When citing, please refer to the published chapter:
"Constraints, opportunities and hope: Artisanal gold mining and trade in South Kivu (DRC)" in Ansoms, A. and Marysse, S. *Natural Resources and local livelihoods in the Great Lakes Region of Africa. A political economy perspective*, Palgrave Macmillan, 2011.

Constraints, opportunities and hope in gold mining and trade: The case of Kamituga

Sara Geenen

1. Introducing agency and constraints

The dominant discourse on mineral resources and local livelihoods in the DRC emphasizes people's constraints. For most, the exploitation of mineral riches does not contribute to improved livelihoods; small diggers are forced by master traders and/or armed groups to work in the mines with the profits from mineral exploitation and trade flowing to criminal networks (Global Witness, 2004, 2005 and 2009; Pole Institute and International Alert, 2004; Human Rights Watch, 2005; and NiZA, 2006; Prendergast and Lezhnev 2009; Enough 2009; Sullivan and Atama 2010.). This discourse, accepted in international policy circles and by the media, fails to grasp the more complex local realities. This chapter offers an agency perspective, focusing on people's opportunities and the way they deal with them. Agency-oriented sociologists view human beings as social agents capable of solving problems, taking decisions and intervening in the social world around them. Therefore, 'the notion of agency attributes to the individual actor a capacity to process social experience and to devise ways of coping with life, even under the most extreme forms of coercion' (Long, 2001, p.16).

Of course, opportunities are not boundless. They are restricted by institutions; very broadly defined as 'the rules of the game in a society' (North, 1990, p.40). Institutions shape individuals' room for manoeuvre and provide the constraints within which they can act and pursue their own interests. The literature usually differentiates between formal and informal rules and institutions. Informal rules are defined as codes of conduct, socially embedded norms of behavior and conventions. 'Informal' in this case applies to institutions and activities that exist apart from official state structures and processes. Formal rules, on the other hand, are official rules emanating from state law which govern the public sphere.

In reality, the formal and informal are not 'physically separate locales of power and action' (Nordstrom, 2001, p.219). They interact constantly with people and goods moving incessantly into and out of the worlds of 'formality' and 'informality'. Acknowledging the inadequacy of this dichotomization and arguing that socially embedded norms and conventions might be more influential than state norms, Olivier de Sardan (2008, p.15) introduces the exploratory concept 'practical norms'. 'Practical norms' govern day-to-day realities, they are implicit and often automatic and routine, but they are also subject to change.

It is recognized that in any environment, a wide variety of norms and institutions co-exist. The coexistence of different institutional frameworks, and thus multiple normative orders with different sources of legitimacy and authority, is often referred to as 'legal pluralism' (Griffiths, 1986). Individual actors can use this diversity. They can and do navigate between institutional frameworks and address various institutions, depending on which best serves their interests (Meinzen-Dick and Pradhan, 2002). This enhances actor's opportunities, but it may also increase the number of constraints because of the power relations at play (see also Ansoms & Claessens' chapter in this volume).

This chapter deals with constraints and opportunities in the gold sector. We look at the agency of social actors and determine which practical norms guide their relationships. Using a case-study approach, the aim is to describe different groups of actors and the multiplicity of practical norms in Kamituga, a mining town in South Kivu. Data have been collected from historical archives and fieldwork (March-April 2008 and July-August 2009). The first section of this chapter gives a historical overview of mining in Kamituga. The second discusses agency and constraints in exploitation and trade.

2. The historical trajectory of a mining town

The purpose of this section is to place our case-study in a historical context. The decay of industrial production and the boom of artisanal mineral exploitation can be related to some key events and evolutions: the rise of industrial production and the creation of a mining town during colonization, the Zairian economic crisis of the 1970s, the liberalization of the gold and diamond sectors in 1982, the severe economic crisis of the 1990s and the armed conflicts of 1996-97 and1998-2003.

2.1. Early industrial developments and the dawn of artisanal mining

In the 1920's, gold deposits were discovered in Maniema and South Kivu. The Belgian company, MGL (Minière des Grands Lacs Africains), started industrial gold production in Kamituga, situated about 180 kilometres south-west of Bukavu. Shortly after independence, however, political troubles, violent insurgencies and a weak administrative apparatus disrupted industrial production. In the mid-1970s, nationalization measures and commodity price instability on the world market forced different mining companies to restructure. In 1976, nine mining companies in Eastern Congo merged into the newly created Sominki (Société Minière et Industrielle du Kivu). The Zairian state held 28 per cent of the shares and private shareholders 72 per cent. Its two most important commodities were cassiterite (i.e. SnO_2 - a tin oxide mineral) and gold. Gold exploitation was concentrated in the Mobale mine in Kamituga.

According to the Mining Law established during colonial times, the Kamituga concession was divided into different zones. Zone A encompassed the neighbourhoods of Kitemba, (Flat)mero, Tshanda and Mobale. Only the original inhabitants of local villages and personnel from the mining company had access to this zone. Zone B covered a larger area of 40 km. in diameter around Mobale. Though Zone B was still part of the concession, there was no active industrial mining therein. The area was meant for agriculture and the provisioning of the workers.

However, since the installation of Sominki in 1976 and encouraged by constantly rising gold prices, many small-scale diggers began artisanal gold mining, both in Zones A and B. These 'illegal diggers' can be categorized as follows. A first group was active in the outskirts of Zone A and in Zone B. After independence, the legal prohibition on moving and settling in this zone was no longer enforced. So long as the diggers avoided the main industrial site (i.e. Mobale), MGL did not really mind. But illegal exploitation was also flourishing inside the shafts of Mobale. Indeed, the second group of diggers were workers who, during their shifts, selected the richest ores and hid them. These thefts represented a considerable loss to the company. Some estimated that 100 to 200 grammes were stolen each working shift (interview with former Sominki director, 5 September 2008). Given three shifts a day and 20 working days a month, this would represent a loss of between 72 kg and 144 kg per year. This is a considerable amount, given that Sominki's annual gold production between 1976 and 1990 varied from 400 to 600 kg. Very soon, diggers not working at Sominki began to frequent Mobale as well. Some of them quickly earned a lot of money and began to wear fancy clothes which inevitably attracted other young people.

2.2. The consequences of liberalization

In 1982, President Mobutu announced the 'liberalization of the gold and diamond sector.' The public, seeing this as consent for local people to exploit the mining concessions, rushed to the gold sites. People were quickly attracted by the opportunities and high returns the sector offered for relatively low investments. The illegal diggers inside Mobale came to be better organized and were called 'Ninjas' (Bulambo Katambu, 2002 and interview in Bukavu, 27 July 2009), referring to stock characters in Kung-Fu movies. The movement flourished because of the complicity of the Mining Police and the ill-paid guards at the main entrance.

Illegal digging offered a range of opportunities to everyone involved and increased the agency of the local population. First, illegal digging substituted or augmented official wages (which could not keep up with food price rises). Secondly, the illegal extraction and sale of gold was a simple way to acquire desirable consumer goods (for example fancy clothes and radios) and a certain status in the local community. It also provided excellent opportunities for wealth accumulation (MacGaffey, 1987). Bulambo (2002, p.139) describes, for example, that the Ninja members were doing rather well in Kamituga. They had three meals daily, fancy clothes, popular consumer goods and belonged to a new middle class. Some built houses in Kamituga and in Bukavu, Kitutu and Mwenga. One even acquired a coffee plantation in Butembo (North-Kivu). Illegal digging, finally, was a way for diggers to 'appropriate' physically the gold mine areas and their deposits as their own, a form of resistance to the company and the state. This view was commonplace among a group of young men, some of them intellectuals, who developed strong feelings against 'Western domination and dictatorship'. Bulambo (2002) says that for many, especially the young, joining the Ninja movement and reclaiming this land were public statements and tangible acts to proclaim the space as their own.

2.3. Crisis and war

While artisan exploitation was booming in the 1980s, industrial gold production was heavily affected by poor economic policies and the decay of physical infrastructure. As a result, Sominki was forced to look for a buyer. In 1995, the Canadian company Banro expressed their interest in a possible take-over. In 1996, they acquired the majority of Sominki shares. However, in September 1996, AFDL (Alliance des Forces Démocratiques pour la Libération du Congo-Zaïre), headed by Laurent Désiré Kabila and backed by Rwanda, started its rebellion against the Mobutu regime and launched its march on Kinshasa. By November, Kamituga was plundered and its director, in an attempt to secure the underground level for possible future exploitation, ordered to flood the Mobale mine (Sominki, 1997a). Banro thus never started exploration or exploitation works.

On 29 March 1997, Sominki went into liquidation (Sominki, 1997b). At the time, Banro was negotiating for its mining titles both with the Mobutu regime and with Laurent Kabila, who then had his headquarters in Goma. They were thus hedging their bets. The negotiations with the Likulia government resulted in the creation of a new company: Sakima (Société Aurifère du Kivu-Maniema) on 6 May 1997, a few days before the seizure of Kinshasa by AFDL forces (Baracyetse, 1999). In this new company, the share of the Zairian state fell to 7 per cent, while Banro controlled the remaining shares. This was little appreciated by the new regime headed by Laurent Kabila. Besides, there were other complaints about the on-going Sakima operation (for example their refusal to make redundancy payments).

On 4 August 1998, the RCD (Rassemblement Congolais pour la Démocratie) rebellion broke out, challenging the Kabila regime. The director of Sakima, Alexis Thambwe, was one of its founding members (Tull, 2005, p.168). Victor Ngezayo, a businessman with Rwandese roots and the director of RMA (Ressources Minières Africaines, another subsidiary of Banro) also supported the rebellion. Thus two protagonists on the Banro side were directly involved in the rebellion. In response, President Laurent Kabila deprived Banro of its mining titles on 31 July 1998 and created a new company: Somico (Société Minière du Congo). The creation of Somico was presented as a kind of indigenous (or national) response to a perceived external threat or aggression.

From 1998 to 2003, the Kamituga region witnessed various confrontations between Mayi-Mayi groups, FDLR (Forces Démocratiques pour la Libération du Rwanda), and the RCD which de facto controlled the area. At the local level, for example in Kamituga's Mobale mine, the RCD also controlled the taxation system (Vlassenroot and Raeymaekers, 2004). Individual soldiers positioned themselves at the entrance and the exit of a tunnel and levied taxes on the artisanal miners. Thus, the gold chain became highly integrated into the new war economy. To a large extent, production and trade were controlled by armed groups and used to finance their war efforts (UN Group of Experts, different reports).

In the meantime, Banro did not agree with the court's decision to hand over its concessions to Somico and appealed the decision. However, on 16 January 2001 President Kabila was murdered and ten days later succeeded by his son, Joseph. During the new president's first visit to the United States, a Banro delegation invited the Congolese government to negotiate a 'gentlemen's agreement'. And so it was done. On 21 December 2001, Banro announced having concluded a protocol of understanding with the Congolese state. The agreement, which transferred all titles and rights to Sakima and lengthened the time frame for concessions from 25 to 30 years, was signed on 19 April 2002. Banro now holds the titles on four gold concessions: Twangiza, Lugushwa, Namoya and Kamituga. At this moment they have concluded exploration in Twangiza and are starting in Lugushwa. Tin concessions were completely neglected as they were judged unprofitable.

2.4. Mineral resources for development?

The role of mineral resources in conflict financing has been described extensively by researchers, both academic and activist. Few have however considered the potential of mineral extraction and trade for post-conflict development (Garrett and Mitchell, 2009 and Mitchell and Garrett, 2009). Contributions can take place at two levels: at the level of the national (or provincial) budget, and at the level of local livelihoods. Looking at official export figures for South Kivu (Table 1.1), it is clear that the officially exported quantity of gold, and thus the contribution to the national budget through official taxes, is limited.

Table 1. Official export figures of the registered export offices in South Kivu

Source: CEEC and Division des Mines, South Kivu.

Table 1.1 shows how in 2007 three gold export offices were registered in South Kivu (two in 2008). Indeed, the cost for opening an export office in the DRC was very high until 2008 (US$ 50,000). Now (i.e. 2009) it has been reduced by 90 per cent (i.e. to US$ 5000). For the time being, this does not seem to have an effect on new export office openings in South Kivu. Thanks to its near monopolistic position, the export office Namukaya (better known as Congocom, its former name) sets the price and controls a large part of the official trade. But many traders go directly to Bujumbura or Kigali where independent export offices are able to offer higher prices (due to the lower taxes they pay). When comparing official export figures and estimated production figures, it is clear that the bulk of gold production from South Kivu is smuggled out to neighbouring countries[1] (see also Dan Fahey's chapter in this volume).

The contribution of mineral exploitation and trade to development can also be placed at the level of individual livelihoods. When analysing this, we should look at the agency of different actors involved in gold mining and trade, taking into consideration the practical norms that govern and sometimes constrain their interactions. This is what we do in the next section.

3. Agency and constraints in exploitation and trade

In this section we first discus legal pluralism and property rights in mining sites. Next, we describe the organisation of a reef mining project (a system of underground shafts and tunnels to mine the gold that appears in quartz veins or reefs). We then explore the agency of individual miners and analyse their constraints, opportunities and hopes. We also consider a range of other actors active in the production process. Then we describe the trading network and some practical norms that govern trade relations. Lastly, we discuss the tentative absence of industrial actors from the scene.

3.1. 'This is our land': legal pluralism and property rights in mining sites

Property rights are crucial, since they determine who has access to which resources and what incentives are available for investors (Meinzen-Dick and Pradhan, 2002, p.1). The same is true in the mining sector. In Kamituga, the official claim holder for the mining concession (according to statutory law) is Banro. Nevertheless, Banro has not yet started its exploration activities in Kamituga and is not physically present in the concession. Instead, local miners are extracting gold from artisanal mining shafts. According to estimates by the local Mines Division, there are 150 to 200 mining shafts in and around Kamituga. Some are abandoned industrial shafts but most are new. The exploitation of each of these shafts was initiated by a PDG (*Président Directeur Général*), also called a shaft owner. They are often former Sominki workers (or their parents were) with considerable experience in the gold sector[2]. The shaft owner acts both as an investor and as an organizer. He provides the necessary tools (for example shovels, chisels and so on), engages a team of workers and caters for their food – and possibly other needs – until the shaft starts 'producing' (i.e. when the team reaches the gold vein). Besides, as a team leader he organizes the work (see later).

But since they work in a company's concession, the so-called shaft owners are not the official owners. In this institutional environment, property rights are flexible and constantly open to negotiation. In fact, local miners and shaft owners are working in a context of 'livelihood uncertainty' (Meinzen-Dick and Pradhan, 2002, p.22). Therefore they use various strategies for obtaining and securing access to mining sites. Shaft owners endeavour to 'legitimize' their claims by referring to their 'traditional' rights to the land that their ancestors lived and worked on. As one interviewee told us, 'We only take what is ours; it's the land of the Congolese.' Another miner said: 'We are born here, our parents worked in the company. Being their children, we have the right to work in these mines.'

The claims they make are addressed to different actors and institutions which are often overlapping. For example, they might address state representatives, customary chiefs, military leaders, local leaders, associations and NGOs at the same time. All these institutions generate law, broadly defined as, 'cognitive and normative orders generated and maintained in a social field' (Meinzen-Dick and Pradhan, 2002, p.3). The coexistence of multiple legal orders is referred to as legal pluralism. It allows people to navigate between different institutional frameworks depending on their personal interests and local power, a process known as 'forum shopping' (Benda-Beckmann, 1981). Shaft owners usually go 'forum shopping' once the exploitation of the shaft has started.

Firstly, they address the local branch of the Mines Division which issues mining licences ('carte d'exploitant artisanal'). According to the Mining Code, each digger must buy such a licence (at US$ 40, renewable each year). The Division is aware that a simple digger cannot afford to buy this card every year, and so the shaft owner often pays one licence per pit. This legitimizes his claim and gives him a certain degree of security. Secondly, shaft owners address the customary authorities who traditionally decide on the distribution of land. According to our interviews, shaft owners pay one to four renge (one renge equals 1.26 grammes) of gold per month to the traditional chief (about US$ 30 to 120). The amount not only depends on the arbitrariness of the customary chief, but also on bilateral negotiations with the shaft owners. Occasionally the military, the police and the judiciary also levy taxes (all interviewees said that the payments to the military have been drastically reduced since the end of the war).

An additional strategy to secure mining titles is to become a member of an association. In Kamituga, two associations support shaft owners. One is COKA (*Comité d'orpailleurs de Kamituga*), which presents itself as a trade union that 'defends the interests of the artisan miners' and intervenes in conflicts around mining issues. The other is CPACAM (*Coopérative Principale des Associations des Creuseurs Artisanaux de Mwenga*). This organization has 70 members. It provides technical support to shaft owners and also intervenes in disputes.

3.2. 'It's teamwork': the organisation of reef mining

One shaft may employ between ten and one hundred miners, depending on the availability of manpower, the size of the shaft and the expected production. The work is done manually and makes use of shovels, chisels and other small tools. Only a few shaft owners have been able to invest in machines like water pumps and compressors. The lack of modern technical equipment obviously imposes considerable constraints upon exploitation. For example, many teams get stuck when ground water wells up. During the raining season, this seriously hampers production. It is also very dangerous for the miners. Secondly, the periodic lack of oxygen is a cause of many illnesses and deaths (this can be remedied using simple compressors).

A 'reef mining' project requires a considerable investment in working tools, but also in preparatory works and catering for the workers. In some cases, teams have to work for up to one year or more before they reach a gold vein. The first task for the team is to dig a tunnel, which has to be shorn up with wooden trunks; a task carried out by specialized workers (i.e. the 'boiseurs'). The latter are usually experienced, middle-aged ex-Sominki workers. After them, the 'foreurs' intervene. This category of workers extracts the auriferous rocks, cuts them into smaller stones and then proceeds into the tunnel. The work of the 'foreurs' is physically very demanding and is typically done by men between 20 and 40. They usually have a certain degree of experience in reef mining. Next come the 'peleteurs', mainly younger and/or less experienced men. They clear out the quartz for processing (see later). The recruitment of workers by the shaft owner is generally based on friendships and (extended) family relations.

Every reef mining project is governed by practical norms. Whereas the diggers have no written labour contracts, there are oral conventions between shaft owners and diggers. Generally, the initial agreement is as follows: one third of the extracted rocks are used to reimburse the expenses (made by the shaft owner), one third falls to the shaft owner, and one third is equally distributed among the other workers (normally regardless of their category, but the distribution may be negotiated). Since remuneration comes in kind (i.e. in a quantity of rocks), it is commonplace to evacuate one meter of quartz to cover the expenses, one meter for the shaft owner and one meter for the workers. Hence, the quality of the rock determines whether a worker will make profit or not. Serious conflicts may arise after having reached the gold vein if a shaft owner suddenly modifies these conventions and claims a larger share for himself. Typically, he would try to justify this by claiming he had investments to recoup beyond those provided for in the initial agreement. In other words, the power imbalance between shaft owners and diggers might lead to a unilateral cancellation of the initial agreement.

3.3. 'Who seeks, finds': constraints, opportunities and hope in reef mining

This brings us to the question as to whether individual actors can and do profit from these activities. Are there opportunities for accumulation and investment? Is there a possibility for social mobility? And finally, what motivates men to engage in gold exploitation?

The popular and dominant image of a gold mining settlement is that of a 'doomed' place where consumerism, alcoholism, prostitution and moral decay are rampant. This does not seem like a place where opportunities for wealth accumulation and investment arise. It is true that, in general, diggers in Kamituga like to sell their production on the spot and spend their earnings on alcohol, women and fashionable clothes, instead of saving and investing. These phenomena intensified during the armed conflicts of the 1990s (Vlassenroot and Raeymaekers, 2004). Also today there might be several reasons for this: the constant need for cash, a general feeling of insecurity and the threat of state intervention and/or theft. The institutional (i.e. banking) environment does not encourage people to save or invest.

However, some individual cases do stand out as examples of wealth accumulation, social mobility and agency. COMILU ('Coopérative Minière de Luna') is one small-scale mining company which contracts about two hundred workers. It is managed by Gerard Kyabinya, an ex- Sominki worker who began artisanal exploitation in the early 1990s and since has benefited handsomely from its production. He has successfully invested part of his earnings in Bukavu in real estate and automobile sales, and in improvements to his mining facilities. He is now a very rich and influential person in the local community. Apart from being the manager of COMILU, Kyabinya is also president of the digger's association CPACAM and pastor in the 'Ministère du combat spirituel,' a popular revivalist church. In having such different jobs on the side, it is obvious that he occupies an important position in the community and can be considered an 'indigenous capitalist' (MacGaffey, 1987) [3]. From our interviews and informal conversations, it is clear that Kyabinya serves as a role model for many diggers and small-scale traders.

We also observed a certain change in the spirits of young gold diggers: they start thinking about investments. One interviewee stressed: '[...] There have been some changes, yes. In the old days, the youth was not thinking rationally, while now they have an ideal, they dream about investing' (interview, 3 April 2008). Men like Kyabinya, who has become a successful businessman and social figure, inspire young people and show that upward social mobility is possible. Besides, they now have improved access to Bukavu, the provincial capital, thanks to a newly rehabilitated road. The physical accessibility of Kamituga encourages young entrepreneurs to do business and to invest locally. On the other hand, they can also find ample opportunities and examples for accumulation and investment in Bukavu.

These observations suggest a positive motivation for engaging in gold exploitation. In almost all our interviews, the work in the gold exploitation or trade is indeed judged positively by miners and traders themselves. Respondents particularly appreciated that the work generates quick revenues: 'For a digger like me, the money we find is easy money, whereas a farmer has to wait so long for the harvest' (interview, 2 April 2008). Another digger said: 'I love this work in the gold sector because you can go to bed as a poor man and wake up as a rich man' (interview, 6 April 2008).

Indeed, having observed work in Kamituga's various mining pits and having spoken to various diggers and shaft owners, one must conclude that everyone is driven by hope. There is first of all the hope of the team that the shaft will lead to a rich gold vein, and secondly, the hope of individual diggers that their portion of rocks will contain some gold dust. One of the most important aspects of this work is the variability in income, because it is almost impossible to know beforehand how rich a certain deposit of rocks will be. According to almost all respondents, their income depends on 'luck' and can never be predicted (interview, 7 April 2008). This spirit of hope (as a driving force) is beautifully expressed in the name of one of the shafts we visited 'Who seeks, finds'. Although, at first glance, 'It all depends on luck', there are other factors such as experience that influence the outcome of a mining project.

We found that shaft owners often have considerable experience in the mining sector. As (children of) former Sominki workers, they know the mining sites very well and they do not start a reef mining project 'blindly'. They know which shafts have been abandoned by MGL or Sominki and which veins are still worth exploiting. Moreover, they have the technical and geological knowledge to direct their tunnels towards the gold veins. The case of Jean-Baptiste, a shaft owner, illustrates this.

> Jean-Baptiste is 45 years old and has six children. He was born in Kamituga and worked for Sominki in the eighties. Having lacked the opportunity to study at that time, he has recently decided to begin his university studies at one of the four divisions of universities in Kamituga. In order to pay for his studies, he works as a miner. In 2008, we met him in Mero. He constituted a team together with some fellow-students.

> Unfortunately, they had to abandon the shaft a few months after our visit due to the mounting groundwater. In January 2009, Jean-Baptiste invested in a new shaft in Misagi, another mining area in Kamituga. Being an ex-Sominki worker, he knew that this area contained a particularly rich vein. He says that they base themselves on old geological maps which, although not up-to-date, give a pretty good indication of where to direct your tunnel. ‘While proceeding,’ he explained, ‘we also communicate with each other, and hammer-blows indicate when another team is coming too close.’ At the time of our last visit in August 2009, they had already dug a 60- meter long tunnel with a team of five diggers. Their work had to be temporarily stopped since Jean-Baptiste lacked the money to buy fresh batteries for their torches.

This case illustrates how shaft owners have agency (for example his studies and new shaft) but also face constraints (for example a need for fresh batteries).

Finally, we touch upon the broader question of what motivates people to work in the gold sector. In the debate on artisanal mining, some authors highlight ‘push factors’ while others stress ‘pull factors’ that attract people towards the mines (Hilson, 2009, p.3). The ‘demand-pull’ school of livelihood diversification states that people are subsisting adequately from farming, but choose to diversify in order to generate higher economic returns. This school has been largely informed by accounts of ‘rush-type’ activities: the discovery of new gold sites leads to a ‘rush’ and the short but intensive and chaotically planned exploitation of the new mining site. The people involved are very mobile. They set up mining camps which they are willing to abandon as soon as returns are no longer adequate. In the ‘distress-push’ school there are two main accounts. The first says that people get involved in artisanal mining because they are desperate to escape poverty. The second view claims that artisanal mining has become a permanent activity in some places in Africa’s rural economy and that ‘despite being fuelled by poverty, artisanal mining is more than just a ‘rush activity’, that it is a deeply-rooted industry […] which offers a range of economic opportunities for people from all walks of life’ (Hilson, 2009, p.3).

Considering the historical trajectory of the mining sector in Kamituga, and the many statements we collected from interviewees about their work, we tend to agree with the last view. In Kamituga, artisanal mining is the principal means of surviving and generating an income. For some, it is a means to invest and evolve economically. The presence of an experienced, skilled workforce makes the Kamituga case particular. It stands in contradiction to popular accounts of the chaotic, unplanned ‘gold rush’ which are quite popular and influential in donor circles.

3.4. ‘It’s a never-ending process’: the processing of auriferous rocks

There are further stages in the production process once the rocks have been ‘harvested.’

Figure 1. Actors in gold exploitation and the processing of auriferous rocks
(All terms are explained in sections 3.2. and 3.4.)

Source: Author’s diagram based on own fieldwork.

As we have said, a miner receives his salary in kind (i.e. a certain quantity of auriferous rocks which he will have to work and re-work before being able to sell the gold). After the auriferous rocks are extracted from the mining shaft, they are transported to a ‘loutra,’ a fenced off parcel of land where the stones are crushed into fine powder. This powder is then washed in a basin to separate the gold dust from the 'waste.' In this parcel, we usually find a guard who is paid by the 'loutrier,' the owner of the parcel (he receives part of the production). We also find 'mamans twangaises,' women who are hired by individual diggers to pulverize their production. These women are paid US $1.4 per iron bucket; each containing 13 to 15 kilogrammes of stone[4].

The 'mamans twangaises' are employed on an ad-hoc basis by individual diggers or by groups of diggers and they have no contract. This makes them vulnerable. When the stones appear to contain little gold dust, diggers are not likely to pay the 'mamans twangaises.' On the other hand, diggers repeatedly denounce the 'mamans twangaises' for stealing valuable stones and selling them on their own account. Indeed, some women admit that they might hide stones in their underclothes. In any case, this work is physically very demanding and many suffer from pulmonary diseases and vertebral column deformation due to the harsh working conditions (International Alert and LEAD, 2009: 47).

When the stones are pulverized into fine powder, the powder can then, if necessary, be sifted. The miners wash their own production in a water-filled basin of about one by two meters long and 1.5 meters deep in which an iron plate (called a 'karaï') is used to separate the 'sand' and the gold dust. They do this by slowly turning the plate around so that the heavier gold particles are separated. The smaller gold particles however sink to the bottom of the basin. After two or three months, depending on the frequency of use, the basin is emptied and the owner can re-process this sand for additional profit.

The 'loutrier' sells the part of the sand that is left in the parcel or the basin to others, usually younger men or women, to be further worked and re-worked. This happens in a second plot which is often located further away from the mining sites and closer to the centre of the town. These 'loutras' can be very spacious and host several areas, each accommodating a specific processing activity: water basins, water streams, parcels for pulverizing the production and fireplaces for purifying the gold dust (with nitric acid). People come here to work their production because they need water streams, for example, which are not publicly available elsewhere.

A first specific category of actors who intervene in the re-working of the sand are the 'biporistes'. They use the bark of a banana tree (called 'biporo'), into whose pores the gold dust sticks, to wash the sand. They are often organized in teams of four to six men and might produce some 3 to 10 mishale (measure equal to 1/10 of a renge) per day for between US$ 9 to 30. A second category are the 'mamans bizalu' who buy a quantity of sand (waste) for US$ 2 to 3, wash and work it, and if necessary crush it again, in order to find some gold dust in it. They can earn between US$ 3 to 6 a day for 1 to 2 mishales. A third category (mainly women and children) is present in the 'loutra' and gathers the leftovers. They crush, wash and sift the waste once more to extract any remaining gold dust. The women involved in this activity are commonly called 'maman tora.' Their daily revenues vary between US$ 1 and 3.

As is obvious from these descriptions, the participants in the production process are manifold. The production process itself is almost endless, since the 'waste' produced by one actor can be bought and further processed by another. At the various stages, the local population somehow tries to profit from the gold business.

3.5. 'The gold passes through many hands': the network of gold traders

After processing, the gold has to be sold and transported to international markets. The gold passes through many hands when entering the networks of gold traders at the local and regional levels.

Figure 2. Actors and their relationships in gold trade

Source: Author's diagram based on own fieldwork.

Gold at the local level is sold in 'buying offices,' while some petty traders also go directly to the mining shafts and the 'loutras' to buy 'at source'. The number of buying offices in town is not stable since smaller offices often face bankruptcy. However, there are a number of well established 'big buying offices.' They have often existed for a long time, have a big turnover and are locally well known. The owners of these offices ('*patrons*', 'bosses' or intermediary traders) usually live and work in Bukavu and travel frequently to Kamituga to manage their businesses. Some have a number of offices in different neighbourhoods in Kamituga, or even in other mining sites like Lugushwa or Fizi. A boss often combines the gold trade with other business, such as clothing, transport, fuel and so on, which are transported to the interior. These people can become very successful businessmen.

In August 2009 we did a survey to identify all of the buying offices in Kamituga[5]. We obtained a list of 17 big offices, and at least 50 small offices which might be commission agents of the big offices or independent small offices. About 20 to 25 offices are officially registered; the other ones operate illegally, or work under the cover of an official office[6]. The system of commission agents is widespread. This system allows a boss to officially register and pay taxes for one office when, for example, he really operates three. It is also a strategy to diversify the supply and thus guarantee a constant supply of gold and to avoid risk. The recruitment of agents in these offices is done on the basis of friendships or family relations. Family relations can be disadvantageous because they may involve a lot of moral obligations, as one of our interviewees explained. Most of the time, agents and bosses refer to each other as 'friends' and identify familiarity as the most important criterion for recruitment.

While relations are multiple, complex and often overlapping, we limit ourselves to relationships between agents and bosses. Buying offices in Kamituga are usually staffed by one or two agents, who are each entrusted with specific tasks. One agent is charged with 'heating' the gold in nitric acid so as to remove the impurities. This process is called 'heating,' 'burning' or 'cleaning' the gold and produces highly toxic fumes from the burnt acid[7]. A second agent does the weighing, negotiations with the clients, payment and accounting.

To make the office operational, the boss places a sum, varying from US$ 1000 to 20,000, at the agent's disposal. The trader/agent uses this money to buy small quantities of gold from the diggers. To weigh the gold, traders use very simple balances. They hold the balance between thumb and forefinger and balance the amount of gold with suitable weights. These weights include a range of coins, matchsticks and toothpicks. In the process, cheating frequently occurs. In fact, commission agents depend for part of their profit on the manipulation of the weights. One agent explained to us that a coin of one 'kanta' should normally weigh 0.7 grammes. To make some profit, you should manipulate your kanta to 0.9 or 1.0 gramme. The 0.7 is transferred to the boss, whereas the agent keeps 0.2 or 0.3. He concluded that 'an agent must be a bit of a thief,' although the bosses are all well aware of this practice, as are most customers. We might, therefore, call this 'institutional cheating.' Apart from this, agents and bosses have some practical arrangements with respect to the agent's remuneration. Usually, the boss evaluates his profits at the end of the month, and the agent receives a percentage. Thus, their salary is not fixed. It depends on the quality of the relationship, and on the level of monthly profits. Almost all agents publically affirm that they are satisfied with this agreement, and that the levels of trust between them and their bosses are high enough to ensure that their profit shares are fair.

Once the agent has bought a sufficient quantity of gold, he sends it to the boss who is normally based in Bukavu. Traders in Bukavu buy at a price that is slightly higher than the price in Kamituga (about US$ 1 to 2 per renge higher). The prices in Bukavu and in Kamituga keep up with the world market price, although not everyone is equally informed about 'global' price evolutions. Some traders follow it on internet or on the radio; others say they are not informed. In April 2008, one renge was bought at US$ 31.5 to 33 per renge in Kamituga, while in Bukavu traders paid US$ 33 to 34.5. The boss sells to the export offices in Bukavu at US$ 37.5 to 41 per renge, thus making a profit (gross margin) of about US$ 5 per renge.

To sum up, many different actors are involved in the gold trade at the level of South Kivu. In this system, we do not see a tendency towards centralization, on the contrary. The reasons for this are threefold. Firstly, diggers supply small quantities of gold dust to the agents. They tend to sell immediately and do not wait until they have a larger quantity to sell. Therefore, they remain dependent on small, local traders in Kamituga instead of going directly to larger traders in Bukavu. Secondly, supply comes from many dispersed, remote and difficult to reach mining sites. This makes it unprofitable for a master trader to set up his business in the vicinity of the mining shafts. Thirdly, setting up a big office in the interior makes a trader vulnerable to theft, military or state control. The more complex the network and the more 'informal' and personal the exchanges, the more difficult it is for the state and others to take control over the transactions. Managing different offices is a risk-sharing arrangement. Instead of observing a tendency towards centralization, we see a tendency to break up into smaller units and engage more and more agents.

3.6. The tentative absence of industrial actors

An interesting characteristic of the production and trading process described above is the (near) absence of industrial actors in Kamituga. This does not mean that they have ceased to exist. Today, Banro is still holding mining titles but it is absent and is not taking any concrete steps to re-start prospection in Kamituga, although they have always announced that they would (interview, April 2008). Somico, still referring to the 1998 presidential decree, is also claiming mining titles. In 2007 Somico management occupied Sominki's former offices and announced they would start exploiting Mobale mine. In August 2007 they concluded a partnership (a US$ 50 million investment) with a Swiss mining company Aurex, a former export office in Bukavu (Beltrade Info, 2007). The partnership though has never become operational as tensions emerged between Aurex and Somico headquarters in Kinshasa (and even within Somico). These tensions are clearly linked to political conflicts between pro-Somico and pro-Banro politicians at the national and provincial levels[8]. In brief, Somico has no machines, nor any money to invest.

Aurex, which seems to have good relationships with the president's entourage, is now negotiating with the government in Kinshasa to acquire the mining titles and claims to have made a deal (personal communication, April 2010). In the meantime, Aurex is financing a few mining shafts and has put ten ball mills at the disposal of the diggers. The ball mills crush larger quantities of quartz, and thus do the work of the 'mamans twangaises.' The diggers who want to process their stones in Aurex's 'factory' are obliged to sell their production to Aurex. It remains however a mystery to what extent Aurex is already involved in the gold extraction, which arrangements they have with the miners and to whom they sell their production.

In the near future, the question of how to reconcile the industrial and artisanal sectors will definitely come to the fore (see also the chapters by Dan Fahey and Jeroen Cuvelier in this volume). It is already hotly debated by the Congolese government and external donors, but practices on the reconciliation of industrial and artisanal mining disputes are full of contradictions. The Mining Code, for example, hardly speaks about the artisanal sector except from the claim that, 'mining sites should be set at the disposal of artisan producers.' Yet in practice, most of the territory has been divided into concessions for industrial companies. Secondly, the installation of Saesscam (*Service d'Assisiatnce et d'Encadrement du Small Scale Mining*), a technical service to assist the small-scale and artisanal miners, might be seen as government legitimization of (and support to) these miners. In South Kivu however, the only thing that Saesscam has done until now is to levy more taxes on the actors involved. On various Congolese mining sites, tensions and even open conflicts are emerging between local communities and mining companies[9]. This issue will become more and more important as the debate moves towards the role of mineral resources in post-conflict development.

4. Conclusion

This chapter has studied the constraints and opportunities of actors involved in the gold mining sector. Our analysis focused on the agency of miners and traders, and considered the practical norms that govern and sometimes constrain their interactions. Let us briefly consider a few conclusions we can draw from this case-study.

In the 1970s and the 1980s, the Kamituga area was administered as the private property of a mining company. People were not allowed to build houses, to open shops or to mine gold for themselves. However, they managed to circumvent these rules and negotiate with the company's management over a more lenient application of the rules. Currently, no official property rights can be granted to individuals in Kamituga since the area is still situated in Banro's concession. Accordingly, people cannot rely on state law to secure titles to land and mining pits. But the (physical) absence of the title-holder also allows for relatively easy access to the mining shafts. Someone who is able to invest in tools and manpower can quite easily become a shaft owner. In order to secure their titles, shaft owners navigate between different institutions ('legal pluralism'). But at the same time, they are continuously confronted with the threat of an industrial actor (re)appearing in the local setting and (re)claiming the mining titles.

This chapter has also demonstrated how the 'formal' and 'informal' sphere cannot be separated, as evidenced by public authorities levying non-official taxes and artisanal gold producers and traders paying official taxes on gold, but smuggling the same gold across the border. Institutions, defined here as 'the rules of the game,' in the Congolese gold sector are usually not governed by state law. In order to describe these institutions, we have used Olivier de Sardan's 'practical norms' as an exploratory concept. The aim was to empirically describe some of these practical norms which govern relationships between people, rather than to provide an in-depth analysis.

Between shaft owner and miners and between commission agent and trader, no official or written contracts exist. All contracts are based upon personalized and reciprocal relationships and ‘arrangements.’ Even between traders and miners, these arrangements exist: once a miner (a ‘client’) becomes more familiar to the trader, he can be granted special privileges and, very importantly, credit. This is crucial in a context where official credit and saving systems are absent (which considerably hampers opportunities for investment). Instead, miners, shaft owners and commission agents take loans from sponsors. In many cases this helps them in their work, but it also brings moral obligations and dependencies between the actors involved.

We have also described how shaft owners and miners agree to distribute production. Although these practical norms are always open for negotiation, they guide the relationships between miner and shaft owner. Similarly, the trading agent and his boss have arrangements concerning the distribution of profits. Still, cheating frequently occurs and is part of the practical norms. Cheating in a way forms the ‘room for manoeuvre’ and creates agency for the subordinate actors (see Scott, 1995), like commission agents (who manipulate the weights) or ‘mamans twangaises’ who hide precious stones.

The chapter provided other examples of agency. The Ninja, for example, were surviving amidst an economic and institutional crisis, looking for opportunities to buy consumer goods and to accumulate wealth and opposing an industrial company. Also today, local ‘entrepreneurs’ are seeking opportunities to invest. They exercise agency, which may in some cases result in accumulation and investment. Those who managed to accumulate often leave for Bukavu. But very recently traders have also started to invest locally, which might have a positive trickle-down effect on the local economy. A final example of agency can be found among the shaft owners, who, in a situation of legal pluralism, actively negotiate with different state and non-state agencies.

Using Kamituga as a case-study we have shown who are the actors involved in artisanal mining, why they work in the gold sector and what their constraints and opportunities are. If the Congolese government and/or external actors want to take steps towards a reform and industrialisation of the Congolese mining sector, it is important to take the potential impact upon the livelihoods of actors operating in artisanal mining into account.

Bibliography

P. Baracyetse (1999) *L’enjeu géopolitique des sociétés minières internationales en République Démocratique du Congo (ex-Zaïre)* (Buzet: SOS Rwanda-Burundi).

Beltrade Info/ACP (2007), ‘50 millions de dollars américains pour relancer les activités de la Somico à Kamituga’, *Beltrade,* n° 11.

K. von Benda-Beckmann (1981) ‘Forum Shopping and Shopping Forums: Dispute Processing in Minangkabau Village’, *Journal of Legal Pluralism* (19), 117-159.

Bulambo Katambu, A. (2002) *Capitalisme minier et droits de l’homme en RDCongo. La croisade des* Nindja *contre la Société Minière et Industrielle du Kivu* (Huy : Les Editions du Trottoir).

Enough (2009) *A comprehensive approach to Congo's conflict minerals* (Washington DC: Enough Project).

Garrett, N. and Mitchell, H. (2009) *Trading conflict for development* (Aston Sandford: Resource Consulting Services).

Global Witness (2004) *Same old story. A background on natural resources in the Democratic Republic of Congo* (Washington: Global Witness).

Global Witness (2005) *Under-mining peace: Tin- the explosive trade in cassiterite in Eastern DRC* (Washington: Global Witness).

Global Witness (2009) *Faced with a gun, what can you do? War and the militarization of mining in Eastern Congo* (Washington: Global Witness).

J. Griffiths (1986) 'What is Legal pluralism?', *Journal of Legal Pluralism and Unofficial Law* 24, 1-55.

G. Hilson (2009) 'Small-scale mining, poverty and economic development in sub-Saharan Africa: An overview', *Resources Policy* 34, 1-5.

Human Rights Watch (2005) *The curse of gold. Democratic Republic of Congo* (New York : Human Rights Watch).

International Alert and Laboratoire d'Economie Appliqué au Développement (LEAD) (2009) *La femme comme objet d'exploitation socio-économique dans la dynamique des guerres au Sud-Kivu* (Bukavu : International Alert).

N. Long (2001) *Development sociology: Actor perspectives* (London: Routledge).

J. MacGaffey (1987) *Entrepreneurs and parasites. The struggle for indigenous capitalism in Zaïre* (Cambridge: Cambridge University Press).

R.S. Meinzen-Dick and R. Pradhan (2002) *Legal Pluralism and Dynamic Property Rights* (Washington: International Food Policy Research Institute [IFPRI]).

H. Mitchell and N. Garrett (2009) *Beyond Conflict - Reconfiguring Approaches to the Trade in Minerals from Eastern DRC* (Aston Sandford: Resource Consulting Service).

Netherlands Institute for Southern Africa (NiZA) (2006) *The state vs. the people. Governance, mining and the transitional regime in the Democratic Republic of Congo* (Amsterdam: Netherlands Institute for Southern Africa).

C. Nordstrom (2001) 'Out of the shadows' in T. Callaghy et alii (eds.) *Intervention and transnationalism in Africa. Global-local networks of power* (Cambridge: Cambridge University Press).

D. North (1990) *Institutions, institutional change and economic performance* (Cambridge: Cambridge University Press).

Pole Institute and International Alert (2004) *Natural resource exploitation and human security in the Democratic Republic of Congo. Seminar Report* (London and Goma: Internaional Alert and Pole Institute).

Prendergast, J. and Lezhnev, S. (2009) *From mine to mobile phone. The conflict minerals supply chain* (Washington DC: Enough Project)

Sominki (1997a) *Procès-verbal de la cinquante et unième réunion du Conseil d'Administration tenue à Kinshasa le samedi 29 mars 1997* (unpublished document).

Sominki (1997b) *Procès-verbal de l'Assemblée Générale Extraordinaire des Actionnaires du samedi 29 mars 1997* (unpublished document).

J. Scott (1995) *Domination and the arts of resistance: Hidden transcripts* (London: Yale University Press).

Sullivan, D. and Atama, N. (2010) *Digging in. Recent developments on conflict minerals* (Washington DC: Enough Project).

D. Tull (2005) *The reconfiguration of political order in Africa. A case study of North Kivu (RDCongo)* (Hamburg: Institut für Afrika-kunde).

UN Security Council (2001) *Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo, S/2001/357* (New York: United Nations Security Council).

UN Security Council (2007) *Report of the Secretary-General pursuant to paragraph 8 of resolution 1698 (2006) concerning the DRC, S/2007/68* (New York: United Nations Security Council).

UN Security Council (2008) *Final report of the Group of Experts on the Democratic Republic of Congo, S/2008/773* (New York: United Nations Security Council).

K. Vlassenroot and T. Raeymaekers (2004) 'Divisé en deux. Or et identité sociale à Kamituga (Sud-Kivu)' in S. Marysse and F. Reyntjens (eds.), *L'Afrique des Grands Lacs, Annuaire 2003-2004* (Paris: L'Harmattan).

Tables and figures

Table 1

Export office	2007 Exported quantity (in grammes)	2007 Value (in US$)	2008 Exported quantity (in grammes)	2008 Value (in US$)
NAMUKAYA	90,716.50	1,571,527.00	57,102.90	1,072,265
AUREX CONGO	7,640.56	132,371.36	0	0
COTRACOM	7,505.80	133,603.00	7,531.13	90,748.30
Total	105,862.86	1,837,501.36	64,634.03	$1,163,013.30

Figure 1

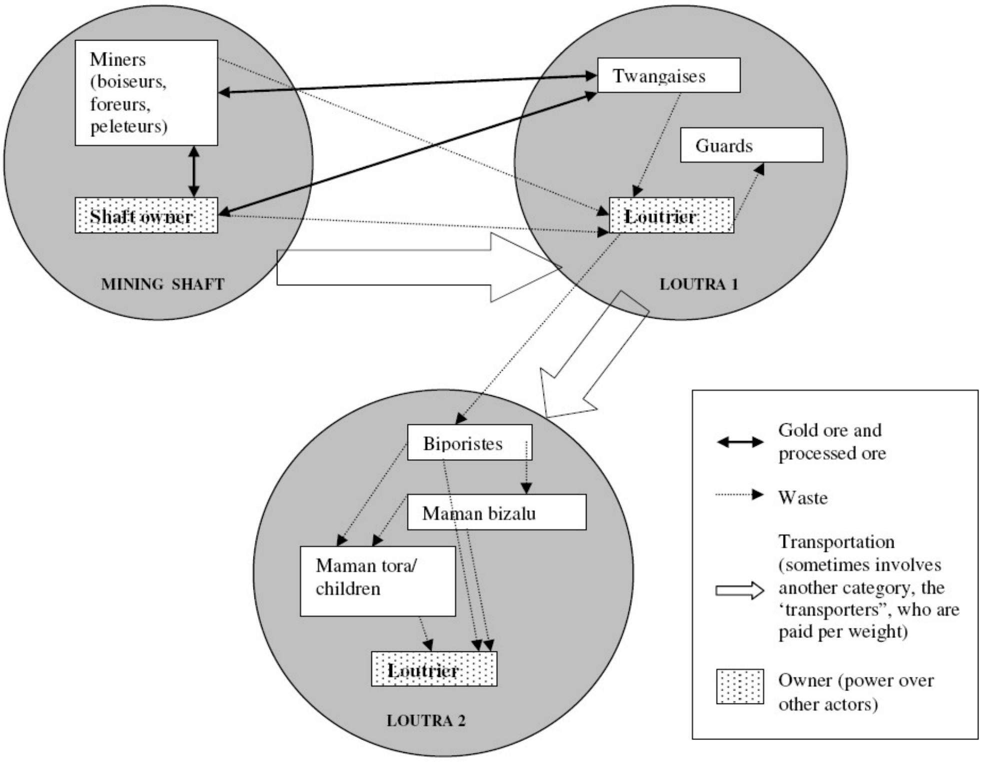
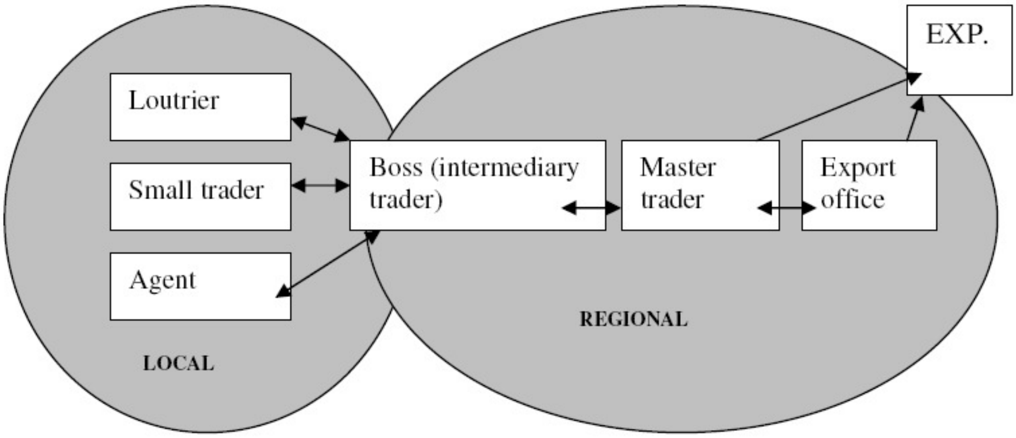


Figure 2


EXP.
Loutrier
Small trader
Agent
Boss (intermediary trader)
Master trader
Export office
REGIONAL
LOCAL

[1] Real production is estimated at about 4 tons per year (Interview at the 'Division de Mines', Bukavu, 21 March, 2008 and interview with Eric Kajemba, Observatoire Gouvernance et Paix, 28 March 2008). According to Garrett and Mitchell (2009), 95 per cent of gold production in North and South Kivu is smuggled out.

[2] In March-April 2008, we interviewed 8 shaft owners. Six of them had more than 10 years of experience, one of them between 5 and 10 and one between 0 and 5 years of experience.

[3] Indigenous capitalists are local entrepreneurs who have made use of opportunities, mostly in the second economy, and have accumulated capital. MacGaffey (1987) argues that these local entrepreneurs are a vital element in answering the questions of how Zaire actually functions.

[4] This iron bucket is also called a '*loutra*'. Another meaning of the word is the basin in which the production is washed. The word *loutra* has thus three meanings.

[5] We managed to identify at least 90 per cent of all operational buying offices. We did not identify individual small traders, such as women who are selling food at the market, but who also buy and sell gold.

[6] We have a list of 25 officially registered offices for September 2008, 23 in October and 26 in November 2008.

[7] Nitric acid is used to determine the purity of the gold and to remover impurities, since gold is insoluble in it. Another process involves the use of mercury to recuperate gold from the 'waste' because gold dissolves in mercury forming amalgam alloys (but does not react with it).

[8] President Kabila is said to be pro-Banro since he has negotiated the 2002 Agreement. The Vice-Governor in South Kivu is pro-Aurex. Somico is supported by Yerodia and has a strong basis in Kinshasa.

[9] For example, in Luhwindja the local community is opposing Banro because the latter want to relocate a number of families from the concession.