

Briefing Note:

Artisanal Mining in the DRC

(Key Issues, Challenges and Opportunities)

August 2007

DRAFT: Prepared for Discussion at the DRC Donor Coordination Meeting



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Engineering & Environmental Solutions



DRAFT VERSION NOT FOR CITATION: Prepared for discussion and validation at the DRC Donor coordination meeting facilitated by CASM (Kinshasa 15-17 August 2007)

Contents

	<i>Page</i>
Mining Background	1
Key Minerals	3
Artisanal & Small Scale Mining (ASM)	4
ASM – Key Characteristics	5
ASM – Legal Framework	6
ASM – Institutional Capacity	7
ASM – Economics	9
ASM – Conflict & Security	10
ASM – Social Impact	11
ASM – Vulnerable Groups	12
ASM – Environmental Impact	14
ASM – Diamonds	15
ASM – Coltan & Cassiterite	16
ASM – Gold	17
ASM – Copper & Cobalt	18
ASM – Relationships with LSM	18
ASM – Development & Assistance	21
Summary	24

This briefing note is a collaborative effort between the World Bank's OGMC Group, DFID's Policy Division, Sustainable Development Group, DFID's DRC office, and the World Bank hosted Communities and Small scale Mining (CASM) initiative

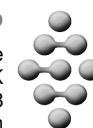
While consultations have been considerable, the opinions expressed and arguments employed in this work do not necessarily reflect the official views of the World Bank, DFID or CASM

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Mining Background

The Democratic Republic of Congo (hereafter DRC) is a country of extraordinary mineral wealth. In 1985 the export orientated economy relied on mining which accounted for 75% of exports, 25% of fiscal revenues and 25% of GDP, with production of copper exceeding 400,000 tonnes annually. Over two decades later, the DRC is once again in the spotlight of the international mining industry and Large Scale Mining (LSM) companies are showing increasing interest in the DRC. However, the often overlooked fact is that 80% of Congolese mineral production is still undertaken by vulnerable, impoverished and largely illegal artisanal miners.

Although there are many superlatives often quoted to describe this 'geological scandal', the fact remains that the current mining industry in the DRC is characterised by very poor geological knowledge, and the true extent of mineral resources is unclear due to a lack of modern exploration. The country has substantial reserves of copper, cobalt, cadmium, diamonds, gold, silver, zinc, manganese, tin, uranium, germanium, columbite-tantalum (coltan), bauxite, iron ore and coal. It is estimated that the DRC contains 80% of the world's columbite-tantalite (coltan) reserves, 49% of its cobalt reserves, and 10% of its copper reserves; while the gold potential is substantially under explored. Most of the known mineral wealth is concentrated near the country's eastern borders, and south into Katanga where it shares the rich Copperbelt of the Lufilian Arc with neighbouring Zambia. In the south-central area of the country there is a large, prolific diamond area within the Kasai Craton; along and adjoining the northeasterly Angolan kimberlite trend.

Lack of investment, widespread mismanagement, and political interference sanctioned by the kleptocratic head of State – the despotic Mobutu Sese Seko - resulted in many of the DRC's (then Zaïre) mining parastatals being run into ground even before the wars. These two successive wars (1998-2004) had a significant impact on the country's natural resources; and in June 2000 the President of the UN Security Council requested the UN Secretary General to establish a Panel of Experts on the illegal exploitation of natural resources and other forms of wealth from the DRC. The panel's findings emphasised the evident connection between systematic and systemic exploitation, illegal trafficking, and profiteering in natural resources by foreign armies; with the ongoing conflict in the DRC, and condemned this continuing exploitation. The UN Panel of Experts also noted that the private sector played a 'vital' role in the exploitation of natural resources and the continuation of the war.

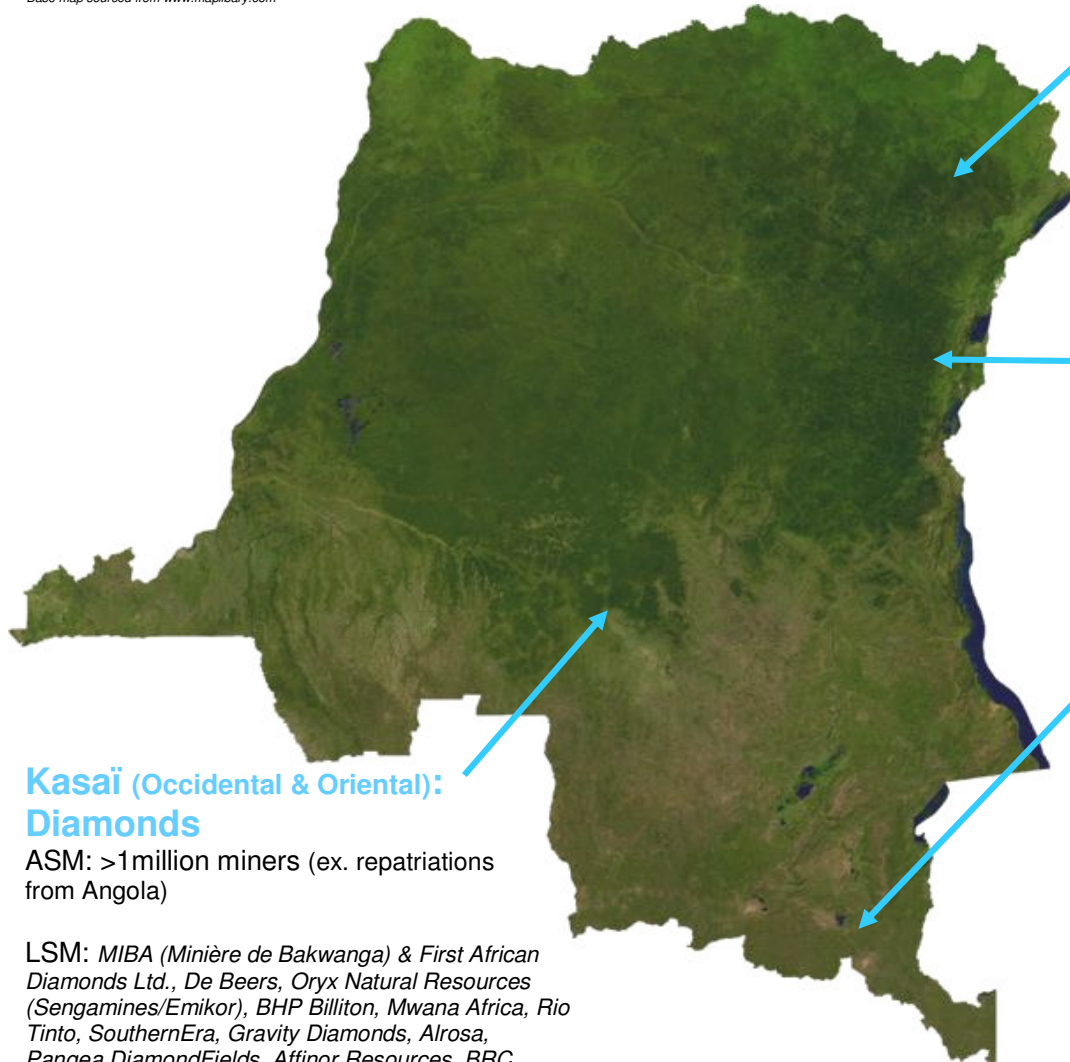
By 2001, the mining sector's recorded contribution to GDP had declined to a depressing 7%. Fortunately the wholesale plundering, looting and racketeering of the nation's mineral resources has since ended, and over the past five years legitimate mining companies have shown an increasing interest in the DRC with inward investment growing year on year (based on increased metal demand particularly from Asia and buoyant international commodity mineral prices). Although from the outside it would appear that progress has been slow, it is worth remembering that there were a great many more pressing post-conflict humanitarian issues for the country's new leaders to work on. In 2006, 57% of the state budget (US\$2.2 billion) came from international aid and 80% of the country's economy was 'underground' and informal. Despite these immense challenges the transitional government did make some rather commendable efforts to reignite and increase investment in the mining sector; for instance, with the help of the World Bank, the DRC implemented a new Mining Code in 2002, Mining Regulations in 2003 and more recently a Mining Plan in 2006. The implications of these new legal instruments and their effects have yet to be fully tested.

In 2005 a special National Assembly Commission (the *Lutundula Commission*) highlighted that some of the industrial mining contracts agreed and negotiated during the past instability and transitional governments may need to be renegotiated and finally in May 2007 the government announced that it intended to review sixty-three mining contracts approved from 1996 to 2003. The process involves experts from *Open Society Initiative for Southern Africa (OSISA)*, the *Carter Centre* and the *Rothschild Cabinet* and it is expected concluded report by October 2007.

Expectations for the DRC mining sector are high; hardly a week passes without an article in the mining press reporting on yet another mining company registering a concession, reporting new mineral discoveries or increased resources and reserves. However, the Government needs to be convinced that it still has a long way to go to satisfy investment confidence, overcome entrenched corrupt practices, enforce the legal framework, and maintain political stability.

Key Mining Areas in the DRC

Base map sourced from www.maplibary.com



Kasai (Occidental & Oriental): Diamonds

ASM: >1million miners (ex. repatriations from Angola)

LSM: MIBA (Minière de Bakwanga) & First African Diamonds Ltd., De Beers, Oryx Natural Resources (Sengamines/Emikor), BHP Billiton, Mwana Africa, Rio Tinto, SouthernEra, Gravity Diamonds, Alrosa, Pangea DiamondFields, Affinor Resources, BRC Diamond Corp and Midamines

Orientale & Équateur: Gold & Diamonds

ASM: 60-150,000 gold and 100,000 diamond miners

LSM: OKIMO (Office des Mines d'Or de Kilo Moto), AngloGold Ashanti, Moto Gold Mines, Mwana Africa, Barrick, Tangold, Greendale Universal, Borgakim Mining, Kibali Gold, Blue Rose, Amani Gold, Mvelaphanda Holdings and Afri Minerals

Kivu (Nord & Sud) & Maniema: Cassiterite, Coltan & Gold

ASM : 150,000 miners in Sud Kivu, 200,000 Nord Kivu and 50,000 Maniema

LSM: Banro Corporation, Metal Processing Congo and Groupe Minier Bagandula

Katanga: Copper & Cobalt

ASM: 150,000 miners

LSM: Gécamines (Générale des Carrières et des Mines) Anvil Mining, Kingamyambo Musonoi Tailings (KMT), First Quantum Minerals, Katanga Mining, Tenke Mining (Freeport McMoRan/Lundin Group), Nikanor /DCP (KOV), Global Enterprises Corp, International Panorama Resources, Metrorex, Kumba Resources, Kababankola Mining (KMC), Central African Mining & Exploration (CAMEC), Copper Resources Corp (MMK), Platmin Congo, Costamin, Congo Star Resources, Africo Resources, Orgaman, Tiger Resources, Teal Exploration & Mining, Melikor Resources, Kakanda Development Corp/PTM Minerals, George Forrest Int / Outukumpu (STL), Sodimco, Feza Mining, Casmin, Colec Group, Rubicon Minerals and China Sun Group HiTech.

Gold - Gold Fields and Cluff Mining, Uranium - Brinkley Mining
Maganense - Enterprise Minière de Kisenge-Manganese

Key Minerals

The Copperbelt area (estimated to contain 55.5m tonnes of copper and 3.6m tonnes of cobalt), which runs through Katanga contains 34% of the world's cobalt resources and 10% of the world's copper resources, and during the 1960s and 1970s the DRC was the world's leading producer of these metals. Copper concessions were formerly managed by *Générale des Carriers et des Mines (Gécamines)*, the state owned parastatal mining company. Since the 1990s the facilities of the *Gécamines* (currently managed by *SOFRECO*) have seriously deteriorated, and production in Katanga stagnated with total capacity utilisation estimated at less than 10%, and an alleged external debt of US\$2.5 billion. However, Katanga is currently witnessing something of a renaissance with several industrial mines already in production (e.g. *Anvil Mining, First Quantum Minerals, Metorex, Forrest, et cetera.*) and some massive new plant facilities are in the construction phase (e.g. *Katanga Mining, CAMEC, Nikanor's DCP, Freeport McMoran's famous Tenke Fungurume Mine*) Investment is really booming and the Cadastre Minier has recorded data for 792 granted concessions in Katanga – 70 new ones in the last six months alone, and there are currently 207 mining companies established in Katanga. However, as noted by the recent *DfID* trade flows study, one of the greatest challenges is the endemic corruption, the involvement of the military and local authorities in the illegal mineral trade, and the failure to enforce the rule of law. There is a general consensus from most agencies that around 60% of mineral produce passes through illegal channels, through Kasumbalesa on the Zambian border (with small amounts passing westwards via Lake Moero).

Staniferous minerals (Coltan and Cassiterite) are widely distributed in the Eastern DRC, particularly throughout the Kivus and Maniema. Key mining areas in the Kivus and Maniema include Bunia, Kalima, Lugushwa, Masisi, Walikale, Kamituga and Mwenga, with most mining rights previously held by the state company *Société Minière et Industrielle du Kivu (SOMINKI)*. These minerals occur in streambeds, alluvial deposits and soft rock, and are easily extracted by artisanal mining methods. Allegedly 75% of coltan within the DRC occurs within and around Kahuzi Biéga National Park which has created concerns regarding the destruction of the environment and protection of endangered species. The *Enterprise Minière de Kisenge-Manganese* aims to raise manganese production by 40,000 tonnes per year from the Lulua basin in western Katanga. The company already has a stockpile of 540,000 tonnes of 47-50% manganese carbonate.

Gold was first discovered in north eastern DRC in 1903 and a number of mining companies entered the region to exploit its resources. Following independence in 1960, the state nationalised many existing companies including the Belgian company *Société des Mines d'Or de Kilo – Moto (SOKIMO)* which became the *Office des Mines d'Or de Kilo-Moto (OKIMO)*, and around 400 tonnes of gold have been extracted from their concessions in Orientale. The three *OKIMO* concessions in Haut Ulélé and Ituri are believed to be particularly mineral rich by many in the industry. In the early 1990s *OKIMO* entered into arrangements with many multinational mining companies including *AngloGold Ashanti, Mwana Africa* and *Moto Gold Mines*. At present gold exploration has been confined to the Kilo-Moto Goldfield (Orientale) with the above companies and also the Canadian major *Barrick, Banro Corporation* in the Twangiza Namoya gold belt (Sud Kivu and Maniema) and the South African major *Gold Fields Ltd* and *Cluff Mining* in the Kisenge area in Katanga.

Diamonds were first discovered in the DRC in 1907 in the Kasai region and the DRC is currently the third largest exporter by volume with diamonds having the highest relative revenue contribution to Congolese mineral exports. The DRC is recognised as one of the leading sources of alluvial diamonds, principally from Kasai Occidental, with kimberlite diamonds occurring more sporadically in locations within the southwest, northern and northeastern areas. The principal areas include Mbuji-Mayi (Kasai-Orientale), Tshikapa (Kasai Occidental) and Kisangani (Orientale). Large deposits are also found in Orientale (Bafwasende and Watsa), Équateur (Gbadolite), Kasai Orientale (Lodja), Bandundu (Tembo), Maniema (Puna and Lubutu) and Tselha and Louzi in Lower Congo Bas. One of the major players in diamond mining in DRC is *La Société Minière de Bakwanga (MIBA)* an 80% state owned company with a 78,000 km² concession area; although after production fell 80% in 2006 (2.22 million carats with only four shipments and around 6% gem quality) leaving 6,500 employees unpaid *MIBA* has been bankrupt, and *Sengamines* (previously with *Oryx Natural Resources* and now *Enterprise Minière de Kasai Orientale (Emikor)*) halted production at Tschibue in 2005. Many larger companies are exploring Kasai Oriental, with *First African Diamonds* gaining access to the 800 km² *Eminkor* concession, *BHP Billiton* and *Southern Era Diamonds* have access to a 16,000 km² concession, and *De Beers* (who held a virtual monopoly on diamond production until 1997) and twelve local companies having access to concessions covering 60,000 km². Other companies include *Alrosa, Pangea DiamondFields, Gee-Ten,* and *BRC Diamond Corp.* In 2004 a new polishing plant opened at Kananga (*Emaxon Finance International* and *Dan Gertler International (DGI)*) and more recently *Mwana Africa* acquired a 20% stake in *MIBA* (through *Umicore's* subsidiary *Sibeka*) a company that already owns *Gravity Diamonds*.

Artisanal & Small-Scale Mining

Economic collapse, social instability, and resource plunder have resulted in a proliferation of clandestine ASM activity in the DRC, and today the situation in the sub-sector could be described as utterly chaotic with little respect for law and order in almost all mining areas in virtually all provinces. In addition, the two wars, foreign army invasions and occupations, militia activity, and ethnic conflict have created large numbers of internally displaced people (IDPs) and ex-combatants (including DDRRR (Disarmament, Demobilisation, Repatriation, Reinsertion, Reintegration) beneficiaries) who have few livelihood options. In some areas, such as Orientale, up to 80% of the miners are ex-combatants (militia and soldiers), a livelihood which is keeping them from rejoining militia forces. Also the prolonged presence of violent militia in many rural areas forced many farming communities to abandon their traditional agro-pastoral livelihoods and rely on coping strategies such as ASM to secure an alternative source of income.

Artisanal Miners in the DRC

- *Kasaï*s: All previous studies indicate 1 million in the Kasais alone. 500,000, around Tshikapa perhaps 300,000. The miners & *negociants* association in Mbuji-Mayi cite 1.3 million members. A further 200,000 diggers have been deported from Angola back to the DRC.
- *Katanga*: Estimates indicate around 150,000. (Kolwezi 30,000; Fungurume & environs 10,000; Likasi 20,000; Likasi-Kawama-Lubumbashi 30,000; Lubumbashi-Kipushi 10,000; north of Pweto & environs 10,000; Kalemie 10,000; others possibly 20,000).
- *Sud Kivu & Maniema* : Estimated at around 200,000.
- *Nord Kivu*: Perhaps 200,000 spread across a variety of minerals.
- *Orientale* (east): 60-150,000 on the OKIMO concessions in Haut Ulélé and Ituri. *Orientale* (west): in the diamond fields could be 100,000.

At present, this disorganised and recalcitrant sector probably provides a vital livelihood to many thousands of people dispersed throughout the country, and collectively probably constitutes over 80% of the entire mining sector production (*Office des Douanes et Accises (OFIDA)* does not have accurate statistics on mineral production). In addition, escalating global mineral commodity prices, continued national economic decline, parastatal mismanagement, and staff retrenchments have exacerbated the problem and swelled the numbers of artisanal miners. However, as there is currently no enabling legislation or policy sympathetic to ASM, and because virtually all of these miners work casually, seasonally, or are migrant workers from other parts of the country or neighbouring countries, it is impossible to determine the actual number of workers in the ASM sector. Although no systematic census or comprehensive baseline studies have been undertaken; conservative estimates indicate are

that there at least two million people, perhaps 3% of the population (estimated as 62.6 million in 2005), directly dependent on this extremely arduous, hazardous, and precarious activity for their livelihood. Allowing each miner five dependents, it can be assumed that up to one fifth of the population probably survive through ASM. When the ubiquitous middlemen and associated businesses are considered, artisanal mining emerges as one of the most important elements of the Congolese economy.

The informal mining situation has also worsened through the influx of migrant workers from neighbouring countries (e.g. In 2003 *Operação Brilhante*, conducted in Lunde Norte province of Angola, expelled around 200,000 Congolese diamond mining *garimperos* many of whom turned up in sites like Kahemba and Tembo close to the border) who tend to work on the mineral belts nearest to the border with their home country. In addition, a worrying fact claimed by many experts is that the number of people seeking to work in this sector in DRC (as with many other parts of Africa) is expected to rise dramatically over the next ten years. This view is based largely on the current national population growth, continued under-performance of the economy with respect to the rural populace, and the expectation that the formal sector will not be able to meet job creation demands resulting in continued rural under-employment.

Throughout the DRC many rural people face dwindling livelihood choices in an increasingly marginal environment and hence ASM has become the only real option. To those not familiar with the hardships and realities of ASM, the lure of winning 'valuable rocks' from their lands and rising above subsistence levels is very appealing, and many desperate rural and urban people still continue to flock to the ASM sites to seek their fortune. However, despite the richness of many of the ASM sites and the apparent productivity of some miners (*orpailleurs, diggers or creuseurs*), the vast majority continue to live in poverty. The excessive formal and illegitimate 'taxes' levied on production means that the miners and labourers receive very little daily pay, and most also become trapped, either through debt-bondage, or because they have travelled far and abandoned their homes and farms and have no means to return to their previous livelihoods or seek an alternative source of income. Others, especially the young, have no concept of saving and frivolously spend

their earnings immediately, often on non-essential temporary 'luxury' items in the local towns such as alcohol, drugs and prostitutes.

Although the range of minerals exploited by artisanal mining in the DRC is highly varied, it still encompasses all the typical dangerous practices seen elsewhere such as unstable open pits, unsupported deep shafts and galleries where diggers may remain underground for days, child labour, rapid and high levels of migration between sites with significant community impacts, social disruption, environmental devastation, health concerns, debt-bonding, *et cetera*. Despite these challenges, the ASM sector does have the potential to economically empower disadvantaged and vulnerable groups and contribute to the Congolese development strategies. There is ample anecdotal evidence from the many mining areas throughout the country that on a local level ASM does provide a means of wealth creation, could provide decent work, and certainly stimulates demand for imported and locally produced goods and services and various types of infrastructure through the re-investment of direct proceeds from the ASM activity.

ASM – Key Characteristics

The informal ASM sector in the DRC is characterised by various issues:

Poverty is rife; the majority of miners are subsistence *creuseurs/orpailleurs* who live in a particularly precarious and fragile post-conflict environment and are faced with dwindling livelihood choices and most often indebtedness. Artisanal miners are exceedingly vulnerable (as noted by the most recent UN Secretary General report pursuant to paragraph 8 of resolution 1698 (2006)) have and continue to be victims of forced displacement, ill-treatment, harassment, extortion, violence and human rights abuses. However, ASM dependency is considerable and the sector allows local communities to benefit from natural resources and a degree of increased family income.

Child labour is prominent; many factors have combined to heighten its prevalence in the DRC, including normal socialisation processes, large numbers of war/conflict orphans, ex-child soldiers, remoteness, HIV/AIDS orphans, deteriorating health, lack of incentives for schooling, lack of formal jobs, lack of law enforcement, *et cetera*.

Gender awareness is lacking; women constitute a growing proportion of workers in the DRC, they are engaged in some aspects of ASM (particularly processing) but due to low status they are generally compelled to undertake the poorly paid ancillary activities. However women face numerous other obstacles such as land ownership, illiteracy, sexist/chauvinist attitudes, patriarchal views and social taboos.

Most ASM operations are **labour intensive**, employ a semi or un-skilled workforce with low levels of mechanisation, production levels, income, productivity, recovery and inefficiency. Most of the ASM operations also perpetuate haphazard mining and recovery situations leading to the high grading and potential sterilisation of good deposits, thereby wasting the finite mineral resources. In general these operations have limited access to, or knowledge of, appropriate **'best practice' techniques or equipment;** entrenched poor practices with archaic and crude mining and processing techniques that have often been maladapted from the Large Scale Mining (LSM) sector; perpetuating dangerous practices, incredibly high dilution, and very low overall mineral recoveries.

The welfare and labour conditions of virtually all ASM mines is appalling and miners are generally completely ignorant about basic **occupational health and safety**, with many injuries and fatal accidents caused by falls of ground (common in the diamond fields of Kasaï), lack of knowledge, resources or regard for basic safety precautions. Most incidents are caused by; widespread appalling and unsafe working conditions, and exposure to mercury (*orpillage* activity), dust, fumes, rock falls, landslides, underground stope collapses and ground failure. There are also the effects of poor ventilation and lighting, over exertion and inadequate work space. Appropriate and enforceable guidelines, sensitisation and training are desperately needed.

Artisanal mining is virtually always **environmentally destructive** as the sector operates in a clandestine manner with little regard or respect for the local environment or ecosystems; resulting in the direct dumping of waste, tailings, effluents, river damage in alluvial areas, mercury pollution, land degradation and soil erosion, deforestation, and the loss of biodiversity in protected areas. Yet again there is a need for appropriate and enforceable guidelines and training.

There are often **deteriorating health** conditions in ASM areas and proximal communities; generally a lack of public health facilities, and communities can harbour malaria and other parasitic and communicable diseases related to poor sanitation such as cholera, dysentery, diarrhoea, tuberculosis, protozoan and helminth infections. Other issues include alcoholism, drug addiction, and STIs including HIV/AIDS.

Socio-economic problems result from the nomadic nature of much ASM, resulting in conflict with indigenous people, localised artificial inflation, 'dollarisation', food insecurity, increased demands on limited infrastructure/public services, and families abandoning farms and children dropping out of school. Many sites and nearby towns have become breeding grounds for general moral depravity, unconventional social behaviour, sexual violence, delinquency and criminality.

No democratic organisation into associations or co-operatives is followed to provide a single 'voice' that could help the ASM in conducting pricing or workplace negotiations, mobilising assistance programmes, conducting awareness campaigns amongst its members and organising security and other minesite related activities. Some organisations do exist who purport artisanal miners representation, but in reality they are essentially syndicates of *trafiquants* and *négociants* who have a vested interest to control the vulnerable miners (e.g. *EMAK* and *CMKK* in Katanga, *UCDAK* in Kasai, or *AEMAPRI* and *AODAPRI* in Orientale).

Virtually all of ASM activity is illegally and completed unregulated due to a **lack of law enforcement**, basic oversights, appropriate legal framework, or appropriate policing. In reality neither the existing 2002 *Code Minier* nor the 2003 *Code de Conduite de l'Exploitant Artisanal* are appropriate or sympathetic to the realities of the sector.

The system is exceedingly **exploitative** with an engrained and ruthless culture of rent seeking and entrenched corruption. In almost all areas the actual miners are regularly abused and subjected to a disproportionate amount of informal taxes and capricious fees. Systematic corruption, smuggling and fraud are rife, and there many vested interests, unpaid security groups, military elites, and unscrupulous government officials all with overlapping mandates and authority who are often complicit in illegal exploitation and trade and expect rewarding kickbacks (e.g. *Guard Industriel*, *Disciplinary Brigade*, *suicidaires*, *Private Security*, *Policar*, *Police des Mines*, *Police Territoriale*, militia groups, and the *FARDC* (*Forces Armées de la République Démocratique du Congo*)).

Finally, there is a **lack of an enabling, consistent and clear policy** and a depleted and largely **dysfunctional institutional capacity** to help implement the *Code Minier* formalise, empower and assist the ASM sector especially in the provinces. Poverty alleviation objectives need to be incorporated into a formally endorsed & clearly enunciated National Mineral Development Policy and ASM needs to be included in the 2004 National *Interim Poverty Reduction Strategy (I-PRS)*.

Key Donor/Agency interest: *Multilaterals:* WBG (IFC, CommDev, MIGA, PEP Africa) EU, UN (MONUC, ILO, UNDP, UNECA & INICA) *Bilaterals:* UK (DfID), USA (USAID), France (AFD), Belgium, Germany (BGR & GTZ), Sweden (SIDA), and Canada (PAC).

Key Civil Society interest: Pact (Congo), Global Witness (new SIDA Funding), Human Rights Watch (HRW), Pole Institute, International Alert, International Crisis Group (ICG), Oxfam, Rights and Accountability in Development (RAID), Fatal Transactions, Friends of the Earth (FoE), Nederlands instituut voor Zuidelijk Afrika (NiZA), Greenpeace, CAFOD, Mobilisation for Global Justice, and local NGOs including CENADEP (Centre National d'Appui au Développement et à la Participation Populaire), GAERN (Groupe d'Appui Aux Exploitants des Ressources Naturelles), OCEAN (Organisation Concertée des Ecologistes et Amis de la Nature), Réseau Ressources Naturelles (RRN), Coalition Pluraliste des Patriotes, En Avant Congo, and Congo Global Action. Also the NGO coalition campaign 'A Fair Share for Congo'

ASM – Legal Framework

The World Bank, in assisting the promotion of economic stability, sponsored the new *Code Minier* which was successfully adopted in July 2002 and the ancillary the *Code de Conduite de l'Exploitant Artisanal* implemented in June 2003. The new Mining Law: No 007/2002, relating to the *Code Minier*, deals with a full range of matters from prospecting to mineral extraction. Under the provisions of the current Code, the State aims to ensure the development of the minerals it owns by resorting, in particular, to the private sector. The State's principal role is to promote and regulate the development of the mining industry by the private sector.

Within the *Code Minier* artisanal exploitation is defined as: “Any activity by means of which a person of Congolese nationality carries out extraction and concentration of mineral substances using artisanal tools, methods and processes, within an artisanal exploitation area limited in terms of surface area and depth up to a maximum of thirty metres.” A distinction is made from small-scale mining, which is: “Any activity by means of which a person carries out permanent small-scale exploitation, requiring a minimum amount of fixed installations, by using semi-industrial or industrial processes, after a deposit has been found.”

The creation, authorisation and closure of a *zone d'exploitation artisanale* is subject to an order pursued by the Minister, based on the opinion of the Directorate of Mines and the Governor of the relevant province. Upon the creation of a *zone d'exploitation artisanale*, no commercial mining title is permitted to be granted over the area. Following the advice of the *Direction de Géologie*, *zones d'exploitation artisanale* can be revoked if the factors on which creation was based no longer exist. The artisanal miners are obliged to vacate the concession within sixty days of notification. If the artisanal miners' group want to upgrade to small-scale exploitation, license priority is given to those already working the deposit, and they have a period of thirty days in which to apply following the closure notification.

According to the law, artisanal miners' are issued with a *carte d'exploitant artisanal* valid for their relevant exploitation area. Issued by the Head of the *Division Provinciale des Mines*, they require complicity with environmental, health and safety regulations in accordance with the *Code de Conduite de l'Exploitant Artisanal*. A fixed fee is charged once a year, and there are controls in place to eliminate duplicate cards. Only Congolese nationals of age may obtain artisanal miners' cards. Authorized traders for mineral substances from artisanal mining must be either; an individual of age who is a Congolese national; an individual of age and who is a foreign national and has a domicile in the National Territory; or a legal entity incorporated pursuant to Congolese law which has its administrative registered office in the National Territory, and whose corporate purpose is the purchase and sale of mineral substances from artisanal mining. Government employees, civil servants, armed forces personnel, and similar are not eligible for any mining or quarrying rights. The transportation of minerals is restricted to those with miners'/traders' cards, or specific authorisation.

Exorbitant fines equivalent to between US\$2,000 and US\$20,000 are payable for illegal purchase, sale, theft, possession, and transportation of minerals, and also health and safety infringements. The fine can be up to the equivalent of US\$250,000 for operating illegal mining activities. The holder or lessee is also liable for damages caused by the works carried out, even if authorised. Compensation should be paid when the occupation of the land prevents the rightful holders from enjoyment of the surface rights, renders unfit for agriculture, *et cetera*.

Unfortunately, the regulations set out in the *Code Minier* are seldom followed in reality; very few miners carry a *carte d'exploitant artisanal* and the imposition of such hefty fines on impoverished artisanal miners who earn US\$1-3 per day is simply preposterous. The application for mining titles requires the submission of a feasibility study, environmental impact assessment, and proof of financial capability; something very unlikely for a impoverished artisanal miner to do. Although there is no provision in the Code; some provincial offices issue a *Permis d'Exploitation* to some artisanal operators, and hereditary rights over a mine are also unofficially recognised.

Although vulgarisation of the Code is a popular suggestion, regrettably, neither the existing *Code Minier* (2002), nor the *Code de Conduite de l'Exploitant Artisanal* (2003), nor the *Plan Minier* (2006) are appropriate or sympathetic to the current realities of the ASM sector, provide no real incentives for legalisation, and are plagued by contradictions and unenforceable articles.

ASM - Institutional Capacity

In the DRC the *Ministère des Mines* (currently overseen by Hon. Minister Martin Kabwelulu Labilo and Hon. Vice-Minister Victor Kasango Shomary) is responsible for the ASM sector, and has several key agencies under its jurisdiction including the *Division des Mines* and the *Cadastre Minier (CAMI)*, and the *CEECC*.

- *CAMI (Cadastre Minier)* is a public company providing administrative and technical support to the mining sector. It deals with matters such as the record of prospecting certificates, miners' rights, and lease requests.
- *CEECC (Centre d'Evaluation, d'Expertise et de Certification)* was created by a presidential decree in 2003, and is a public company working under the supervision of the *Ministère des Mines*. Its remit is to

evaluate and appraise diamond, gold, coltan and other precious/semi-precious minerals; offer legitimate, monitored trading houses; train national evaluator experts; monitor all processes in order to eradicate smuggling; and generally to promote the mineral industries.

The capacity to police, regulate, monitor or assist the ASM sector is under-resourced, both from a Government and a parastatal direction. The Government lacks the technical capacity and resources to manage the system, and does not fulfill any of their legal labour, social or environmental obligations. Parastatal management systems are largely incompetent and their integrity is compromised by endemic corruption. Significant institutional strengthening, capacity building, sensitisation and effective decentralisation is needed to turn this around.

SAESSCAM (Service d'Assistance et d'Encadrement du Small Scale Mining) was established as a technical branch of the *Division des Mines* in March 2003, primarily in order to track the flow of minerals from ASM workings to the point of sale; ensuring all production is funnelled into official routes to clamp down on smuggling and illicit sales, and all exportation is through the *CEEC* in Kinshasa. The idea was to base a *SAESSCAM* official at each artisanal mine site who will oversee all selling processes and record keeping. *SAESSCAM* is also tasked with supporting artisanal miners with technical assistance, health and safety advice, social services, *et cetera*; a huge challenge for a young and relatively small organisation. Pact has entered a formal partnership with *SAESSCAM* in Kolwezi to collaborate and support the Service's work in relation to technical expertise, interpretation and dissemination of the law, research into potential artisanal mining zones, and social programmes for *creuseurs* who want an alternative livelihood. *SAESSCAM* has undertaken some census work (in Tshikapa, Mbuji Mayi and Lubumbashi), organised a few training sessions, and provided some tools for small enterprises, and 20% of tax and license revenue is repatriated to local communities. There is a possible conflict of interest as it is both a regulatory body and an extension service provider, which makes logistical and economic sense, but could reduce its regulatory effectiveness. In reality; *SAESSCAM* needs a clear mandate, proper resourcing, expert support, and managerial training to sensitise its staff to the realities, constraints and challenges of ASM.

In 2003 the transitional government became a signatory of *Kimberley Process Certification Scheme (KPCS)*, a certification process designed to stem the flow of conflict diamonds, and in 2005 they became a full signatory of the *Extractive Industries Transparency Initiative (EITI)*. Progress implementing these policy reforms has been slow and given the size of the informal ASM sector and the fact that despite *CEEC*'s efforts 40% diamond exports exit the DRC illegally, the reality is that both these key initiatives still have a long way to go before they can genuinely claim to encapsulate the whole mining or even just the diamond sector in the DRC.



The *KPCS* is a joint government, international diamond industry, and civil society initiative designed to stem the flow of conflict diamonds - rough diamonds that are used by rebel movements to finance wars against legitimate governments. The last official review of the DRC was made in 2004, and it concluded that the main elements required to implement the *KPCS* are in place, although further efforts were required to tighten controls and traceability over artisanally mined diamonds and improve coordination between the various authorities involved in the overall *KPCS* implementation. Fortunately DRC is a member of the new *Working Group on Alluvial and Artisanal Producers (WGAAP)*. Various reports allege that most diamonds from Orientale and Équateur are smuggled through Uganda and République Centraafracaine, production from Kasaï Occidental is regularly bypassing Kinshasa, Zimbabwean diamonds are being laundered through the DRC, and until 2004 many diamonds were traditionally smuggled through neighbouring Republic of Congo (Brazzaville). Worryingly, in 2006 reports show that there was a yawning gap between the appraised value of gems (US\$642 million) and the value declared by companies (US\$384 million). Civil society monitoring of the *KPCS* is undertaken by *Le Centre National d'Appui au Développement et à la Participation Populaire (CENADEP)* and the national network *Réseau Ressources Naturelles*.



The *EITI* supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas, and mining. *EITI* is dependent on a minimum enabling environment to be in place in implementing countries that encompass institutional, structural and political dimensions to achieve efficiency and effectiveness. The successful implementation of *EITI* in the DRC would help promote the development of good practices in the extractive industries. In the DRC, the *EITI* needs to prioritise regaining control over the key mining areas, increasing the efficacy of the *Ministère des Mines*, reducing smuggling (coordinated with *OFIDA*, *l'Agence Nationale de Renseignements (ANR)*, and *Direction Générale des Migration (DGM)*), enforcing the new *Code Minier*, improving transparency,

administrating the new provincial 40% mineral derived tax returns (defined in the 2006 Constitution as *recettes a caractere national*), and restructuring the sector; implementing the *EITI* is seen as a means to establish good governance. However, given the magnitude of the challenges of the Congolese mining sector, and in particular the recalcitrant ASM sector, *EITI* cannot be viewed as the sole solution, especially given its voluntary nature. Many advocate that other, more wide-ranging, Congolese owned, and legally enforceable measures should be implemented in parallel with *EITI*

ASM - Economics

In terms of ASM the DRC has moved from a conflict trade scenario to an exploitative trade situation with limited access to equitable and fraudulent mineral markets. In particular, precious minerals such as gold and diamonds are attractive as they have the advantage of being relatively simple to extract, refine, and transport. Informality and illegality of the ASM sector also extends to the marketing of mineral products that are easily smuggled through the nation's porous borders and serve as an exportable hard currency equivalent. The lack of a local, fully liberalised, and competitive market in the DRC is probably one of the greatest constraints to achieving real and tangible development of this sub-sector.

Natural Resources Trade Flow Patterns in the Great Lakes Region

In the autumn of 2006 DFID, in collaboration with COMESA and USAID, commissioned four research organisations (*PACT, Forests Monitor, Pole Institute and INICA*) to undertake a study to examine regional trade patterns that would create opportunities for promoting peace in the troubled Great Lakes region. The goal of the work is to build ways of ensuring that natural resource exploitation contributes to poverty reduction, through strengthened and more equitable trade.

The research has concluded that although informality and fraudulent behaviour all along the value chain from mine (or forest) to market is a profound problem, inflicting serious damage on livelihoods and security, there is great potential for increasing benefit to the DRC from streamlining trade and improving governance in the natural resources sector. Programmes and investments are needed in four broad areas: livelihoods development, economic and financial aspects; and governance

The agenda is challenging but there is a real window of opportunity; relative peace in the region, a buoyant global market for natural resources allowing for increased investment, ongoing vitality of trade against very difficult odds, the election and the new constitution giving accountability and responsibility at provincial level and a sense among the population that change can happen. The expectation, based on the findings of the study, is that increased regularized trade and decreased illicit trade will enhance stability in the region.

In truth the economic dynamics of the ASM sector in the DRC is not fully understood, but the proliferation of parallel and illegal markets (the UN estimated that in Orientale and the Kivus between 50% and 90% of all exports are fraudulent) and the covert 'transactions' and quasi-criminal nature of commerce is testimony to the problems with the existing mineral marketing arrangement. Both registered and unregistered *comptoirs* and *maison d'achats* resort to fraudulent practices either by undervaluing the quantities and quality of mineral exports, or more blatantly through overt smuggling. This situation is further exacerbated by the fact that many ASM sites are located in remote areas in the vicinity of national borders.

The recent Natural Resources Trade Flow study has catalogued many of the key trading routes for the export (both legal and illegal) of minerals from the DRC, and estimated tonnages of material leaving the country. This report has noted that according to official data diamonds are exported principally to Belgium, USA, and South Africa; gold to the UAE and Uganda; cassiterite to Belgium, UK, Rwanda and Malaysia; cobalt to the UK and China; copper to China, Zambia, India, South Africa, Belgium, China, Finland and Zambia; pyrochlor to Rwanda and Estonia, and wolframite to Belgium, USA and the UK. Border towns such as Kasumbalesa in Katanga, and towns around the Great Lakes such as Goma, Bukavu, Ariwara, Isiro, Beni, Uvira, Aru and in particular Butembo (gold, diamonds, cassiterite, wolframite, tourmaline, amethyst and alexandrite) act as major export points for Congolese ASM mineral produce.

Regrettably, the existing 'governance' system has failed to regulate and assist the ASM sector, and by default has become an exploitative revenue collection system crippled by corruption, fraud, *tracasserie*, and other forms of rent seeking (e.g. the custom of *liwanza* that is enforced unpaid work required by mine owners and military especially during the war years). The predatory economy means that many artisanal miners are pre-financed, and are debt-bonded to supporters, *trafiqunats*, *négociants* and *petite comptoirs*; and the current situation provides no alternative options (very few *comptoirs* or *maisons d'achats* sponsor

miners). The situation is further complicated through the multitude of complex and inter-connected relationships between many of the illegal traders and other actors who control the work. Depending on the locality, the supply chain can be further complicated by a variety of stakeholders, all with vested interests; from local *kapitas* and *supporters* to the *transporteurs*, *trafiqunats Chefs de Chantier*, *Chef de Sous Traitance*, *Chef de Colline*, *Chef de Territoire*, *direction generale*, AFM (*Administrateur de Foyer Minier*), *comite de la mine*, parastatals, *Division des Mines*, and also SAESSCAM officials.

For most miners, income is sporadic, and in order to ensure a regular cash flow from small amounts of production, *creuseurs/orpailleurs* are compelled to sell their products as quickly as they can, and when combined with a lack of real 'voice' or bargaining power and debt bondage, they usually get low prices particularly if sold in the bush rather than main trading towns. Most Congolese artisanal miners earn between US\$1-3 (less if indebted through pre-financing) per day irrespective of whether they mine diamonds, gold copper, coltan, cobalt or cassiterite. The UN has noted that around 75% of artisanal miners are unable to cover minimal family needs with their earnings and that most income was negative. There are occasional anecdotal reports of, for example diamond divers in Kisangani earning US\$5,000 per month, but these really are the very rare exception. Irrespective of the fact that the current gold price is over US\$600, *orpailleurs* probably collectively garner less than 10% of the final gold selling price; that *creuseurs* produce between 30-50kg of copper ore per day each that is locally worth between US\$10-20 depending on grade; and that diamond diggers collectively get around one-third of the carat value currently around US\$400/carat and a considerably lesser proportion of diamonds over 2 carats. This exploitation is even more acute for women, whose low status often means that they are usually compelled to carry out poorly paid ancillary work. Informality and illegality (smuggling) increases the risk that an assortment of intermediaries; *trafiqunats*, *transporteurs*, *supporters*, *comptoirs* and *maison d'achats* (e.g. the harassing practice of *boulouwage* common in Mbuji Mayi) will exploit the *creuseurs/orpailleurs*. This endemic economic exploitation and inequitable distribution of the profits is one of the major obstacles to achieving poverty reduction in the ASM communities throughout DRC.

The Congolese ASM sector is constrained by predation; in many areas there is a strong military presence (including the new integrated FARDC and in some remote areas remnants of militia groups), and political involvement in the mineral trade which permits blatantly illegal activity to continue without challenge. Unfortunately, the miners are easily manipulated for political or commercial purposes and incited against large scale mining companies or the larger community, and this will represent a constant and underlying threat in all efforts to regulate the ASM sector and mineral trade. The necessary disruption of vested interests will present one of the greatest challenges to all well-meaning interventions when creating alternatives to ASM. Cognisance should be given to the fact that every artisanal miner leaving the sector reduces the income of the predatory *trafiqunats*, *négociants* and *petite comptoirs*, therefore it is not in these groups' interest that the transition and empowerment occurs.

Traceability, certification schemes, and value chains are all strongly advocated (UN, Belgium and Germany) and in the long term this commendable recommendation certainly has the potential to improve the control over a sizeable proportion of the mineral trade in the DRC. A thorough feasibility study will be essential to determine whether such a system would have the capacity to identify and verify mineral ore from specific commercial mines once such mines are operational, and would be beneficial in identifying and hopefully curbing illicit mineral production. For such a system to work there would be a need for a high degree of integrity and independence and also for political commitments and Government co-operation. Regrettably, given the evident limitations of governance, weak regulatory regime and institutional capacity to manage the ASM sector, the lack of a comprehensive geochemical database, the limited technical infrastructure, the proximity of ASM sites and commercial concessions, and the current trading patterns; it is likely that many schemes would be ineffective, unworkable or will be cost prohibitive in the current context and social milieu of the DRC, especially in areas of particularly weak governance such as the Kivus, where current actors care little about international control measures and less than 20% of revenues remain in the DRC (*La Cellule Technique de Coordination et de Planification Minière (CTPCM) 2005 report*).

ASM – Conflict & Security

The popular 'resource curse' hypothesis is regularly used to depict the mining sector of the DRC. The UN Security Council and numerous NGOs (including *Global Witness*, *International Crisis Group*, *Human Rights Watch*, *Oxfam*, *CAFOD*, *Pole Institute*, *International Alert*, et cetera) have all researched and catalogued the clearly identifiable links between mineral exploitation and a variety of social and security issues ranging

from blatant plundering and looting, to criminal cartels, racketeering, civil instability, violence, and human rights abuses particularly during the war years.

During the war, many ASM sites in the eastern provinces (Orientale and the Kivus) were controlled by the belligerents and militia who forced Congolese men, women and children to undertake extensive mining in dangerous conditions that were profoundly abusive of their human rights. The relationship between mineral exploitation, the use of forced labour, and the continuation of the war in eastern DRC came to global attention following investigations by the UN Panel of Experts (2000-2003) and the efforts of humanitarian and conservation organisations to highlight the plight of people and wildlife in the war-torn region. Although there was an outcry from many civil society advocacy groups, who usually approach the mining development nexus from a critical lens, and even some foreign governments to implement sanctions against natural resource exploitation, the UN wisely realised that such action would directly penalise the impoverished artisanal miners the most severely.

Today most ASM sites have one or more security forces present, although they appear to be there more to monitor activity and stop the theft of gold rather than to protect the rights and security of the communities or workers. On some 'controlled sites' (e.g. *OKIMO* sites in Orientale), the two key official agencies are the Mine Police and the locally-recruited *Guard Industriel*. On more remote sites where the *Guard Industriel* are only sporadically present, the *Chefs de Chantier* have their own makeshift security, the *Disciplinary Brigade*. Some sites are also 'protected' by militia or even members of the newly integrated 4th Brigade of *FARDC* who use intimidation and force to extort 'taxes' from many ASM communities.

Until recently in Katanga, the *Police de Mines* were the lone force officially authorised to enter mining concessions but were disbanded in March 2007 by a new force, *Police Territoriale*, following accusations that the *Police de Mines* were involved in fraudulent mining deals. The Eastern regions of the DRC are still the most insecure, and in many areas soldiers and ex-combatants still attempt to exploit the ASM sector; in Nord Kivu there are reports of the 85th non-integrated Mai-Mai *FARDC* Brigade and in Sud Kivu both the *FARDC* (e.g. Lunga and Lemera) and remnants of *Forces Démocratiques de Libération du Rwanda (FDLR)* both still extending tenuous control over some cassiterite and gold mines.

In Kasai Orientale, the diamond fields near Mbuji Mayi are currently characterised by a small-scale war between *MIBA* and thousands of artisanal miners controlled by the *suicidaires* who are both current and demobilised soldiers. In such cases as there is no local garrison, the soldiers live in the nearby town with weapons which can end up being used against the population. Security in areas like Mbuji Mayi is a serious concern with *MIBA* worker strikes in 2006, regular mass lootings, illegal mechanised mining, theft and shootings of both *MIBA* guards and *creuseurs* all being regular occurrences.

According to MONUC the modalities of the DDRRR programme in the DRC has been largely successful in achieving its key objectives. However, thousands of ex-combatants, including core commanders, are now deployed in the ASM sector, particularly in alluvial diamond areas of Kasai, the gold mines in Orientale and the cassiterite mines in volatile Nord Kivu. Some claim that large numbers of young Congolese combatants have been excluded from an adequate and flexible DDRRR process, and 'hidden' in the anonymity offered by the unregulated ASM sector. The clandestine ASM sector is probably the DDRRR's 'blind spot' and could constitute a major threat to peace and stability if mis-managed.

ASM – Social Impact

The evident links between mineral resources and security have been well documented and the degradation of rural livelihoods throughout the DRC has forced an increasing number of rural families to rely on basic coping strategies to secure an alternative source of income in other sectors, including ASM. Indeed, the ASM sector of the DRC is characterised by significant demographic shifts caused by the nomadic nature of many miners and their families. Many miners are highly mobile and flock to mineral rich areas in the desperate hope of escaping poverty and getting rich, and unfortunately care little for conventional social behaviour or traditional values. Competent public security within these transient communities is often weak or sometimes non-existent, and theft and other criminal activity and unconventional social behaviour gradually becomes the norm. In Sud Kivu, Orientale and Kasai Orientale these sites and nearby towns rapidly become breeding grounds for crime (theft, assault, sexual violence, abuse, rape and murder), alcoholism, narcotics and substance abuse, prostitution, and other forms of moral depravity particularly amongst the young male migrant workers and ex-combatants who in turn influence the indigenous adolescents.

When large numbers of Congolese migrants arrive at a new 'rush' mineral find, they can sometimes come into conflict with local communities. In addition, when a 'booming' economy develops around a sizeable ASM operation, localised inflation brought about by the remoteness, erroneously perceived high purchasing power, high levels of extortion, and the extravagance of those involved in mineral trading often poses extreme difficulties to those who are not involved in mining and have a much lower income (e.g. report conducted by *Groupe d'Appui de l'Accompagnement pour le Développement Durable (GAAD)* in Mbuji Mayi). In some areas of the DRC this has provoked violence and introduced new social problems resulting in xenophobia, community tension and antagonism. The higher cost and lower availability of basic foodstuffs also results in under nourishment and malnutrition (and related conditions) for many not involved in mining, and is especially common amongst the more vulnerable groups such women, children and in some areas the indigenous people.

In addition, increased pressure on the local services provided through local administrations, such as water supply, education facilities and health provision - already scarce following the years of conflict - also pose difficulties and become yet another potential source of tension between the miners and the local, indigenous populations and land owners. Most ASM sites are cosmopolitan, with miners, labourers, traders and other community members from various parts of the DRC. In many sites these differing ethnic groups coexist in relative harmony, although in others there are strong ethnic tensions (e.g. Orientale and Kasai) However, field observations have demonstrated that within some communities there is often a clear segregation along various lines (not fully understood) with some sites only employing migrants from specific areas.

In some areas such as Kasai and Orientale, the migration of people into the ASM sector has resulted in many fertile agricultural areas being abandoned; many subsistence farmers have forsaken their traditional farming in the hope of securing a decent income through ASM. Some schools claim that both teachers and pupils have left to work in nearby ASM sites. The long term societal and national consequences of such demographic movement of people away from villages, traditional livelihoods and their ancestral lands are currently unknown. On a national level the distressing issue of food insecurity and rapidly increasing prices of basic foodstuffs in the mining areas caused by the abandonment of farms needs to be addressed. The final issue that must not be ignored is the long term consequence of a growing frequency of school drop-outs lured to the 'get-rich-quick' casino mentality of ASM, and the resulting rising illiteracy levels within the rural populace.

ASM – Vulnerable Groups

Child Labour

The DRC is, in theory, well supplied with legislation to protect children:

- The DRC has ratified the International Labour Organisation (ILO) 'Convention on the Rights of the Child' and the UN 'Worst Forms of Child Labour Convention' (C182)
- There is a special Ministry of Social Affairs that has mandate over children
- The DRC has signed the Organisation of African Unity (OAU) Charter on the Rights of Children

Despite this, a comprehensive lack of labour law enforcement and investment in the social infrastructure in many rural areas has resulted in child labour still being prevalent (according to *ILO*, *UNICEF* and the NGO *Groupe One*) in many ASM operations throughout the DRC; particularly Orientale, Kasai (past studies indicated around 10,000 in Mbuji Mayi alone) and Katanga (ILO estimates that a staggering 35-70% of the *creuseurs* in Katanga are children less than 18 years old). In general, children work in the mines to help their parents and to supplement the family income in order to provide basic goods simply to survive, and their contribution is highly valued by their families. As education is not free in the DRC many children are forced to either drop out of school or work part-time in the mines to help support their family needs. Many children and adolescents are simply lured by the prospect of becoming rich while others are encouraged by their parents to help contribute to the family earnings, or are lured by the apparent 'macho' image of becoming an artisanal miner. Throughout the DRC child labour in the ASM sector is a result of:

- Deepening poverty in rural areas (according to the UNDP around 68% (2004) of population live in rural areas) increasing dependence on the income-earning potential of children

- The ease of opportunity to exploit children, the growing proportion of the Congolese population under the age of fifteen (46.8% - UNDP 2004) and the fact that child work is often considered part of the socialisation process by many rural peoples
- The rising number of orphans (including many conflict and some AIDS orphans)
- Disintegration of the traditional extended family
- Illegality and informal nature of the much of the ASM sector
- Lack of empowered associations/ASM unions, organised CBOs or sector-specific NGOs
- Remoteness and isolation of many ASM areas
- Lack of opportunities or incentives to go to school or continue with education in mining areas
- Lack of post primary education, few job prospects, regular employment or livelihood choices in rural areas

Often families accompany the men when they travel to seek a livelihood in ASM. In such circumstances, the children are made immediately more vulnerable, losing many of their basic rights, the vital stability and routine of village life that is critical in their infancy, contact with their extended family and friends, concepts of normal social conventions and moral stability, opportunities for an education, and even the opportunities to play safely. Once on site, continual poverty and lack of earnings can sometimes force the entire family to seek work in the mines. In general there is also a far greater incidence of boys than girls working directly in the mines with children ranging from around 6-16 years of age. On the mines where child labour is particularly prevalent, the girls tend to be engaged in ancillary activities such as trading, whilst the boys assist with the actual mining and processing. These children fall within the group who should have completed their primary education but now face a very limited chance of obtaining a secondary school education and/or any vocational training.

The children are engaged in virtually all aspects of the mining and processing operations from rock-breaking and transport to washing, crushing and dressing, and can work up to eight hours per day. The children often undertake physically demanding work (e.g. carrying heavy headpans or ore filled sacs) in hazardous underground conditions or in direct sunshine and dusty areas. Although some children working in the ASM sector are paid in cash, they are most often cheated and some are not paid but work simply to survive, receiving only basic sustenance as an in-kind payment. In the Kasai diamond areas children are particularly vulnerable, where distrust and superstition caused by diamonds has bred a climate of fear, with regular accusations of witchcraft against children who are thrown out of their homes and are forced to work in the mines to survive. Self appointed preachers divine which children are 'really' witches, and use powers of prayer and ritual exorcism to try and 'cleanse' them.

At present, there is insufficient data to determine if these children remain in the ASM sector or eventually manage to find alternative employment. Whether or not the children leave the ASM sector, there is always a continuous influx of willing, new young labour. Likewise, the means of recruitment is unclear, whether it is through 'voluntary' family or community relationships or understandings, or if it is 'forced' with the children working as conscripted or bonded labour.

Gender Inequality

Womens' involvement in ASM activities is increasing, particularly in Africa (45 - 50% of all ASM workers in Africa are now women), and they are also involved in a variety of minesite activities resulting from the prevalence of family based activity in rural Africa. In the DRC the women and girls are mostly compelled to undertake the poorly paid ancillary operations including manual transport, ore sorting and crushing. For instance, in some sites womens' low status means that they are only permitted to treat the tailings from the abandoned operations, the leftovers from the primary panning by the men, or they are employed to simply hand crush the ore. In other sites, they only work for part of the day to enhance the earnings of their husbands. In general, for those women who are forced to work long and arduous hours, they receive far less pay than their male counterparts whilst also being expected to fulfil their primary family care-giving role and undertake the traditional domestic duties of fetching firewood, drawing water, cooking, cleaning, *et cetera*. The fact that women are often limited to lower status and lower paid activities stems from cultural perceptions and traditional beliefs as to what constitutes 'appropriate' work for men and women.

In addition, women and girls also undertake a variety of collateral activities including selling locally produced goods (e.g. women petty traders selling food, charcoal, *et cetera*) and working in bars and restaurants. In fact, many young girls migrate to ASM sites from afar in the hope of making some money in the apparently 'booming' ASM settlements. Unfortunately, many young women find it difficult to sustain and survive through trading, and their hosts or peers often encourage, or force them to seek extra cash through prostitution.

The nomadic nature of many artisanal miners also has a direct and damaging effect on the traditional extended family structure, and in particular women's role. The extended family is traditionally a very important strong social security institution in the DRC, taking care of orphans, the elderly and widows. However, this crucial structure often disintegrates when the male miners have to travel far from home and are away for indefinite periods of time. The remaining female-headed households have to cope without their husbands for long periods and live in hope that they will send money back or return themselves soon. Some of the occurrences of child labour in ASM can be attributed to the fact that women in some areas are forced to bring their children along to work - even if just petty trading near the mining sites.

Polygamy is also common in ASM communities as the migrant male miners (especially ex-combatants and current *FARDC* soldiers) sometimes choose to take a second wife when they establish themselves in a new area, leading to a variety of marital and social problems. Such remote and temporary ASM settlements also promote alcoholism and the use of narcotics (marijuana), which in turn has led to growing prostitution and alarming levels of domestic/sexual violence, abuse of women, and rape. Such promiscuity has also led to an increased incidence of teenage pregnancies with many young girls contracting STDs, possibly including HIV/AIDS, and a growing frequency in child abandonment (e.g. Mbuji Mayi). This abandonment is overlaid on the already high numbers of orphans left following the war.

There are only a few examples of women 'managing' ASM enterprises as they find it more difficult to get financial, legal, or technical support and gain ownership of land. Although in theory the legal framework and the efforts of the *Ministère de la Condition Feminine* protect their position, many rural women still face traditional and religious obstacles including illiteracy, insufficient technical knowledge, sexist/chauvinist attitudes, patriarchal views, social taboos and family responsibilities. Women face difficulty in asserting their formal rights and discrimination under customary 'laws' further contributing to the feminisation of poverty in many rural areas.

ASM – Environmental Impact

Throughout the DRC, environmental destructiveness is the single most visible aspect of ASM activity. However, as with many other African countries, impoverishment, a lack of awareness particularly of the less visible or long-term environmental impacts of activities, combined with a lack of information about affordable methods to reduce impacts, and a lack of obvious incentives to change, all contribute to the significant environmental problems within the ASM sector throughout the country. Since virtually all of the ASM operations are clandestine subsistence activities that struggle to survive from day to day, the miners are forced to focus more on immediate concerns rather than the long-term consequences of their activities. This is compounded by the fact that the *Ministère de l'Environnement* and the department mandated to regulate environmental protection (within the *Ministère des Mines*) lacks the capacity to effectively monitor or control these informal activities - particularly in remote, inaccessible, and often hostile locations. Unfortunately, despite the existence of the *Code de Conduite de l'Exploitant Artisanal* that specifies environmental regulations to which the artisanal sector is expected to adhere, many of these regulations are inappropriate and certainly unenforceable.

One minor consolation is that the majority of environmental impacts appear to be confined to the close proximity of the ASM workings, and as a result the impacts of individual operations are of a limited scale and should be reversible. Nevertheless the cumulative effects of these unregulated mining activities, especially in areas of prolonged and concentrated activity in Kasaï, Katanga and Orientale may be less apparent. One key site (closed by presidential decree in 2004) that could have had more significant and widespread environmental and radiological implications was the Shinkolobwe mine in Katanga. This mine was worked industrial scale for uranium until 1961 but was reopened by artisanal miners to exploit copper and rich cobalt ores towards the end of the 1990s, and at its peak was worked by around 6,000 *creuseurs* producing around 12,000 of heterogentite ore per month.

The *Institut Congolais pour la Conservation de la Nature (ICCN)* and various conservation NGOs (*Flora & Fauna International, World Wildlife Fund, Conservation International, Wildlife Conservation Society, IUCN (World Conservation Union)*, and the *Gorilla Organisation*) have all highlighted the devastating impact of ASM activity on some of the DRC's environment. The DRC has some 57 parks and reserves that cover over 180,000km² mostly located in areas in the east and north that coincide with geologically prospective areas. Biodiversity destruction caused by ASM is a serious threat, particularly in the *UNESCO* listed Kahuzi Biéga National Park (KBNP) where coltan and cassiterite is mined, the Okapi Faunal Reserve where gold is mined, and the Maiko National Park where both gold and coltan are being mined.

The overlap of areas of mineral potential with environmental assets and biodiversity is a key issue that needs to be urgently addressed; whilst remembering that poverty alleviation is intimately linked with environmental and natural resource management. In the DRC these links include the enormous burden of disease that affects the rural populace through pollution of water and air, and their dependence on natural resources and ecosystem services which when degraded can undermine their very livelihoods and in turn force more people into illegal ASM.

ASM Environmental Impacts	ASM Pollution Sources
<ul style="list-style-type: none"> ▪ Destruction of natural habitat and biodiversity at ASM sites and at mine/community waste disposal sites ▪ Destruction of adjacent habitats through emissions and discharges ▪ Destruction of adjacent habitats from influx of migrant workers and land encroachments ▪ Destruction of agricultural and protected lands ▪ Siltation of wetland and riparian areas from the release of processing slimes ▪ Adverse changes in river regime and ecology due to pollution, siltation, sedimentation and flow modification ▪ Soil contamination from treatment residues and non-organic spillage ▪ Deforestation, destruction of landforms and soil erosion ▪ Land degradation due to inadequate rehabilitation after closure and the abandonment of ASM workings ▪ Land instability and ground subsidence 	<ul style="list-style-type: none"> ▪ Drainage from mining sites, including processing water discharge and the breaching of LSM tailings impoundments ▪ Direct dumping of mine/domestic waste ▪ Sediment runoff from ASM sites ▪ Pollution resulting from ASM 'dredging' operations in river beds ▪ Anthropogenic mercury pollution (<i>orpillage</i>) of terrestrial and aquatic ecosystems ▪ Effluents from mineral processing operations ▪ Sewage effluent from the ASM site ▪ Leaching of pollutants from tailings residues, disposal areas and contaminated soils ▪ Air emissions from minerals processing diesel equipment ▪ Dust emissions from sites close to villages and habitats

ASM – Diamonds

In 2006 official Congolese diamond exports totalled 28.25 million carats (11% lower than 2005), valued at US\$671.6 million (22.8% lower than 2005); the ASM production proportion has been growing yearly at rate of over 15% and in 2006 around 92% of the officially recorded diamond production in the DRC was from artisanal mining. In the first four months of 2007 officially recorded ASM production was 10.3 million carats representing 95% of all declared production. However, it is officially (CEEC) estimated that at least 40% of production is smuggled out every year, although some claim that two thirds is nearer the real value. Over 50% of exports by value pass through Kinshasa with Mubji Mayi accounting for around 30%, Tshikapa just over 10% and the balance passing through Tembo, Kisangani, Kahemba and Isiro. Some of largest official purchasing agents include *Millenium, Congo Diam, Primogem, Margaux* and *Kasai wa Bal*.

The key focus of ASM diamond activity in DRC is Kasaï Orientale especially around Tshikapa (with an estimated 15,000 creuseurs) and Mbuji Mayi (estimated to be between 500,000 and as many as 1,300,000 creuseurs) with ASM's contribution accounting for an ever increasing amount. Mbuji Mayi was spared the direct effects of the war but has experienced tremendous and rapid population growth with the surrounding population flooding into the town to escape the militia and following the expulsion of over two million Kasaïan workers from Katanga, most of whom are unemployed.

Artisanal miners work alluvial diamonds both through conventional artisanal mines (working surface pits - 4x4 or underground galleries - *majimba*) and also by diving in rivers for diamondiferous gravels (*divers*). The economies of both these Kasaïan towns and proximal areas are orientated towards diamonds (*mbongu*) to the detriment of other activities including agriculture, resulting in food insecurity and relatively high costs of living. In Mbuji Mayi perhaps more than 80% of the population are directly involved and dependent on the artisanal diamond trade as there are very few other livelihood opportunities in an area largely isolated from the rest of the country. However, wealth distribution is extremely inequitable with the various PDGs, *preso, nvuandu, citanciste* and *mwamayi* favouring deliberate and brazen shows of private wealth. Miners, including many children, also work illegally on the MIBA concessions (including the famous *Polygone*) especially at night under the forced control of the *suicidaries* and there are many armed fights over the most lucrative areas. Currently there is what could be described as a small-scale war between the artisanal miners, MIBA, the police, and the armed *suicidaries* over access and control of the key diamondiferous areas. The *Syndicale des Creuseurs du Diamant Artisanal (UCDAK)* and the local NGO

Groupe d'Appui aux Exploitants des Ressources Naturelles (GAERN) exist to assist the artisanal diamond miners. They have held training workshops on diamond valuation and plan further technical support.

Notwithstanding the fact there are currently between 10-25 *comptoirs* in both towns and hundreds of *masion d'achat*, at least 20% of the total diamonds bought and sold by the *comptoirs* are sold illegally without the presence of CEEC agents. A further proportion of diamond parcel exports completely bypass the *comptoirs* and are sold by the *négociants* who pay no duties or fees. However the recent diamond 'organised' rush in Zimbabwe has attracted many of the Tshikapa based *comptoirs* (to the Chiadzwa area in the Marange communal lands in the eastern region of Zimbabwe) with traders attempting to launder parcels through the DRC via South Africa in order to get KPCS paperwork. This exodus of traders has also affected Mbuji Mayi, and the local economy is also in decline as many of the traditional mines are near exhaustion; miners are having to deepen existing mines which is expensive and almost impossible to work in the rainy season; supporters are lacking cash; and MIBA employees have not been paid for months resulting in a lack money of in local circulation. The economic depression and reduction of production has fuelled conflict and criminality between the *creuseurs* and MIBA.

Artisanal diamond mining also occurs, albeit to a lesser degree, in Bas-Congo, Bandundu, Équateur and Orientale provinces. The district of Tshopo in Orientale has a particularly high concentration of diamond activity especially around Banalia, Bafwasende, Basoko, Opala, Isangi with the town of Kisangani being a major diamond trading centre since the late 1980s, following the discovery of alluvial diamonds in Orientale. Smuggling has remained a major problem, partially due to the political disenfranchisement of the local population by the Kinshasa authorities, the reality of being a distant outpost of government control, and partially due to rebel groups from Rwanda and Uganda. Currently, the channelling of diamonds through official routes has become a priority, as they could easily form a revenue source for armed groups. Licenses *comptoirs* returned to Kisangani in 2003, and these have now provided substantial amounts of revenue. Official statistics are very difficult to come by but it is estimated that just under 10% of total Congolese production, passing through Kinshasa, has come from the areas surrounding Kisangani.

ASM - Coltan & Cassiterite

Coltan was first discovered in the Kivu regions in 1910. The current key mining areas are in the Kivus and Maniema; Bunia, Kalima, Lugushwa, Masisi, Walikale, Mubi, Mwenga, Kamituga, and Kindu; and it is estimated that over 60% of the world's known coltan reserves are located in the DRC. In Sud Kivu, coltan has been exploited in areas of critical biodiversity and conservation such as the Kahuzi Biéga National Park (KBNP) and Maiko National Park.

Between 1999 and 2001, a 'coltan phenomenon' occurred; remarkable both for its intensity and its short duration. Before 2000 the DRC was not even present in published world tantalum statistics, when suddenly it shot into second place with over one seventh of total world production; with the Kivu and Maniema provinces providing practically all of it. Production dropped off again rapidly over the following few years, alongside a worldwide slump in the market. It can be estimated that the DRC's earnings from coltan export in 2003 were around 1% of the 2000 figure, due to a combined production and price decline. It is alleged that the Rwandan army and militia in Eastern Congo were heavily involved with the mining and trading of coltan during the boom, and the UN estimated in April 2001 that Rwanda's army may have earned up to US\$250m over 18 months through the resale of DRC coltan.

In May 2005 a CTPCM report on coltan concluded that 81% of the revenues generated go to external actors, bypassing the desperate ASM communities. At the peak, an estimated 100,000 *creuseurs* were involved with coltan, including an estimated 12,000 in the KBNP who could produce a kilogram a day, worth US\$80 in 2000. Today these *creuseurs* and porters make far less; between US\$2.5 and US\$12/kg depending on grade and the location of the sale, on average earning US\$2-3 per day.

Cassiterite was also first discovered in the Kivus in 1910, and in the 1940s the DRC was the second largest global producer. The key mining areas are in close proximity to coltan sites in the Kivus, Maniema, and north Katanga. *Société Aurifère et Industrielle du Kivu et du Maniema* (SAKIMA) formed by the Canadian junior *Banro Corporation* in 1995, was formerly in charge of cassiterite concessions, however since 2002 they have 'lost control'. Since the end of the coltan boom, Nord Kivu has experienced a similar event with cassiterite; the difference being that cassiterite is a less contentious mineral than coltan, with less technological connotations, and therefore caused was much less international interest.

World cassiterite consumption soared by 14% in 2004, resulting in prices tripling compared to 2002. In 2004 the DRC produced around 8,300 tonnes of cassiterite, 3% of global production, with revenues around US\$46m, virtually entirely through ASM extraction. It is mainly exported through Rwanda, with minor amounts passing through Uganda and Burundi. The key purchasing agents include *Metal Processing Congo (MPC)* and *Groupe Minier Bagandula (GMB)* with others including *Munsad Minerals*, *Clamab*, *Sodexmines*, *Cometex*, *Afrimex*, *Mudekereza/Olive*, and *Kotecha*, vying for market shares.

Most ASM activity is currently focused on cassiterite in both Nord and Sud Kivu and *creuseurs* work in teams overseen and 'managed' by their supporter or *petits négociants*, and the trade is characterised by debt bondage, indiscriminate and capacious taxation and extortion from the local chiefs, the *FARDC* (including the 85th non-integrated Mai-Mai Brigade) the *Police des Mines* and in some remote mining sites in Sud Kivu remnants of *Forces Démocratiques de Libération du Rwanda (FDLR)*. There are still a multitude of *Comptoirs*, *Transporteurs*, and both *Grands* and *Petits Négociants* in Goma, Bukavu and further north in Butembo, and today it is alleged that most produce still passes through Rwanda (with allegedly more than 75% being illegally exported) en route to China, Belgium and the UK; albeit all 'exported' as cassiterite.

ASM - Gold

Gold production is scattered throughout the country, particularly in the eastern and northern border regions. Sud Kivu (Kamituga) and Maniema have many gold ASM (called *orpaillage*) sites, and the province of Orientale is a major region for ASM and gold trade. Whilst the activity is largely illegal, clandestine, dangerous, exploitative and fails to return official revenues to the state; it is still the economic backbone of the region generating direct employment for many. Some *orpaillage* activity is also threatening critical conservation areas such as the Okapi Faunal Reserve and Maiko National Park.

Currently there is no accurate data on the numbers of *orpailleurs* involved in Orientale, production statistics, or anything similar and estimates vary between between 60,000 and 150,000 (for example the *Chef de Division des Mines* in Bunia estimates that in Ituri district there are 60,000 *orpailleurs* with around 10,000 in Mahagi, 20,000 in Djugu, 10,000 in Irumu and 20,000 in Mamabas). Other currently active areas include Mongwablu, with over 5,000 and perhaps another 5,000 concentrated on the latest rush at Inga Barrier. Despite the presence of the *Encadrement Général des Exploitants Artisanaux d'Or (EGEAO)* or *Association des Exploitants Miniers Artisanaux pour la Pacification et la Reconstruction de l'Ituri (AEMAPRI)* and *Association des Orpailleurs pour le développement, Reconstruction et Paix en Ituri (AODAPRI)* there is no formal association that truly represents the interests, or gives voice to, the *orpailleurs*.

The *orpailleurs* work in teams overseen and 'managed' by *Chefs de Chantier* who in turn are recruited and controlled by the *OKIMO* contracted *Chef de Sous Traitance*. Once again the entire trading system is constrained by greed through the imposition of debt bondage, illegitimate taxation, embezzlement and blatant extortion and corruption, and even *OKIMO* agents are taking a 30% redevance of the freshly amalgamated gold at source. Production is equally hard to measure; according to the recent DfID trade flow study, *orpailleurs* produce maybe 70kg per month returning just over US\$1 million to local economy in just the Mongbwalu area, a further US\$150,000 is financing local traders and around US\$450,000 is financing the stakeholders who claim to manage the *orpaillage* activity. Around 90% of the gold exported from Ituri alone is believed to be fraudulent.

Orpaillage is growing and will continue to play a key role in regional and cross-border 'trade' into Uganda and Rwanda through key towns such as Bunia, Beni, Aru, and Ariwara, and particularly from Butembo for the foreseeable future. Butembo (largely controlled by the Nande people) itself is a major export route for gold from all over country (including Orientale (Ituri, Haut and Bas Ulélé) and Nord Kivu (Lubero, Beni and Walikale)) with perhaps between 400-1,500kg passing through annually, mainly headed to Dubai (UAE). Gold is also mined by ASM in numerous isolated areas in Equateur and as far as Haut Katanga. In the province of Sud Kivu, an estimated 500kg of gold is produced monthly from mining areas such as Kamituga, although around 80-90% leaves the DRC fraudulently, in particular through Burundi via the town of Uvira.

As part of the country's economic reconstruction; *OKIMO* is granting titles to LSM operators to commence commercial mining on its concessions. Exploration is in progress and revenue is expected to be derivable within several years. These license grants make artisanal activity on the denoted concessions (e.g. #40 Mongbwalu prospect licensed to *AngloGold Ashanti*, #39 Zani-Kodo prospect licensed to *Mwana Africa*, and #38 to including Pakaka, Mengu Hill, Kombokolo, Sessenge, Karagba, Gorumbwa Chauffeur and Durba

prospects licensed to *Moto Gold Mines/Borgakim* illegal, however *OKIMO* is still allowing (claiming *force majeure* status) and benefiting from these arrangements; an incompatibility causing tensions between the various parties concerned and also the attention of NGOs such as *CAFOD (Unearth Justice)*, *Human Rights Watch (Curse of Gold)* and the *No Dirty Gold Campaign (Oxfam and Earthworks)*

ASM – Copper & Cobalt

The demise of *Gécamines*, the large numbers of retrenchees, and the recent surge in copper and cobalt prices (the copper price has quadrupled since 2001) have combined to create an artisanal mining rush in the southern area of Katanga with a conservatively estimated 150,000 *creuseurs* (and *kwanda*). However, the ever growing inward investment into the region and interest from foreign mining companies has increased competition for mineralised land, with the *creuseurs* facing constant eviction (e.g. recently on *Metrorex's* Ruashi concession) as mining companies secure concessions. According to *SAESSCAM* and *Gécamines* there are gazetted *zones d'exploitation artisanale*, but to date attempts to review these sites has shown them to be unproductive and unrealistic for ASM relocation and subsequent exploitation

This in turn has resulted in the *creuseurs* becoming increasingly more volatile, aggressive and violent especially in areas like Kolwezi. More recently these problems have been exacerbated as companies such as *Groupe Bazano* have decided to cease sourcing mineral produce from *creuseurs* in recognition of the clear reputational and security risks, and because they want to change to more industrial methods, are transforming into service providers for the new big companies, or simply as they cannot compete with industrial competition or the prices offered by the illegal traders.

The *creuseurs* and *kwanda* currently exploit orebodies both on surface and underground some extending more than 20m (*salons* and *kalolo*) and abandoned tailings. Theoretically the *creuseurs* are supposed to sell their product to *Gécamines*; however the parastatal is not yet geared up to this scale of petty buying, in cash, at mine site level. This is causing increased hardship and poverty for the miners. Typically artisanal miners in Katanga earn US\$1-3 per day, by producing around 30-50kg per person in teams of five. Transport of a 50kg sack of ore costs US\$2 and there are endless taxes and cuts that have to be paid out. The *creuseurs* are usually pre-financed by a *négociant* who sets the terms, including interest and price.

The two main agencies involved in managing artisanal digging in Katanga are:

- *EMAK (Exploitants Miniers Artisanaux du Katanga)* is an association of 76 Comité members, all *négociants*, who represent four groups (Likasi, Lubumbashi, Kolwezi and Haut Katanga). The organisation claims to have a general membership of 70,000 *creuseurs* and *négociants*. All *creuseurs* working on an EMAK site must pay for their membership card and the association takes a tax of 50-100 Congolese Francs per sack
- *CMKK (Co-operative Maadini Kwa Kilimo)* is a more recent association but functions in much the same way and areas as EMAK. CMKK purports to have 40 agents and 25,000 member *creuseurs* and *négociants*.

There are numerous stakeholders; LSM companies, *masion d'achat* (e.g. *Chemaf, CoCoCo, SOMIKA* until recently *Groupe Bazano* and a growing number of Chinese backed agents), *Gécamines, négociants, transporteurs, OFIDA, EMAK/Policar, police des mines, ANR*, security forces, militia groups and local communities. Exploitation, extortion, fraud, corruption, bribery, theft, mistrust, tracasserie, resentment and complex inter-related tensions and vested interests are very much present.

ASM - Relationships with LSM

Mining activity in the DRC is entering a period of transition as the country emerges from conflict and the international private sector grows eager to invest in the country's extraordinary mineral wealth. However, with nearly 2,150 mining (and quarrying) concessions registered, virtually all mining areas of the DRC face the challenge of balancing ASM activities with the growing presence of Large Scale Mining (LSM). In many areas (particularly for the first-mover pioneer companies) the dynamic relationship between ASM and LSM is characterised by tension, mistrust, antagonism, resentment, intimidation, and increasing violence. Both sides have their own misguided preconceptions and feelings about each other. The ASM sector is often viewed as 'trespassing' on company concessions, whereas ASM view the granting of company concessions as depriving them of their 'traditional' land and rightful livelihoods. This latter issue is linked intimately to the

emerging sense of Congolese sovereignty and the desire to secure control over their own natural resources; surrendering all exploitation to foreign companies excluding local communities is viewed as an unpatriotic aberration and is causing mounting cultural and national disquiet.

Such resource conflicts are often heightened by the contentious issue of land tenure caused by a lack of appreciation and understanding by the ASM sector of the legal difference between land and mineral ownership rights; and traditional (*chefferies*) or customary lands. Although the *Code Minier* allow the concession or mining lease holder the right to prohibit any encroachment for competing activities (i.e. mining), conflict still arises simply because the two sectors are competing for the same mineral resources. The evident competition is no coincidence; some mining and exploration companies have used the artisanal miners as unpaid 'barefoot geologists', as they are often very efficient prospectors, and then subsequently concentrate exploration wherever there is ASM activity, historical or recent. Conversely and more frequently, illegal miners have congregated around virgin exploration sites and newly developed, rehabilitated or expanding LSM sites, taking advantage of the better access and perhaps re-mining some of the company's tailings, waste or marginal ground (some even have contracts with parastatals). There is also a disparity between the objectives of the ASM sector scraping a living by essentially high-grading shallow near surface deposits, and the commercial LSM sector seeking to bulk mine a larger but lower grade global deposit of which the high grade areas constitutes a minor but essential component.

In the past some companies tried to keep the artisanal miners at bay through force and intimidation, and built expensive systems of security which often led to conflict, production disruption, tarnished reputations, and legal liability. Regrettably, some companies still initially want to treat the ASM issue as security problem and involve both private and public security forces; often resulting in accusations of human rights violations. Other companies still fail to comprehend the latent corporate risk or the true scale of the ASM issue in the vicinity of their operations. In addition, companies regularly neglect or deliberately omit ASM issues from social management plans, or present confusing and inconsistent approaches. Some more forward thinking companies adopt a *laissez-faire* attitude that simply tolerates the presence of illegal ASM activity, providing it does not encroach or impact on their operations. Companies need to be convinced that building constructive relationships, as a risk management strategy, is far more effective than resorting to force (especially for those companies who are signatories to the Voluntary Principles on Security & Human Rights (VPs)) in an attempt to eliminate the ASM miners and hoping that the 'problem' simply disappears. Given the fact that the economic, social and environmental costs and potential liabilities of uncontrolled ASM activity are starting to get out of control on many minesites throughout the DRC, there is hopefully a strong case for a paradigm shift towards a more innovative, non-confrontational, non-competitive, consensual and pragmatic strategy for dealing with local artisanal miners. However, given the rise in the number of incidents of conflict between the two sub-sectors - regardless of how they started - the irrefutable challenge remains of how the LSM sector can constructively engage and attempt to coexist with the increasingly vulnerable, and in some cases volatile ASM sector.

Mining companies are increasingly incorporating social justice concerns into corporate policy commitments, and such policies are often presented within the framework of 'sustainable development' or 'corporate social responsibility' (CSR). However, it should be emphasised that the management of 'softer' social issues, and in particular the challenge of coexisting with ASM, is a relatively new area of management focus throughout the mining sector. Also, because of the multitude of involved stakeholders with divergent interests, such issues are complex and require approaches and solutions that go beyond the traditional technical fixes and contingency planning familiar to the majority of current minesite operational management. To add to these problems, there has also been an upsurge in civil society activism and anti-mining NGO lobbying allegedly to raise public awareness about the 'evils inflicted on the poor artisanal miners'; portraying the LSM sector as deliberately denying impoverished communities the right to earn a living. The combination of numerous factors, discussed in previous sections, further exacerbates the problem by increasing the vulnerability of companies to the ASM challenge, with the onus for dealing with ASM relationships resting inevitably on the shoulders of LSM operators who are somehow expected to demonstrate leadership by adopting a pragmatic rather than legal-protectionistic approach. Although the ASM burden defaults to the mining companies who are encouraged to adopt proactive approaches, the lack of legality of the sector in the DRC limits the options for companies to respond despite the reputational consequences.

Despite the understandable frustration of dealing with such recalcitrant neighbours, failure to effectively manage social issues such as ASM can and will affect the core business interests of both the operating mine and the reputation of the company as a whole. The adoption of a purely compliance focused approach to the ASM issue on site, with an emphasis on forceful evictions and meeting legal and contractual requirements is unwise; and evidence has shown that it will certainly not offer a durable local 'social license' to continue to operate. The need to focus on improved productivity, enhanced profitability, and to secure the

company employees and assets should unquestionably be key priorities for any mining company, however site security should not only rely on defensive, uncompromising, protectionist and reactive measures that merely address the social symptoms of increased ASM activity, but rather should attempt to address the underlying causes of community disharmony and ASM invasions.

Given the variety of ASM microcosms, companies wishing to extend assistance to the ASM must recognise that there are no quick fix solutions to develop and formalise the ASM sector, and that an integrated multi-stakeholder approach is essential in order to help maintain their 'social licence'. Although most companies wish to make a material contribution to the reconstruction of the Congolese economy and to secure their social licence to operate by being good and responsible neighbours and partners to local communities, in reality there is no mining company currently active in the DRC that can overcome all the cross-cutting issues, challenges and constraints that plague the ASM sector on its own. Companies must recognise that implementing only *ad hoc* isolated technical training, or fashionable alternative livelihood agro-based programmes will certainly not bring about the desired long-term sustainable results. Civil society also needs to concede that given the numbers of artisanal miners it is completely unrealistic to expect LSM companies to simply employ all the artisanal miners or be able to generate attractive alternative livelihoods. Whatever level of co-operation is deployed towards ASM, it is imperative that it is maintained over the life of the project, as short term engagements will not be effective and could actually be counter productive. In order to foster greater acceptability and tackle the ASM issue effectively, mine management has to be innovative, pioneering, and accept the need to adopt a more effective conciliatory ('win-win'), and less intimidating approach to ASM (and community) consultation, and maybe consider entering into more voluntary arrangements with non-traditional parties such as local reputable NGOs or national governments.

There is regrettably no generic or 'magic blue-print' that can promise straightforward solutions, or help a company to socially engineer a utopian programme of perfect harmony with ASM. Instead companies will need to decide, possibly with external advice and neutral facilitation and mediation assistance (e.g. the current IFC funded project in Kolwezi being implemented by the NGO *Pact Congo*), what potential actions would suit the local culture, their neighbouring artisanal miners, and their particular joint-venture partners (especially the parastatals). In most cases a transparent and piecemeal approach that has a defined sequence with distinct steps and milestones will be best, allowing all stakeholders time to adjust and forge a durable and trusting relationship.

Companies need to constructively engage and gain the trust of the ASM sector and the indigenous community, determine the roles and obligations of parastatal partners, ensure security provisions are in compliance with the Voluntary Principles, manage massive community expectations and divergent vested interests, balance high investor, home government and stakeholder expectations in relation to governance and compliance issues, and measure social returns; not just implement 'feel-good' showcasing projects. Some more common ideas of ASM focused assistance and cooperation schemes often suggested, which could be implemented at minesites to foster co-habitation include (CASM/IFC in collaboration with the ICMM intend to publish a guidance note on 'good practice' for LSM and ASM co-existence):

- Addressing the lack of organisation/formalisation and assisting with attaining legal status
- Relinquishing sub-economic areas of concessions
- Creating direct minesite employment through training and apprenticeships
- Creating labour intensive Small-Medium Enterprise (SME) service provider and mine service micro-enterprise
- Forming alternative sites, relocating and resettling artisanal miners/communities
- Developing ASM-LSM hybrid mining partnerships or 'contract mining'
- Acting as an assured buyer through a some form of tributor arrangement
- Providing 'good practice' training and technical assistance

Although a sustainable solution to the ASM challenge is likely to be found through a combination of the above, the concept of alternative sites and relocation of the artisanal miners is becoming increasingly necessary given the growing number of incidences of minesite invasions. However, the process of identification and demarcation of alternative sites for resettlement has numerous challenges and potential consequences that must be carefully considered, addressed and managed. Government (including SAESSCAM) also needs to be a key partner in this process and may have to be persuaded to tolerate specific innovative conflict management arrangements that may not explicitly comply with *Code Minier*. Firstly, companies may have to determine whether their plans constitute a formal involuntary resettlement and/or economic displacement, and this thereby needs to be undertaken in accordance with international codes such as the IFC Performance Standards, and the requisite formal procedures/codes and obligations of a proposed relocation plan must be defined. It should however be noted that these international

standards were never devised to account for the informal and transient nature of ASM activities and communities, and that to date no mining company has completed an ASM community relocation in full compliance with these standards. Any alternative sites have to be adequately geologically evaluated, selected and ranked based on some pre-agreed and mutually acceptable criteria. Other issues include determining suitable site organisation and 'management', the physical relocation, site ownership and tenure, corporate liabilities, social and environmental implications, public disclosure and consultations, support packages and compensation and, particularly pertinent in the DRC, the role and responsibility of public and private security forces in accordance with the Voluntary Principals.

Companies may also wish to consider adopting a collaborative, and hopefully more influential, approach with other industry players (possibly through the fledgling mining group of the *Fédération des Entreprises du Congo (FEC)*) to try collectively to raise the profile of the ASM challenge by lobbying governments and resident donors on key governance and development issues, in an attempt to prioritise and mainstream ASM into Congolese development strategies and also identify possible PPP opportunities.. Even if a company chooses to act unilaterally it is still essential that they engage with the Government (probably through the *Ministère des Mines*) to share ideas whilst ensuring compliance with *Code Minier* and applicable regulations, and also alignment with national strategies and provincial development plans. Other national actions could include forging links with other ASM assistance initiatives, and also national poverty reduction strategies through dialogue with cogent ministries. On a national level it may also prove worthwhile attempting to instigate constructive dialogue with civil society and the numerous mining focused NGOs.

ASM – Development & Assistance

Experience from other countries has shown that most *ad hoc* efforts and assistance programmes have endeavoured to solve one aspect of the ASM sector alone and ignored others. Whilst being clearly well meaning, these one-dimensional projects have unfortunately provided little more than superficial gains and little long-lasting impact. Indeed, many projects have suffered from a lack of resources, competent management, political will, result-oriented and time-bound actions and long term monitoring. Over the last few decades various approaches have been employed in order to 'deal' with the ASM sector and these have been closely associated with the viewpoint and agenda of the researcher, implementer, or funding agency.

Many ASM development opponents are quick to draw attention to the fact that the ASM sector is littered with examples of unsustainable interventions, with projects having failed for a large number of reasons. Mostly, however, they have failed because of the approach taken in designing and implementing the project rather than the type of project *per se*. Many of the project interventions that have aimed at improving only one aspect of the ASM problem have not worked because the needs and concerns of miners were not understood or the interests intended artisanal 'beneficiaries' interests were secondary to those of the Government, NGO, Donor or outside 'experts', who conceived and managed these interventions. Therefore, it is imperative that any interventions suggested for the DRC, adopt a broader multi-dimensional approach, be locally-owned and driven, informed by robust output orientated research data, be strategically linked to other key policy initiatives and sectors (in order to avoid duplication of efforts and maximise efficient use of donor funding), and also work within the current Congolese capacity and obvious limitations. Trying to solve the symptoms of ASM in isolation from the other issues and challenges that plague the ASM sector will likely result in only temporary and cursory success.

It should be emphasised that the problems of ASM will continue and not be resolved if future interventions ignore the root causes and simply seek to solve the multitude of symptoms, and will likely result in only superficial gains. There is a real and urgent need to take into account the existing socio-economic system and consider how ASM can best contribute to poverty reduction and sustainable development, through integration into national poverty alleviation strategies and provincial development plans. It must be emphasised that the realistic development of the ASM sector implies the recognition of the complexity of social, gender, cultural, political and economic issues at its roots. Likewise the ultimate success of any formalisation programme will also heavily depend on the sustained political will of the DRC Government and a more empowered and better informed civil society.

All future recommendations and suggested assistance projects should adopt a holistic and multi-dimensional approach and thereby find better and more affirmative ways of formally integrating the ASM sector into the rest of the Congolese economy. In order to be truly sustainable, there will be a clear

objective to resolve conflict, foster and encourage local stakeholder buy-in and ownership, and ensure all stakeholders identify and provide incentives for the continuation of any proposed assistance scheme, whilst appealing to the self-interest of the artisanal miners and their communities. It will also be vital that the nomadic nature of the sector is fully considered and incentives to encourage settlement or reduce migration may also have to be examined. Only by adopting such an approach will the sector be able to contribute to real poverty alleviation, sustainable rural livelihoods, contribute to the fulfilment of the Congolese development processes, and instil investor confidence.

It is clear that if this informal sector is to be turned into an economically viable industry that provides a net benefit to all concerned - including the Government - real and affirmative reform is required. All future proposals must have an emphasis on people (especially women, youth and children) and community development, rather than merely technology and production increases, and recognition must be given that ASM activities will continue for at least as long as poverty and opportunity drives them. Therefore the rights of Congolese individuals to secure a livelihood whether within or outside the ASM sector must be respected.

Inevitably the ultimate vision should be to create sustainable communities, benefiting from the economic activity generated by legal and responsible mineral extraction, processing and trade at several scales; where ASM is one activity within a broad range of livelihoods. The following nine points essentially embody the most critical macro tasks that need to be pro-actively addressed in order to formalise, develop and empower the ASM sector and help achieve this vision.

- Alleviate poverty, improve the livelihood security and increase the social capital of the ASM sector.
- Delineate and define the mineral potential suitable for ASM exploitation.
- Strengthen the capacity of SAESSCAM to handle and/or manage the ASM sector.
- Formulate a more enabling, appropriate and transparent legislative framework and licensing scheme.
- Encourage the formation of more democratic and representative ASM associations or co-operatives.
- Provide more appropriate outreach services - regional self sustaining technical assistance and training schemes (appropriate and 'good practice').
- Develop and implement a pragmatic ASM gender mainstreaming strategy.
- Replace the current fraudulent and exploitative regime with a sustainable financing scheme and more effective extortion-free marketing system for ASM products.
- Contribute to the immediate and long-term resolution of existing and potential conflicts with the LSM sector.
- Protect the rights of vulnerable groups, especially children.
- Define relevant and consistent health & safety standards and practices.
- Establish appropriate and realistic environmental protection practices and principles.

Any Congolese pro-poor and best-practice development strategy for the ASM sector must be multi-dimensional: institutional, political, legal, technical and fiscal. As already stated, a holistic approach MUST be adopted in order to increase human, financial, physical and social capital available to the sector, however future recommendations must not be naïve and should ensure that any suggested macro-policy links with the micro-reality of the ASM sector in the various regions of the DRC. All future project concepts will also have to take into account the multitude of vested, divergent and interconnected interests of the various ASM stakeholders from Government, public authorities, civil society, private sector and others; many of whom benefit from the current status quo. Therefore it will be prudent to include, right from the initial design stage, an element of awareness raising, informed advocacy, communication, negotiation and mediation to determine potential areas of conflict, influence the Congolese decision makers, identify common targets, and areas for compromise between all the key stakeholders.

It is hoped that a policy framework is adopted and led by the Government to help devise strategies that are realistic, pragmatic and that are fully supported by and appropriate to rural ASM communities. In order to achieve this adoption the development framework will have to be tailored to suit the political, cultural, geographical and economic peculiarities and current realities of each province of the DRC, and all micro, meso and macro linkages must be identified and resourced.

The primary focus of any suggested interventions in the ASM sector in the DRC must be to alleviate poverty by overcoming exploitative practices, providing financial betterment and empowerment to ASM communities, assisting in rural economic development and being part of integrated local development plans.

Broadly-speaking the short and medium term objectives of any proposed programme of assistance for the ASM sector in the DRC should attempt to:

- Ensure poverty alleviation and wealth creation for the actual miners, labourers and rural communities is always the primary focus of any proposed intervention.
- Advocate Government budget expenditure to prioritise the implementation of general social and development programs to help improve the living conditions and basic social infrastructure in ASM communities (water, sanitation, transport, basic nutritional services, schools/child care, health-care, security, *et cetera*.)
- Promote the formation of family or community based mining co-operatives that are mindful of the current political and organisational challenges, sensitive to the diversity of local cultures, social norms, and traditions, build on existing or traditional CBOs that help give 'voice' to and empower the miners and their communities.
- Identify practical means to formalise ASM activity and ensure the sector becomes a driving force for rural development.
- Encourage local rural economic development and diversification by ensuring that a proportion of mineral revenues are repatriated to the mining communities and invested in ways that bring sustained benefits, including the development of basic social infrastructure.
- Ensure ASM is adopted as part of a range of complimentary alternative livelihoods that in combination lead to economic diversification and real rural community sustainable development.
- Give full recognition of gender-differentiated impacts and adoption of a gender-sensitive approach and strategy that gives particular emphasis to the valued role of women whilst respecting the traditional values of local communities.
- Reduce and eventually eliminate child labour in mining areas through the provision of viable alternatives (whilst differentiating from suitable child work that is part of normal rural socialisation processes).
- Avoid or mitigate negative environmental and social impacts as well as impacts on human health on the ASM sites and within the proximal communities.
- Promote a business environment that discourages extortion and eliminates oppressive and exploitative mineral purchasing and marketing monopolies whilst encouraging fully equitable, streamlined and liberalised markets for all mining products, achieves greater profit distribution, and that curbs the illicit trading and smuggling of precious minerals.
- Develop the collective capacity of artisanal miners to contribute to sustainable development and an upscaling of mining activity through the adoption of identified best/good practice methods, technology and equipment.
- Mainstream the ASM sector in national economic activity and ensure that other relevant Government actors, cogent Ministries and key stakeholders understand their obligations to ASM communities.
- Strengthen investor confidence by fostering and maintaining mutually respectful relationships between the artisanal miners, communities, mining companies, local and traditional leaders, regional and national Government and all other relevant stakeholders.
- Provide evidence to help mainstream the ASM sector in to national economic activity and ensure that other relevant Government actors, cogent Ministries and key stakeholders understand their obligations to ASM communities throughout the DRC.

As a final note it is worth remembering that the ASM sector in many African countries is already a victim of 'research fatigue' with countless academic studies, inappropriate data gathering exercises, a plethora of dead paper policy, and grandiose well-meaning declarations that simply choke the ASM sector and have yet to be implemented or even tested. Given that within the DRC most artisanal miners live a precarious life and that both expectations and latent volatility are high, all suggested interventions or assistance projects in DRC must be conscious and wary of these past, well meaning, but highly academic approaches that have failed to really impact on the physical lives of artisanal miners and their communities. The adopted development strategy for the DRC must aspire to finally bridge the increasing gap between high level policy in Kinshasa and on-the-ground practice. It is also critical that a realistic and pragmatic approach is articulated and subsequently adopted that ensures both immediate and tangible impact (quick wins) to the impoverished mining communities scattered throughout the provinces, and the long term sustainability for the benefit of the entire DRC.

Summary

The ASM sector

- It is evident that improved natural resource management and governance (including security sector, customs and border control, Public Financial Management (PFM), strengthening revenue transparency, and encouraging responsible business behaviour in line with OECD guidelines) will be key to maintaining security, building investor confidence, and contributing to the overall economic growth and poverty reduction in the DRC.
- ASM is an incredibly sensitive issue with countless vested interests and a multitude of complex, interconnected relationships between artisanal miners, communities, middlemen, traders, parastatals, mining companies, security forces, militia groups and the Government.
- The ASM sector is growing and will continue to have a key role; with a degree of informal cross-border 'trade' in diamonds, gold, copper, cobalt, cassiterite and coltan continuing.
- ASM provides valuable 'jobs' and income for many ex-combatants and vulnerable people in a fragile post-conflict environment, and if it is not managed carefully it could have a negative influence on national stability.
- The current status and practices are illegal, exploitative, extremely hazardous to health and the environment, and in breach of Congolese legislation.
- The governance system has failed to regulate and assist the sector and, by default, has become an exploitative revenue collection system. Regrettably, in some areas Government officials are actively colluding with trading 'companies' in circumventing control procedures and the payment of taxes; therefore the Government must be assisted in improving governance (including the KPCS and EITI), transparency, accountability, regulation and the overall formalisation of the ASM sector.
- The proximity of some ASM sites, and existing and proposed industrialised mining is incompatible, and resultant ASM challenges erode investor confidence. Reputable mining companies who are trying to be innovative and work with ASM communities should be given due recognition, whilst other companies need to be persuaded to be more responsible and proactive in their approaches and refrain from a merely compliance focused strategy. Companies need to measure the actual social returns of their investments and CSR plans, and not just implement 'feel-good' showcasing ad hoc projects.
- Civil society also needs to act in a responsible and constructive manner; although civil society is exceedingly active and vocal, only some are properly informed with respect to ASM or mining related issues; advocating well meaning ASM recommendations of which only a proportion are pragmatic and implementable given the current realities and constraints of the DRC. Regrettably a small proportion of NGO reports contain inaccuracies, exaggerations, or adopt biased, unfounded and sensationalist reportage.

ASM Assistance

- The ASM sector requires the formulation and enactment of enabling policy, and needs immediate and pragmatic assistance; with short, medium and long term tangible actions.
- There must be a clear and immediate focus on strengthening national, provincial and local ASM governance.
- Interventions must also focus on trying to solve the underlying causes, rather than solely addressing the more evident problematic symptoms that are more commonly documented.
- Socially engineered 'Dream Lists' must be avoided, and all interventions need to have a clear focus with distinct outcomes and outputs, with pragmatic, measurable and tangible on-the-ground actions.
- The promotion of responsible and mutually beneficial co-existence strategies between LSM and ASM needs to be prioritised, possibly through the establishment of workable PPPs.
- All efforts and ASM interventions must be coordinated, and a realistic assessment, monitoring and evaluation scheme initiated.

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