In the Eastern provinces of the Democratic Republic of the Congo (where most of the Congolese gold is mined), artisanal and small-scale (ASM) gold mining contributes to the livelihood of about 200,000 miners and their families. This type of mining however, has a significant environmental and social impact.

Development partners seek to support the sector and make it a vehicle for sustainable development. This comes with a range of challenges, because of the nature of ASM itself, and because of the local political, economic and social context in DRC.

This study illustrates and sheds new light on some of the ASM realities in Eastern DRC. More specifically, it analyses the political economy of the ASM gold mining in Eastern DRC and the challenges and opportunities for economic development using a territorial development approach.

There are three main implications for development partners:

- Be realistic about what can be achieved, and work following a flexible and adaptive approach.
- Foster vertical and horizontal linkages and synergies, in particular between ASM and agriculture, and ASM and large-scale mining.
- Engage, facilitate and support partnerships between businesses, civil society organisations (CSOs), communities and formal and informal authorities.
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Acronyms

ASM  Artisanal and small-scale mining  
CSO  Civil society organisations  
CSR  Corporate social responsibility  
DfID  UK Department for International Development  
DRC  Democratic Republic of Congo  
ECDPM  European Centre for Development Policy Management  
FARDC  Forces Armées de la République Démocratique du Congo  
FDI  Foreign direct investment  
ICMM  International Council on Mining and Metals  
IMF  International Monetary Fund  
LSM  Large-scale mining  
MNC  Multinational companies  
NGO  Non-governmental organisation  
OECD  Organisation for Economic Co-operation and Development  
PEA  Political economy analysis  
PFM  Public financial management  
SAESSCAM  Service d'accompagnement et d'encadrement du small-scale mining  
SDG  Sustainable Development Goal  
UN  United Nations
1. Introduction

Artisanal and small-scale mining (ASM) covers a wide spectrum of mining activities, the scale, features\(^1\) and legal status of which varies significantly from country to country. While there is no agreed common definition of ASM, it usually refers to low-tech, labour-intensive mineral extraction and processing (Hilson & McQuilken, 2014). In most Sub-Saharan African countries like the Democratic Republic of Congo (DRC), ASM is rooted in local history and part and parcel of the socio-economic fabric of society.

ASM in the gold sector occupies about 10 to 15 million artisanal and small-scale gold miners worldwide, including 4.5 million women and 600,000 children (OECD, 2017); and represents a production of about 380 to 450 tonnes of gold per year, or 17–20% of the gold produced globally (Seccatore, Veiga, Origliasso, Marin, & De Tomi, 2014). In the Eastern provinces of DRC alone (where most of the Congolese gold is mined), ASM contributes to the livelihood of about 200,000 miners and their families. Gold production in the area is estimated at around 10 tons per year (BGR, 2010), of which 98% is undeclared, according to a United Nations (UN) Group of Experts.\(^2\) That said, rather than the contribution of ASM gold mining to employment and production, it is its negative attributes that attract most international attention, e.g. informality, mercury pollution, hazardous and unhygienic working conditions, prostitution, disease, drug abuse, and child labour (Hilson & McQuilken, 2014).

This helps explain why some argue (e.g. Hilson & McQuilken, 2014) that until recently, ASM has occupied such a peripheral position on the economic development agenda of Africa, in comparison to large-scale mining (LSM). This applies both to governments and development partners. The World Bank, for example, between 1988 and 2012 dedicated USD1.4 billion to mining sector reform, stimulating foreign large-scale (mostly foreign) investment, and at the expense of ASM (Hilson, 2016).\(^3\) Even activities aiming to support ASM through finance, formalisation/registration or capacity building, have had limited impacts - because of the informality, large size and complex nature of ASM, which makes it difficult to achieve significant broad-based impact, in spite of numerous positive initiatives (Sippl et al., 2012). For example, the World Bank’s DRC programme ProMines (Projet d’Appui au Secteur Minier)\(^4\) - a single donor trust fund, ‘failed to make sufficient progress’\(^5\) leading DfID to exit this fund. This suggests that supporting ASM is a complex and challenging endeavour, which requires development partners to adapt their programmes to the complexities of ASM and the local political, economic and social context in which ASM activities take place.

This brief aims to reconcile the gap between policy and practice by illustrating and shedding new light on some of the ASM realities on the ground in the context of gold mining in Eastern DRC. It draws some implications on what these mean for development practitioners and other actors engaged in ASM in DRC. To do so, it seeks to draw some insights from two interlinked dimensions: the political economy of the ASM gold mining in Eastern DRC; and the territorial development approach, which looks more specifically into the value chains and sectoral linkages of ASM.

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\(^1\) These may include e.g. the volume of production, the amount of capital invested or the number of people employed.

\(^2\) More information at: https://impacttransform.org/en/countries/democratic-republic-of-congo/

\(^3\) However, these numbers should be treated carefully as LSM projects cost a lot, as opposed to small scale projects for ASM.

\(^4\) This programme includes results on improving living conditions of artisanal and industrial miners communities, improving the capacity of SAESSCAM (government service to support artisanal miners), or establishing a registration system for artisanal miners (more information at http://projects.worldbank.org/P106982/drc-growth-governance-mineral-sector?lang=en&tab=results)

\(^5\) More information at: https://devtracker.dfid.gov.uk/projects/GB-1-105844/documents
2. Understanding the political economy of ASM in DRC

The exploitation of natural resources can effectively contribute to sustainable and inclusive development. Yet too often, resource-rich countries have failed to leverage the potential of their natural endowment and transform their economies (Bial, 2017). The poor performance of some resource-rich countries can be explained by a number of economic (fluctuation in commodity cycles, the Dutch disease etc.) and political factors, including power relations and institutional settings (idem). The latter are of particular importance in the DRC where the extractive sector is highly politicised (NRGI, 2015). This section therefore aims to illustrate some of the political economy factors and actors that shape the contribution of ASM gold mining to sustainable development in DRC.

ASM gold mining in Eastern DRC: an old story

Gold was first discovered in North Eastern DRC in 1903, and soon after exploited by the Belgian colonial administration, which established and developed large-scale mining (LSM) during the first half of the century, and by artisanal miners (Geenen et al., 2013a; IPIS, 2012). After the independence in 1960 and the subsequent nationalisation of LSM companies in the 1970s, the LSM productive capacity declined due to economic mismanagement, poor infrastructure and external shocks - the two Shaba wars and the closure of export routes to Angola (idem). This also put great pressure on government’s budget, which relied on a large part on LSM, whose activities fell close to zero in the mid 1990s. At the same time, individual Congolese were exploiting and trading gold to intermediate traders, notably in the abandoned concessions in Sominki (Geenen, 2014).

In the 1980s the DRC was facing deep financial and economic crisis. President Mobutu legalised ASM activities to allow DRC citizens to make a living from the small-scale exploitation and trade of minerals, including gold. ASM activities continued to spread, and even more when war broke out in 1996 and 1998. In time of conflict, ASM is often one of the only viable livelihood for young men, but also for many women and children. ASM and gold trade also became integrated in the regional war economy, with armed groups taking control over several mining areas, and using ASM to finance their activities - a legacy that lives on to this day (Geenen et al., 2013a). Such trade was naturally facilitated by the easiness of smuggling gold, and by the porous borders located close to the gold mines in Eastern DRC.

With the revision of the mining code in 2002, the Congolese government tried to revive LSM (at the expense of ASM activities) by attracting foreign direct investment (FDI), together with the support of the International Monetary Fund (IMF) and World Bank. This move was seen by some as motivated by the idea that with LSM, revenues from the exploitation of mineral resources including gold, would be controlled more easily than from millions of artisanal miners (Geenen et al., 2013a). This resulted in large surface areas conceded to LSM, the same where ASM was very present - hence pushing artisanal and small-scale miners to work outside of the legal framework and generating conflicts between ASM and LSM.9

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6 “In its various phases, Zairianisation [or nationalisation] redistributed a wide range of businesses, from shops to large enterprises, by replacing European owners with Zairians. Because many of the new owners were members of the president’s patronage network and not necessarily qualified to run businesses, many formerly profitable companies went bankrupt (Askin and Collins 1993)” (Garrett, 2016:369).

7 The legal framework introduced at the time has said to be bureaucratic, requiring the approval of not only the local administrative branch of the Provincial Mining Ministry, but also the national administrative endorsement from Kinshasa (Mortimer, 2016), costly and time-consuming (Bryceson and Geenen, 2016).

8 For instance, Artisanal Economic Zones, established by Ministerial Decree, cover a total surface area of only about 219 km² (compared to the surface area of one gold company’s [Banro] exploitation permits: more than 2790 km²) and some are very remote and insecure (De Herdt et al., 2015).

9 For example, the company Banro claimed that it holds research permits for Mukungwe, a claim that was violently contested by the site's artisanal miners but that has been confirmed by the Ministry of Mining (personal communication 26/09/2013) (Geenen, 2014).
At the same time, international regulations on conflict minerals such as the Dodd-Frank Act passed in 2010\textsuperscript{10} or the OECD due diligence guidelines adopted in DRC law, pushed the Congolese government to accelerate the formalisation of ASM activities (it even imposed a ban on ASM from September 2010 to March 2011), and to strengthen its control by raising taxes on ASM (Bashizi et al., 2014). In practice, however, this resulted in excluding up to two million Congolese miners from the formal mining sector, which showed in the decrease in official gold production figures. In effect, it led to the creation of a two tier market with minerals that avoided traceable programmes selling for 30-60\% less (Geenen, 2014; NRGI, 2015; Mortimer, 2016).

### On the importance of going beyond (and dealing with) formal institutions

While the 2002 Mining Code and 2003 Mining Regulations\textsuperscript{11} address both ASM and LSM, they prove to be rather inadequate in promoting the formalisation of ASM (Geenen, 2014). First, the reform of the mining code introduced special artisanal exploitation zones. Yet this remains limited, for instance to just seven zones in South Kivu with a total surface area of 219 km\textsuperscript{2}, in comparison to 2790 km\textsuperscript{2} for one LSM gold company in the same region. The legislation also ignores the fact that ASM often takes place on existing LSM concessions (idem). Second, the process for miners to get mining license is bureaucratic. It requires the approval of not only the local administrative branch of the Provincial Mining Ministry, but also the national administrative endorsement from Kinshasa (Mortimer, 2016), and is thus costly and time consuming. These permits need to be renewed on an annual basis. The regulations also mention the need for registered miners to sell their production to registered traders in centralised trading points where agents from the different mining services are present, issue certificates and levy taxes. Furthermore, miners need to comply with regulations on security, hygiene, water use and environmental protection (Geenen, 2014). These requirements represent significant barriers for artisanal miners to enter the formal economy, and partly explain why these mining regulations are not implemented in practice. In other instances, reforms ignore the local dynamics of the informal value chains (Box 1).

### Box 1: ASM - an unorganised sector?

> 'Every Nindja [artisanal miner] collaborated with a financier, a local trader who paid for the expenses (tools, clothes, food and so on), and who in turn bought the raw gold at a favourable price (idem and Dupriez, 1987). This local trader was in turn financed by another trader, usually operating from Bukavu. In this way, a tight network of clients and supporters, debtors and creditors, miners and traders emerged, the basic structure of which still exists today. In this ‘informal’ network, practical norms developed out of a need for stability and for gearing all actors’ interests to one another. These relationships, as miners and traders say themselves, are characterised by trust, which builds up over time (Granovetter, 1993: 27).'

> 'If such problems evolve into a dispute, there are several possibilities for sanctioning. Going to court is difficult in the absence of formal contracts, and traders say they do not trust the court or the police (commission agent 13 August 2009 int.), or that it is not worth the effort (commission agent 12 August 2009 int.). Instead, creditors may ask for collateral. But the strongest sanction is the refusal to grant credit to individuals with a bad reputation. This is an incentive for people to behave in a reliable and honest way, for they could lose the benefits of future exchange if they default (commission agent 27 July 2009 int.). So, although the primary motivation seems to be self-interest, people also comply with this because a damaged reputation leads to shame and possibly social exclusion. So, enforcement and sanctioning in this case is not done by the state, but by the professional actors themselves.'

**Source:** Geenen, 2014

As a consequence, the DRC regulatory approach led to a hybrid system of formal and informal institutions that shape the way ASM work in practice. In other words: mining sites are governed ‘by practical norms, set and negotiated by a mix of customary, state, military and other power holders’ (Geenen, 2014). This is well illustrated by the issues of land tenure (Box 2), which is a crucial issue as ASM operations are at the mercy of those in charge of assigning concessions to the ASM operatives and the industrial mines alike (Chabal, 2009: 132 as cited in Mortimer, 2016).

\textsuperscript{10} This regulation demands due diligence from American companies sourcing minerals from the DRC.

Box 2: Land tenure system: content specific mix of formal and informal arrangements

“To give one example, the process of acquiring and securing a plot of land where you can start to mine, is different in Kamituga and in Twangiza. Kamituga is a historical mining town of about 100,000 inhabitants, situated in Mwenga territory, Wamuzimu chiefdom, in a region traditionally inhabited by the Balega people. Sominki’s main gold mine was in Kamituga, and the company recruited workers from all over South Kivu and beyond, which resulted in an ethnic mix in the mining camp. The Balega traditionally lived on hunting and slash-and-burn in the forest and the region was not densely populated. This had consequences for the system of land distribution, and for customary governance in general. The latter was decentralised, not strictly hierarchical. Any male adult could occupy a plot of land and start working (Biebuyck, 1973: 14; Dupriez, 1987: 17). This system is mirrored in artisanal mining. If you want to start a mining project in this area, it suffices to have the necessary financial capital, recruit workers, provide them with tools and equipment, and start to dig, as interviewees in Kamituga assured me. At a later stage, you go and see the chief and pay the customary taxes and contributions.

The procedure is different in Twangiza. Twangiza is actually the name of a concession [by the state], stretching over different Bushi chiefdoms such as Luhwindja, Burhinyi and Ngweshe. The Bushi chiefdoms were hierarchically organised with the mwami or king at the top. He was the holder of all land rights (Dupriez, 1987: 12). Such land rights, in the form of non-alienable inheritable user rights, were allocated by the mwami in exchange for the ‘kalinzi’, which came mostly in the form of cattle and banana beer and was handed over in a special ceremony in the presence of witnesses. By giving the kalinzi, the customary land owner became a ‘political subject’ of the mwami, had to pay his fiscal contributions and work on the king’s land (Dupriez, 1987: 15-16). The industrial mines in this area were already abandoned by M.G.L. in the 1970s, but remained part of the concession, according to official state law. Yet in practice, thousands of people have been working in the artisanal mines since that time, and the entire system was controlled by the mwami. This was at least allowed, if not encouraged, by the mining company, which had an interest in maintaining good relationships with the chiefs (Geenen and Claessens, 2013). For the mwami, it was an opportunity to extend his power over land rights to the underground, and to substantially benefit from its yields”.

Source: Geenen, 2014

Key points:

- Contrary to the common perception, ASM is not chaotic, but regulated by practical norms and standards, influenced by historical, political, social and economic factors, and set by a mix of traditional, state, military, private sector power holders. Supporting the formalisation of the ASM is hence not about “bringing order” but dealing with the realities and players on the ground.
- Any reforms aiming to formalise the ASM hence need to engage and deal with central and local formal and informal power networks and authority.
- Efforts to formalise the ASM should take into account the (power) relations between key stakeholders along the value chains, and the roles, incentives and constraints of stakeholders in moving from a system based on trust, to a market-based type of system.

Understanding the politics of ASM

Mineral rents have always been a major part of the state’s resource base, both at national and sub-regional levels - they are hence key for political stability. In DRC, control over mining rents has always been key to gain and maintain power - especially since the Mobutu regime12 (1965-1997), which has fueled tensions between interest groups, resulting in poor governance and contributing to national and regional instability and/or conflicts (World Bank, 2010; NRGI, 2015). But DRC’s formal capture of rents from the sector is very low - it is estimated that the government collects less than 20% of the mining royalties to which it is entitled (Barma et al., 2012). This result partly reflects the risk premium that investors demand from the country, and the weaknesses in the country’s revenue administration (idem).

The DRC government, even though supported by a number of development partners, has great difficulty collecting revenue from mining. This is largely due to four key issues:

1. overlapping institutional mandates and lack of institutional coordination. DRC has a complex tax system with more than 40 different fees, but also has different agencies at the different jurisdictions

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12 The Mobutu regime was said to have been sustained thanks to the mineral rents (1965 - 1997) (World Bank, 2010).
collecting them, and is even facing issues when coordinating within the same agency, leading Barma et al. (2012) to observe that tax mobilisation is low and mired with corruption risks;

2. partial coverage of tax collection in the country - especially around the borders, which benefits smuggling by organised illegal groups, which export an important part of the production - a major problem in ASM gold mining (Chevallier and Kaiser 2010; Gboyega et al. 2010 as cited by Barma et al., 2012);

3. weak administrative capacity, which face challenges in terms of attracting, training, and retaining specialised personnel, let alone having sufficient resources to conduct onsite monitoring of exploration or extraction sites (the DRC Directorate of Mines has 30 staff with no logistical support, laboratories, or vehicles according to Chevallier and Kaiser 2010, as cited by Barma et al., 2012);

4. lack of transparency and corruption, where the exploration and extraction rights are often allocated on a discretionary basis; and where deals are secret (Ayee et al. 2011; Chevallier and Kaiser 2010; Barma, Fritz, and Rex 2010, as cited by Barma et al., 2012).

Mineral rents matter for political power. The ambition of President Kabila to attract FDI is not surprising as mineral rents are more easily extracted in LSM activities than from thousands of artisanal miners (Geenen, 2014). But implementing market-friendly policies also contributed to help Kabila’s government maintain good relationships with development partners, on which it relies heavily for the provision of social services to the population (Mortimer, 2016; NRGI, 2015).

But rent-seeking does not only happen at central level but at all levels - from the highest authorities to civil servants, at the central and local level (Box 3).

Box 3: Example of rent seeking from ASM activities at local level

After a chaotic period in 2007, and despite some current competition between the locally posted units and other soldiers, mines or sections of mines are under control of a single military unit, generating a relatively stable environment for the extraction of resources and for related business. Within their separate areas of control, FARDC units have become part of an informal political and economic governance system that incorporates other state agencies and local authorities as long as they do not challenge the FARDC units’ rent-seeking. However, while it generates relative stability, the persistence of such a parallel governance system prevents real economic reconstruction by depleting miners’ incomes, minimising formal revenue generation and keeping legal businesses and development actors out. For the non-integrated elements of the Kongolo Brigade and the Border Guard Brigade, the actual or potential benefits they can derive from controlling mining areas are a disincentive to accept full integration into new FARDC structures. The Congolese Government and the military leadership are unlikely to put much real pressure on their own troops to relinquish their control of mining sites for fear of violent resistance or of creating a void that would be filled by non-state armed groups. The Congolese state turns a blind eye to rent-seeking by military units because it can exercise only limited command over them but relies on them for security. Revenues from local rent-seeking are also probably passed up the chain of military command, providing another disincentive for the military leadership to take firm action against the practice.

Source: SIPRI, 2010

Another legacy of the Mobutu regime is ‘the concentration of political and economic powers in the hands of a few individuals’, which translates in practice by mineral rents being controlled by a small elite. For instance, the brother of president Kabila, Zoé Kabila, who is also a parliamentarian, owns companies that have been contracted to work on some of the world’s richest mineral deposits. The Ministry of Mines has granted a company controlled by the president’s sister, Jaynet Kabila, more mining permits than allowed under the country’s mining code (Congo Research Group, 2017). Another example is the Gecamines (one of the state-owned enterprise involved in the mining sector in Katanga), which board is directly appointed by the president, who balances the representation of different elite groups, and is subject to little or no oversight by

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13 Civil Society Organisations in DRC face obstacles in having access to, or providing inputs in contract negotiations, thus putting limited pressure on government’s led corruption practices.
the parliament (Barma et al., 2012). Hence, DRC is characterised by patrimonialism and non-inclusive political system - in a conflict environment, where mainly people close to the political elite occupy strategic governmental and economic positions (Matti, 2010: 405 as cited in Mortimer, 2016).

But elites operating in conflict-affected areas (and where power is highly contested\(^{14}\)) commonly face short-time horizons, which results in strong preferences for signing bonuses and other upfront payments, in lieu of long-term objectives such as transforming resource rents into sustained development riches (Barma et al., 2012). This may partly explain the lack of developmental orientation of the political elite (Figure 1), and their preference for attracting LSM FDI, which generate mineral rents that can be captured more easily than in the case of the ASM.

Figure 1: Political inclusiveness and developmental orientation

![Figure 1](image)

Figure 2.8. Political Inclusiveness and Developmental Orientation

Source: Barma et al., 2012

Political power is also intrinsically linked to ethnicity. In this regard, the Kabila family comes from the mineral rich (including gold) Katanga province in eastern DRC, from which they give and receive significant support. This led Mortimer (2016) to note that their ‘power is founded on the economic wealth derived from the belonging and the distributional arrangements implied’.\(^{15}\) This in turn means that although power is controlled by a small political elite, it is not fully centralised - part of the power lies in the hands of sub-regions. These local elites, together with other states and non-state actors (including military) have a strong hold on the ASM gold mining\(^{16}\) rents at the local level (while the central government deducts part of the mineral rents from LSM activities). Power and rents are shared between competing actors (see Box 3), yet this de facto governance of minerals is characterised by a reasonably well-organised system of cooperation, coordination and hierarchical attribution of roles amongst different actors (Atanasijevic, 2012:43).

\(^{14}\) For example, the former governor of Katanga recently resigned, to found his own party and run as presidential candidate.

\(^{15}\) That said, there has been some recent tensions between the president Kabila and the governor of Katanga, Moïse Katumbi, which resulted in Katumbi resigning and founding a new political party to run as presidential candidate for the elections (initially planned in 2016). More fundamentally this shows that the influence of the president on the Karanga region may be diminishing, which could threaten his power basis.

\(^{16}\) According to IPIS (2016), while about 21% of artisanal 3T miners in our 2013-2015 survey work under the influence of armed actors, compared to 64% in the gold sector in Eastern DRC.
That said, there are instances of competition between central and local authorities in terms of extracting rents, where reforms initiated by the central government to formalise the ASM, were also attempts to increase their control over mineral rents. For example, part of the mining reforms includes the creation of cooperatives in order to improve the governance of the ASM. In practice, these new cooperatives did not take account of pre-existing ones (usually headed by the local elite) that already played a governance role in the ASM. Rather than improving the governance of the ASM, this reform resulted in enhancing the influence of higher-level elites in institutional formation. This in turn leaves miners with less power and leverage than they used to have with the local elite, and also means more salaries that need to be paid through formal, semi-formal or illegal taxation of the mineral transactions (Hilhorst et al., 2016).

Likewise, the LSM interest also shape the way ASM is perceived and addressed in policies. As mentioned earlier, ASM represent over 98% of the gold production and is as such a threat to LSM (Geene, 2012). In order to strengthen their position, LSM companies have advocated for market liberalisation and FDI promotion policies (Mortimer, 2016), as means to foster sustainable development. At the same time, they also contribute to a narrative assimilating ASM to conflicts, environmental, social and political risks, thus strengthening their position as a vector for development in contrast to ASM; and using political risk as a means of legitimising specific distributional arrangements between this host country and LSM actors (Emel & Huber, 2008:1394 and Hilson & Maconachie, 2009: 54 as cited by Mortimer, 2016). However, this does not mean that there are no collaborations or linkages between the ASM and the LSM - as will be described later in the paper.

Artisanal miners have limited bargaining power (and power of change) vis-a-vis other state and non-state actors, notably because of the difficulties they face in organising collective action. This may be partly due to their lack of knowledge/access to information, the individual risks and costs of contributing to a collective endeavour, the perceived shared benefits and the risk of free riding, which is more common in larger groups. But all miners do not have the same rights, responsibilities or access to opportunities. Women miners face additional challenges in comparison to their male counterparts: i) some roles are reserved for men (such as digging) and earn significantly more than those reserved for women (such as grinding); and even when performing the same role (like washing), women earn less; ii) women face more challenges than men in joining ASM mining team (in fact almost half of the women did not work as part of a team), noting the benefits of team working such as enhanced production, increased efficiency, shared economic returns, and a strong social and economic support network; iv) women have limited access to credit and trainings (IMPACT, 2017). Strong customary powers and religious institutions are particularly important in upholding large gender inequalities and reproducing gender norms (Weijs et al., 2012).

What this means is that equilibrating the power imbalance with any ‘opponent’ interest group means fostering the collective action of artisanal miners by tackling some of the issues aforementioned, and/or having artisanal miners benefiting from the support from local (e.g. press, political parties etc.) or external actors (CSOs, development partners or the private sector).

Key points:

- This section shows that policy reforms in the mining sector are not neutral but reflect the incentives and interests of a small and powerful political elite at national and subregional level, which captures a large part of the formal and informal mineral rents. The ASM is an important source of rents to private, state and non-state actors, at all levels including the subregional level.

- This means that any initiatives aiming to reform the ASM in gold should be based on a thorough understanding of the winners and losers (including gender disaggregated analysis) at local and subregional level that may block or stimulate reforms. That said, with the formal and informal military power having leverage on the Congolese government and controlling part or sections of mines, reforms will need to deal and engage with these actors.
• Political economy principles and tools, such as the problem-solving analysis, that aims to increase rates of implementation; or the influencing analysis, which aims to develop a political strategy for change (ESID, 2015), could be valuable tools helping to think about and deal with, ASM regulation in an iterative, adaptive, politically savvy and incentive-based approach, reconciling ambition and (difficult) realities on the ground.17

• Formal and informal central and local authorities and non-state actors, private sector (LSM including state-owned enterprises and ASM), development partners, communities based organisations and CSOs… all have an agenda, different interests, approaches, leverage and characterised by different time horizon and spatial scale (from international to hyperlocal). This makes collective action or multi-stakeholder partnerships (as promoted by the Sustainable Development Goals (SDGs)) a challenging and extremely complex endeavour to realise. For development partners, the question is hence about how to remove obstacles to, and/or foster, collective action - not only by injecting financial resources, but also by linking/connecting actors, balancing power, reducing asymmetry of information, and/or providing technical assistance.

3. ASM as a spatial development challenge

ASM gold mining is by nature a local activity, yet very much integrated into national, regional and global markets. It hence touches upon a range of global-local dynamics (Medinilla et al., 2017), including land access and tenure, extractive industries and commodity trading, agriculture and connected activities, water and environmental preservation, migration, security and law enforcement, employment and livelihood means, etc. Every mine involves and impacts different stakeholders, with different interests and incentives, at different spatial levels and time horizons, and each actor also brings its own expectations of what benefits and changes the extractive industries will generate (illustrated in Figure 2). At the same time, development approaches often favour a specific thematic or sectoral focus. In doing so, they tend to abstract from the local and spatial dimension, and overlook the links between local, national and global processes (Bital, 2015).

17 DfID has recently dedicated one component of their programme on Public Financial Management (PFM) and Accountability in DRC to a Flexible Fund that finances PFM-related activities when an opportunity arises in terms of political commitment and interest. This also represents a shift from a comprehensive approach characterised by great ambitions, to a more realistic and humble approach targeting specific changes.
Horizontal linkages with agriculture or vertical linkages with LSM are often overlooked by development partners, while these are key in going beyond addressing the environmental and social impacts of ASM, and (re)connect this sector to the inclusive economic transformation agenda. In other words, development partners must view ASM holistically, and recognise the cross-sectoral or value chains linkages, rather than treating them through separate policy processes/interventions. Simply put, this means that ASM cannot be fully understood without examining the local fabric of society, power and leadership structures, and the economic and agricultural dynamics in mining areas. Both the problems and solutions relating to ASM are as much sectoral as they are local.

A multi-stakeholder, multi-sector and multi-dimensional approach to structural transformation, can address ASM as a place-based development challenge, adapt solutions to specific contexts, and harness local resources and initiatives with national, regional and international ones (Bilal, 2015). Addressing ASM as a local and spatial development challenge is infinitely more complicated than applying a sectoral reform lens. It recognises that ASM is essentially a local political and economic challenge, one that is subject to specific power relations, interests and incentives that cannot be easily changed.

This is where the Political Economy Analysis (PEA) comes in. PEA can help identify entry points, actors and potential change agents that can drive or advocate for developmental outcomes and adaptation strategies that go beyond the narrow and often perverse personal interests that underpin the status quo. In particular, it can help in defining which actors need mobilising and how to best empower local authorities, civil society and (miner) communities to enable a balanced engagement over sharing the costs and the benefits of mineral extraction (Medinilla et al., 2017). A spatial development approach builds on incentives, manages expectations on what can realistically be achieved and to make better-informed and more strategic choices.
around ASM interventions, it looks for workable solutions that play into the local power structures, elite interests, local capacities, and may in fact also reduce (long-term) costs and risks in the process.

(Re)connecting ASM to agriculture

ASM in gold mining and agriculture are key livelihood strategies in Eastern DRC. They share the same geographical space and fluctuate between competition and complementarity. The linkages between the two sectors are shaped by a number of structural, institutional and economic factors, and have evolved over time.

In the 1960s, agriculture was the most important means of livelihood for an important part of the DRC population. Land reform in the 1970s eroded the traditional systems of land ownership. This resulted in the dispossession and marginalisation of many peasants, making the agricultural sector less attractive. In parallel, DRC saw a decline of LSM and a surge in ASM. The Shaba wars in the 1970s further uprooted customary land ownership. Insecurity caused peasants to abandon their fields, and seek alternative means of livelihood, notably in the ASM (Vlassenroot, 2005: 25 as cited by Geenen et al., 2013b). In addition, ASM was and is still perceived as an easier and quicker way to generate an income that is higher than in the agriculture (and even public administration) sector (Geenen et al., 2013b).

This does not mean that agriculture was completely abandoned. In many communities, ASM became the dominant source of income, while agriculture was reduced to subsistence farming at the household level.18 This is not to ignore the business opportunities derived from ASM activities for service and support activities that are complementary to small-scale mining, including food. In this regard, exploiting synergies between the two sectors can provide further opportunities, particularly for women, who rarely engage in the physical act of mining, yet are very present in providing basic services such as food to miners (Lahiri-Dutt, 2011).

Hilson (IM4DC, 2014:25) argues that the two activities are inseparable and there are even flows of capital and labour between the two over time. For instance, in Ituri and South Kivu, artisanal miners use their mining income to invest in agriculture including in the more resource intensive livestock sector.19 This also allows them to better cope with variations in their mining income. (Geenen et al., 2013b). ASM can be hence understood as an income diversification strategy. These flows between ASM and agriculture are also shaped by the seasonality effect. The wet season makes working in mining more difficult and dangerous, lowering production outputs, and incentivising artisanal miners to engage in agriculture. On the contrary, in the dry season less labour is needed in farming, while there are more opportunities in ASM (Geenen et al., 2013b).

Although mining and agriculture co-exist, and generate economic benefits, there are some inherent tensions between the two sectors as they also compete for resources, such as land and water but also labour and capital (ACET, 2017). In this context, ASM may generate significant negative impacts: i) diversion of water streams into mine sites, threatening food production and security and increasing the vulnerability of rural households; ii) contamination derived from mining processing activities, causing lasting environmental and health issues and hence the reduction of available arable land; iii) abandoned artisanal mining sites close to communities, which are breeding grounds for mosquitoes, and threaten the local communities’ health and; iv) women forced to engage in ASM activities, where their position and bargaining power is weak (idem).

These issues are also shaped by the power relations with the formal and informal authorities, which may redistribute land to artisanal miners at the expense of farmers because of the higher rents these activities generate. The short-term vision of local elites (partly driven by conflict) may be less compatible with

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18 Farming contribute to 64% of households’ food consumption in DRC (Weijis et al., 2012).
19 In the case of ASM in Mozambique, Hilson (2016) finds that ASM income were for example used to purchase of fertilisers or other agricultural inputs. In Ghana mining income is seen as an engine for small business growth and agricultural expansion, complementing national micro-, small-, and medium-size enterprise projects (Wilson, 2015).
agricultural activities (which is more longer term oriented than mining). This was for example the case of Ghana, where local elites in many rural communities with some stake in land resources have preferred to allocate land to ASM operators who pay them quite well (as they do for labour) rather than to use such land for farming (ACET, 2017). This echoes the need for an integrated, spatial approach to ASM, as well as the need for a thorough understanding of the power dynamics, interests and incentives that underpin the relations between ASM, agriculture and other connected activities.

Key points:

- **Thinking spatially helps connect sectors traditionally dealt with separately by development partners, and understand their interaction in a given geographical space. Understanding the political economy of these interactions is a critical condition for any initiative that targets ASM.**
- **Such an approach may help development partners make sense of the complexity of ASM Gold mining in Eastern DRC, why some initiatives work and others don’t.**
- **A spatial approach means letting go of the traditional sectoral perspective of development partners’ initiatives and adopt a more holistic perspective based on an in-depth analysis of the economic, political, social and environmental context. Doing so may in turn foster coordination and coherence between and within development partners’ interventions.**
- **Development partners can use the linkages between ASM and agriculture in a way that (effectively) contributes to sustainable development. This means incentivising sustainable agricultural business-models and value chains that can provide adequate services to the extractives sector. Doing so also requires taking gender dimensions into account (e.g. different roles of men and women in ASM and agriculture).**
- **Similarly, ASM reforms should take into account the structures of the local economy, labour market, capacity and local needs, including agriculture. This also responds to the common objective of diversifying the economy, and creating stronger linkages between the mining sector and the rest of the economy.**

**Vertical linkages between artisanal and large-scale mining**

The DRC government policies seek to maximise FDI of LSM companies, and by doing so, granted multinational companies (MNCs) large concessions, which sometimes ignore pre-existing ASM activities. At the same time, LSM often attract an influx of artisanal miners working in the periphery of their operations. When LSM declined from the 1970s to the end 1990s and during the Shaba wars, ASM spread even further. Later, as the business environment improved (especially after the Mining Code revision in 2002), LSM companies that restarted their activities were often faced with ASM taking place on their concessions or in the outskirts (e.g. the Canadian Gold company Banro). In other words, ASM and LSM activities are intertwined.

The main reason for tensions between ASM and LSM comes back to the ownership of mining claims, and the question who can access what? - in other words, even when ASM and LSM take place in the same geographical space, mining claims are often not “properly agreed and demarcated” (Bannock Consulting, 2005). This may in fact refer to the role of the central government, and the local informal and formal authorities: while the former may grant LSM operator a concession, this may not be recognised by the local formal and/or informal authorities (including local army groups), whose income often relies on ASM. This has been the case of Banro, but also Ashanti Goldfields Kilo (branch of AngloGold Ashanti). This shows the importance of the role of (formal and informal) government authorities and their coordination and power relations.

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20 (and perhaps even more with local armed groups)

Other sources of tensions relate to the environmental damage and social issues related to ASM activities. For example, when the two sectors are adjacent to each other, ASM damages the environment as a result of discharge of mercury and cyanide into the atmosphere and rivers - while it is often LSM companies that are in charge of rehabilitating the area. In addition, this can cause reputational (but also financial) risks to the mining companies. These relationships between ASM and LSM, beyond their diverging interests and power relation, are also affected by information asymmetry, which often translates into a lack of trust between actors.

Though tensions around environmental and social issues (including child labour) are not the only facet to ASM and LSM relations, it is one of the aspect that has attracted most attention from development partners (through the development of guidelines and regulations on transparency and traceability\textsuperscript{22} and LSM companies (through their CSR strategy and due diligence processes\textsuperscript{23}). In such processes, it is not rare to see CSOs (e.g. Pact or others) acting as a broker between LSM companies or development partners, and artisanal miners and communities, and local authorities. Similarly, CSOs and civil society organisations can go beyond mere mediation and conflict avoidance, and facilitate spatial development processes in mining that promote alternative livelihood strategies for ASM operators, including as local content providers for LSM (Medinilla, 2016b; Medinilla et al., 2016).

These initiatives generated both positive and negative impacts: on the one hand, in the case of conflict mineral regulations and due diligence, evidence has been found of reduced militarisation of mines in North and South Kivu; over 40% the world’s tin, tantalum, tungsten and gold smelters passed third-party conflict-free audits (Baflemba et al., 2014); but also the creation of a two tier market with minerals that avoided traceable programs selling for 30-60% less and the exclusion of up to two million miners (Geenen et al., 2014).

But there are also examples of collaboration going beyond CSR that can foster economic linkages (though these take place in other countries such as Zimbabwe and Ghana (Box 4). These initiatives can relate to local input services and business (local procurement), local content initiatives etc., and often require a shift towards a long-term perspective or engagement strategy. There again, a multi-stakeholder partnership approach seems to be one of the most favoured way to foster such linkages - where CSOs collaborate with businesses to provide e.g. capacity building activities to artisanal miners but also farmers (e.g. vocational training, inputs).

\begin{boxed quotation}
In Ghana, a large-scale mining company, Great Consolidated Diamond Limited (GCDL), located in Akwatia, in the Eastern Region, operates “tributer” schemes which are systems that involve registration of all ASM operators encroaching on a property and demarcating areas for small-scale miners to work on the LSM company’s concession (Aryee, 2003). Miners apply for permits from GCDL for a small fee, are required to undertake medical and safety checks before starting work, and must sell a portion of the diamonds won back to the company. Dialogue is maintained via a miners’ association. In return, GCDL is able to work marginal deposits that are uneconomical to mine on a large scale, and miners act to protect the concession from encroachment by unlicensed operators. However, the tributer system is not without its challenges due to the difficulties of effectively managing such a large area. As a result, some unlicensed miners have encroached on parts of the concession where it is difficult to manage and control operations (Nyame & Grant, 2012; McQuilken & Hilson, 2017).
\end{boxed quotation}

Source: IGF, 2018

\textsuperscript{22} These include e.g. UN Voluntary Principles on Security and Human Rights, UN Global Compact, Kimberley Process, Equator Principles, Extractive Industries Transparency Initiative, OECD Guidelines for Multinational Enterprises, ILO Declaration on Principles and Rights at Work, International Council on Mining and Metals (ICMM) Sustainable Development Principles, Sustainable Development Goals (SDGs).

\textsuperscript{23} Example of such guidelines include notably the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD, 2016). Note that the scope of application of Due Diligence guidelines also go beyond the relation between LSM and ASM.
Linkages between ASM and LSM will vary depending on the technological, knowledge and capacities gap between both sectors, i.e. the bigger the gap is, the more likely linkages will be limited. In this regard, it is worth looking at ASM and LSM not simply as a dichotomy, but rather as a broad spectrum of activities (see Figure 3). In turn this may help development partners to target specific actors, which may provide better entry points for igniting ASM based sustainable development.

Figure 3: Spectrum of mining activities ranging from informal artisanal to formal large-scale mining

Artisanal and large-scale mining: a spectrum of operations in the gold sector

Key points:

- ASM and LSM coexist in Eastern DRC since several decades. Linkages between these two sectors have mainly been driven by social and environmental rather than economic development concerns, reflecting the interests and power relations between different actors on the ground.

- At the same time, going beyond such practice and looking at how best to exploit linkages and synergies between the ASM and LSM sectors is critical to foster the economic transformation agenda. Examples to learn from can be found in countries like Ghana and Zimbabwe. The responsible mining and economic development agenda should hence be seen as two mutually reinforcing pillars working together.

- Working in partnership with CSOs offers businesses an opportunity to adopt sustainable business practice and work towards sustainable development. But experience shows such a multi-stakeholder approach only works in a context where the power imbalances and governance deficit are being addressed between the actors involved in the partnership. Development partners can potentially counteract the balance of power by investing in a realistic territorial and multi-sector strategy that seeks to strengthen local governance in and around mining operations.

4. Implications for development partners’ interventions

Looking at ASM gold mining in Eastern DRC from a political economy and territorial development perspective allows to better understand the actors and factors that shape the way ASM works in practice. In this light, this section presents implications for development partners to enhance the effectiveness of their ASM-related interventions.

Implication #1: Development partners need to be realistic about what it is they can achieve, and work following a flexible and adaptive approach.
Issues in the ASM gold mining in Eastern DRC are not only technical, but inherently political. Development partners need to take account of political economy dynamics, in other words they need to understand why things are the way they are - i.e. who are the winners and losers of the system they aim to alter or change, and how potential reforms and interventions may be affected by their incentives and interests.

This in turn means that any interventions must focus on identifying, deconstructing and targeting specific issues where there is enough political traction, i.e. adopt a problem-driven approach, instead of focusing on comprehensive (and sometimes over ambitious) solutions. In doing so, development partners should develop an adaptive and flexible approach, i.e. an approach that can respond to the inherent complexity (and changes) of the ASM gold mining in Eastern DRC, and apply lessons learnt through a feedback loop in their programmes.

**Implication #2: Development partners can play a facilitating role, fostering (existing) vertical and horizontal linkages, across sectors.**

ASM gold mining economic horizontal linkages with other sectors such as agriculture, or vertical linkages with other players in mining value chains including with the formal private sector, are often overlooked by development partners. Adopting a territorial development approach makes these links more visible, which may in turn help development partners consider ways to maximise cross-sectoral synergies and linkages. Development partners hence need to coordinate their development interventions e.g. in agriculture and mining, formal and informal mining activities, thus breaking traditional sectoral silos.

In addition, ASM gold mining is by nature a local activity, yet very much integrated in national, regional and global markets. This hence requires development partners to try to connect and coordinate their interventions at the local, national, regional and global level.

**Implication #3: Development partners need to engage, facilitate or support partnerships between businesses, CSOs and communities and formal and informal authorities.**

Multi-stakeholder partnerships are a key instrument for the implementation of the Sustainable Development Goals (SDGs) Agenda (Karaki, 2015). This instrument seems even more relevant in the ASM gold mining sector as the sector suffers from a range of interrelated challenges including conflict, child labour, environmental issues etc. requiring the actions of a wide range of stakeholders. In this way, partnerships may be useful in harnessing collective action (and including informal organisations), establishing common and realistic ambitions and promoting inclusive development.

Policymakers can open doors to businesses and play a crucial role in brokering partnership relations, bringing together CSOs and businesses and authorities, incentivising new forms of cooperation with potential for long-term change. Such support should take proper account of, and address, power relations, improving the negotiating position of disadvantaged partners.
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