and how it has altered the organisation of mining and the trade of coltan. Second, this thesis aimed to examine how this organisation has affected *creuseurs* and *négociants* regarding their livelihoods and access to minerals, and how these two groups have responded to iTSCi. To provide an ethnographic account of the changes that iTSCi has introduced in artisanal mining areas, the main question that this thesis sought to answer is as follows:

How have initiatives to reform artisanal mining (iTSCi in particular) affected institutional change, how does this relate to changes in patterns of coltan production and trade, how were *creuseurs* and *négociants* affected by these changes, and how did these groups respond in the coltan mining areas of Kahendwa, Kisengo and Mai Baridi (northern Katanga) from 2009 to 2014?

The main conclusions presented in this chapter build upon the findings reports in the preceding chapters. Each chapter has its own conceptual vocabulary. Together, these compose the theoretical framework of this thesis. In the introductory chapter, the main research question formulated above was broken down into five sub-questions. These guided the data collection, the analysis and the structuring of the chapters. The sub-questions were formulated as follows:

1. What are the contexts of coltan mining and reforms in northern Katanga?
2. How, following the implementation of iTSCi, have mining cooperatives as newly introduced institutions interacted with pre-existing miners' organisations?
3. How have these interactions altered patterns of property rights and access to coltan?
4. What implications have the changes in property rights and access to coltan had for the livelihoods of *négociants*?
5. How have *creuseurs* and *négociants* responded to iTSCi?

This concluding chapter outlines several thematic issues that were first presented in the introduction to this thesis. The chapter also reviews the evidence confirming my working hypothesis that, although the pre-existing organisation of mining in DRC was shaped by a number of structural problems associated with artisanal mining (e.g. the informal character of the coltan trade, abuses of *creuseurs* by armed actors, and the smuggling of coltan), the ongoing mining reforms have reproduced these problems and also generated new challenges.

Rather than listing the findings per chapter, this chapter draws a number of in-depth and cross-cutting findings that emerge from the thesis as a whole. Linking the five sub-questions to the objectives of this thesis, this chapter aims to demonstrate how the findings from the five chapters contributed to attaining these objectives. The chapter also reflects on the implications of the cross-cutting findings elaborated here for policy and future research on artisanal mining in eastern DRC.

Each chapter of this thesis contributes to attaining the overall objectives by discussing one specific theme. Chapter 2 presents the historical context of artisanal mining and mining reforms. Chapter 3 focuses on mining cooperatives. Chapter 4 is about conflicts over property rights and access to minerals (coltan). This is followed by Chapter 5, which centres on the livelihoods and socioeconomic position of *négociants*, also paying attention to how *creuseurs* experience this group of mineral brokers. Finally, Chapter 6 is about smuggling and therefore explores the responses of both *négociants* and *creuseurs* to the ongoing reforms taking place around the iTSCi policy.

The following section outlines my analytical approach and indicates the main findings per chapter. For the subsequent sections, each section presents one overarching and cross-cutting finding, providing examples from and referring to the relevant chapters that illustrate the significance of this finding in this thesis. Each section ends with my

argument relating to that finding. The last part of this chapter presents three policy implications with regard to mining reforms and suggested areas for future research.

7.2. Core concepts and empirical chapters

To address the research questions outlined above, I adopted three complementary analytical approaches. First, the thesis used an actor-oriented approach in the analysis of the local dynamics of the mining reforms taking place around iTSCi. This thesis has shown that the implementation of the iTSCi programme and subsequent changes are socially constructed and negotiated between various actors at different levels, including the institutional level (e.g. mining cooperatives).

Second, the thesis followed the sociology of economic life school of thought. This approach draws on the main idea that economic action is a form of social action that is socially ‘embedded’, meaning that it is linked to or dependent on action and institutions that are non-economic in content, goals and processes (Granovetter, 2005; Hilhorst et al., 2017). As I have argued, this theory allowed me to move away from the official regulations and formal market exchange promoted by iTSCi to examine how the reforms are socially constructed and shaped, predominantly through social networks.

Third, this thesis introduced the original concept of ‘enclaves of regulations’. These enclaves refer to the mining areas where iTSCi or other reforms are in force. This thesis has shown that, although these ‘enclaves’ appear to be ‘closed’ and insulated from the environment in terms of the locally applied rules for the mining and trading of minerals (e.g. ‘tagging and bagging’), in reality, such closure is not complete. It would be more appropriate to consider these ‘enclaves of regulations’ as semi-autonomous fields with porous boundaries (Moore, 1973).

This thesis has presented five empirical chapters:

In Chapter 2, which explored the contexts around artisanal mining and mining reform in northern Katanga, it was shown that there is a long history of the organisation of mining in the Katangese province. The reforms therefore did not enter into an arena of anarchy, or an institutional void. Rather, they added a layer to the already existing forms of organisation.

Chapter 3 studied the formation and working of the mining cooperatives created with the objective of improving the governance of mining. This chapter demonstrated that these cooperatives have been an emergent—rather than durable—solution in terms of representing the interests of artisanal miners.

Chapter 4 examined issues regarding access to minerals. Here, it was demonstrated that the ongoing reforms have given rise to new social tensions and local conflicts around property rights and access to minerals.

Chapter 5 focused on the livelihoods and socioeconomic position of *négociants*, showing that the reforms have affected this group of mineral brokers in different ways. Some *négociants* were well off, whereas others have been excluded from the mineral commodity chain. These findings contradict the widespread opinion that *négociants* are always abusive brokers in the mineral production and commodity chain.

Finally, Chapter 6, on the responses of miners and *négociants* to iTSCi, demonstrated that coltan smuggling is a deeply rooted practice. Despite the reforms, smuggling is entangled in the activities of various networks and continues in different forms.

Methodologically, this thesis is grounded in the ethnographic tradition. Specifically, this work adopted three methodological approaches: multi-sited ethnography, historical ethnography and research uptake. These approaches were useful in studying peoples' history, activities, accounts and interactions in their own contexts and for a long period of time and helped in the dissemination of findings. To achieve these aims, research in mining communities requires the development of methods and data collection techniques (e.g. playing football as a particular form of participant observation, research uptake or other related techniques). This would help to reduce the distance between the academic researcher and the people in the studied communities and to discuss the findings with other academics, policymakers and practitioners in the mining sector.

7.3. Cross-cutting findings

This section outlines four cross-cutting findings of this thesis on the following topics: a) historical continuities; b) the new shapes taken by violence associated with mining; c) reinforcing network-like constructions and d) looking beyond 'enclaves of regulations'.

Paying attention to the issues raised in this thesis and to the series of policy recommendations outlined below will help to answer a question I was asked in the course of conducting this research: Where will what you write go, and how can this change our lives?¹³⁹ By asking this question, the *creuseurs* participating in this study showed that they expected the conclusions of the study to contribute to changing the how the current reforms work.

7.3.1. Historical continuities

One major cross-cutting finding of this thesis is that the mining reforms, beneath the changes that these initiatives have brought about—regarding, for instance, the introduction of ‘formal’ institutions (mining cooperatives) and the organisation of the coltan market—,have furthered several historical continuities. This is quite remarkable in a country that is always characterised as being governed by a non-functioning state. .

In Chapter 2, on the context of artisanal mining and reforms, it was shown that, since the colonial area, predominantly for economic reasons, the state has granted vast mining concessions to private mining actors, that is, large-scale extractive companies (Hönke, 2013; Rubbers, 2006). Although these historical entitlements did not concern the northern part of Katanga because the region was historically agrarian (Mwanyimi-Mbomba, 1988)¹⁴⁰, the initiation of coltan mining in 2007 and the subsequent reforms created an open moment for granting concessions—in the form of Artisanal Exploitation Zone (AEZ), of which there were eight in total—to a series of private actors, namely mining companies, trading houses and mining cooperatives. In the study area, where iTSCi has been in force along with the establishment of Mining Mineral Resources (MMR), a large Indian trading house, the effects of the privatisation of mining were noticeable. For instance, MMR was granted all of the rights regarding the mineral trade, allowing this company to engage in contractual relations with mineworkers and *négociants*, who, in exchange for material or financial assistance, were obliged to sell or purchase minerals only at prices fixed by the company.

As has also been noted in previous studies (Cuvelier et al., 2014; Johnson, 2013), while iTSCi has itself achieved a near monopoly as a conflict mineral policy in eastern DRC, its

¹³⁹ Group interview with miners, Kisengo, August 2014.

¹⁴⁰ This is the case although gold, cassiterite and coal have been extracted since the colonial period. See, for instance, Omasombo, J. (ed.) (2014). *Tanganyika. Espace fécondé par le rail et le lac*. Tervuren: Musée royal de l’Afrique Centrale, pp. 63–67.

implementation in northern Katanga tends to reinforce a robust monopoly of trading houses, particularly MMR. This has exacerbated tensions with *creuseurs* (Matthysen and Montejano, 2013: 31) and encouraged a lack of competition among coltan buyers.

The outcome of the cooperation between trading houses (MMR), mining cooperatives, *négociants* and *creuseurs* has not always been peaceful. As was shown in Chapter 4, which examined conflicts over accessing minerals, relationships between MMR and the *creuseurs* have repeatedly been characterised by conflict. This situation illustrates a general historical trend in the Katanga region, where many large-scale extractive companies with ties to political elites clashed with *creuseurs* over accessing minerals. These companies also excluded or marginalised the *creuseurs* because this group is considered to be intruders into the companies' concessions (Cuvelier, 2011a; Hönke, 2013). Therefore, the Katangese realities confirm the tendency towards marginalising *creuseurs* that has been extensively documented in the literature regarding artisanal mining in other mineral-rich countries in Sub-Saharan Africa (Ballard and Banks, 2003; Fischer, 2007; Geenen and Claessens, 2013; Hilson, 2003).

Chapter 3, on mining cooperatives, suggests another dimension of continuity. Prior to the reforms, artisanal mining was dominated by the influence of many actors, including warmongers, powerful entrepreneurs such as customary chiefs, and military officials (Garret et al., 2009). Following the reforms, these actors seem to have been replaced (or had their roles reproduced) by 'big men', who are predominantly state elites and customary chiefs. This thesis has shown that the role of these 'big men' in the design or working of new institutions (especially the mining cooperatives) and the ways in which these institutions affect the organisation of mining are key to understanding the changes occurring after the mining reforms.

Chapter 6, which is about smuggling, is also a good illustration of continuity. Before the reforms, northern Katanga was the most important supplier of smuggled coltan to South Kivu (Spittaels, 2010). Despite the efforts of iTSCi, the trading houses and the cooperatives to address coltan smuggling, the situation continues to play into the hands of the smugglers (known as *hiboux*, or owls) to such an extent that smuggling minerals remains a deeply rooted practice (Wakenge, 2014).

In sum, as shown in Chapter 3 (on mining cooperatives), powerful people—'big men'—have taken over the cooperatives as emerging institutions so that, instead of originating

from or blending with pre-existing miners' organisations, the cooperatives' way of working signals that power is shifting to the urban elites. In addition, Chapter 6 (on the smuggling of coltan), has shown that *hiboux* continue to smuggle minerals. Although smuggling has become relatively marginal (Wakenge, 2014), it is done by the same people as before the reforms, because the *hiboux*, who were predominantly *négociants* in the study area, adapted to the reforms.

However, the marginality of smuggling also suggests that, after the reforms, the coltan trade is better organised. It is monitored, recorded and formalised; in other words, it is traded under official channels. A telling example is that the recorded volume of coltan officially exported from 2011 to 2013 approached 1004.53 tonnes in the Katanga province (Diemel and Cuvelier, 2015: 158), which stands in sharp contrast to large-scale smuggling reported before the reforms (Spittaels, 2010: 17). Before iTSCi, '*comptoirs* tended to under-state the volume or value of their exports so as to reduce tax liability, and some were allegedly involved in smuggling' (De Koning, 2010: 7).

7.3.2. Reinforcing network-like constructions

Building on historical continuities, this thesis demonstrates that the ongoing reforms encouraged the development of various networks or network-like constructions. These networks have thrived around many issues regarding the organisation of mining and helped explaining how social relationships among mining actors (e.g. miners and *négociants*) permeated the formal relations and arrangements around mining and the coltan trade.

In Chapter 4, which is about conflicts over accessing minerals, it was shown that a kind of 'elites' networks' (Fahey, 2011: 170) seem to exist around granting entitlements to trading houses and mining cooperatives. The present study found that the evolving networks comprising elites of the Katangese provincial government, the international mining companies and the mining cooperatives turned artisanal mining sites into an arena of conflict. These networks were connected to state authorities at different administrative levels, from Lubumbashi to local-level echelons of the state apparatus. In these particular reform conflicts, which occurred over property rights, the state authorities did not stand alone. They could either rely on the support of their collaborators or intimidate them. The words of the administrator in charge of finances in Nyunzu territory are illustrative of this

intimidation: ‘No one knows what happens regarding mining activities in Nyunzu. Someone who wants to find more [...] faces intimidation from high-ranking state authorities based in Lubumbashi or Kalemie’ (Chapter 4). Thus, the mining reforms have become an opportunity for ‘predation and private appropriation [...] for state elites to acquire and redistribute resources’ (Englebert, 2009: 3). Thus, foreign interventions, albeit well-intended, are easily instrumentalised, resulting in the production and reproduction of neo-colonial systems. .

The recurring term of ‘networks’ features prominently in Chapters 5 and 6. Chapter 5, covering the implications of the reforms for the livelihoods and economic position of *négociants*, demonstrates that *négociants* relied on their social networks to cope with economic hardships and to diversify their livelihood portfolios. To make ends meet, miners’ households also relied on the social networks in which they were embedded with the *négociants*.

Chapter 6, on coltan smuggling inside the mining areas and between northern Katanga and the province of South Kivu, describes in detail the role played by social networks in maintaining the ‘economy of smuggling’. In explaining how these networks are constructed and how they operate, this thesis builds on the conceptual notion of the sociology of economic life (Granovetter, 1985), which helped in the exploration of how and why *creuseurs* and mine-based *négociants* allowed the *hiboux* to engage in coltan trafficking. It is argued that, through the mine-based *négociants*’ social networks, the *hiboux* were able to adapt to the reforms. Many *négociants* and mineworkers feel disenchanted with the terms of the reforms or find themselves excluded, and many of them have resorted to a continuation of smuggling practices. Thus, the social networks of *creuseurs* and *négociants* enabled the circumventing of the compulsory monopoly of prices set by MMR and the cooperatives. These networks also protect these local actors in their dealings with large-scale smugglers. The literature on the smuggling of minerals or other goods focuses predominantly on explaining how people breach official or state regulations (Deardorff and Stopler, 1990; Hilson and Potter, 2003; Meagher, 1990; MacGaffey, 1991; Titeca and De Herdt, 2010). This thesis adds to this debate by demonstrating that *creuseurs* and mine-based *négociants* also rely on the same networks to cheat in their dealings with the smugglers.

This thesis argues that the organisation of networks works around the formal market exchange and transparency in trading minerals promoted by the reforms. This study

therefore shows that an overemphasis on promoting formal market exchange also provides space for informal activities performed through networks. The intrusion of elites into local arrangements regarding mining and the use of networks for livelihood diversification or for smuggling exemplify a persistent trend towards the importance of informal social ties that, in one way or another, shape the mining reforms. Hence, ironically, the more formalisation is put forward, the more opportunity for ‘informalisation’ is offered. In sum, this thesis maintains that the efficiency of the ongoing reforms depends on the capacity of the Congolese state to grasp and understand the reasons why these networks continue to operate.

7.3.3. Violence associated with mining has taken new shapes

The third cross-cutting finding pertaining to this thesis is that, beyond iTSCi’s technical role in the organisation of the coltan trade—and the relatively improved security at mining sites (Ken and Montejano, 2013: 33)—the mining reforms have engendered new forms of violence.

In Chapter 4, which concerns conflicts over property rights and access to minerals, it was argued that the reforms have been detrimental to *creuseurs* and *négociants*. In some cases, trading houses and cooperatives have prevented these two groups from accessing the most productive mines (such as Bovu, in Kisengo), illustrating ‘new modes of disarticulation and dispossession’ (Vogel and Radley, 2015: 409). Although trading houses and cooperatives have provided technical assistance (e.g. *découverte*) to *creuseurs* and pre-financed the purchase of minerals by *négociants*, these practices can be seen as strategic, designed to maintain their influence over the *creuseurs* and *négociants*. In reality, this assistance was carried out in such a way that the trading houses and cooperatives were able to leverage their powerful economic positions and ties with state authorities (including the Congolese police) to oust the *creuseurs* and *négociants* from the mines. In this thesis, these new forms of conflicts are labelled ‘reform conflicts’. These question of whether the mining areas where reforms take place can be seen as ‘terr(it)or(ies) of peace’ remains (Vogel and Raeymaekers, 2016).

The newly coined phrase of ‘reform conflicts’ refers to how the mining reforms have engendered new tensions regarding property rights and access to minerals. The understanding of the intensity of these tensions is a matter of the scale, period and

problem-solving mechanisms used to address them, and the tensions varied from one mining site to another. In Kisengo, for instance, tensions have been more acute than at the other mining sites. The tensions in Kisengo regularly resulted in violent and open confrontations between MMR, the *Coopérative des Artisans Miniers du Congo* (CDMC) and the mineworkers over many issues, including coltan prices. Additionally, these tensions led to the exclusion of miners from the most productive mining areas (e.g. the Bovu quarry). In Kahendwa, ‘reform conflicts’ resulted from the Katangese state authorities’ instrumentalisation of property rights to the Kahendwa mine. State authorities used their power position to concurrently grant Kahendwa to different trading houses and cooperatives, thus creating tensions among them. Crucially, these tensions negatively affected the mining activities of *creuseurs* and *négociants*.

Chapter 5, dealing with the implications of the reforms for the livelihoods and socioeconomic position of *négociants*, demonstrated that the mining reforms are associated with marginal livelihood conditions. For instance, all of the mine-based *négociants* depended on a selection process and on a daily pre-financing system run by the trading houses and mining cooperatives. In reality, these entities were regularly confronted with cash flow problems. As a result, from 2009 to 2014, the number of *négociants* was reduced from 105 to only 28, and the estimates of *creuseurs* dropped from approximately 10,000 to around 2,500. These estimates suggest that the focus on violence that has informed the reforms leads to a blind eye to other effects, in particular for people’s livelihoods and their access to the sector. Importantly, despite the relative improvements in the coltan trade, both *négociants* and *creuseurs* have lost their bargaining position in the mineral supply chain and in their dealings with trading houses and cooperatives. This can be seen as a ‘policy paradox’ (Thomas and Mthembu-Salter, 2016) in the sense that one would expect the better organisation of the mineral market to improve people’s livelihoods. In previous work, debates on the livelihoods of *négociants* are dominated by a tendency to treat this group as the most privileged in the mineral supply chain (Global Witness, 2006; Kilosho, 2011; Maconachie and Hilson, 2011b; World Bank, 2008). This thesis adds to these debates by arguing that, contrary to this widespread opinion, the mining reforms have affected *négociants*’ livelihoods in different ways. Some *négociants* are relatively well off, whereas others have been pushed out of the commodity chain or have become trapped in indebtedness.

Chapters 4 and 5 demonstrate that the mining reforms are shaped significantly by instrumentalisation, in the sense of ‘elite capture’, meaning that power may be exercised by authorities in the pursuit of individual interests rather than community interests (Platteau and Gaspart, 2003). In my view, this can be seen as a kind of political violence, where ‘Congolese authorities cunningly smother reform initiatives but without completely suffocating them’ (Trefon, 2011: 9). This kind of instrumentalisation of the reforms negatively affects the living conditions of *creuseurs* and *négociants* in many ways. For example, Chapter 4 points out how state authorities in the provincial capital city (Lubumbashi), in the district capital city (Kalemie) and at the territorial level in Nyunzu instrumentalised the reform policy for their personal benefit. Either these authorities were bought off by trading houses or mining cooperatives, or they condoned the practices of these entities vis-à-vis the *creuseurs* (e.g. when the trading houses or mining cooperatives set mineral prices, often through unilateral means). Instrumentalisation also relates to the fact that state authorities tended to privilege the economic interests of certain multinational companies and trading houses. For instance, Chapter 5 shows that MMR, which was considered by Katangese officials to be the most ‘serious mineral buyer’ (Diemel and Cuvelier, 2015: 156) and ‘was given favourable treatment by the Katangese government’ (Diemel and Cuvelier, 2015: 156; Johnson, 2013), used its privileged and dominant economic position to exclude many *négociants* from the 3T mineral supply chain.

This thesis argues that the path to mining reform has altered the nature of violence around mining. Despite the positive effects of the reforms in organising the mining and trade of coltan, new actors, alliances and conflicts have emerged. The thesis has also shown that, in most of the accounts of conflicts around resources, the complexity and effects of ‘reform conflicts’ have been underestimated and poorly understood. One element that is often missing is the analysis of how and through what means the systems of economic exploitation developed by armed groups during the Congolese wars manage to persist in the post-conflict context and to develop over time and in another fashion.

7.3.4. Looking beyond ‘enclaves of regulations’

This thesis demonstrates that artisanal mining sites where the reforms are in force cannot be seen as ‘enclaves of regulations’. The dynamics in these areas are more complex and need to be studied further, taking such complexity into account. In reality, mining areas

are connected with and experience the influence of various actors whose interests are closely related to the mining business.

For instance, Chapter 2, on the context of artisanal mining and mining reform, shows that the establishment of AEZ is not a decision taken at the local level, that is, in the mining area. In urban cities, AEZ are demarcated by ministerial decree and granted to mining cooperatives—and in rare cases to trading houses. The entitlement of AEZ can thus play into the hands of people exerting powerful positions, as was shown in Chapter 4.

Chapter 3, about the mining cooperatives, illustrates how these newly created institutions were formed and how they have been predominantly controlled by urban-based ‘big men’. The working of the cooperatives is informed by the interests of these elites, and this thesis has shown that these cooperatives are seen by mineworkers as an ‘appendage of the trading houses’ and are therefore considered top-down, urban creations. As a result, many *creuseurs* viewed the cooperatives as ‘etiquette’, conveying that these institutions did not represent their interests. Thus, the thesis concludes that the idea that mining cooperatives exist and perform as locally grounded mineworkers’ organisations does not hold true.

Like Chapter 3, Chapter 4, which addresses conflicts over accessing minerals, also cautions against looking at the mining sites undergoing reform as ‘enclaves of regulations’. The idea of ‘enclaves of regulations’ is at odds with a metaphor expressed by a participant in this study: ‘The Katangese mining business can be compared to a football team. However, during the game, it is not the competitors—but the referees—who are the players on the pitch’ (Chapter 4). This metaphor illustrates the extent to which conflicts occurring over the governance of mining sites were, in fact, produced by the political elites to whom the term ‘referees’ refers. For example, the Katangese Minister of Mines took advantage of her power position to influence policy on property rights, especially in the mine of Kahendwa. This influence became an impediment to the working of the trading houses in Kahendwa and affected their interactions with the Nyunzu-based authorities, as well as with *creuseurs* and *négociants*. As Hilhorst (2013: 8) argues, ‘policy is the result of interaction between different stakeholders, who try to make policy fit their own perspectives and goals [...] and according to their own understanding, interests and ambition’.

Lastly, Chapter 6, on coltan smuggling between northern Katanga and South Kivu, explains in detail how and why *hiboux* operated despite the iTSCi traceability scheme

being in place at the mining sites. Not only is there a significant imbalance of mineral prices between the two regions, but also the *hiboux* were connected to numerous actors (their *antennes*, *creuseurs*, *négociants* and other traders) who were located in or regularly visited the mines.

This thesis has therefore shown that mining reforms are not micro-level phenomena. Rather, they exist in relation to much broader dynamics. For that reason, improving transparency in the trade of minerals is contingent upon understanding, for instance, the reasons why the prices of minerals are uneven between different locations, such as urban cities and provincial capital cities, where smuggled minerals are sold on the black market.

7.4. Policy implications and future research

This section outlines a number of policy implications and future research activities that would build upon the findings presented in this thesis.

7.4.1. Policy implications

This thesis is part of the research programme entitled ‘Down to Earth: Governance Dynamics and Social Change in Artisanal and Small-scale Mining in DRC’, which was funded by the WOTRO Science for Global Development programme of the Netherlands Organisation for Scientific Research. This research programme aimed to understand ordering processes in mining sites in Katanga and South Kivu provinces and how these have been affected by the reform initiatives targeting artisanal mining. In the last 15 years, it is clear that these two Congolese regions have become the pioneer cases for traceability and due diligence efforts. Basically, the reform initiatives aim to make the Congolese artisanal mining sector more transparent and to prevent ‘conflict minerals’ from entering the international market. In 2014, 13 reform initiatives—10 focusing on 3T and three on gold—were operational in eastern DRC (Cuvelier et al., 2014: 5).

However, as far as the implementation of these initiatives is concerned, the impact of the mining reforms has been ambiguous and limited (Cuvelier et al., 2014; Geenen, 2012; Vogel and Radley, 2015). This is problematic, because these initiatives have not only generated new challenges, as this thesis has demonstrated, but also—and more importantly—many of them have failed to improve people’s living conditions. To change this situation, policymakers need to take into account the following three issues:

- A key point of this thesis for policymakers is the call for contextually informed reforms. Reform initiatives, such as iTSCi, are often considered and experienced as top-down initiatives by people on the ground, because they feel that they have not been consulted or given the opportunity to express their opinion about the reforms. As has been shown in this thesis, iTSCi is based on ‘tagging and bagging’, a kind of ready-made technique. In reality, reforms—and the institutions embodying them—are socially negotiated, evolving processes (Long, 2001). They gain social meaning in practice. Actors in and around the reforms strategically seek to advance their interests, leading to altered, ‘negotiated’ arrangements on the ground. Thus, policies should be accompanied by qualitative monitoring to gauge the local responses and assess the intended and unintended outcomes. The results of this monitoring can be used as feedback loops to adapt the policies accordingly.
- It is critical to continue addressing the new challenges raised by the mining reforms. The ongoing implementation of initiatives focusing mainly on trying to make the mining sector transparent tends to overlook the effects of these initiatives on people. It is therefore crucial to put the central focus on the millions of people depending on artisanal mining for their livelihoods in DRC who live in marginal, poor and often violent livelihood conditions. This means, among other things, the development of alternatives for people who are removed from the mines.
- Third, this research indicates that mining reforms are complex processes. In 3T mining areas, these processes are predominantly shaped by the design, working and interactions of local actors and institutions, especially the mining cooperatives, which are actually dominated by the influence of ‘big men’. The questions then become how to create inclusive institutions and, in a related vein, how to give voice to the people themselves (*creuseurs*, *négociants*, etc.), so that they can influence the process of reforms locally, nationally and internationally.

7.4.2. Future research

The current research primarily focused on only three artisanal mining sites of 3T in northern Katanga. In all of these sites, iTSCi was in force and only coltan was extracted and traded. It would be beneficial for further research to target mining sites where iTSCi has not yet been implemented and where tin (cassiterite) or tungsten are extracted.

Targeting these sites is important because the experiences of the *creuseurs* and *négociants* with trading houses, mining cooperatives and state agencies may differ.

This study focused on *creuseurs* and *négociants*, and future research could explore the implications of the mining reforms for the living conditions of two groups of people: civil servants and Pygmy populations. Following the reforms, there is a significant reduction of state services operating in the artisanal mining sites, and the illegal taxation of *creuseurs* and *négociants* seems to diminish. It would therefore be interesting to examine how civil servants experience the reforms, what the reforms mean for this group and for the state agencies they represent, and how civil servants engage the state when performing their duties (for instance ‘tagging and bagging’ loads of minerals).

In terms of Pygmy populations, in Kalemie and Nyunzu, I was unable to find any Pygmies working as miners. As Pygmies are known to be indigenous to the study area (Omasombo, 2014: 101) and it was a Pygmy (named Kalegelege) who is said to have first found coltan in Kisengo in 2007, it was surprising that there were no Pygmies engaged in artisanal mining. The reason for this was not uncovered. In northern Katanga, after years of violent conflicts pitting Pygmy populations and Bantu against each other over access to resources (Okapi, 2016), it is important to examine the past and present position of Pygmy populations regarding mining.

A third topic for future research concerns the importance of studying the impact of the social projects undertaken by trading houses and cooperatives in mining communities. In addition to providing technical assistance to *creuseurs* and pre-financing the mineral purchases of *négociants*, trading houses such as MMR undertake a series of projects (e.g. building schools or hospitals, restoring roads, paying the salaries of civil servants) as part of their corporate social responsibility agenda. It would be interesting to examine the impact of these projects for the development of the mining areas.

Finally, this thesis focused on only one reform initiative (iTSCi) and was undertaken at mining sites where only one trading house (MMR) operated. This decision allowed me to gauge in detail the different facets of the reforms and the realities around this specific initiative. However, it would be useful to compare iTSCi (and affiliated trading houses

and mining cooperatives) with other initiatives implemented in eastern DRC aiming to make the Congolese mineral supply chain more transparent¹⁴¹.

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¹⁴¹ For instance Tetra Tech is a reform initiative financed by USAID that targets the traceability of artisanal gold in the Kivus and Maniema.

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SUMMARY

In the Democratic Republic of Congo (DRC), the mining sector has the potential to play a pivotal role in post-conflict reconstruction (World Bank, 2008), and artisanal mining sustains the livelihoods of millions people in the country (PACT, 2010). However, in the last 15 years, minerals from this artisanal mining have been ill-reputed. Eastern DRC has often been characterised by chronic instability and violent conflicts (Autesserre, 2010; Stearns, 2011) because it is widely believed that minerals in this region have attracted the greed of national and foreign armed groups, who benefit from the mining business.

Although this ‘greed hypothesis’ has been criticised for its inconsistent performance in explaining resource-related conflicts (Le Billon, 2010; Ross, 2006), various national and international reform initiatives have gained momentum (Verbruggen et al., 2011). These initiatives aim to make the Congolese artisanal mining sector more transparent and to prevent ‘conflict minerals’ from entering the international market. In 2014, 13 reform initiatives—10 focusing on 3T (tantalum, tin and tungsten) and three on gold—were operational in eastern DRC (Cuvelier et al. 2014: 5). The implicit assumptions are that mining reforms will fully ‘clean’ artisanal mining of violence and corruption and that this will contribute to sustaining people’s livelihoods (Garrett and Mitchell, 2009: 12).

This study investigated initiatives intended to ‘formalise’ artisanal mining in DRC—in other words, they aimed to bring mining under state control. The study especially focuses on the effects of one among these initiatives—the ITRI Tin Supply Chain Initiative (iTSCi)—on two groups of actors: miners (*creuseurs*) and middlemen (*négociants*). This thesis thus presents a fine-grained case study of the iTSCi. Designed by the International Tin Research Institute in 2009, iTSCi provides a means of determining the origin of 3T and documenting the trading chain for these minerals by ‘tagging and bagging’ the loads of 3T near miners’ shafts (at *postes d’achat*/selling points or buying stations), at counting offices (*comptoirs*) and in mineral depots, before the minerals are exported through the international market.

This is a qualitative study undertaken at three coltan mining sites of northern Katanga: Kahendwa, Kisengo and Mai-Baridi. Coltan has been extracted at these sites since 2007. From March 2013 to September 2014, data were collected using participant observation of people’s practices (extraction/sale of coltan and various types of interactions between

trading houses, cooperatives, mineworkers (*creuseurs*) and middlemen (*négociants*), as well as detailed in-depth interviews with *creuseurs*, *négociants* and their households. Data were also collected from the staff of mining cooperatives, trading houses, state authorities and civil servants—predominantly of the *Service d'Assistance et d'Encadrement du Small-Scale Mining* (SAESSCAM) and the *Division des Mines*. The last group of informants were a group of clandestine coltan *négociants* (known as *hiboux*—literally, ‘owls’), who were followed in the study.

The purpose of this research is to study the micro-dynamics of changes after the reforms following the implementation of iTSCi. The study thus provides insights into how iTSCi is concretely implemented and how it has altered the organisation of mining and the trade of coltan. The study also aims to examine how this organisation affected *creuseurs* and *négociants*. The main research question of this study is as follows:

How have initiatives to reform artisanal mining (iTSCi in particular) affected institutional change, how does this relate to changes in patterns of coltan production and trade, how were *creuseurs* and *négociants* affected by these changes, and how did these groups respond in the coltan mining areas of Kahendwa, Kisengo and Mai Baridi (northern Katanga) from 2009 to 2014?

Analytically, the study adopted three main theoretical perspectives. First, an actor-oriented approach was taken, building on the premise that individual actors have the agency, knowledge and experience to reflect upon their situation and to respond to changes in their surrounding context (Giddens, 1984). Although the examined mining reforms consist predominantly of ‘ready-made’ techniques such as iTSCi’s ‘tagging and bagging’, analysing reforms with an actor orientation helps to highlight people’s reactions and responses. This includes how reform policies are applied in institutions (e.g. mining cooperatives), how they interact, how they are assigned meaning and how they are negotiated by social actors (Christoplos and Hilhorst, 2009).

Second, the study builds on the sociology of economic life, which holds that economic action is a form of social action that is socially ‘embedded’, meaning that it is linked with or dependent on actions and institutions (such as social networks) that are noneconomic in content, goals and processes (Granovetter, 2005). This perspective facilitates the

analysis of the livelihoods of *négociants*, including mechanisms of smuggling minerals into and beyond the mining areas where iTSCi is in force.

Third, this thesis introduced the original concept of ‘enclaves of regulations’. These enclaves refer to the mining areas where iTSCi or other reforms are in force. This thesis has shown that, although these ‘enclaves’ appear to be ‘closed’ and insulated from the environment in terms of the locally applied rules for the mining and trading of minerals (e.g. ‘tagging and bagging’), in reality, such closure is not complete. This thesis has demonstrated that it would therefore be more appropriate to consider these ‘enclaves’ as semi-autonomous fields with porous boundaries.

Apart from the introduction and the concluding chapters, this thesis is composed of five chapters. Chapter 2 explores the evolution of the mineral sector in the Katanga province. It analyses the history of mining, the initiation of artisanal mining and how the ongoing reforms have been informed by this history. In this chapter, it is shown that there is a long history of the organisation of mining in the Katangese province. The reforms therefore did not enter into a stage of anarchy, or an institutional void, but they added a layer to already existing forms of organisation.

Chapter 3 focuses on mining cooperatives as newly introduced institutions aimed at governing the artisanal mining sites. Through a single case study, the chapter analyses how these cooperatives—especially the *Coopérative des Artisans Miniers du Congo*, CDMC—were introduced into the mining areas and how they interacted and blended with pre-existing miners’ organisations. This chapter demonstrates that cooperatives have been an emergent—rather than durable—solution in terms of representing the interests of artisanal miners.

In Chapter 4, I provide a different perspective on ‘conflict minerals’. I thus introduce the notion of ‘reform conflicts’ to emphasise that, although ongoing reforms aim to sever the supposed linkages between the artisanal mining business and violent conflicts, these reforms have become a driving force behind the emergence of new conflicts over property rights and access to minerals.

Chapter 5 is about livelihoods. It analyses how the reforms have influenced the livelihoods and socioeconomic position of *négociants*. This chapter also explores what

kind of opportunities the reforms have offered to this group of mineral brokers often considered powerful in the mineral supply chain and explains what kind of constraints the *négociants* have confronted and why they have opted to diversify their livelihood portfolios. The chapter has shown that the reforms have affected this group of mineral brokers in different ways. Some *négociants* were well off, whereas others have been excluded from the mineral commodity chain. These findings contradict the widespread opinion that *négociants* are always abusive brokers in the mineral production and commodity chain.

Chapter 6 analyses the responses of *creuseurs* and *négociants* to iTSCi. Although the mining sites where iTSCi is in force appear to be ‘enclaves of regulations’, I explore the strategies of *creuseurs* and *négociants* to bypass iTSCi and the reforms, especially around the coltan trade. This chapter demonstrates that coltan smuggling is a deeply rooted practice. Despite the reforms, smuggling continues in different forms.

All of the elements highlighted above suggest that mining reforms have undergone a major shift, from addressing the initial problems associated with ‘conflict minerals’ to creating or reinforcing various types of problems, such as the influence of ‘big men’ in the mining business, coltan smuggling and the emergence of new conflicts over accessing minerals. This means that reform initiatives such as iTSCi should be based on knowledge about the actual situation. Thus, understanding and addressing these new types of problems calls for a comprehensive approach at both local and broader levels.

RÉSUMÉ

En République Démocratique du Congo (RDC), le secteur minier pourrait potentiellement jouer un rôle central dans la reconstruction post-conflit (Banque mondiale, 2008), d'autant que l'exploitation minière artisanale fait vivre des millions de personnes (Pact, 2010). Toutefois, depuis quinze ans, les minerais tirés de l'extraction artisanale pâtissent d'une mauvaise réputation. La RDC orientale a été le théâtre d'une instabilité chronique et de conflits violents (Autesserre, 2010 ; Stearns, 2011). L'opinion selon laquelle les gîtes miniers de la région ont attisé la convoitise de groupes armés nationaux et étrangers qui tireraient des bénéfices des activités minières est largement répandue.

Bien que la valeur explicative de cette « hypothèse de la convoitise » ait été critiquée quant aux conflits liés aux ressources (Le Billon, 2010; Ross 2006), divers projets de réforme ont été formulés à l'échelle nationale et internationale (Verbruggen et al., 2011). Ces initiatives visent à favoriser la transparence du secteur minier artisanal congolais et à empêcher des « minerais de conflit » d'accéder aux marchés internationaux. En 2014, treize projets de réforme, dix relatifs aux « 3T »¹⁴² et trois relatifs à l'or, avaient été initiés en RDC orientale (Cuvelier et al. 2014 : 5). Un postulat implicite sous-tend ces initiatives : « laver » l'exploitation minière artisanale de la violence et de la corruption, contribueraient à améliorer les conditions de subsistance de la population (Garrett et Mitchell 2009 : 12).

Cette étude s'intéresse aux initiatives de réforme du secteur minier en RDC, en d'autres termes celles qui tentent d'assurer le contrôle de l'Etat sur le secteur minier¹⁴³. Particulièrement, l'étude examine les effets indésirables de l'une de ces initiatives (Le programme iTSCi Tin Supply Chain Initiative, « Initiative pour la chaîne d'approvisionnement de l'étain » sur deux principaux groupes d'acteurs : les mineurs (dit « creuseurs») et les intermédiaires (dit « *négociants*»). Élaboré par l'ITRI (International Tin Research Institute, « Institut international de recherche sur l'étain », Royaume-Uni)

¹⁴² L'abréviation « 3T » se réfère aux trois types de minerais exploités en RDC : l'étain ou « tin » en anglais (la cassitérite), le tantale (le coltan) et le tungstène (la wolframite). « Coltan » est une contraction de colombite-tantalite couramment utilisée en RDC orientale. Le coltan, composé de deux minéraux, le niobium et le tantale, est utilisé dans le secteur des technologies de pointe. Voir Nest, M. (2011). *Coltan*. Cambridge : Polity Press, pp. 3–30.

¹⁴³ L'étude est actuellement traduite en Français et cette version sera publiée.

en 2009, le programme iTSCi consiste à assurer la traçabilité des minerais 3T à chaque étape de la chaîne d’approvisionnement en « étiquetant et emballant »¹ les lots depuis les puits d’extraction jusqu’aux postes d’exportation des minerais sur le marché international.

Cette étude qualitative s’est intéressée à trois sites d’exploitation du coltan situés au nord du Katanga : Kahendwa, Kisengo et Mai-Baridi, opérationnels depuis 2007. Les données ont été collectées entre mars 2013 et septembre 2014 par le biais d’une observation participative des pratiques (extraction/négoce du coltan, interactions entre comptoirs d’achat, coopératives, *creuseurs* et *négociants*), ainsi que d’entretiens approfondis avec les *creuseurs*, les *négociants* et leurs familles. Des données ont également été collectées auprès du personnel des coopératives minières, des comptoirs d’achat et des services de l’État, et auprès de fonctionnaires (ceux du Service d’assistance et d’encadrement du small-scale mining, le SAESSCAM, et de la Division des mines, principalement). Un groupe clandestin de négociants en coltan, connus sous le nom de « hiboux », a également été suivi dans le cadre de l’étude.

Cette étude vise à examiner les changements consécutifs à la mise en œuvre de iTSCi au niveau local. L’étude analyse la manière dont iTSCi est concrètement mis en œuvre, comment cette initiative a modifié l’organisation de l’extraction minière et du commerce de coltan. En plus, l’étude entend examiner la manière dont cette organisation a affecté les conditions de vie des *creuseurs* et des *négociants*. La question principale de la recherche est la suivante :

En quoi les initiatives de réforme du secteur minier artisanal (et en particulier, le programme iTSCi) sont-elles influencé les mutations institutionnelles et l’évolution des modes de production et de commerce du coltan ; en quoi ces évolutions sont-elles affecté les négociants et les creuseurs ; et comment ces derniers s’y sont-ils adaptés dans les zones d’exploitation du coltan de Kahendwa, Kisengo et Mai-Baridi (nord du Katanga) entre 2009 et 2014 ?

Trois axes d’analyse principaux ont été retenus. Le premier est centré sur les acteurs, partant du principe qu’à l’échelle individuelle, ceux-ci ont les capacités, les connaissances et l’expérience nécessaires à la formulation d’une réflexion sur leur situation et sur leur adaptation aux évolutions du contexte (Giddens 1984). Au-delà des

techniques « préfabriquées » introduites par la majorité des réformes, telles que l'« étiquetage et emballage » appliqué par le programme iTSCi, une analyse axée sur les acteurs met en lumière les réactions et modes d'adaptation des populations. Cette analyse prend en compte la question de la mise en œuvre institutionnelle des réformes (par exemple, via la création de coopératives minières), celle des interactions interinstitutionnelles, et celle de la signification accordée par les acteurs sociaux à ces institutions et des rapports que ceux-ci négocient avec elles (Christoplos et Hilhorst 2009).

Le deuxième axe d'analyse examine la vie économique d'un point de vue sociologique, l'action économique étant considérée comme une forme d'action socialement « ancrée », c'est-à-dire que la vie économique est liée à ou déterminée par des actions et des institutions (comme les réseaux sociaux) dont la nature, l'objet et le fonctionnement sont non-économiques (Granovetter, 2005). Ce point de vue permet en particulier de porter un éclairage sur les modes de subsistance des négociants, y compris sur les mécanismes de trafic clandestin de minerais vers et hors des zones d'application du programme iTSCi.

En troisième lieu, cette thèse introduit la notion d'« enclaves réglementées ». Ces enclaves font référence aux zones minières où iTSCi est mis en œuvre. Dans les faits, l'étude démontre que ces zones ne sont ni localisées, ni étanches en termes d'application des règles en rapport avec la vente des minerais (par exemple d'« étiquetage et d'emballage »). L'étude soutient qu'il serait plus approprié de considérer ces enclaves comme des espaces aux frontières poreuses.

À part l'introduction et la conclusion, cette étude comprend 5 chapitres. Chapitre 2 porte sur l'évolution du secteur minier en province du Katanga. Ce chapitre analyse l'histoire du secteur minier, retrace le début de l'artisanat minier et la manière dont les réformes se sont construites sur ces dynamiques historiques. Il est démontré que l'histoire minière du Katanga s'inscrit sur le long terme. Par conséquent, les réformes en cours ne sont pas construites sur un vide institutionnel mais apparaissent comme un complément aux formes d'organisations préexistantes.

Le chapitre 3 se focalise sur les coopératives créées dans l'optique d'améliorer la gouvernance du secteur minier. À partir d'une étude de cas—particulièrement celui de la *Coopérative des Artisans Miniers du Congo*, CDMC—, ce chapitre examine les

interactions entre coopératives et les structures préexistantes des *creuseurs*. Il démontre que les coopératives apparaissent comme une solution émergente—plutôt que durable—en matière de représentation des intérêts des artisans-mineurs.

Chapitre 4 offre une autre perspective à la compréhension de la notion des «minerais des conflits». Il introduit la notion de «conflits des réformes» pour expliquer que bien que les réformes voulaient mettre un terme aux liens entre conflits et les affaires du secteur minier, les réformes ont conduit à l'émergence de nouvelles tensions sociales et de conflits locaux autour des droits de propriété et des modalités d'accès au coltan.

Le Chapitre 5 se focalise sur les conditions de subsistance des *négociants*. Il analyse la manière dont les réformes ont impacté les conditions de subsistance et la position économique des *négociants*. Ce chapitre examine les opportunités offertes par les réformes en cours à ce groupe d'intermédiaires. Il explique pourquoi les *négociants* s'engagent dans des activités de diversification de leurs moyens de subsistance. L'étude démontre que les réformes ont impacté les *négociants* de diverses manières. Certains négociants sont mieux nantis, d'autres ont été exclus de la chaîne d'approvisionnement des minerais ou ont vu leur marge de manœuvre considérablement amenuisée. Ces résultats contredisent l'opinion largement répandue selon laquelle l'activité des *négociants* aurait systématiquement un caractère usurpatoire vis-à-vis des *creuseurs*.

Chapitre 6 examine les réponses des *creuseurs* et *négociants* à iTSCi. Malgré que les sites miniers où iTSCi est mis en œuvre apparaissent comme des 'enclaves réglementées', ce chapitre explore les stratégies développées par les *creuseurs* et *négociants* pour contourner iTSCi et les réformes, particulièrement autour du commerce de coltan. Ce chapitre démontre que le trafic de coltan est une pratique profondément enracinée et que malgré les réformes, la fraude des minerais se poursuit sous différentes formes.

L'ensemble des observations évoquées ci-dessus montrent que, loin de leur intention initiale (répondre à la question des « minerais de conflit »), les réformes du secteur minier ont généré et aggravé toute une série de problèmes, comme la mainmise des « big men » sur la filière des minerais, le trafic clandestin du coltan, et l'émergence de nouveaux conflits concernant l'accès aux minerais. Cela signifie que des initiatives de réforme telle que l'iTSCi doivent se nourrir d'une connaissance concrète de la situation. De cette manière, comprendre et résoudre les nouveaux problèmes que pose les réformes exige d'adopter une approche globale intégrant différentes échelles géographiques.

SAMENVATTING

In de Democratische Republiek Congo (DRC) heeft de mijnbouwsector het potentieel om een sleutelrol te spelen in de wederopbouw na de oorlog (Wereldbank 2008). Artisanale mijnbouw vormt bovendien een vitale bron van levensonderhoud voor miljoenen mensen in het land (Pact 2010). Maar in de voorbije 15 jaar hebben de grondstoffen afkomstig uit deze vorm van mijnbouw een kwalijke reputatie gekregen. Oost-Congo wordt vaak voorgesteld als een gebied dat gebukt gaat onder chronische instabiliteit en gewelddadige conflicten (Autesserre 2010; Stearns 2011), omdat algemeen wordt aangenomen dat de mineralen in deze regio de hebzucht van nationale en buitenlandse gewapende groepen hebben opgewekt: zij zouden profiteren van de mijnbouw-business.

Hoewel deze “hebzucht-hypothese” kritiek heeft gekregen wegens de beperkte verklaring die ze biedt voor conflicten rond natuurlijke rijkdommen (Le Billon 2010; Ross 2006), hebben diverse nationale en internationale initiatieven (gebaseerd op deze hypothese) opgang gemaakt (Verbruggen et al. 2011). Deze initiatieven zijn erop gericht de Congolese artisanale mijnbouwsector transparanter te maken en te voorkomen dat ‘conflictmineralen’ op de internationale markt zouden worden verhandeld. In 2014 waren in Oost-Congo 13 hervormingsinitiatieven operationeel: 10 daarvan waren gefocust op de 3T-mineralen (tantalum, tin en wolfram) en 3 op goud (Cuvelier et al. 2014: 5). Men ging ervan uit dat de mijnbouwhervormingen artisanale mijnbouw vrij zouden maken van geweld en corruptie, wat dan een positieve invloed zou hebben op de manier waarop de mensen in hun levensonderhoud voorzien (Garrett & Mitchell 2009: 12).

In deze studie werden initiatieven onderzocht die tot doel hadden artisanale mijnbouw in Congo te ‘formaliseren’ – ze waren er met andere woorden op gericht om mijnbouw onder de controle van de staat te brengen. De focus van de studie lag in het bijzonder op de effecten van één van deze initiatieven - het ITRI Tin Supply Chain Initiative (iTSCi) – op twee groepen actoren: de mijnwerkers (*creuseurs*) en de tussenhandelaren (*négociants*). Het proefschrift biedt dus een fijnmazige case study van iTSCi, dat ontworpen werd door het International Tin Research Institute in 2009. Itsci maakt het mogelijk om de oorsprong van 3T-mineralen te determineren en de handelsketen voor deze mineralen te documenteren via een systeem van “bagging and tagging”: zowel op het niveau van de mijn (bij de zogenaamde aankooppunten of “*postes d’achat*”), als bij de handelshuizen (*comptoirs*) en in de pakhuizen (*dépôts*) worden allerlei gegevens over de

ladingen grondstoffen verzameld en opgeslagen in een databank, voordat de mineralen op de internationale markt worden gebracht.

Dit is een kwalitatieve studie die ondernomen werd op drie coltan-mijnsites in Noord-Katanga: Kahendwa, Kisengo en Mai-Baridi. Op deze sites wordt al sinds 2007 coltan gedolven. Tussen maart 2013 en september 2014 werden gegevens verzameld via participatorische observatie van de praktijken van de mensen (het delven en de verkoop van coltan en verschillende soorten interacties tussen handelshuizen, coöperatieves, mijnwerkers (*creuseurs*) en tussenhandelaren (*négociants*), alsook via gedetailleerde diepte-interviews met creuseurs, négociants en hun huishoudens. Gegevens werden ook verzameld bij de staf van mijnbouwcoöperatieves, handelshuizen, en ambtenaren – hoofdzakelijk van de *Service d'Assistance et d'Encadrement du Small-Scale Mining* en de *Division des Mines*. De laatste groep informanten waren een groep clandestiene coltan-handelaren (die bekend stonden als *hiboux* – wat letterlijk ‘uilen’ betekent), die gevolgd werden in de studie.

Het doel van dit onderzoek is om de micro-dynamieken van veranderingen te bestuderen in de periode na de hervormingen die volgden op de implementatie van iTSCi. De studie biedt dus inzichten in de wijze waarop iTSCi concreet werd geïmplementeerd en hoe het de organisatie van de mijnbouw en de handel in coltan heeft veranderd. Daarnaast beoogt deze studie ook te onderzoeken welke impact dit hervormingsprogramma had op de *creuseurs* en de *négociants*. De centrale onderzoeksvraag van deze studie luidt als volgt:

Hoe hebben initiatieven om artisanale mijnbouw te hervormen (en in het bijzonder iTSCi) institutionele verandering beïnvloed, hoe is dit gerelateerd aan veranderingen in patronen van coltan-productie en –handel, welke gevolgen ondervonden de *creuseurs* en de *négociants* van deze veranderingen, en hoe reageerden deze groepen in de coltanmijnbouwgebieden van Kahendwa, Kisengo en Mai Baridi (Noord-Katanga) van 2009 tot 2014?

Op analytisch vlak hanteerde deze studie drie centrale theoretische perspectieven. Om te beginnen werd er een zogenaamde *actor-oriented approach* gevolgd, uitgaand van de premisse dat individuele actoren de agency, kennis en ervaring hebben om over hun situatie te reflecteren, en om te reageren op veranderingen in hun omgeving (Giddens, 1984). Hoewel de onderzochte mijnbouwhervormingen vooral bestaan uit ‘ready-made’ technieken zoals de ‘bagging en tagging’ van iTSCi, maakt een analyse vanuit deze actor-oriented benadering het mogelijk om de reacties en antwoorden van mensen in de verf te

zetten. Het gaat dan onder meer over hoe de hervormingsmaatregelen worden toegepast in instituties (bvb. de mijnbouwcoöperatieves), hoe ze met elkaar interageren, hoe er betekenissen aan worden toegekend, en hoe ze worden onderhandeld door sociale actoren (Christoplos & Hilhorst 2009).

Ten tweede bouwt de studie voort op inzichten uit de economische sociologie, een discipline waarin men ervan uitgaat dat economische activiteiten een vorm van sociaal gedrag zijn en dus sociaal zijn ingebed: ze zijn gelieerd aan of afhankelijk van acties en instituties (zoals sociale netwerken) die niet-economisch zijn qua inhoud, doelstellingen en processen (Granovetter 2005). Het volgen van een dergelijke benadering maakt het mogelijk de vormen van levensonderhoud van *négociants* te analyseren, inclusief de mechanismen voor het smokkelen van mineralen in en voorbij de mijnbouwgebieden waar iTSCi van kracht is.

Ten derde wordt in deze thesis het originele concept '*enclaves of regulations*' geïntroduceerd. Deze enclaves verwijzen naar de mijnbouwgebieden waar iTSCi of andere hervormingen van kracht zijn. Dit proefschrift heeft aangetoond dat, hoewel deze 'enclaves' op het eerste gezicht afgesloten lijken te zijn van de buitenwereld wat betreft de regels die er worden toegepast voor het ontginnen en verhandelen van mineralen (bvb. 'tagging & bagging'), er toch geen sprake is van een volledige afsluiting. Het proefschrift heeft duidelijk gemaakt dat het daarom beter is om deze enclaves te beschouwen als 'semi-autonome sociale velden' met poreuze grenzen.

Naast de introductie en de concluderende hoofdstukken telt het proefschrift nog vijf andere hoofdstukken. Hoofdstuk 2 geeft een overzicht van de evolutie van de mijnbouwsector in de provincie Katanga. Het analyseert de geschiedenis van de mijnbouw, het begin van de artisanale mijnbouw, en de manier waarop de huidige hervormingen door die geschiedenis gekleurd worden. In het hoofdstuk wordt aangetoond dat er een lange geschiedenis van georganiseerde mijnbouw is in de provincie Katanga. De hervormingen werden dus niet geïntroduceerd in een context van anarchie of in een institutioneel vacuüm, maar ze voegden wel een extra laag toe aan reeds bestaande vormen van organisatie.

Hoofdstuk 3 focust op de mijnbouwcoöperatieves als pas geïntroduceerde instituties die tot doel hadden de artisanale mijnsites te besturen. Via een single case study onderzoekt het hoofdstuk hoe deze coöperatieven – en met name de *Coopérative des Artisanaux*

Miniers du Congo, CDMC – geïntroduceerd werden in de mijnbouwgebieden en hoe ze interageerden en vermengd geraakten met al eerder bestaande mijnwerkersorganisaties. Dit hoofdstuk toont aan dat de coöperatieves een ontluikende – eerder dan een duurzame – oplossing zijn wat betreft het vertegenwoordigen van de belangen van de artisanale mijnwerkers.

In hoofdstuk 4 bied ik een ander perspectief op de conflictmineralenproblematiek. Ik introduceer de notie van ‘reform conflicts’ om te beklemtonen dat, hoewel de huidige hervormingen bedoeld zijn om een einde te maken aan de veronderstelde links tussen de artisanale mijnbouwbusiness en gewelddadige conflicten, deze hervormingen de drijvende kracht zijn geworden achter het ontstaan van een nieuw type van conflicten, die draaien rond eigendomsrechten en toegang tot grondstoffen.

Hoofdstuk 5 gaat over bronnen van levensonderhoud. Het analyseert hoe de hervormingen de vormen van levensonderhoud en de socio-economische positie van *négociants* hebben beïnvloed. Het hoofdstuk gaat ook na welke kansen de hervormingen hebben geboden aan deze ertsenshandelaren, die vaak als machtig worden beschouwd in de mineralenhandel, en het legt uit met welke beperkingen de *négociants* geconfronteerd zijn, en waarom ze ervoor gekozen hebben om hun *livelihood portfolio* te diversifiëren. Het hoofdstuk toont aan dat de hervormingen deze groep van ertsenshandelaren op verschillende manieren hebben getroffen. Sommige *négociants* hebben het er goed van afgebracht, terwijl anderen uitgesloten zijn geraakt van de toevoerketen. Deze onderzoeksbevindingen weerleggen de wijdverspreide opvatting dat *négociants* altijd misbruik maken van hun positie als tussenpersoon in de grondstoffenhandel.

Hoofdstuk 6 analyseert hoe *creuseurs* en *négociants* hebben gereageerd op iTSCi. Hoewel de mijnsites waar iTSCi van kracht is ‘enclaves of regulations’ lijken te zijn, onderzoek ik de strategieën van *creuseurs* en *négociants* om iTSCi en de hervormingen te omzeilen, vooral in de coltanhandel. Het hoofdstuk toont aan dat het smokkelen van coltan een diepgewortelde praktijk is. Ondanks de hervormingen blijft het smokkelen op verschillende manieren doorgaan.

Al de hierboven aangehaalde elementen geven aan dat de mijnbouwhervormingen een grote verschuiving hebben ondergaan: van het aanpakken van de initiële problemen in verband met conflictmineralen naar het creëren of versterken van verschillende soorten problemen, zoals de invloed van ‘big men’ in de mijnbouwbusiness, de coltansmokkel en het ontstaan van nieuwe conflicten rond de toegang tot mineralen. Dit betekent dat

hervormingsinitiatieven zoals iTSCi gebaseerd zouden moeten zijn op kennis over de situatie zoals ze echt is. Dus om deze nieuwe types van problemen te begrijpen en te kunnen aanpakken is er nood aan een alomvattende benadering op zowel het lokale niveau als op bredere niveaus.

ABOUT THE AUTHOR

Claude Iguma Wakenge (1971) was born in Bukavu (South-Kivu) in the Democratic Republic of Congo. In 2003, he achieved the degree of bachelor in rural development at the *Institut Supérieur de Développement Rural de Bukavu* (ISDR/Bukavu) with honour. Since 2004, he was employed by the same institution as assistant. In 2007, he became lecturer and supervisor of numerous bachelor theses in social organisations and projects planning. He also conducted many consultancies with civil society organisations in South and North-Kivu.

From 2008 to 2011, Claude Iguma coordinated the national programme lead by the Life & Peace Institute (LPI), a Swedish organisation based in the DRC. LPI worked on reinforcing the capacities of civil society organisations as professional centres for conflicts transformation in the Great Lakes Region. Claude Iguma was since involved in many research activities with LPI partners in South and Nord-Kivu, especially on conflicts involving communities and armed groups regarding land issues, identities and minerals. In 2007 and 2010, he also conducted and published with Prof. Dennis Dijkzeul two academic papers: on the perceptions of international NGOs (the International Rescue Committee and Malteser) and on proselytising peacekeepers in eastern DRC.

In January 2012, Claude Iguma started his current PhD research, after he successfully completed a number of master courses as qualifying exams at Wageningen University. He has published on a variety of topics, including NGOs, armed groups, mining cooperatives and the smuggling of minerals.

Claude Iguma Wakenge

Wageningen School of Social Sciences (WASS)

Completed Training and Supervision Plan



Name of the learning activity	Department/Institute	Year	ECTS*
A) Project related competences			
Literature review and proposal writing	RDS/Disaster Studies	2012	6
B) General research related competences			
Introduction course	WASS	2012	1
CERES basic training course	CERES	2012	7
A practical course on the methodology of fieldwork	CERES	2012	2
Quantitative methodology and economics quantitative	CERES	2012	2
Quantitative data analysis for development research	CERES	2012	1.5
Qualitative research: data analysis and writing	SLRC	2015	2
<i>'Incertaine cohabitation. Compagnies minières, creuseurs et négociants au Nord-Katanga'</i>	Université de Lubumbashi (RDC)	2014	1
<i>'Looking beyond conflict minerals. Mining reforms and livelihoods in Northern Katanga'</i>	Mining, conflict and post-conflict reconstruction in Eastern DRC Conference, Antwerp, Belgium	2015	1
<i>'Negotiating the implementation of mining reform projects in the DRC'</i>	Development 2.0 or "Business as usual"? Conference, IOB, Antwerp	2015	1
<i>'Analysing the Impact of Mining Reform on 'Négociants' in Northern Katanga (Eastern DRC)'</i>	Transition and local development in eastern DRC, Bukavu, DRC	2016	1
<i>'Emergency or durable solution? Coltan mining and cooperatives in eastern DR Congo'</i>	World conference on Humanitarian studies, Addis Ababa, Ethiopia	2016	1
<i>'Des enjeux mouvants: Extraction minière de coltan, réformes et changements social en DRC'</i>	ISDR/HAR conférence Kinshasa	2017	1
C) Career related competences/personal development			
In VIVO Training	RDS/Disaster Studies	2013	2
9 th Forum on responsible mineral supply chain	OECD (Paris)	2015	1
Total			30.5

*One credit according to ECTS is on average equivalent to 28 hours of study load.

The research described in this thesis was financially supported by the WOTRO Science for Global Development programme of the Netherlands Organisation for Scientific Research [File number W 01.65.340.00].

Cover photo by Claude Iguma Wakenge